» alicloud_account

This data source provides information about the current account.

» Example Usage

```
data "alicloud_account" "current" {
}

output "current_account_id" {
  value = "${data.alicloud_account.current.id}"
}
```

» Attributes Reference

The following attributes are exported:

- `id` - Account ID (e.g. ”1239306421830812”). It can be used to construct an ARN.

» alicloud_caller_identity

This data source provides the identity of the current user.

NOTE: Available in 1.65.0+.

» Example Usage

```
data "alicloud_caller_identity" "current" {
}

output "current_user_arn" {
  value = "${data.alicloud_caller_identity.current.id}"
}
```

» Attributes Reference

The following attributes are exported:

- `id` - Principal ID.
- `arn` - The Alibaba Cloud Resource Name (ARN) of the user making the call.

- `account_id` - Account ID.
- `identity_type` - The type of the princiapal. RAMUser for users.

» alicloud_file_crc64_checksum

This data source compute file crc64 checksum.

NOTE: Available in 1.59.0+.

» Example Usage

```
data "alicloud_file_crc64_checksum" "default" {
  filename = "exampleFileName"
}

output "file_crc64_checksum" {
  value = "${data.alicloud_file_crc64_checksum.defualt.checksum}"
}
```

» Argument Reference

The following arguments are supported:

- `filename` - (Required) The name of the file to be computed crc64 checksum.

» Attributes Reference

The following attributes are exported:

- `id` - file crc64 ID
- `checksum` - the file checksum of crc64.

» alicloud_regions

This data source provides Alibaba Cloud regions.

» Example Usage

```
data "alicloud_regions" "current_region_ds" {
  current = true
}

output "current_region_id" {
  value = "${data.alicloud_regions.current_region_ds.regions.0.id}"
}
```

» Argument Reference

The following arguments are supported:

- `name` - (Optional) The name of the region to select, such as `eu-central-1`.
- `current` - (Optional) Set to true to match only the region configured in the provider.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

NOTE: You will get an error if you set `current` to true and `name` to a different value from the one you configured in the provider. It is better to either use `name` or `current`, but not both at the same time.

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of region IDs.
- `regions` - A list of regions. Each element contains the following attributes:
  - `id` - ID of the region.
  - `local_name` - Name of the region in the local language.

» alicloud_zones

This data source provides availability zones that can be accessed by an Alibaba Cloud account within the region configured in the provider.

NOTE: If one zone is sold out, it will not be exported.

» Example Usage

```
# Declare the data source
```

```
data "alicloud_zones" "zones_ds" {
  available_instance_type = "ecs.n4.large"
  available_disk_category = "cloud_ssd"
}

# Create an ECS instance with the first matched zone
resource "alicloud_instance" "instance" {
  availability_zone = "${data.alicloud_zones.zones_ds.zones.0.id}"

  # Other properties...
}
```

» Argument Reference

The following arguments are supported:

- `available_instance_type` - (Optional) Filter the results by a specific instance type.
- `available_resource_creation` - (Optional) Filter the results by a specific resource type. Valid values: `Instance`, `Disk`, `VSwitch`, `Rds`, `KVStore`, `FunctionCompute`, `Elasticsearch`, `Slb`.
- `available_disk_category` - (Optional) Filter the results by a specific disk category. Can be either `cloud`, `cloud_efficiency`, `cloud_ssd`, `ephemeral_ssd`.
- `multi` - (Optional, type: bool) Indicate whether the zones can be used in a multi AZ configuration. Default to `false`. Multi AZ is usually used to launch RDS instances.
- `instance_charge_type` - (Optional) Filter the results by a specific ECS instance charge type. Valid values: `PrePaid` and `PostPaid`. Default to `PostPaid`.
- `network_type` - (Optional) Filter the results by a specific network type. Valid values: `Classic` and `Vpc`.
- `spot_strategy` - - (Optional) Filter the results by a specific ECS spot type. Valid values: `NoSpot`, `SpotWithPriceLimit` and `SpotAsPriceGo`. Default to `NoSpot`.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).
- `enable_details` - (Optional, Available in 1.36.0+) Default to false and only output `id` in the `zones` block. Set it to true can output more details.
- `available_slb_address_type` - (Available in 1.45.0+) Filter the results by a slb instance address type. Can be either `Vpc`, `classic_internet` or `classic_intranet`
- `available_slb_address_ip_version` - (Available in 1.45.0+) Filter the results by a slb instance address version. Can be either `ipv4`, or `ipv6`. -> **NOTE:** The disk category `cloud` has been outdated and can only be

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used by non-I/O Optimized ECS instances. Many availability zones don't support it. It is recommended to use `cloud_efficiency` or `cloud_ssd`.

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of zone IDs.
- `zones` - A list of availability zones. Each element contains the following attributes:
  - `id` - ID of the zone.
  - `local_name` - Name of the zone in the local language.
  - `available_instance_types` - Allowed instance types.
  - `available_resource_creation` - Type of resources that can be created.
  - `available_disk_categories` - Set of supported disk categories.
  - `multi_zone_ids` - A list of zone ids in which the multi zone.
  - `slb_slave_zone_ids` - A list of slb slave zone ids in which the slb master zone.

» alicloud_actiontrails

This data source provides a list of action trail of the current Alibaba Cloud user.

» Example Usage

```
data "alicloud_actiontrails" "trails" {
  name_regex = "tf-testacc-actiontrail"
}

output "first_trail_name" {
  value = "${data.alicloud_actiontrails.trails.actiontrails.0.name}"
}
```

» Argument Reference

The following arguments are supported:

- `name_regex` - (Optional) A regex string to filter results action trail name.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `names` - A list of trail names.
- `actiontrails` - A list of actiontrails. Each element contains the following attributes:
  - `name` - The name of the trail.
  - `event_rw` - Indicates whether the event is a read or a write event.
  - `oss_bucket_name` - The name of the specified OSS bucket.
  - `oss_key_prefix` - The prefix of the specified OSS bucket name.
  - `role_name` - The role in ActionTrail.
  - `sls_project_arn` - The unique ARN of the Log Service project.
  - `sls_write_role_arn` - The unique ARN of the Log Service role.

» alicloud_actiontrail

Provides a new resource to manage Action Trail.

NOTE: Available in 1.35.0+

» Example Usage

```
# Create a new action trail.
resource "alicloud_actiontrail" "foo" {
  name            = "action-trail"
  event_rw        = "Write-test"
  oss_bucket_name = "${alicloud_oss_bucket.bucket.id}"
  role_name       = "${alicloud_ram_role_policy_attachment.attach.role_name}"
  oss_key_prefix  = "at-product-account-audit-B"
}
```

» Argument Reference

The following arguments are supported:

- `name` - (Required, ForceNew) The name of the trail to be created, which must be unique for an account.
- `event_rw` - (Optional) Indicates whether the event is a read or a write event. Valid values: Read, Write, and All. Default value: Write.
- `oss_bucket_name` - (Required) The OSS bucket to which the trail delivers logs. Ensure that this is an existing OSS bucket.
- `role_name` - (Required) The RAM role in ActionTrail permitted by the user.

- `oss_key_prefix` - (Optional) The prefix of the specified OSS bucket name. This parameter can be left empty.
- `sls_project_arn` - (Optional) The unique ARN of the Log Service project.
- `sls_write_role_arn` - (Optional) The unique ARN of the Log Service role.

NOTE: `sls_project_arn` and `sls_write_role_arn` should be set or not set at the same time when actiontrail delivers logs.

» Attributes Reference

The following attributes are exported:

- `id` - The action trail id. The value is same as its name.

» Import

Action trail can be imported using the id, e.g.

```
$ terraform import alicloud_actiontrail.foo abc12345678
```

» alicloud_alikakfa_consumer_groups

This data source provides a list of ALIKAFKA Consumer Groups in an Alibaba Cloud account according to the specified filters.

NOTE: Available in 1.56.0+

» Example Usage

```
data "alicloud_alikafka_consumer_groups" "consumer_groups_ds" {
  instance_id = "xxx"
  consumer_id_regex = "CID-alikafkaGroupDatasourceName"
  output_file = "consumerGroups.txt"
}

output "first_group_name" {
  value = "${data.alicloud_alikafka_consumer_groups.consumer_groups_ds.consumer_ids.0}"
}
```

» Argument Reference

The following arguments are supported:

- `instance_id` - (Required) ID of the ALIKAFKA Instance that owns the consumer groups.
- `consumer_id_regex` - (Optional) A regex string to filter results by the consumer group id.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `consumer_ids` - A list of consumer group ids.

» alicloud_alikakfa_instances

This data source provides a list of ALIKAFKA Instances in an Alibaba Cloud account according to the specified filters.

NOTE: Available in 1.59.0+

» Example Usage

```
variable "instance_name" {
 default = "alikafkaInstanceName"
}

data "alicloud_zones" "default" {
    available_resource_creation= "VSwitch"
}
resource "alicloud_vpc" "default" {
  cidr_block = "172.16.0.0/12"
}

resource "alicloud_vswitch" "default" {
  vpc_id = "${alicloud_vpc.default.id}"
  cidr_block = "172.16.0.0/24"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
}

resource "alicloud_alikafka_instance" "default" {
```

```
  name = "${var.instance_name}"
  topic_quota = "50"
  disk_type = "1"
  disk_size = "500"
  deploy_type = "4"
  io_max = "20"
  vswitch_id = "${alicloud_vswitch.default.id}"
}

data "alicloud_alikafka_instances" "instances_ds" {
  name_regex = "alikafkaInstanceName"
  output_file = "instances.txt"
}

output "first_instance_name" {
  value = "${data.alicloud_alikafka_instances.instances_ds.instances.0.name}"
}
```

» Argument Reference

The following arguments are supported:

- `ids` - (Optional) A list of instance IDs to filter results.
- `name_regex` - (Optional) A regex string to filter results by the instance name.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of instance IDs.
- `names` - A list of instance names.
- `instances` - A list of instances. Each element contains the following attributes:
  - `id` - ID of the instance.
  - `name` - Name of the instance.
  - `create_time` - The create time of the instance.
  - `service_status` - The current status of the instance. -1: unknown status, 0: wait deploy, 1: initializing, 2: preparing, 3 starting, 5: in service, 7: wait upgrade, 8: upgrading, 10: released, 15: freeze, 101: deploy error, 102: upgrade error.

- deploy_type - The deploy type of the instance. 0: sharing instance, 1: vpc instance, 2: vpc instance(support ip mapping), 3: eip instance, 4: eip/vpc instance, 5: vpc instance.
- vpc_id - The ID of attaching VPC to instance.
- vswitch_id - The ID of attaching vswitch to instance.
- io_max - The peak value of io of the instance.
- eip_max - The peak bandwidth of the instance.
- disk_type - The disk type of the instance. 0: efficient cloud disk , 1: SSD.
- disk_size - The disk size of the instance.
- topic_quota - The max num of topic can be create of the instance.
- zone_id - The ID of attaching zone to instance.
- paid_type - The paid type of the instance.
- spec_type - The spec type of the instance.

» alicloud_alikafka_sasl_acls

This data source provides a list of ALIKAFKA Sasl acls in an Alibaba Cloud account according to the specified filters.

NOTE: Available in 1.66.0+

» Example Usage

```
data "alicloud_alikafka_sasl_acls" "sasl_acls_ds" {
  instance_id = "xxx"
  username = "username"
  acl_resource_type = "Topic"
  acl_resource_name = "testTopic"
  output_file = "saslAcls.txt"
}

output "first_sasl_acl_username" {
  value = "${data.alicloud_alikafka_sasl_acls.sasl_acls_ds.acls.0.username}"
}
```

» Argument Reference

The following arguments are supported:

- **instance_id** - (Required) ID of the ALIKAFKA Instance that owns the sasl acls.
- **username** - (Required) Get results for the specified username.

- `acl_resource_type` - (Required) Get results for the specified resource type.
- `acl_resource_name` - (Required) Get results for the specified resource name.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `acls` - A list of sasl acls. Each element contains the following attributes:
  - `username` - The username of the sasl acl.
  - `acl_resource_type` - The resource type of the sasl acl.
  - `acl_resource_name` - The resource name of the sasl acl.
  - `acl_resource_pattern_type` - The resource pattern type of the sasl acl.
  - `host` - The host of the sasl acl.
  - `acl_operation_type` - The operation type of the sasl acl.

» alicloud_alikafka_sasl_users

This data source provides a list of ALIKAFKA Sasl users in an Alibaba Cloud account according to the specified filters.

NOTE: Available in 1.66.0+

» Example Usage

```
data "alicloud_alikafka_sasl_users" "sasl_users_ds" {
  instance_id = "xxx"
  name_regex = "username"
  output_file = "saslUsers.txt"
}

output "first_sasl_username" {
  value = "${data.alicloud_alikafka_sasl_users.sasl_users_ds.users.0.username}"
}
```

» Argument Reference

The following arguments are supported:

- `instance_id` - (Required) ID of the ALIKAFKA Instance that owns the sasl users.
- `name_regex` - (Optional) A regex string to filter results by the username.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `names` - A list of sasl usernames.
- `users` - A list of sasl users. Each element contains the following attributes:
    - `username` - The username of the user.
    - `password` - The password of the user.

» alicloud_alikafka_topics

This data source provides a list of ALIKAFKA Topics in an Alibaba Cloud account according to the specified filters.

NOTE: Available in 1.56.0+

» Example Usage

```
data "alicloud_alikafka_topics" "topics_ds" {
  instance_id = "xxx"
  name_regex = "alikafkaTopicName"
  output_file = "topics.txt"
}

output "first_topic_name" {
  value = "${data.alicloud_alikafka_topics.topics_ds.topics.0.topic}"
}
```

» Argument Reference

The following arguments are supported:

- `name_regex` - (Optional) A regex string to filter results by the topic name.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `names` - A list of topic names.
- `topics` - A list of topics. Each element contains the following attributes:
  - `topic` - The name of the topic.
  - `create_time` - Time of creation.
  - `local_topic` - whether the current topic is kafka local topic or not.
  - `compact_topic` - whether the current topic is kafka compact topic or not.
  - `partition_num` - Partition number of the topic.
  - `remark` - Remark of the topic.
  - `status` - The current status code of the topic. There are three values to describe the topic status: 0 stands for the topic is in service, 1 stands for freezing and 2 stands for pause.

» alicloud_alikafka_consumer_group

Provides an ALIKAFKA consumer group resource.

NOTE: Available in 1.56.0+

NOTE: Only the following regions support create alikafka consumer group. [`cn-hangzhou,cn-beijing,cn-shenzhen,cn-shanghai,cn-qingdao,cn-hongkong,cn-huhehaote,cn-zhangjiak`

» Example Usage

Basic Usage

```
variable "consumer_id" {
  default = "CID-alikafkaGroupDatasourceName"
}

data "alicloud_zones" "default" {
    available_resource_creation= "VSwitch"
}
resource "alicloud_vpc" "default" {
  cidr_block = "172.16.0.0/12"
}

resource "alicloud_vswitch" "default" {
  vpc_id = "${alicloud_vpc.default.id}"
  cidr_block = "172.16.0.0/24"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
```

```
}

resource "alicloud_alikafka_instance" "default" {
  name = "tf-testacc-alikafkainstance"
  topic_quota = "50"
  disk_type = "1"
  disk_size = "500"
  deploy_type = "5"
  io_max = "20"
  vswitch_id = "${alicloud_vswitch.default.id}"
}

resource "alicloud_alikafka_consumer_group" "default" {
  consumer_id = "${var.consumer_id}"
  instance_id = "${alicloud_alikafka_instance.default.id}"
}
```

» Argument Reference

The following arguments are supported:

- `instance_id` - (Required, ForceNew) ID of the ALIKAFKA Instance that owns the groups.
- `consumer_id` - (Required, ForceNew) ID of the consumer group. The length cannot exceed 64 characters.
- `tags` - (Optional, Available in v1.63.0+) A mapping of tags to assign to the resource.

» Attributes Reference

The following attributes are exported:

- `id` - The `key` of the resource supplied above. The value is formulated as `<instance_id>:<consumer_id>`.

» Import

ALIKAFKA GROUP can be imported using the id, e.g.

```
$ terraform import alicloud_alikafka_consumer_group.group alikafka_post-cn-123455abc:consume
```

» alicloud_alikafka_instance

Provides an ALIKAFKA instance resource.

NOTE: Available in 1.59.0+

NOTE: ALIKAFKA instance resource only support create post pay instance.
Creation or modification may took about 10-40 minutes.

NOTE: Only the following regions support create alikafka pre paid instance.
[cn-hangzhou,cn-beijing,cn-shenzhen,cn-shanghai,cn-qingdao,cn-hongkong,cn-huhehaote,cn-zhangjia

NOTE: Only the following regions support create alikafka post paid instance.
[cn-hangzhou,cn-beijing,cn-shenzhen,cn-shanghai,cn-qingdao,cn-hongkong,cn-huhehaote,cn-zhangjia

» Example Usage

Basic Usage

```
variable "instance_name" {
 default = "alikafkaInstanceName"
}

data "alicloud_zones" "default" {
    available_resource_creation= "VSwitch"
}
resource "alicloud_vpc" "default" {
  cidr_block = "172.16.0.0/12"
}

resource "alicloud_vswitch" "default" {
  vpc_id = "${alicloud_vpc.default.id}"
  cidr_block = "172.16.0.0/24"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
}

resource "alicloud_alikafka_instance" "default" {
  name = "${var.instance_name}"
  topic_quota = "50"
  disk_type = "1"
  disk_size = "500"
  deploy_type = "4"
  io_max = "20"
  vswitch_id = "${alicloud_vswitch.default.id}"
}
```

» **Argument Reference**

The following arguments are supported:

- `name` - (Optional) Name of your Kafka instance. The length should between 3 and 64 characters. If not set, will use instance id as instance name.
- `topic_quota` - (Required) The max num of topic can be create of the instance. When modify this value, it only adjust to a greater value.
- `disk_type` - (Required, ForceNew) The disk type of the instance. 0: efficient cloud disk , 1: SSD.
- `disk_size` - (Required) The disk size of the instance. When modify this value, it only support adjust to a greater value.
- `deploy_type` - (Required, ForceNew) The deploy type of the instance. Currently only support two deploy type, 4: eip/vpc instance, 5: vpc instance.
- `io_max` - (Required) The max value of io of the instance. When modify this value, it only support adjust to a greater value.
- `eip_max` - (Optional) The max bandwidth of the instance. When modify this value, it only support adjust to a greater value.
- `paid_type` - (Optional) The paid type of the instance. Support two type, "PrePaid": pre paid type instance, "PostPaid": post paid type instance. Default is PostPaid. When modify this value, it only support adjust from post pay to pre pay.
- `spec_type` - (Optional) The spec type of the instance. Support two type, "normal": normal version instance, "professional": professional version instance. Default is normal. When modify this value, it only support adjust from normal to professional. Note only pre paid type instance support professional specific type.
- `vswitch_id` - (Required, ForceNew) The ID of attaching vswitch to instance.
- `tags` - (Optional, Available in v1.63.0+) A mapping of tags to assign to the resource.

NOTE: Arguments io_max, disk_size, topic_quota, eip_max should follow the following constraints.

io_max	disk_size(min-max:lag)	topic_quota(min-max:lag)	eip_max(min-max:lag)
20	500-6100:100	50-450:1	1-160:1
30	800-6100:100	50-450:1	1-240:1
60	1400-6100:100	80-450:1	1-500:1
90	2100-6100:100	100-450:1	1-500:1
120	2700-6100:100	150-450:1	1-500:1

» Removing alicloud_alikafka_instance from your configuration

The alicloud_alikafka_instance resource allows you to manage your alikafka instance, but Terraform cannot destroy it if your instance type is pre paid(post paid type can destroy normally). Removing this resource from your configuration will remove it from your statefile and management, but will not destroy the instance. You can resume managing the instance via the alikafka Console.

» Attributes Reference

The following attributes are exported:

- `id` - The `key` of the resource supplied above, also call instance id.
- `vpc_id` - The ID of attaching VPC to instance.
- `zone_id` - The Zone to launch the kafka instance.

» Import

ALIKAFKA TOPIC can be imported using the id, e.g.

```
$ terraform import alicloud_alikafka_instance.instance alikafka_post-cn-123455abc
```

» alicloud_alikafka_sasl_acl

Provides an ALIKAFKA sasl acl resource.

NOTE: Available in 1.66.0+

NOTE: Only the following regions support create alikafka sasl user. [`cn-hangzhou,cn-beijing,cn-shenzhen,cn-shanghai,cn-qingdao,cn-hongkong,cn-huhehaote,cn-zhangjia`

» Example Usage

Basic Usage

```
variable "username" {
  default = "testusername"
}

variable "password" {
  default = "testpassword"
}

data "alicloud_zones" "default" {
```

```
    available_resource_creation= "VSwitch"
}
resource "alicloud_vpc" "default" {
  cidr_block = "172.16.0.0/12"
}

resource "alicloud_vswitch" "default" {
  vpc_id = "${alicloud_vpc.default.id}"
  cidr_block = "172.16.0.0/24"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
}

resource "alicloud_alikafka_instance" "default" {
  name = "tf-testacc-alikafkainstance"
  topic_quota = "50"
  disk_type = "1"
  disk_size = "500"
  deploy_type = "5"
  io_max = "20"
  vswitch_id = "${alicloud_vswitch.default.id}"
}

resource "alicloud_alikafka_topic" "default" {
  instance_id = "${alicloud_alikafka_instance.default.id}"
  topic = "test-topic"
  remark = "topic-remark"
}

resource "alicloud_alikafka_sasl_user" "default" {
  instance_id = "${alicloud_alikafka_instance.default.id}"
  username = "${var.username}"
  password = "${var.password}"
}

resource "alicloud_alikafka_sasl_acl" "default" {
  instance_id = "${alicloud_alikafka_instance.default.id}"
  username = "${alicloud_alikafka_sasl_user.default.username}"
  acl_resource_type = "Topic"
  acl_resource_name = "${alicloud_alikafka_topic.default.topic}"
  acl_resource_pattern_type = "LITERAL"
  acl_operation_type = "Write"
}
```

» Argument Reference

The following arguments are supported:

- `instance_id` - (Required, ForceNew) ID of the ALIKAFKA Instance that owns the groups.
- `username` - (Required, ForceNew) Username for the sasl user. The length should between 1 to 64 characters. The user should be an existed sasl user.
- `acl_resource_type` - (Required, ForceNew) Resource type for this acl. The resource type can only be "Topic" and "Group".
- `acl_resource_name` - (Required, ForceNew) Resource name for this acl. The resource name should be a topic or consumer group name.
- `acl_resource_pattern_type` - (Required, ForceNew) Resource pattern type for this acl. The resource pattern support two types "LITERAL" and "PREFIXED". "LITERAL": A literal name defines the full name of a resource. The special wildcard character "*" can be used to represent a resource with any name. "PREFIXED": A prefixed name defines a prefix for a resource.
- `acl_operation_type` - (Required, ForceNew) Operation type for this acl. The operation type can only be "Write" and "Read".

» Attributes Reference

The following attributes are exported:

- `id` - The `key` of the resource supplied above. The value is formulated as `<instance_id>:<username>:<acl_resource_type>:<acl_resource_name>:<acl_resource_pattern_`
- `host` - The host of the acl.

» Import

ALIKAFKA GROUP can be imported using the id, e.g.

```
$ terraform import alicloud_alikafka_sasl_acl.acl alikafka_post-cn-123455abc:username:Topic:
```

» alicloud_alikafka_sasl_user

Provides an ALIKAFKA sasl user resource.

NOTE: Available in 1.66.0+

NOTE: Only the following regions support create alikafka sasl user. [`cn-hangzhou,cn-beijing,cn-shenzhen,cn-shanghai,cn-qingdao,cn-hongkong,cn-huhehaote,cn-zhangjia`

» Example Usage

Basic Usage

```
variable "username" {
  default = "testusername"
}

variable "password" {
  default = "testpassword"
}

data "alicloud_zones" "default" {
    available_resource_creation= "VSwitch"
}
resource "alicloud_vpc" "default" {
  cidr_block = "172.16.0.0/12"
}

resource "alicloud_vswitch" "default" {
  vpc_id = "${alicloud_vpc.default.id}"
  cidr_block = "172.16.0.0/24"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
}

resource "alicloud_alikafka_instance" "default" {
  name = "tf-testacc-alikafkainstance"
  topic_quota = "50"
  disk_type = "1"
  disk_size = "500"
  deploy_type = "5"
  io_max = "20"
  vswitch_id = "${alicloud_vswitch.default.id}"
}

resource "alicloud_alikafka_sasl_user" "default" {
  instance_id = "${alicloud_alikafka_instance.default.id}"
  username = "${var.username}"
  password = "${var.password}"
}
```

» Argument Reference

The following arguments are supported:

- `instance_id` - (Required, ForceNew) ID of the ALIKAFKA Instance that owns the groups.
- `username` - (Required, ForceNew) Username for the sasl user. The length should between 1 to 64 characters. The characters can only contain 'a'-'z', 'A'-'Z', '0'-'9', '_' and '-'.
- `password` - (Optional, Sensitive) Operation password. It may consist of letters, digits, or underlines, with a length of 1 to 64 characters. You have to specify one of `password` and `kms_encrypted_password` fields.
- `kms_encrypted_password` - (Optional) An KMS encrypts password used to a db account. You have to specify one of `password` and `kms_encrypted_password` fields.
- `kms_encryption_context` - (Optional, MapString) An KMS encryption context used to decrypt `kms_encrypted_password` before creating or updating a user with `kms_encrypted_password`. See Encryption Context. It is valid when `kms_encrypted_password` is set.

» Attributes Reference

The following attributes are exported:

- `id` - The `key` of the resource supplied above. The value is formulated as `<instance_id>:<username>`.

» Import

ALIKAFKA GROUP can be imported using the id, e.g.

```
$ terraform import alicloud_alikafka_sasl_user.user alikafka_post-cn-123455abc:username
```

» alicloud_alikafka_topic

Provides an ALIKAFKA topic resource.

NOTE: Available in 1.56.0+

NOTE: Only the following regions support create alikafka topic. [`cn-hangzhou,cn-beijing,cn-shenzhen,cn-s`

» Example Usage

Basic Usage

```
data "alicloud_zones" "default" {
    available_resource_creation= "VSwitch"
}
```

```
resource "alicloud_vpc" "default" {
  cidr_block = "172.16.0.0/12"
}

resource "alicloud_vswitch" "default" {
  vpc_id = "${alicloud_vpc.default.id}"
  cidr_block = "172.16.0.0/24"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
}

resource "alicloud_alikafka_instance" "default" {
  name = "tf-testacc-alikafkainstance"
  topic_quota = "50"
  disk_type = "1"
  disk_size = "500"
  deploy_type = "5"
  io_max = "20"
  vswitch_id = "${alicloud_vswitch.default.id}"
}

variable "topic" {
  default = "alikafkaTopicName"
}

resource "alicloud_alikafka_topic" "default" {
  instance_id = "${alicloud_alikafka_instance.default.id}"
  topic = "${var.topic}"
  local_topic = "false"
  compact_topic = "false"
  partition_num = "12"
  remark = "dafault_kafka_topic_remark"
}
```

» Argument Reference

The following arguments are supported:

- `instance_id` - (Required, ForceNew) InstanceId of your Kafka resource, the topic will create in this instance.
- `topic` - (Required, ForceNew) Name of the topic. Two topics on a single instance cannot have the same name. The length cannot exceed 64 characters.
- `local_topic` - (Optional, ForceNew) Whether the topic is localTopic or not.
- `compact_topic` - (Optional, ForceNew) Whether the topic is compact-

Topic or not. Compact topic must be a localTopic.

- `partition_num` - (Optional) The number of partitions of the topic. The number should between 1 and 48.
- `remark` - (Required) This attribute is a concise description of topic. The length cannot exceed 64.
- `tags` - (Optional, Available in v1.63.0+) A mapping of tags to assign to the resource.

» Attributes Reference

The following attributes are exported:

- `id` - The `key` of the resource supplied above. The value is formulated as `<instance_id>:<topic>`.

» Import

ALIKAFKA TOPIC can be imported using the id, e.g.

```
$ terraform import alicloud_alikafka_topic.topic alikafka_post-cn-123455abc:topicName
```

» alicloud_gpdb_instances

The `alicloud_gpdb_instances` data source provides a collection of AnalyticDB for PostgreSQL instances available in Alicloud account. Filters support regular expression for the instance name or availability_zone.

NOTE: Available in 1.47.0+

» Example Usage

```
data "alicloud_gpdb_instances" "gpdb" {
  availability_zone = "cn-beijing-c"
  name_regex        = "gp-.+\\d+"
  output_file       = "instances.txt"
}

output "instance_id" {
  value = "${data.alicloud_gpdb_instances.gpdb.instances.0.id}"
}
```

» Argument Reference

The following arguments are supported:

- `ids` - (Optional) A list of instance IDs.
- `name_regex` - (Optional) A regex string to apply to the instance name.
- `availability_zone` - (Optional) Instance availability zone.
- `vswitch_id` - (Optional) Used to retrieve instances belong to specified `vswitch` resources.
- `tags` - (Optional, Available in v1.55.3+) A mapping of tags to assign to the resource.
- `output_file` - (Optional) The name of file that can save the collection of instances after running `terraform plan`.

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - The ids list of AnalyticDB for PostgreSQL instances.
- `names` - The names list of AnalyticDB for PostgreSQL instance.
- `instances` - A list of AnalyticDB for PostgreSQL instances. Its every element contains the following attributes:
  - `id` - The instance id.
  - `description` - The description of an instance.
  - `charge_type` - Billing method. Value options are `PostPaid` for Pay-As-You-Go and `PrePaid` for yearly or monthly subscription.
  - `region_id` - Region ID the instance belongs to.
  - `availability_zone` - Instance availability zone.
  - `creation_time` - The time when you create an instance. The format is YYYY-MM-DDThh:mm:ssZ, such as 2011-05-30T12:11:4Z.
  - `status` - Status of the instance.
  - `engine` - Database engine type. Supported option is `gpdb`.
  - `engine_version` - Database engine version.
  - `network_type` - Classic network or VPC.
  - `instance_class` - The group type.
  - `instance_group_count` - The number of groups.

» alicloud_gpdb_connection

Provides a connection resource to allocate an Internet connection string for instance.

NOTE: Available in 1.48.0+

NOTE: Each instance will allocate a intranet connection string automatically and its prefix is instance ID. To avoid unnecessary conflict, please specified a internet connection prefix before applying the resource.

» Example Usage

```
variable "creation" {
  default = "Gpdb"
}

variable "name" {
  default = "gpdbConnectionBasic"
}

data "alicloud_zones" "default" {
  available_resource_creation = "${var.creation}"
}

resource "alicloud_vpc" "default" {
  name       = "${var.name}"
  cidr_block = "172.16.0.0/16"
}

resource "alicloud_vswitch" "default" {
  vpc_id            = "${alicloud_vpc.default.id}"
  cidr_block        = "172.16.0.0/24"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  name              = "${var.name}"
}

resource "alicloud_gpdb_instance" "default" {
  vswitch_id           = "${alicloud_vswitch.default.id}"
  engine               = "gpdb"
  engine_version       = "4.3"
  instance_class       = "gpdb.group.segsdx2"
  instance_group_count = "2"
  description          = "${var.name}"
}

resource "alicloud_gpdb_connection" "default" {
  instance_id       = "${alicloud_gpdb_instance.default.id}"
  connection_prefix = "testAbc"
}
```

» Argument Reference

The following arguments are supported:

- `instance_id` - (Required, ForceNew) The Id of instance that can run database.
- `connection_prefix` - (ForceNew) Prefix of an Internet connection string. It must be checked for uniqueness. It may consist of lowercase letters, numbers, and underlines, and must start with a letter and have no more than 30 characters. Default to + '-tf'.
- `port` - (Optional) Internet connection port. Valid value: [3200-3999]. Default to 3306.

» Timeouts

NOTE: Available in 1.53.0+.

The `timeouts` block allows you to specify timeouts for certain actions:

- `create` - (Defaults to 10 mins) Used when creating the Internet connection (until DB instance reaches the initial `Running` status).
- `update` - (Defaults to 10 mins) Used when activating the DB instance during update.
- `delete` - (Defaults to 10 mins) Used when terminating the DB instance.

» Attributes Reference

The following attributes are exported:

- `id` - The current instance connection resource ID. Composed of instance ID and connection string with format `<instance_id>:<connection_prefix>`.
- `connection_string` - Connection instance string.
- `ip_address` - The ip address of connection string.

» Import

AnalyticDB for PostgreSQL's connection can be imported using the id, e.g.

```
$ terraform import alicloud_gpdb_connection.example abc12345678
```

» alicloud_gpdb_instance

Provides a AnalyticDB for PostgreSQL instance resource supports replica set instances only. the AnalyticDB for PostgreSQL provides stable, reliable, and

automatic scalable database services. You can see detail product introduction here

NOTE: Available in 1.47.0+

NOTE: The following regions don't support create Classic network Gpdb instance. [`ap-southeast-2,ap-southeast-3,ap-southeast-5,ap-south-1,me-east-1,ap-northeast-1,eu-wes`

NOTE: Create instance or change instance would cost 10~15 minutes. Please make full preparation.

» Example Usage

» Create a Gpdb instance

```
data "alicloud_zones" "default" {
  available_resource_creation = "Gpdb"
}

resource "alicloud_vpc" "default" {
  name       = "vpc-123456"
  cidr_block = "172.16.0.0/16"
}

resource "alicloud_vswitch" "default" {
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  vpc_id            = "${alicloud_vpc.default.id}"
  cidr_block        = "172.16.0.0/24"
  name              = "vpc-123456"
}

resource "alicloud_gpdb_instance" "example" {
  description          = "tf-gpdb-test""
  engine               = "gpdb"
  engine_version       = "4.3"
  instance_class       = "gpdb.group.segsdx2"
  instance_group_count = "2"
  vswitch_id           = "${alicloud_vswitch.default.id}"
  security_ip_list     = ["10.168.1.12", "100.69.7.112"]
}
```

» Argument Reference

The following arguments are supported:

- `engine` (Required, ForceNew) Database engine: gpdb. System Default value: gpdb.
- `engine_version` - (Required, ForceNew) Database version. Value options can refer to the latest docs CreateDBInstance `EngineVersion`.
- `instance_class` - (Required) Instance specification. see Instance specifications.
- `instance_group_count` - (Required) The number of groups. Valid values: [2,4,8,16,32]
- `description` - (Optional) The name of DB instance. It a string of 2 to 256 characters.
- `instance_charge_type` - (Optional, ForceNew) Valid values are `PrePaid`, `PostPaid`,System default to `PostPaid`.
- `zone_id` - (Optional, ForceNew) The Zone to launch the DB instance. it supports multiple zone. If it is a multi-zone and `vswitch_id` is specified, the vswitch must in one of them. The multiple zone ID can be retrieved by setting `multi` to "true" in the data source `alicloud_zones`.
- `vswitch_id` - (Optional, ForceNew) The virtual switch ID to launch DB instances in one VPC.
- `security_ip_list` - (Optional) List of IP addresses allowed to access all databases of an instance. The list contains up to 1,000 IP addresses, separated by commas. Supported formats include 0.0.0.0/0, 10.23.12.24 (IP), and 10.23.12.24/24 (Classless Inter-Domain Routing (CIDR) mode. /24 represents the length of the prefix in an IP address. The range of the prefix length is [1,32]).
- `tags` - (Optional, Available in v1.55.3+) A mapping of tags to assign to the resource.

» Timeouts

NOTE: Available in 1.53.0+.

The `timeouts` block allows you to specify timeouts for certain actions:

- `create` - (Defaults to 30 mins) Used when creating the DB instance (until it reaches the initial `Running` status).

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the Instance.

» Import

AnalyticDB for PostgreSQL can be imported using the id, e.g.

```
$ terraform import alicloud_gpdb_instance.example gp-bp1291daeda44194
```

» alicloud_api_gateway_apis

This data source provides the apis of the current Alibaba Cloud user.

» Example Usage

```
data "alicloud_api_gateway_apis" "data_apigatway_apis" {
  output_file = "output_ApiGatawayApis"
}

output "first_api_id" {
  value = "${data.alicloud_api_gateway_apis.data_apigatway.apis.0.id}"
}
```

» Argument Reference

The following arguments are supported:

- `api_id` - (Deprecated, Optional) (It has been deprecated from version 1.52.2, and use field 'ids' to replace.) ID of the specified API.
- `group_id` - (Optional) ID of the specified group.
- `name_regex` - (Optional) A regex string to filter api gateway apis by name.
- `ids` - (Optional, Available 1.52.2+) A list of api IDs.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of api IDs.
- `names` - A list of api names.
- `apis` - A list of apis. Each element contains the following attributes:
  - `id` - API ID, which is generated by the system and globally unique.
  - `name` - API name.
  - `description` - API description.
  - `region_id` - The ID of the region where the API is located.
  - `group_id` - The group id that the apis belong to.
  - `group_name` - The group name that the apis belong to.

» alicloud_api_gateway_apps

This data source provides the apps of the current Alibaba Cloud user.

» Example Usage

```
data "alicloud_api_gateway_apps" "data_apigatway" {
  output_file = "outapps"
}

output "first_app_id" {
  value = "${data.alicloud_api_gateway_apps.data_apigatway.apps.0.id}"
}
```

» Argument Reference

The following arguments are supported:

- `name_regex` - (Optional) A regex string to filter apps by name.
- `ids` - (Optional, Available in 1.52.2+) A list of app IDs.
- `tags` - (Optional, Available in v1.55.3+) A mapping of tags to assign to the resource.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of app IDs.
- `names` - A list of app names.
- `apps` - A list of apps. Each element contains the following attributes:
  - `id` - App ID, which is generated by the system and globally unique.
  - `name` - App name.
  - `description` - App description.
  - `created_time` - Creation time (Greenwich mean time).
  - `modified_time` - Last modification time (Greenwich mean time).
  - `app_code` - App code.

» alicloud_api_gateway_groups

This data source provides the api groups of the current Alibaba Cloud user.

» Example Usage

```
data "alicloud_api_gateway_groups" "data_apigatway" {
  output_file = "outgroups"
}


output "first_group_id" {
  value = "${data.alicloud_api_gateway_groups.data_apigatway.groups.0.id}"
}
```

» Argument Reference

The following arguments are supported:

- `name_regex` - (Optional) A regex string to filter api gateway groups by name.
- `ids` - (Optional, Available 1.52.1+) A list of api group IDs.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of api group IDs.
- `names` - A list of api group names.
- `groups` - A list of api groups. Each element contains the following attributes:
  - `id` - API group ID, which is generated by the system and globally unique.
  - `name` - API group name.
  - `description` - API group description.
  - `region_id` - The ID of the region where the API group is located.
  - `sub_domain` - Second-level domain name automatically assigned to the API group.
  - `created_time` - Creation time (Greenwich mean time).
  - `modified_time` - Last modification time (Greenwich mean time).
  - `traffic_limit` - Upper QPS limit of the API group; default value: 500, which can be increased by submitting an application.
  - `billing_status` - Billing status.
  - NORMAL: The API group is normal.
  - LOCKED: Locked due to outstanding payment.
  - `illegal_status` - Locking in invalid state.
  - NORMAL: The API group is normal.
  - LOCKED: Locked due to illegality.

» alicloud_api_gateway_api

Provides an api resource.When you create an API, you must enter the basic information about the API, and define the API request information, the API backend service and response information.

For information about Api Gateway Api and how to use it, see Create an API

NOTE: Terraform will auto build api while it uses `alicloud_api_gateway_api` to build api.

» Example Usage

Basic Usage

```
resource "alicloud_api_gateway_api" "apiGatewayApi" {
  name        = "terraformapi"
  group_id    = "${alicloud_api_gateway_group.apiGatewayGroup.id}"
  description = "description"
  auth_type   = "APP"

  request_config = {
    protocol = "HTTP"
    method   = "GET"
    path     = "/test/path1"
    mode     = "MAPPING"
  }

  service_type = "HTTP"

  http_service_config = {
    address   = "http://apigateway-backend.alicloudapi.com:8080"
    method    = "GET"
    path      = "/web/cloudapi"
    timeout   = 12
    aone_name = "cloudapi-openapi"
  }

  request_parameters = [
    {
      name         = "aaa"
      type         = "STRING"
      required     = "OPTIONAL"
      in           = "QUERY"
      in_service   = "QUERY"
      name_service = "testparams"
```

```
    },
  ]

  stage_names = [
    "RELEASE",
    "TEST",
  ]
}
```

» Argument Reference

The following arguments are supported:

- `name` - (Required) The name of the api gateway api. Defaults to null.
- `group_id` - (Required, ForcesNew) The api gateway that the api belongs to. Defaults to null.
- `description` - (Required) The description of the api. Defaults to null.
- `auth_type` - (Required) The authorization Type including APP and ANONYMOUS. Defaults to null.
- `request_config` - (Required, Type: list) Request_config defines how users can send requests to your API.
- `service_type` - (Required) The type of backend service. Type including HTTP,VPC and MOCK. Defaults to null.
- `http_service_config` - (Optional, Type: list) http_service_config defines the config when service_type selected 'HTTP'.
- `http_vpc_service_config` - (Optional, Type: list) http_vpc_service_config defines the config when service_type selected 'HTTP-VPC'.
- `fc_service_config` - (Optional, Type: list) fc_service_config defines the config when service_type selected 'FunctionCompute'.
- `mock_service_config` - (Optional, Type: list) http_service_config defines the config when service_type selected 'MOCK'.
- `request_parameters` - (Required, Type: list) request_parameters defines the request parameters of the api.
- `constant_parameters` - (Required, Type: list) constant_parameters defines the constant parameters of the api.
- `system_parameters` - (Required, Type: list) system_parameters defines the system parameters of the api.
- `stage_names` - (Optional, Type: list) Stages that the api need to be deployed. Valid value: RELEASE | PRE | TEST.

» Block request_config

The request_config mapping supports the following:

- **protocol** - (Required) The protocol of api which supports values of 'HTTP','HTTPS' or 'HTTP,HTTPS'
- **method** - (Required) The method of the api, including 'GET','POST','PUT' and etc..
- **path** - (Required) The request path of the api.
- **mode** - (Required) The mode of the parameters between request parameters and service parameters, which support the values of 'MAPPING' and 'PASSTHROUGH'
- **body_format** - (Optional) The body format of the api, which support the values of 'STREAM' and 'FORM'

» Block http_service_config

The http_service_config mapping supports the following:

- **address** - (Required) The address of backend service.
- **path** - (Required) The path of backend service.
- **method** - (Required) The http method of backend service.
- **timeout** - (Required) Backend service time-out time; unit: millisecond.

» Block http_vpc_service_config

The http_vpc_service_config mapping supports the following:

- **name** - (Required) The name of vpc instance.
- **path** - (Required) The path of backend service.
- **method** - (Required) The http method of backend service.
- **timeout** - (Required) Backend service time-out time; unit: millisecond.

» Block fc_vpc_service_config

The fc_service_config mapping supports the following:

- **region** - (Required) The region that the function compute service belongs to.
- **function_name** - (Required) The function name of function compute service.
- **service_name** - (Required) The service name of function compute service.
- **arn_role** - (Optional) RAM role arn attached to the Function Compute service. This governs both who / what can invoke your Function, as well as what resources our Function has access to. See User Permissions for more details.
- **timeout** - (Required) Backend service time-out time; unit: millisecond.

» Block mock_service_config

The mock_service_config mapping supports the following:

- `result` - (Required) The result of the mock service.

» Block request_parameters

The request_parameters mapping supports the following:

- `name` - (Required) Request's parameter name.
- `type` - (Required) Parameter type which supports values of 'STRING','INT','BOOLEAN','LONG',"FLOA and "DOUBLE"
- `required` - (Required) Parameter required or not; values: REQUIRED and OPTIONAL.
- `in` - (Required) Request's parameter location; values: BODY, HEAD, QUERY, and PATH.
- `in_service` - (Required) Backend service's parameter location; values: BODY, HEAD, QUERY, and PATH.
- `name_service` - (Required) Backend service's parameter name.
- `description` - (Optional) The description of parameter.
- `default_value` - (Optional) The default value of the parameter.

» Block constant_parameters

The constant_parameters mapping supports the following:

- `name` - (Required) Constant parameter name.
- `in` - (Required) Constant parameter location; values: 'HEAD' and 'QUERY'.
- `value` - (Required) Constant parameter value.
- `description` - (Optional) The description of Constant parameter.

» Block system_parameters

The system_parameters mapping supports the following:

- `name` - (Required) System parameter name which supports values including in system parameter list
- `in` - (Required) System parameter location; values: 'HEAD' and 'QUERY'.
- `name_service` - (Required) Backend service's parameter name.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the api resource of api gateway.
- `api_id` - The ID of the api of api gateway.

» Import

Api gateway api can be imported using the id.Format to `<API Group Id>:<API Id>` e.g.

```
$ terraform import alicloud_api_gateway_api.example "ab2351f2ce904edaa8d92a0510832b91:e4f728
```

» alicloud_api_gateway_app

Provides an app resource.It must create an app before calling a third-party API because the app is the identity used to call the third-party API.

For information about Api Gateway App and how to use it, see Create An APP

NOTE: Terraform will auto build api app while it uses `alicloud_api_gateway_app` to build api app.

» Example Usage

Basic Usage

```
resource "alicloud_api_gateway_app" "apiTest" {
  name        = "ApiGatewayAPp"
  description = "description of the app"
}
```

» Argument Reference

The following arguments are supported:

- `name` - (Required) The name of the app.
- `description` - (Optional) The description of the app. Defaults to null.
- `tags` - (Optional, Available in v1.55.3+) A mapping of tags to assign to the resource.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the app of api gateway.

» Import

Api gateway app can be imported using the id, e.g.

```
$ terraform import alicloud_api_gateway_app.example "7379660"
```

» alicloud_api_gateway_app_attachment

Provides an app attachment resource.It is used for authorizing a specific api to an app accessing.

For information about Api Gateway App attachment and how to use it, see Add specified API access authorities

NOTE: Terraform will auto build app attachment while it uses `alicloud_api_gateway_app_attachment` to build.

» Example Usage

Basic Usage

```
resource "alicloud_api_gateway_app_attachment" "foo" {
  api_id     = "d29d25b9cfdf4742b1a3f6537299a749"
  group_id   = "aaef8cdbb404420f9398a74ed1db7fff"
  app_id     = "20898181"
  stage_name = "PRE"
}
```

» Argument Reference

The following arguments are supported:

- `api_id` - (Required ForceNew) The api_id that app apply to access.
- `group_id` - (Required ForceNew) The group that the api belongs to.
- `app_id` - (Required ForceNew) The app that apply to the authorization.
- `stage_name` - (Required ForceNew) Stage that the app apply to access.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the app attachment of api gateway., formatted as `<group_id>:<api_id>:<app_id>:<stage_name>`.

» alicloud_api_gateway_group

Provides an api group resource.To create an API, you must firstly create a group which is a basic attribute of the API.

For information about Api Gateway Group and how to use it, see Create An Api Group

NOTE: Terraform will auto build api group while it uses `alicloud_api_gateway_group` to build api group.

» Example Usage

Basic Usage

```
resource "alicloud_api_gateway_group" "apiGroup" {
  name        = "ApiGatewayGroup"
  description = "description of the api group"
}
```

» Argument Reference

The following arguments are supported:

- `name` - (Required) The name of the api gateway group. Defaults to null.
- `description` - (Required) The description of the api gateway group. Defaults to null.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the api group of api gateway.
- `sub_domain` - (Available in 1.69.0+) Second-level domain name automatically assigned to the API group.
- `vpc_domain` - (Available in 1.69.0+) Second-level VPC domain name automatically assigned to the API group.

» Import

Api gateway group can be imported using the id, e.g.

```
$ terraform import alicloud_api_gateway_group.example "ab2351f2ce904edaa8d92a0510832b91"
```

» alicloud_api_gateway_app

Provides an vpc authorization resource.This authorizes the API gateway to access your VPC instances.

For information about Api Gateway vpc and how to use it, see Set Vpc Access

NOTE: Terraform will auto build vpc authorization while it uses `alicloud_api_gateway_vpc_access` to build vpc.

» Example Usage

Basic Usage

```
resource "alicloud_api_gateway_vpc_access" "foo" {
  name        = "ApiGatewayVpc"
  vpc_id      = "vpc-awkcj192ka9zalz"
  instance_id = "i-kai2ks92kzkw92ka"
  port        = 8080
}
```

» Argument Reference

The following arguments are supported:

- `name` - (Required ForceNew) The name of the vpc authorization.
- `vpc_id` - (Required ForceNew) The vpc id of the vpc authorization.
- `instance_id` - (Required ForceNew) ID of the instance in VPC (ECS/Server Load Balance).
- `port` - (Required ForceNew) ID of the port corresponding to the instance.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the vpc authorization of api gateway.

» Import

Api gateway app can be imported using the id, e.g.

`$ terraform import alicloud_api_gateway_vpc_access.example "APiGatewayVpc:vpc-aswcj19ajsz:i-`

» alicloud_ess_scaling_configurations

This data source provides available scaling configuration resources.

» Example Usage

```
data "alicloud_ess_scaling_configurations" "scalingconfigurations_ds" {
  scaling_group_id = "scaling_group_id"
  ids              = ["scaling_configuration_id1", "scaling_configuration_id2"]
  name_regex       = "scaling_configuration_name"
}

output "first_scaling_rule" {
  value = "${data.alicloud_ess_scaling_configurations.scalingconfigurations_ds.configuration
}
```

» Argument Reference

The following arguments are supported:

- `scaling_group_id` - (Optional) Scaling group id the scaling configurations belong to.
- `name_regex` - (Optional) A regex string to filter resulting scaling configurations by name.
- `ids` - (Optional) A list of scaling configuration IDs.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of scaling configuration ids.
- `names` - A list of scaling configuration names.
- `configurations` - A list of scaling rules. Each element contains the following attributes:
    - `id` - ID of the scaling rule.
    - `scaling_group_id` - ID of the scaling group.
    - `name` - Name of the scaling configuration.
    - `image_id` - Image ID of the scaling configuration.
    - `instance_type` - Instance type of the scaling configuration.
    - `security_group_id` - Security group ID of the scaling configuration.
    - `internet_charge_type` - Internet charge type of the scaling configuration.

- – `internet_max_bandwidth_in` - Internet max bandwidth in of the scaling configuration.
- – `internet_max_bandwidth_out` - Internet max bandwidth of the scaling configuration.
- – `system_disk_category` - System disk category of the scaling configuration.
- – `system_disk_size` - System disk size of the scaling configuration.
- – `data_disks` - Data disks of the scaling configuration.
- – `size` - Size of data disk.
- – `category` - Category of data disk.
- – `snapshot_id` - Size of data disk.
- – `device` - Device attribute of data disk.
- – `delete_with_instance` - Delete_with_instance attribute of data disk.
- – `lifecycle_state` - Lifecycle state of the scaling configuration.
- – `creation_time` - Creation time of the scaling configuration.

» alicloud_ess_scaling_groups

This data source provides available scaling group resources.

» Example Usage

```
data "alicloud_ess_scaling_groups" "scalinggroups_ds" {
  ids        = ["scaling_group_id1", "scaling_group_id2"]
  name_regex = "scaling_group_name"
}

output "first_scaling_group" {
  value = "${data.alicloud_ess_scaling_groups.scalinggroups_ds.groups.0.id}"
}
```

» Argument Reference

The following arguments are supported:

- `name_regex` - (Optional) A regex string to filter resulting scaling groups by name.
- `ids` - (Optional) A list of scaling group IDs.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of scaling group ids.
- `names` - A list of scaling group names.
- `groups` - A list of scaling groups. Each element contains the following attributes:
  - `id` - ID of the scaling group.
  - `name` - Name of the scaling group.
  - `active_scaling_configuration` -Active scaling configuration for scaling group.
  - `launch_template_id` - Active launch template ID for scaling group.
  - `launch_template_version` - Version of active launch template.
  - `region_id` - Region ID the scaling group belongs to.
  - `min_size` - The minimum number of ECS instances.
  - `max_size` - The maximum number of ECS instances.
  - `cooldown_time` - Default cooldown time of scaling group.
  - `removal_policies` - Removal policy used to select the ECS instance to remove from the scaling group.
  - `load_balancer_ids` - Slb instances id which the ECS instance attached to.
  - `db_instance_ids` - Db instances id which the ECS instance attached to.
  - `vswitch_ids` - Vswitches id in which the ECS instance launched.
  - `lifecycle_state` - Lifecycle state of scaling group.
  - `total_capacity` - Number of instances in scaling group.
  - `active_capacity` - Number of active instances in scaling group.
  - `pending_capacity` - Number of pending instances in scaling group.
  - `removing_capacity` - Number of removing instances in scaling group.
  - `creation_time` - Creation time of scaling group.

» alicloud_ess_scaling_rules

This data source provides available scaling rule resources.

» Example Usage

```
data "alicloud_ess_scaling_rules" "scalingrules_ds" {
  scaling_group_id = "scaling_group_id"
  ids              = ["scaling_rule_id1", "scaling_rule_id2"]
  name_regex       = "scaling_rule_name"
}
```

```
output "first_scaling_rule" {
  value = "${data.alicloud_ess_scaling_rules.scalingrules_ds.rules.0.id}"
}
```

» Argument Reference

The following arguments are supported:

- `scaling_group_id` - (Optional) Scaling group id the scaling rules belong to.
- `type` - (Optional) Type of scaling rule.
- `name_regex` - (Optional) A regex string to filter resulting scaling rules by name.
- `ids` - (Optional) A list of scaling rule IDs.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of scaling rule ids.
- `names` - A list of scaling rule names.
- `rules` - A list of scaling rules. Each element contains the following attributes:
    - `id` - ID of the scaling rule.
    - `scaling_group_id` - ID of the scaling group.
    - `name` - Name of the scaling rule.
    - `type` - Type of the scaling rule.
    - `cooldown` - Cooldown time of the scaling rule.
    - `adjustment_type` - Adjustment type of the scaling rule.
    - `adjustment_value` - Adjustment value of the scaling rule.
    - `min_adjustment_magnitude` - Min adjustment magnitude of scaling rule.
    - `scaling_rule_ari` - Ari of scaling rule.

» alicloud_ess_alarm

Provides a ESS alarm task resource.

» Example Usage

```
data "alicloud_zones" "default" {
  available_disk_category     = "cloud_efficiency"
  available_resource_creation = "VSwitch"
}

data "alicloud_images" "ecs_image" {
  most_recent = true
  name_regex  = "^centos_6\\w{1,5}[64].*"
}

data "alicloud_instance_types" "default" {
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  cpu_core_count    = 1
  memory_size       = 2
}

resource "alicloud_vpc" "foo" {
  name       = "tf-testAccEssAlarm_basic"
  cidr_block = "172.16.0.0/16"
}

resource "alicloud_vswitch" "foo" {
  name              = "tf-testAccEssAlarm_basic_foo"
  vpc_id            = "${alicloud_vpc.foo.id}"
  cidr_block        = "172.16.0.0/24"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
}

resource "alicloud_vswitch" "bar" {
  name              = "tf-testAccEssAlarm_basic_bar"
  vpc_id            = "${alicloud_vpc.foo.id}"
  cidr_block        = "172.16.1.0/24"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
}

resource "alicloud_ess_scaling_group" "foo" {
  min_size           = 1
  max_size           = 1
  scaling_group_name = "tf-testAccEssAlarm_basic"
  removal_policies   = ["OldestInstance", "NewestInstance"]
  vswitch_ids        = ["${alicloud_vswitch.foo.id}", "${alicloud_vswitch.bar.id}"]
}
```

```
resource "alicloud_ess_scaling_rule" "foo" {
  scaling_rule_name = "tf-testAccEssAlarm_basic"
  scaling_group_id  = "${alicloud_ess_scaling_group.foo.id}"
  adjustment_type   = "TotalCapacity"
  adjustment_value  = 2
  cooldown          = 60
}

resource "alicloud_ess_alarm" "foo" {
  name                = "tf-testAccEssAlarm_basic"
  description         = "Acc alarm test"
  alarm_actions       = ["${alicloud_ess_scaling_rule.foo.ari}"]
  scaling_group_id    = "${alicloud_ess_scaling_group.foo.id}"
  metric_type         = "system"
  metric_name         = "CpuUtilization"
  period              = 300
  statistics          = "Average"
  threshold           = 200.3
  comparison_operator = ">="
  evaluation_count    = 2
}
```

» Module Support

You can use to the existing autoscaling-rule module to create alarm task, different type rules and scheduled task one-click.

» Argument Reference

The following arguments are supported:

- `name` - (Optional) The name for ess alarm.
- `description` - (Optional) The description for the alarm.
- `enable` - (Optional, Available in 1.48.0+) Whether to enable specific ess alarm. Default to true.
- `alarm_actions` - (Required) The list of actions to execute when this alarm transition into an ALARM state. Each action is specified as ess scaling rule ari.
- `scaling_group_id` - (Required, ForceNew) The scaling group associated with this alarm, the 'ForceNew' attribute is available in 1.56.0+.
- `metric_type` - (Optional, ForceNew) The type for the alarm's associated metric. Supported value: system, custom. "system" means the metric data is collected by Aliyun Cloud Monitor Service(CMS), "custom" means the metric data is upload to CMS by users. Defaults to system.

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- `metric_name` - (Required) The name for the alarm's associated metric. See Block_metricNames_and_dimensions below for details.
- `period` - (Optional, ForceNew) The period in seconds over which the specified statistic is applied. Supported value: 60, 120, 300, 900. Defaults to 300.
- `statistics` - (Optional) The statistic to apply to the alarm's associated metric. Supported value: Average, Minimum, Maximum. Defaults to Average.
- `threshold` - (Required) The value against which the specified statistics is compared.
- `comparison_operator` - (Optional) The arithmetic operation to use when comparing the specified Statistic and Threshold. The specified Statistic value is used as the first operand. Supported value: >=, <=, >, <. Defaults to >=.
- `evaluation_count` - (Optional) The number of times that needs to satisfies comparison condition before transition into ALARM state. Defaults to 3.
- `cloud_monitor_group_id` - (Optional) Defines the application group id defined by CMS which is assigned when you upload custom metric to CMS, only available for custom metirc.
- `dimensions` - (Optional) The dimension map for the alarm's associated metric (documented below). For all metrics, you can not set the dimension key as "scaling_group" or "userId", which is set by default, the second dimension for metric, such as "device" for "PackagesNetIn", need to be set by users.

» Block metricNames_and_dimensions

Supported metric names and dimensions :

MetricName	Dimensions
CpuUtilization	user_id,scaling_group
ClassicInternetRx	user_id,scaling_group
ClassicInternetTx	user_id,scaling_group
VpcInternetRx	user_id,scaling_group
VpcInternetTx	user_id,scaling_group
IntranetRx	user_id,scaling_group
IntranetTx	user_id,scaling_group
LoadAverage	user_id,scaling_group
MemoryUtilization	user_id,scaling_group
SystemDiskReadBps	user_id,scaling_group
SystemDiskWriteBps	user_id,scaling_group
SystemDiskReadOps	user_id,scaling_group
SystemDiskWriteOps	user_id,scaling_group

MetricName	Dimensions
PackagesNetIn	user_id,scaling_group,device
PackagesNetOut	user_id,scaling_group,device
TcpConnection	user_id,scaling_group,state

NOTE: Dimension `user_id` and `scaling_group` is automatically filled, which means you only need to care about dimension `device` and `state` when needed.

» Attribute Reference

The following attributes are exported:

- `id` - The id for ess alarm.
- `state` - The state of specified alarm.

» Import

Ess alarm can be imported using the id, e.g.

```
$ terraform import alicloud_ess_alarm.example asg-2ze500_045efffe-4d05
```

» alicloud_ess_attachment

Attaches several ECS instances to a specified scaling group or remove them from it.

NOTE: ECS instances can be attached or remove only when the scaling group is active and it has no scaling activity in progress.

NOTE: There are two types ECS instances in a scaling group: "AutoCreated" and "Attached". The total number of them can not larger than the scaling group "MaxSize".

» Example Usage

```
variable "name" {
  default = "essattachmentconfig"
}

data "alicloud_zones" "default" {
  available_disk_category     = "cloud_efficiency"
```

```
      available_resource_creation = "VSwitch"
}

data "alicloud_instance_types" "default" {
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  cpu_core_count    = 2
  memory_size       = 4
}

data "alicloud_images" "default" {
  name_regex  = "^ubuntu_18.*64"
  most_recent = true
  owners      = "system"
}

resource "alicloud_vpc" "default" {
  name       = "${var.name}"
  cidr_block = "172.16.0.0/16"
}

resource "alicloud_vswitch" "default" {
  vpc_id            = "${alicloud_vpc.default.id}"
  cidr_block        = "172.16.0.0/24"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  name              = "${var.name}"
}

resource "alicloud_security_group" "default" {
  name   = "${var.name}"
  vpc_id = "${alicloud_vpc.default.id}"
}

resource "alicloud_security_group_rule" "default" {
  type              = "ingress"
  ip_protocol       = "tcp"
  nic_type          = "intranet"
  policy            = "accept"
  port_range        = "22/22"
  priority          = 1
  security_group_id = "${alicloud_security_group.default.id}"
  cidr_ip           = "172.16.0.0/24"
}

resource "alicloud_ess_scaling_group" "default" {
  min_size          = 0
  max_size          = 2
```

```
  scaling_group_name = "${var.name}"
  removal_policies   = ["OldestInstance", "NewestInstance"]
  vswitch_ids        = ["${alicloud_vswitch.default.id}"]
}

resource "alicloud_ess_scaling_configuration" "default" {
  scaling_group_id  = "${alicloud_ess_scaling_group.default.id}"
  image_id          = "${data.alicloud_images.default.images.0.id}"
  instance_type     = "${data.alicloud_instance_types.default.instance_types.0.id}"
  security_group_id = "${alicloud_security_group.default.id}"
  force_delete      = true
  active            = true
  enable            = true
}

resource "alicloud_instance" "default" {
  image_id                   = "${data.alicloud_images.default.images.0.id}"
  instance_type              = "${data.alicloud_instance_types.default.instance_types.0.id}"
  count                      = 2
  security_groups            = ["${alicloud_security_group.default.id}"]
  internet_charge_type       = "PayByTraffic"
  internet_max_bandwidth_out = "10"
  instance_charge_type       = "PostPaid"
  system_disk_category       = "cloud_efficiency"
  vswitch_id                 = "${alicloud_vswitch.default.id}"
  instance_name              = "${var.name}"
}

resource "alicloud_ess_attachment" "default" {
  scaling_group_id = "${alicloud_ess_scaling_group.default.id}"
  instance_ids     = ["${alicloud_instance.default.0.id}", "${alicloud_instance.default.1.id
  force            = true
}
```

» Argument Reference

The following arguments are supported:

- `scaling_group_id` - (Required) ID of the scaling group of a scaling configuration.
- `instance_ids` - (Required) ID of the ECS instance to be attached to the scaling group. You can input up to 20 IDs.
- `force` - (Optional) Whether to remove forcibly "AutoCreated" ECS instances in order to release scaling group capacity "MaxSize" for attaching ECS instances. Default to false.

NOTE: "AutoCreated" ECS instance will be deleted after it is removed from scaling group, but "Attached" will be not.

NOTE: Restrictions on attaching ECS instances:

- The attached ECS instances and the scaling group must have the same region and network type(`Classic` or `VPC`).
- The attached ECS instances and the instance with active scaling configurations must have the same instance type.
- The attached ECS instances must in the running state.
- The attached ECS instances has not been attached to other scaling groups.
- The attached ECS instances supports Subscription and Pay-As-You-Go payment methods.

» Attributes Reference

The following attributes are exported:

- `id` - (Required, ForceNew) The ESS attachment resource ID.
- `instance_ids` - (Required)ID of list "Attached" ECS instance.
- `force` - Whether to delete "AutoCreated" ECS instances.

» Import

ESS attachment can be imported using the id or scaling group id, e.g.

```
$ terraform import alicloud_ess_attachment.example asg-abc123456
```

» alicloud_ess_notification

Provides a ESS notification resource. More about Ess notification, see Autoscaling Notification.

NOTE: Available in 1.55.0+

» Example Usage

```
variable "name" {
    default = "tf-testAccEssNotification-%d"
}

data "alicloud_regions" "default" {
    current = true
}
```

```
data "alicloud_account" "default" {
}

data "alicloud_zones" "default" {
    available_disk_category     = "cloud_efficiency"
    available_resource_creation = "VSwitch"
}

resource "alicloud_vpc" "default" {
    name       = "${var.name}"
    cidr_block = "172.16.0.0/16"
}

resource "alicloud_vswitch" "default" {
    vpc_id            = "${alicloud_vpc.default.id}"
    cidr_block        = "172.16.0.0/24"
    availability_zone = "${data.alicloud_zones.default.zones.0.id}"
    name              = "${var.name}"
}

resource "alicloud_ess_scaling_group" "default" {
    min_size = 1
    max_size = 1
    scaling_group_name = "${var.name}"
    removal_policies = ["OldestInstance", "NewestInstance"]
    vswitch_ids = ["${alicloud_vswitch.default.id}"]
}

resource "alicloud_mns_queue" "default"{
    name="${var.name}"
}

resource "alicloud_ess_notification" "default" {
    scaling_group_id = "${alicloud_ess_scaling_group.default.id}"
    notification_types = ["AUTOSCALING:SCALE_OUT_SUCCESS","AUTOSCALING:SCALE_OUT_ERROR"]
    notification_arn = "acs:ess:${data.alicloud_regions.default.regions.0.id}:${data.aliclou
}
```

» Argument Reference

The following arguments are supported:

- `scaling_group_id` - (Required, ForceNew) The ID of the Auto Scaling group.

- `notification_arn` - (Required, ForceNew) The Alibaba Cloud Resource Name (ARN) for the notification object. The format of `notification_arn` is acs:ess:{region}:{account-id}:{resource-relative-id}. Valid values for `resource-relative-id`: 'cloudmonitor', 'queue/', 'topic/'.
- `notification_types` - (Required) The notification types of Auto Scaling events and resource changes. Supported notification types: 'AUTOSCALING:SCALE_OUT_SUCCESS', 'AUTOSCALING:SCALE_IN_SUCCESS', 'AUTOSCALING:SCALE_OUT_ERROR', 'AUTOSCALING:SCALE_IN_ERROR', 'AUTOSCALING:SCALE_REJECT', 'AUTOSCALING:SCALE_OUT_START', 'AUTOSCALING:SCALE_IN_START', 'AUTOSCALING:SCHEDULE_TASK_EXPIRING'.

» Attribute Reference

The following attributes are exported:

- `id` - The ID of notification resource, which is composed of 'scaling_group_id' and 'notification_arn' in the format of ':'.

» Import

Ess notification can be imported using the id, e.g.

```
$ terraform import alicloud_ess_notification.example 'scaling_group_id:notification_arn'
```

» alicloud_ess_lifecycle_hook

Provides a ESS lifecycle hook resource. More about Ess lifecycle hook, see LifecycleHook.

» Example Usage

```
data "alicloud_zones" "default" {
  available_disk_category     = "cloud_efficiency"
  available_resource_creation = "VSwitch"
}

resource "alicloud_vpc" "foo" {
  name      = "testAccEssScalingGroup_vpc"
  cidr_block = "172.16.0.0/16"
}
```

```
resource "alicloud_vswitch" "foo" {
  vpc_id            = "${alicloud_vpc.foo.id}"
  cidr_block        = "172.16.0.0/24"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
}

resource "alicloud_vswitch" "bar" {
  vpc_id            = "${alicloud_vpc.foo.id}"
  cidr_block        = "172.16.1.0/24"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
}

resource "alicloud_ess_scaling_group" "foo" {
  min_size           = 1
  max_size           = 1
  scaling_group_name = "testAccEssScaling_group"
  removal_policies   = ["OldestInstance", "NewestInstance"]
  vswitch_ids        = ["${alicloud_vswitch.foo.id}", "${alicloud_vswitch.bar.id}"]
}

resource "alicloud_ess_lifecycle_hook" "foo" {
  scaling_group_id      = "${alicloud_ess_scaling_group.foo.id}"
  name                  = "testAccEssLifecycle_hook"
  lifecycle_transition  = "SCALE_OUT"
  heartbeat_timeout     = 400
  notification_metadata = "helloworld"
}
```

» Module Support

You can use to the existing autoscaling module to create a lifecycle hook, scaling group and configuration one-click.

» Argument Reference

The following arguments are supported:

- `scaling_group_id` - (Required, ForceNew) The ID of the Auto Scaling group to which you want to assign the lifecycle hook.
- `name` - (Optional, ForceNew) The name of the lifecycle hook, which must contain 2-64 characters (English or Chinese), starting with numbers, English letters or Chinese characters, and can contain number, underscores `_`, hypens `-`, and decimal point `.`. If this parameter value is not specified, the default value is lifecycle hook id.

- `lifecycle_transition` - (Required) Type of Scaling activity attached to lifecycle hook. Supported value: SCALE_OUT, SCALE_IN.
- `heartbeat_timeout` - (Optional) Defines the amount of time, in seconds, that can elapse before the lifecycle hook times out. When the lifecycle hook times out, Auto Scaling performs the action defined in the default_result parameter. Default value: 600.
- `default_result` - (Optional) Defines the action the Auto Scaling group should take when the lifecycle hook timeout elapses. Applicable value: CONTINUE, ABANDON, default value: CONTINUE.
- `notification_arn` - (Optional) The Arn of notification target.
- `notification_metadata` - (Optional) Additional information that you want to include when Auto Scaling sends a message to the notification target.

» Attribute Reference

The following attributes are exported:

- `id` - The ID of lifecycle hook.
- `scaling_group_id` - The scalingGroupId to which lifecycle belongs.
- `name` - The name of lifecycle hook.
- `default_result` - The action the Auto Scaling group should take when the lifecycle hook timeout elapses.
- `heartbeat_timeout` - The amount of time that can elapse before the lifecycle hook time out.
- `lifecycle_transition` - Type of Scaling activity attached to lifecycle hook.
- `notification_metadata` - Additional information that will be sent to notification target.
- `notification_arn` - The arn of notification target.

» Import

Ess lifecycle hook can be imported using the id, e.g.

```
$ terraform import alicloud_ess_lifecycle_hook.example ash-l12345
```

» alicloud_ess_scaling_configuration

Provides a ESS scaling configuration resource.

NOTE: Several instance types have outdated in some regions and availability zones, such as `ecs.t1.*`, `ecs.s2.*`, `ecs.n1.*` and so on. If you want to

keep them, you should set `is_outdated` to true. For more about the upgraded instance type, refer to `alicloud_instance_types` datasource.

» Example Usage

```
variable "name" {
  default = "essscalingconfiguration"
}

data "alicloud_zones" "default" {
  available_disk_category     = "cloud_efficiency"
  available_resource_creation = "VSwitch"
}

data "alicloud_instance_types" "default" {
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  cpu_core_count    = 2
  memory_size       = 4
}

data "alicloud_images" "default" {
  name_regex  = "^ubuntu_18.*64"
  most_recent = true
  owners      = "system"
}

resource "alicloud_vpc" "default" {
  name       = "${var.name}"
  cidr_block = "172.16.0.0/16"
}

resource "alicloud_vswitch" "default" {
  vpc_id            = "${alicloud_vpc.default.id}"
  cidr_block        = "172.16.0.0/24"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  name              = "${var.name}"
}

resource "alicloud_security_group" "default" {
  name   = "${var.name}"
  vpc_id = "${alicloud_vpc.default.id}"
}

resource "alicloud_security_group_rule" "default" {
  type              = "ingress"
```

```
  ip_protocol      = "tcp"
  nic_type         = "intranet"
  policy           = "accept"
  port_range       = "22/22"
  priority         = 1
  security_group_id = "${alicloud_security_group.default.id}"
  cidr_ip          = "172.16.0.0/24"
}

resource "alicloud_ess_scaling_group" "default" {
  min_size          = 1
  max_size          = 1
  scaling_group_name = "${var.name}"
  removal_policies  = ["OldestInstance", "NewestInstance"]
  vswitch_ids       = ["${alicloud_vswitch.default.id}"]
}

resource "alicloud_ess_scaling_configuration" "default" {
  scaling_group_id  = "${alicloud_ess_scaling_group.default.id}"
  image_id          = "${data.alicloud_images.default.images.0.id}"
  instance_type     = "${data.alicloud_instance_types.default.instance_types.0.id}"
  security_group_id = "${alicloud_security_group.default.id}"
  force_delete      = true
}
```

» Module Support

You can use to the existing autoscaling module to create a configuration, scaling group and lifecycle hook one-click.

» Argument Reference

The following arguments are supported:

- `scaling_group_id` - (Required, ForceNew) ID of the scaling group of a scaling configuration.
- `image_id` - (Required) ID of an image file, indicating the image resource selected when an instance is enabled.
- `instance_type` - (Optional) Resource type of an ECS instance.
- `instance_types` - (Optional, Available in 1.46.0+) Resource types of an ECS instance.
- `instance_name` - (Optional) Name of an ECS instance. Default to "ESS-Instance". It is valid from version 1.7.1.

- `io_optimized` - (Deprecated) It has been deprecated on instance resource. All the launched alicloud instances will be I/O optimized.
- `is_outdated` - (Optional) Whether to use outdated instance type. Default to false.
- `security_group_id` - (Optional) ID of the security group used to create new instance. It is conflict with `security_group_ids`.
- `security_group_ids` - (Optional, Available in 1.43.0+) List IDs of the security group used to create new instances. It is conflict with `security_group_id`.
- `scaling_configuration_name` - (Optional) Name shown for the scheduled task. which must contain 2-64 characters (English or Chinese), starting with numbers, English letters or Chinese characters, and can contain number, underscores `_`, hypens `-`, and decimal point `.`. If this parameter value is not specified, the default value is ScalingConfigurationId.
- `internet_charge_type` - (Optional) Network billing type, Values: PayByBandwidth or PayByTraffic. Default to `PayByBandwidth`.
- `internet_max_bandwidth_in` - (Optional) Maximum incoming bandwidth from the public network, measured in Mbps (Mega bit per second). The value range is [1,200].
- `internet_max_bandwidth_out` - (Optional) Maximum outgoing bandwidth from the public network, measured in Mbps (Mega bit per second). The value range for PayByBandwidth is [0,100].
- `system_disk_category` - (Optional) Category of the system disk. The parameter value options are `ephemeral_ssd`, `cloud_efficiency`, `cloud_ssd`, `cloud_essd` and `cloud`. `cloud` only is used to some no I/O optimized instance. Default to `cloud_efficiency`.
- `system_disk_size` - (Optional) Size of system disk, in GiB. Optional values: cloud: 20-500, cloud_efficiency: 20-500, cloud_ssd: 20-500, ephemeral_ssd: 20-500 The default value is max{40, ImageSize}. If this parameter is set, the system disk size must be greater than or equal to max{40, ImageSize}.
- `enable` - (Optional) Whether enable the specified scaling group(make it active) to which the current scaling configuration belongs.
- `active` - (Optional) Whether active current scaling configuration in the specified scaling group. Default to `false`.
- `substitute` - (Optional) The another scaling configuration which will be active automatically and replace current configuration when setting `active` to 'false'. It is invalid when `active` is 'true'.
- `user_data` - (Optional) User-defined data to customize the startup behaviors of the ECS instance and to pass data into the ECS instance.
- `key_name` - (Optional) The name of key pair that can login ECS instance successfully without password. If it is specified, the password would be invalid.
- `role_name` - (Optional) Instance RAM role name. The name is provided and maintained by RAM. You can use `alicloud_ram_role` to create a new one.

- `force_delete` - (Optional) The last scaling configuration will be deleted forcibly with deleting its scaling group. Default to false.
- `data_disk` - (Optional) DataDisk mappings to attach to ecs instance. See Block datadisk below for details.
- `instance_ids` - (Deprecated) It has been deprecated from version 1.6.0. New resource `alicloud_ess_attachment` replaces it.
- `tags` - (Optional) A mapping of tags to assign to the resource. It will be applied for ECS instances finally.
    - Key: It can be up to 64 characters in length. It cannot begin with "aliyun", "http://", or "https://". It cannot be a null string.
    - Value: It can be up to 128 characters in length. It cannot begin with "aliyun", "http://", or "https://" It can be a null string.
- `override` - (Optional, Available in 1.46.0+) Indicates whether to overwrite the existing data. Default to false.
- `password_inherit` - (Optional, Available in 1.62.0+) Specifies whether to use the password that is predefined in the image. If the PasswordInherit parameter is set to true, the `password` and `kms_encrypted_password` will be ignored. You must ensure that the selected image has a password configured.
- `password` - (Optional, ForceNew, Available in 1.60.0+) The password of the ECS instance. The password must be 8 to 30 characters in length. It must contains at least three of the following character types: uppercase letters, lowercase letters, digits, and special characters. Special characters include () `~!@#$%^&*-_+=\|{}[]:;'<>,.?/`, The password of Windows-based instances cannot start with a forward slash (/).
- `kms_encrypted_password` - (Optional, ForceNew, Available in 1.60.0+) An KMS encrypts password used to a db account. If the `password` is filled in, this field will be ignored.
- `kms_encryption_context` - (Optional, MapString, Available in 1.60.0+) An KMS encryption context used to decrypt `kms_encrypted_password` before creating or updating a db account with `kms_encrypted_password`. See Encryption Context. It is valid when `kms_encrypted_password` is set.

NOTE: Before enabling the scaling group, it must have a active scaling configuration.

NOTE: If the number of attached ECS instances by `instance_ids` is smaller than MinSize, the Auto Scaling Service will automatically create ECS Pay-As-You-Go instance to cater to MinSize. For example, MinSize=5 and 2 existing ECS instances has been attached to the scaling group. When the scaling group is enabled, it will create 3 instnaces automatically based on its current active scaling configuration.

NOTE: Restrictions on attaching ECS instances:

- The attached ECS instances and the scaling group must have the same region and network type(`Classic` or `VPC`).

- The attached ECS instances and the instance with active scaling configurations must have the same instance type.
- The attached ECS instances must in the running state.
- The attached ECS instances has not been attached to other scaling groups.
- The attached ECS instances supports Subscription and Pay-As-You-Go payment methods.

NOTE: The last scaling configuration can't be set to inactive and deleted alone.

» Block datadisk

The datadisk mapping supports the following:

- `size` - (Optional) Size of data disk, in GB. The value ranges [5,2000] for a cloud disk, [5,1024] for an ephemeral disk, [5,800] for an ephemeral_ssd disk, [20,32768] for cloud_efficiency, cloud_ssd, cloud_essd disk.
- `category` - (Optional) Category of data disk. The parameter value options are `ephemeral_ssd`, `cloud_efficiency`, `cloud_ssd` and `cloud`.
- `snapshot_id` - (Optional) Snapshot used for creating the data disk. If this parameter is specified, the size parameter is neglected, and the size of the created disk is the size of the snapshot.
- `delete_with_instance` - (Optional) Whether to delete data disks attached on ecs when release ecs instance. Optional value: `true` or `false`, default to `true`.

» Attributes Reference

The following attributes are exported:

- `id` - The scaling configuration ID.

» Import

ESS scaling configuration can be imported using the id, e.g.

```
$ terraform import alicloud_ess_scaling_configuration.example asg-abc123456
```

NOTE: Available in 1.46.0+

» alicloud_ess_scaling_group

Provides a ESS scaling group resource which is a collection of ECS instances with the same application scenarios.

It defines the maximum and minimum numbers of ECS instances in the group, and their associated Server Load Balancer instances, RDS instances, and other attributes.

NOTE: You can launch an ESS scaling group for a VPC network via specifying parameter `vswitch_ids`.

» Example Usage

```
variable "name" {
  default = "essscalinggroupconfig"
}

data "alicloud_zones" "default" {
  available_disk_category     = "cloud_efficiency"
  available_resource_creation = "VSwitch"
}

data "alicloud_instance_types" "default" {
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  cpu_core_count    = 2
  memory_size       = 4
}

data "alicloud_images" "default" {
  name_regex  = "^ubuntu_18.*64"
  most_recent = true
  owners      = "system"
}

resource "alicloud_vpc" "default" {
  name       = "${var.name}"
  cidr_block = "172.16.0.0/16"
}

resource "alicloud_vswitch" "default" {
  vpc_id            = "${alicloud_vpc.default.id}"
  cidr_block        = "172.16.0.0/24"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  name              = "${var.name}"
}

resource "alicloud_security_group" "default" {
  name   = "${var.name}"
  vpc_id = "${alicloud_vpc.default.id}"
```

```
}

resource "alicloud_security_group_rule" "default" {
  type              = "ingress"
  ip_protocol       = "tcp"
  nic_type          = "intranet"
  policy            = "accept"
  port_range        = "22/22"
  priority          = 1
  security_group_id = "${alicloud_security_group.default.id}"
  cidr_ip           = "172.16.0.0/24"
}

resource "alicloud_vswitch" "default2" {
  vpc_id            = "${alicloud_vpc.default.id}"
  cidr_block        = "172.16.1.0/24"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  name              = "${var.name}-bar"
}

resource "alicloud_ess_scaling_group" "default" {
  min_size           = 1
  max_size           = 1
  scaling_group_name = "${var.name}"
  default_cooldown   = 20
  vswitch_ids        = ["${alicloud_vswitch.default.id}", "${alicloud_vswitch.default2.id}"]
  removal_policies   = ["OldestInstance", "NewestInstance"]
}
```

» Module Support

You can use to the existing autoscaling module to create a scaling group, configuration and lifecycle hook one-click.

» Argument Reference

The following arguments are supported:

- `min_size` - (Required) Minimum number of ECS instances in the scaling group. Value range: [0, 1000].
- `max_size` - (Required) Maximum number of ECS instances in the scaling group. Value range: [0, 1000].
- `scaling_group_name` - (Optional) Name shown for the scaling group, which must contain 2-64 characters (English or Chinese), starting with

numbers, English letters or Chinese characters, and can contain numbers, underscores `_`, hyphens `-`, and decimal points `..` If this parameter is not specified, the default value is ScalingGroupId.

- `default_cooldown` - (Optional) Default cool-down time (in seconds) of the scaling group. Value range: [0, 86400]. The default value is 300s.
- `vswitch_id` - (Deprecated) It has been deprecated from version 1.7.1 and new field 'vswitch_ids' replaces it.
- `vswitch_ids` - (Optional) List of virtual switch IDs in which the ecs instances to be launched.
- `removal_policies` - (Optional) RemovalPolicy is used to select the ECS instances you want to remove from the scaling group when multiple candidates for removal exist. Optional values:
    - OldestInstance: removes the first ECS instance attached to the scaling group.
    - NewestInstance: removes the first ECS instance attached to the scaling group.
    - OldestScalingConfiguration: removes the ECS instance with the oldest scaling configuration.
    - Default values: OldestScalingConfiguration and OldestInstance. You can enter up to two removal policies.
- `db_instance_ids` - (Optional) If an RDS instance is specified in the scaling group, the scaling group automatically attaches the Intranet IP addresses of its ECS instances to the RDS access whitelist.
    - The specified RDS instance must be in running status.
    - The specified RDS instance's whitelist must have room for more IP addresses.
- `loadbalancer_ids` - (Optional) If a Server Load Balancer instance is specified in the scaling group, the scaling group automatically attaches its ECS instances to the Server Load Balancer instance.
    - The Server Load Balancer instance must be enabled.
    - At least one listener must be configured for each Server Load Balancer and it HealthCheck must be on. Otherwise, creation will fail (it may be useful to add a `depends_on` argument targeting your `alicloud_slb_listener` in order to make sure the listener with its HealthCheck configuration is ready before creating your scaling group).
    - The Server Load Balancer instance attached with VPC-type ECS instances cannot be attached to the scaling group.
    - The default weight of an ECS instance attached to the Server Load Balancer instance is 50.
- `multi_az_policy` - (Optional, ForceNew) Multi-AZ scaling group ECS instance expansion and contraction strategy. PRIORITY, BALANCE or COST_OPTIMIZED(Available in 1.54.0+).
- `on_demand_base_capacity` - (Optional, Available in 1.54.0+) The minimum amount of the Auto Scaling group's capacity that must be fulfilled by On-Demand Instances. This base portion is provisioned first as your

group scales.

- `on_demand_percentage_above_base_capacity` - (Optional, Available in 1.54.0+) Controls the percentages of On-Demand Instances and Spot Instances for your additional capacity beyond OnDemandBaseCapacity.

- `spot_instance_pools` - (Optional, Available in 1.54.0+) The number of Spot pools to use to allocate your Spot capacity. The Spot pools is composed of instance types of lowest price.
- `spot_instance_remedy` - (Optional, Available in 1.54.0+) Whether to replace spot instances with newly created spot/onDemand instance when receive a spot recycling message.

NOTE: When detach loadbalancers, instances in group will be remove from loadbalancer's `Default Server Group`; On the contrary, When attach loadbalancers, instances in group will be added to loadbalancer's `Default Server Group`.

NOTE: When detach dbInstances, private ip of instances in group will be remove from dbInstance's `WhiteList`; On the contrary, When attach dbInstances, private ip of instances in group will be added to dbInstance's `WhiteList`.

NOTE: `on_demand_base_capacity`,`on_demand_percentage_above_base_capacity`,`spot_instance_pools`,s are valid only if `multi_az_policy` is 'COST_OPTIMIZED'.

» Attributes Reference

The following attributes are exported:

- `id` - The scaling group ID.
- `min_size` - The minimum number of ECS instances.
- `max_size` - The maximum number of ECS instances.
- `scaling_group_name` - The name of the scaling group.
- `default_cooldown` - The default cool-down of the scaling group.
- `removal_policies` - The removal policy used to select the ECS instance to remove from the scaling group.
- `db_instance_ids` - The db instances id which the ECS instance attached to.
- `loadbalancer_ids` - The slb instances id which the ECS instance attached to.
- `vswitch_ids` - The vswitches id in which the ECS instance launched.

» Import

ESS scaling group can be imported using the id, e.g.

```
$ terraform import alicloud_ess_scaling_group.example asg-abc123456
```

» alicloud_ess_scaling_rule

Provides a ESS scaling rule resource.

» Example Usage

```
variable "name" {
  default = "essscalingruleconfig"
}

data "alicloud_zones" "default" {
  available_disk_category     = "cloud_efficiency"
  available_resource_creation = "VSwitch"
}

data "alicloud_instance_types" "default" {
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  cpu_core_count    = 2
  memory_size       = 4
}

data "alicloud_images" "default" {
  name_regex  = "^ubuntu_18.*64"
  most_recent = true
  owners      = "system"
}

resource "alicloud_vpc" "default" {
  name       = "${var.name}"
  cidr_block = "172.16.0.0/16"
}

resource "alicloud_vswitch" "default" {
  vpc_id            = "${alicloud_vpc.default.id}"
  cidr_block        = "172.16.0.0/24"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  name              = "${var.name}"
}

resource "alicloud_security_group" "default" {
  name    = "${var.name}"
```

```
  vpc_id = "${alicloud_vpc.default.id}"
}

resource "alicloud_security_group_rule" "default" {
  type              = "ingress"
  ip_protocol       = "tcp"
  nic_type          = "intranet"
  policy            = "accept"
  port_range        = "22/22"
  priority          = 1
  security_group_id = "${alicloud_security_group.default.id}"
  cidr_ip           = "172.16.0.0/24"
}

resource "alicloud_ess_scaling_group" "default" {
  min_size           = 1
  max_size           = 1
  scaling_group_name = "${var.name}"
  vswitch_ids        = ["${alicloud_vswitch.default.id}"]
  removal_policies   = ["OldestInstance", "NewestInstance"]
}

resource "alicloud_ess_scaling_configuration" "default" {
  scaling_group_id  = "${alicloud_ess_scaling_group.default.id}"
  image_id          = "${data.alicloud_images.default.images.0.id}"
  instance_type     = "${data.alicloud_instance_types.default.instance_types.0.id}"
  security_group_id = "${alicloud_security_group.default.id}"
  force_delete      = "true"
}

resource "alicloud_ess_scaling_rule" "default" {
  scaling_group_id = "${alicloud_ess_scaling_group.default.id}"
  adjustment_type  = "TotalCapacity"
  adjustment_value = 1
}
```

» Module Support

You can use to the existing autoscaling-rule module to create different type rules,
alarm task and scheduled task one-click.

» Argument Reference

The following arguments are supported:

- `scaling_group_id` - (Required) ID of the scaling group of a scaling rule.
- `adjustment_type` - (Optional) Adjustment mode of a scaling rule. Optional values:
  - QuantityChangeInCapacity: It is used to increase or decrease a specified number of ECS instances.
  - PercentChangeInCapacity: It is used to increase or decrease a specified proportion of ECS instances.
  - TotalCapacity: It is used to adjust the quantity of ECS instances in the current scaling group to a specified value.
- `adjustment_value` - (Optional) Adjusted value of a scaling rule. Value range:
  - QuantityChangeInCapacity (0, 500] U (-500, 0]
  - PercentChangeInCapacity [0, 10000] U [-100, 0]
  - TotalCapacity [0, 1000]
- `scaling_rule_name` - (Optional) Name shown for the scaling rule, which must contain 2-64 characters (English or Chinese), starting with numbers, English letters or Chinese characters, and can contain number, underscores `_`, hypens `-`, and decimal point `.`. If this parameter value is not specified, the default value is scaling rule id.
- `cooldown` - (Optional) Cool-down time of a scaling rule. Value range: [0, 86,400], in seconds. The default value is empty if not set, the return value will be 0, which is the default value of integer.
- `scaling_rule_type` - (Optional, Available in 1.58.0+) The scaling rule type, either "SimpleScalingRule", "TargetTrackingScalingRule", "StepScalingRule". Default to "SimpleScalingRule".
- `estimated_instance_warmup` - (Optional, Available in 1.58.0+) The estimated time, in seconds, until a newly launched instance will contribute CloudMonitor metrics. Default to 300.
- `metric_name` - (Optional, Available in 1.58.0+) A CloudMonitor metric name.
- `target_value` - (Optional, Available in 1.58.0+) The target value for the metric.
- `disable_scale_in` - (Optional, Available in 1.58.0+) Indicates whether scale in by the target tracking policy is disabled. Default to false.
- `step_adjustment` - (Optional, Available in 1.58.0+) Steps for StepScalingRule. See Block stepAdjustment below for details.

» Block stepAdjustment

The stepAdjustment mapping supports the following:

- `metric_interval_lower_bound` - (Optional) The lower bound of step.
- `metric_interval_upper_bound` - (Optional) The upper bound of step.
- `scaling_adjustment` - (Optional) The adjust value of step.

» Attributes Reference

The following attributes are exported:

- `id` - The scaling rule ID.

» Import

ESS scaling rule can be imported using the id, e.g.

```
$ terraform import alicloud_ess_scaling_rule.example abc123456
```

» alicloud_ess_schedule

NOTE: This resource has been deprecated from v1.45.0. New resource `alicloud_ess_scheduled_task` will replace.

» alicloud_ess_scheduled_task

Provides a ESS schedule resource.

» Example Usage

```
variable "name" {
  default = "essscheduleconfig"
}

data "alicloud_zones" "default" {
  available_disk_category     = "cloud_efficiency"
  available_resource_creation = "VSwitch"
}

data "alicloud_instance_types" "default" {
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  cpu_core_count    = 2
  memory_size       = 4
}

data "alicloud_images" "default" {
  name_regex  = "^ubuntu_18.*64"
  most_recent = true
  owners      = "system"
```

```
}

resource "alicloud_vpc" "default" {
  name       = "${var.name}"
  cidr_block = "172.16.0.0/16"
}

resource "alicloud_vswitch" "default" {
  vpc_id            = "${alicloud_vpc.default.id}"
  cidr_block        = "172.16.0.0/24"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  name              = "${var.name}"
}

resource "alicloud_security_group" "default" {
  name   = "${var.name}"
  vpc_id = "${alicloud_vpc.default.id}"
}

resource "alicloud_security_group_rule" "default" {
  type              = "ingress"
  ip_protocol       = "tcp"
  nic_type          = "intranet"
  policy            = "accept"
  port_range        = "22/22"
  priority          = 1
  security_group_id = "${alicloud_security_group.default.id}"
  cidr_ip           = "172.16.0.0/24"
}

resource "alicloud_ess_scaling_group" "default" {
  min_size           = 1
  max_size           = 1
  scaling_group_name = "${var.name}"
  vswitch_ids        = ["${alicloud_vswitch.default.id}"]
  removal_policies   = ["OldestInstance", "NewestInstance"]
}

resource "alicloud_ess_scaling_configuration" "default" {
  scaling_group_id  = "${alicloud_ess_scaling_group.default.id}"
  image_id          = "${data.alicloud_images.default.images.0.id}"
  instance_type     = "${data.alicloud_instance_types.default.instance_types.0.id}"
  security_group_id = "${alicloud_security_group.default.id}"
  force_delete      = "true"
}
```

```
resource "alicloud_ess_scaling_rule" "default" {
  scaling_group_id = "${alicloud_ess_scaling_group.default.id}"
  adjustment_type  = "TotalCapacity"
  adjustment_value = 2
  cooldown         = 60
}

resource "alicloud_ess_scheduled_task" "default" {
  scheduled_action    = "${alicloud_ess_scaling_rule.default.ari}"
  launch_time         = "2019-05-21T11:37Z"
  scheduled_task_name = "${var.name}"
}
```

» Module Support

You can use to the existing autoscaling-rule module to create scheduled task, different type rules and alarm task one-click.

» Argument Reference

The following arguments are supported:

- `scheduled_action` - (Required) The operation to be performed when a scheduled task is triggered. Enter the unique identifier of a scaling rule.
- `scheduled_task_name` - (Optional) Display name of the scheduled task, which must be 2-40 characters (English or Chinese) long.
- `description` - (Optional) Description of the scheduled task, which is 2-200 characters (English or Chinese) long.
- `launch_time` - (Required) The time at which the scheduled task is triggered. Specify the time in the ISO 8601 standard in the YYYY-MM-DDThh:mm:ssZ format. The time must be in UTC. You cannot enter a time point later than 90 days from the date of scheduled task creation. If the `recurrence_type` parameter is specified, the task is executed repeatedly at the time specified by LaunchTime. Otherwise, the task is only executed once at the date and time specified by LaunchTime.
- `launch_expiration_time` - (Optional) The time period during which a failed scheduled task is retried. Unit: seconds. Valid values: 0 to 21600. Default value: 600
- `recurrence_type` - (Optional) Specifies the recurrence type of the scheduled task. If set, both `recurrence_value` and `recurrence_end_time` must be set. Valid values:
    - Daily: The scheduled task is executed once every specified number of days.

- Weekly: The scheduled task is executed on each specified day of a week.
    - Monthly: The scheduled task is executed on each specified day of a month.
    - Cron: (Available in 1.60.0+) The scheduled task is executed based on the specified cron expression.
- `recurrence_value` - (Optional) Specifies how often a scheduled task recurs. The valid value depends on `recurrence_type`
    - Daily: You can enter one value. Valid values: 1 to 31.
    - Weekly: You can enter multiple values and separate them with commas (,). For example, the values 0 to 6 correspond to the days of the week in sequence from Sunday to Saturday.
    - Monthly: You can enter two values in A-B format. Valid values of A and B: 1 to 31. The value of B must be greater than or equal to the value of A.
    - Cron: You can enter a cron expression which is written in UTC and consists of five fields: minute, hour, day of month (date), month, and day of week. The expression can contain wildcard characters including commas (,), question marks (?), hyphens (-), asterisks (*), number signs (#), forward slashes (/), and the L and W letters.
- `recurrence_end_time` - (Optional) Specifies the end time after which the scheduled task is no longer repeated. Specify the time in the ISO 8601 standard in the YYYY-MM-DDThh:mm:ssZ format. The time must be in UTC. You cannot enter a time point later than 365 days from the date of scheduled task creation.

- `task_enabled` - (Optional) Specifies whether to start the scheduled task. Default to true.

» Attributes Reference

The following attributes are exported:

- `id` - The schedule task ID.

» Import

ESS schedule task can be imported using the id, e.g.

```
$ terraform import alicloud_ess_scheduled_task.example abc123456
```

» alicloud_ess_scalinggroup_vserver_groups

Attaches/Detaches vserver groups to a specified scaling group.

NOTE: The load balancer of which vserver groups belongs to must be in `active` status.

NOTE: If scaling group's network type is `VPC`, the vserver groups must be in the same `VPC`.

NOTE: A scaling group can have at most 5 vserver groups attached by default.

NOTE: Vserver groups and the default group of loadbalancer share the same backend server quota.

NOTE: When attach vserver groups to scaling group, existing ECS instances will be added to vserver groups; Instead, ECS instances will be removed from vserver group when detach.

NOTE: Detach action will be executed before attach action.

NOTE: Vserver group is defined uniquely by `loadbalancer_id`, `vserver_group_id`, `port`.

NOTE: Modifing `weight` attribute means detach vserver group first and then, attach with new weight parameter.

NOTE: Resource `alicloud_ess_scalinggroup_vserver_groups` is available in 1.53.0+.

» Example Usage

```
variable "name" {
  default = "testAccEssVserverGroupsAttachment"
}

data "alicloud_zones" "default" {
  available_disk_category     = "cloud_efficiency"
  available_resource_creation = "VSwitch"
}

resource "alicloud_vpc" "default" {
  name       = "${var.name}"
  cidr_block = "172.16.0.0/16"
}

resource "alicloud_vswitch" "default" {
  vpc_id            = "${alicloud_vpc.default.id}"
  cidr_block        = "172.16.0.0/24"
```

```
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  name              = "${var.name}"
}

resource "alicloud_slb" "default" {
  name = "${var.name}"
  vswitch_id = "${alicloud_vswitch.default.id}"
}

resource "alicloud_slb_server_group" "default" {
  load_balancer_id = "${alicloud_slb.default.id}"
  name = "test"
}

resource "alicloud_slb_listener" "default" {
  count = 2
  load_balancer_id = "${element(alicloud_slb.default.*.id, count.index)}"
  backend_port = "22"
  frontend_port = "22"
  protocol = "tcp"
  bandwidth = "10"
  health_check_type = "tcp"
}

resource "alicloud_ess_scaling_group" "default" {
  min_size = "2"
  max_size = "2"
  scaling_group_name = "${var.name}"
  vswitch_ids = ["${alicloud_vswitch.default.id}"]
  depends_on = ["alicloud_slb_listener.default"]
}

resource "alicloud_ess_scalinggroup_vserver_groups" "default" {
  scaling_group_id = "${alicloud_ess_scaling_group.default.id}"
  vserver_groups {
  loadbalancer_id = "${alicloud_slb.default.id}"
  vserver_attributes {
    vserver_group_id = "${alicloud_slb_server_group.default.id}"
    port = "100"
    weight = "60"
    }
  }
}
```

» Argument Reference

The following arguments are supported:

- `scaling_group_id` - (Required) ID of the scaling group.
- `vserver_groups` - (Optional) A list of vserver groups attached on scaling group. See Block vserver_group below for details.
- `force` - (Optional, Available in 1.64.0+) If instances of scaling group are attached/removed from slb backend server when attach/detach vserver group from scaling group. Default to true.

» Block vserver_group

the vserver_group supports the following:

- `loadbalancer_id` - (Required) Loadbalancer server ID of VServer Group.
- `vserver_attributes` - (Required) A list of VServer Group attributes. See Block vserver_attribute below for details.

» Block vserver_attribute

- `vserver_group_id` - (Required) ID of VServer Group.
- `port` - (Required) - The port will be used for VServer Group backend server.
- `weight` - (Required) The weight of an ECS instance attached to the VServer Group.

» Attributes Reference

The following attributes are exported:

- `id` - (Required, ForceNew) The ESS vserver groups attachment resource ID.

» Import

ESS vserver groups can be imported using the id, e.g.

```
$ terraform import alicloud_ess_vserver_groups.example abc123456
```

» alicloud_ddosbgp_instances

This data source provides a list of Anti-DDoS Advanced instances in an Alibaba Cloud account according to the specified filters.

NOTE: Available in 1.57.0+ .

» Example Usage

```
data "alicloud_ddosbgp_instances" "instance" {
  name_regex = "^ddosbgp"
}

output "instance" {
  value = "${alicloud_ddosbgp_instances.instance.*.id}"
}
```

» Argument Reference

The following arguments are supported:

- `name_regex` - (Optional) A regex string to filter results by the instance name.
- `region` - (Optional) A region of instance.
- `ids` - (Optional) A list of instance IDs.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above: * `ids` - A list of instance IDs. * `names` - A list of instance names. * `instances` - A list of apis. Each element contains the following attributes: * `id` - The instance's id. * `name` - The instance's remark. * `type` - The instance's type. * `region` - The instance's region. * `base_bandwidth` - The instance's base defend bandwidth. * `bandwidth` - The instance's elastic defend bandwidth. * `ip_type` - The instance's IP version. * `ip_count` - The instance's count of ip config.

» alicloud_ddoscoo_instances

This data source provides a list of BGP-Line Anti-DDoS Pro instances in an Alibaba Cloud account according to the specified filters.

» Example Usage

```
data "alicloud_ddoscoo_instances" "instance" {
  name_regex = "^ddoscoo"
}

output "instance" {
  value = "${alicloud_ddoscoo_instances.instance.*.id}"
}
```

» Argument Reference

The following arguments are supported:

- `name_regex` - (Optional) A regex string to filter results by the instance name.
- `ids` - (Optional) A list of instance IDs.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above: * `ids` - A list of instance IDs. * `names` - A list of instance names. * `instances` - A list of apis. Each element contains the following attributes: * `id` - The instance's id. * `name` - The instance's remark. * `base_bandwidth` - The instance's base defend bandwidth. * `bandwidth` - The instance's elastic defend bandwidth. * `service_bandwidth` - The instance's business bandwidth. * `port_count` - The instance's count of port retransmission config. * `domain_count` - The instance's count of domain retransmission config.

» alicloud_ddosbgp_instance

Anti-DDoS Advanced instance resource. "Ddosbgp" is the short term of this product.

NOTE: The endpoint of bssopenapi used only support "business.aliyuncs.com" at present.

NOTE: Available in 1.57.0+ .

» Example Usage

Basic Usage

```
provider "alicloud" {
  endpoints {
    bssopenapi = "business.aliyuncs.com"
  }
}

resource "alicloud_ddosbgp_instance" "instance" {
  name                = "yourDdosbgpInstanceName"
  base_bandwidth      = "20"
  bandwidth           = "201"
  ip_count            = "100"
  ip_type             = "IPv4"
}
```

» Argument Reference

The following arguments are supported:

- `type` - (Required, ForceNew) Type of the instance. Valid values: Enterprise,Professional. Default to `Enterprise`

- `name` - (Required) Name of the instance. This name can have a string of 1 to 63 characters.
- `base_bandwidth` - (Optional, ForceNew) Base defend bandwidth of the instance. Valid values: 20. The unit is Gbps. Default to `20`.
- `bandwidth` - (Required, ForceNew) Elastic defend bandwidth of the instance. This value must be larger than the base defend bandwidth. Valid values: 51,91,101,201,301. The unit is Gbps.
- `ip_count` - (Required, ForceNew) IP count of the instance. Valid values: 100.
- `ip_type` - (Required, ForceNew) IP version of the instance. Valid values: IPv4,IPv6.
- `period` - (Optional, ForceNew) The duration that you will buy Ddosbgp instance (in month). Valid values: [1~9], 12, 24, 36. Default to 12. At present, the provider does not support modify "period".

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the instance resource of Ddosbgp. ## Import

Ddosbgp instance can be imported using the id, e.g.

```
$ terraform import alicloud_ddosbgp.example ddosbgp-abc123456
```

» alicloud_ddoscoo_instance

BGP-Line Anti-DDoS instance resource. "Ddoscoo" is the short term of this product. See What is Anti-DDoS Pro.

NOTE: The product region only support cn-hangzhou.

NOTE: The endpoint of bssopenapi used only support "business.aliyuncs.com" at present.

NOTE: Available in 1.37.0+ .

» Example Usage

Basic Usage

```
provider "alicloud" {
  endpoints {
    bssopenapi = "business.aliyuncs.com"
  }
}

resource "alicloud_ddoscoo_instance" "newInstance" {
  name             = "yourDdoscooInstanceName"
  bandwidth        = "30"
  base_bandwidth   = "30"
  service_bandwidth = "100"
  port_count       = "50"
  domain_count     = "50"
  period           = "1"
}
```

» Argument Reference

The following arguments are supported:

- **name** - (Required) Name of the instance. This name can have a string of 1 to 63 characters.
- **base_bandwidth** - (Required) Base defend bandwidth of the instance. Valid values: 30, 60, 100, 300, 400, 500, 600. The unit is Gbps. Only support upgrade.

- **bandwidth** - (Required) Elastic defend bandwidth of the instance. This value must be larger than the base defend bandwidth. Valid values: 30, 60, 100, 300, 400, 500, 600. The unit is Gbps. Only support upgrade.
- **service_bandwidth** - (Required) Business bandwidth of the instance. At leaset 100. Increased 100 per step, such as 100, 200, 300. The unit is Mbps. Only support upgrade.
- **port_count** - (Required) Port retransmission rule count of the instance. At least 50. Increase 5 per step, such as 55, 60, 65. Only support upgrade.
- **domain_count** - (Required) Domain retransmission rule count of the instance. At least 50. Increase 5 per step, such as 55, 60, 65. Only support upgrade.
- **period** - (Optional, ForceNew) The duration that you will buy Ddoscoo instance (in month). Valid values: [1~9], 12, 24, 36. Default to 1. At present, the provider does not support modify "period".

» **Attributes Reference**

The following attributes are exported:

- **id** - The ID of the instance resource of Ddoscoo.

» **Import**

Ddoscoo instance can be imported using the id, e.g.

```
$ terraform import alicloud_ddoscoo_instance.example ddoscoo-cn-123456
```

» **alicloud_cdn_domain**

DEPRECATED: This resource is based on CDN's old version OpenAPI and it has been deprecated from version `1.34.0`. Please use new resource alicloud_cdn_domain_new and its config alicloud_cdn_domain_config instead.

Provides a CDN Accelerated Domain resource.

» **Example Usage**

```
# Add a CDN Accelerated Domain with configs.
resource "alicloud_cdn_domain" "domain" {
  domain_name = "${your_cdn_domain_name}"
  cdn_type    = "web"
  source_type = "domain"
  sources     = ["${your_cdn_domain_source1}", "${your_cdn_domain_source2}"]
```

```
// configs
optimize_enable      = "off"
page_compress_enable = "off"
range_enable         = "off"
video_seek_enable    = "off"
block_ips            = ["1.2.3.4", "111.222.111.111"]
parameter_filter_config {
    enable       = "on"
    hash_key_args = ["hello", "youyouyou"]
}
page_404_config {
    page_type       = "other"
    custom_page_url = "http://${your_cdn_domain_name}/notfound/"
}
refer_config {
    refer_type  = "block"
    refer_list  = ["www.xxxx.com", "www.xxxx.cn"]
    allow_empty = "off"
}
auth_config {
    auth_type  = "type_a"
    master_key = "helloworld1"
    slave_key  = "helloworld2"
}
http_header_config {
    header_key   = "Content-Type",
    header_value = "text/plain"
  }
http_header_config   {
    header_key   = "Access-Control-Allow-Origin",
    header_value = "*"
}
cache_config {
    cache_content = "/hello/world",
    ttl           = 1000
    cache_type    = "path"
  }
cache_config {
    cache_content = "/hello/world/youyou",
    ttl           = 1000
    cache_type    = "path"
  }
cache_config {
    cache_content = "txt,jpg,png",
    ttl           = 2000
```

```
      cache_type     = "suffix"
  }
}
```

» Argument Reference

The following arguments are supported:

- `domain_name` - (Required) Name of the accelerated domain. This name
  without suffix can have a string of 1 to 63 characters, must contain only
  alphanumeric characters or "-", and must not begin or end with "-", and "-
  " must not in the 3th and 4th character positions at the same time. Suffix
  `.sh` and `.tel` are not supported.
- `cdn_type` - (Required) Cdn type of the accelerated domain. Valid values
  are `web`, `download`, `video`, `liveStream`.
- `source_type` - (Optional) Source type of the accelerated domain. Valid
  values are `ipaddr`, `domain`, `oss`. You must set this parameter when
  `cdn_type` value is not `liveStream`.
- `source_port` - (Optional) Source port of the accelerated domain. Valid
  values are `80` and `443`. Default value is `80`. You must use `80` when the
  `source_type` is `oss`.
- `sources` - (Optional, Type: list) Sources of the accelerated domain. It's a
  list of domain names or IP address and consists of at most 20 items. You
  must set this parameter when `cdn_type` value is not `liveStream`.
- `scope` - (Optional) Scope of the accelerated domain. Valid values are
  `domestic`, `overseas`, `global`. Default value is `domestic`. This parame-
  ter's setting is valid Only for the international users and domestic L3 and
  above users .

» Domain config

The config supports the following:

- `optimize_enable` - (Optional) Page Optimize config of the accelerated
  domain. Valid values are `on` and `off`. Default value is `off`. It can effec-
  tively remove the page redundant content, reduce the file size and improve
  the speed of distribution when this parameter value is `on`.
- `page_compress_enable` - (Optional) Page Compress config of the acceler-
  ated domain. Valid values are `on` and `off`. Default value is `off`.
- `range_enable` - (Optional) Range Source config of the accelerated domain.
  Valid values are `on` and `off`. Default value is `off`.
- `video_seek_enable` - (Optional) Video Seek config of the accelerated do-
  main. Valid values are `on` and `off`. Default value is `off`.

» Block parameter_filter_config

`parameter_filter_config` - (Optional, Type: set) Parameter filter config of the accelerated domain. It's a set and consists of at most one item. * `enable` - (Optional) This parameter indicates whether or not the `parameter_filter_config` is enable. Valid values are `on` and `off`. Default value is `off`.
* `hash_key_args` - (Optional, Type: list) Reserved parameters of `parameter_filter_config`. It's a list of string and consists of at most 10 items.

» Block page_404_config

`page_404_config` - (Optional, Type: set) Error Page config of the accelerated domain. It's a set and consists of at most one item. * `page_type` - (Optional) Page type of the error page. Valid values are `default`, `charity`, `other`. Default value is `default`. * `custom_page_url` - (Optional) Custom page url of the error page. It must be the full path under the accelerated domain name. It's value must be `http://promotion.alicdn.com/help/oss/error.html` when `page_type` value is `charity` and It can not be set when `page_type` value is `default`.

» Block refer_config

`refer_config` - (Optional, Type: set) Refer anti-theft chain config of the accelerated domain. It's a set and consists of at most 1 item. * `refer_type` - (Optional) Refer type of the refer config. Valid values are `block` and `allow`. Default value is `block`. * `refer_list` - (Required, Type: list) A list of domain names of the refer config. * `allow_empty` - (Optional) This parameter indicates whether or not to allow empty refer access. Valid values are `on` and `off`. Default value is `on`.

» Block auth_config

`auth_config` - (Optional, Type: set) Auth config of the accelerated domain. It's a set and consist of at most 1 item. * `auth_type` - (Optional) Auth type of the auth config. Valid values are `no_auth`, `type_a`, `type_b` and `type_c`. Default value is `no_auth`. * `master_key` - (Optional) Master authentication key of the auth config. This parameter can have a string of 6 to 32 characters and must contain only alphanumeric characters. * `slave_key` - (Optional) Slave authentication key of the auth config. This parameter can have a string of 6 to 32 characters and must contain only alphanumeric characters. * `timeout` - (Optional, Type: int) Authentication cache time of the auth config. Default value is `1800`. It's value is valid only when the `auth_type` is type_b or type_c.

» Block certificate_config

`certificate_config` - (Optional, Type: set) Certificate config of the accelerated domain. It's a set and consist of at most 1 item. * `server_certificate_status` - (Optional) This parameter indicates whether or not enable https. Valid values are `on` and `off`. Default value is `on`. * `server_certificate` - (Optional) The SSL server certificate string. This is required if `server_certificate_status` is `on` * `private_key` - (Optional) The SSL private key. This is required if `server_certificate_status` is `on`

» Block http_header_config

`http_header_config` - (Optional, Type: set) Http header config of the accelerated domain. It's a set and consist of at most 8 items. The `header_key` for each item can not be repeated. * `header_key` - (Required) Header key of the http header. Valid values are `Content-Type`, `Cache-Control`, `Content-Disposition`, `Content-Language Expires`, `Access-Control-Allow-Origin`, `Access-Control-Allow-Methods` and `Access-Control-Max-Age`. * `header_value` - (Required) Header value of the http header.

» Block cache_config

`cache_config` - (Optional, Type: set) Cache config of the accelerated domain. It's a set and each item's `cache_content` can not be repeated. * `cache_type` - (Required) Cache type of the cache config. Valid values are `suffix` and `path`. * `cache_content` - (Required) Cache content of the cache config. It's value is a path string when the `cache_type` is `path`. When the `cache_type` is `suffix`, it's value is a string which contains multiple file suffixes separated by commas. * `ttl` - (Required, Type: int) Cache time of the cache config. * `weight` - (Optional, Type: int) Weight of the cache config. This parameter's value is between 1 and 99. Default value is `1`. The higher the value, the higher the priority.

» Attributes Reference

The following attributes are exported:

- `domain_name` - The accelerated domain name.
- `sources` - The accelerated domain sources.
- `cdn_type` - The cdn type of the accelerated domain.
- `source_type` - The source type ot the accelerated domain.
- `scope` - The accelerated domain scope.

- `optimize_enable` - The page optimize config of the accelerated domain.

- `page_compress_enable` - The page compress config of the accelerated domain.

- `range_enable` - The range source config of the accelerated domain.

- `video_seek_enable` - The video seek config of the accelerated domain.

- `parameter_filter_config` - The parameter filter config of the accelerated domain.

- `page_404_config` - The error page config of the accelerated domain.

- `refer_config` - The refer config of the accelerated domain.

- `auth_config` - The auth config of the accelerated domain.

- `http_header_config` - The http header configs of the accelerated domain.

- `cache_config` - The cache configs of the accelerated domain.

» alicloud_cdn_domain_config

Provides a CDN Accelerated Domain resource.

For information about domain config and how to use it, see Batch set config

NOTE: Available in v1.34.0+.

» Example Usage

Basic Usage

```
# Create a new Domain config.
resource "alicloud_cdn_domain_new" "domain" {
  domain_name = "tf-testacc%d.xiaozhu.com"
  cdn_type    = "web"
  scope       = "overseas"
  sources {
    content  = "1.1.1.1"
    type     = "ipaddr"
    priority = "20"
    port     = 80
    weight   = "15"
  }
}
resource "alicloud_cdn_domain_config" "config" {
  domain_name    = "${alicloud_cdn_domain_new.domain.domain_name}"
```

```
  function_name = "ip_allow_list_set"
  function_args {
    arg_name  = "ip_list"
    arg_value = "110.110.110.110"
  }
}
```

» Argument Reference

The following arguments are supported:

- `domain_name` - (Required, ForceNew) Name of the accelerated domain. This name without suffix can have a string of 1 to 63 characters, must contain only alphanumeric characters or "-", and must not begin or end with "-", and "-" must not in the 3th and 4th character positions at the same time. Suffix `.sh` and `.tel` are not supported.
- `function_name` - (Required, ForceNew) The name of the domain config.
- `function_args` - (Required, ForceNew, Type: list) The args of the domain config.

» Block function_args

The `function_args` block supports the following:

- `arg_name` - (Required) The name of arg.
- `arg_value` - (Required) The value of arg.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the domain config. The value is formate as `<domain_name>:<function_name>`.

» Import

CDN domain config can be imported using the id, e.g.

`terraform import alicloud_cdn_domain_config.example cdn:config-abc123456`

» alicloud_cdn_domain_new

Provides a CDN Accelerated Domain resource. This resource is based on CDN's new version OpenAPI.

For information about Cdn Domain New and how to use it, see Add a domain.

NOTE: Available in v1.34.0+.

» Example Usage

Basic Usage

```
# Create a new Domain.
resource "alicloud_cdn_domain_new" "domain" {
  domain_name = "terraform.test.com"
  cdn_type    = "web"
  scope       = "overseas"
  sources {
    content  = "1.1.1.1"
    type     = "ipaddr"
    priority = 20
    port     = 80
    weight   = 10
  }
}
```

» Argument Reference

The following arguments are supported:

- `domain_name` - (Required) Name of the accelerated domain. This name without suffix can have a string of 1 to 63 characters, must contain only alphanumeric characters or "-", and must not begin or end with "-", and "-" must not in the 3th and 4th character positions at the same time. Suffix `.sh` and `.tel` are not supported.
- `cdn_type` - (Required, ForceNew) Cdn type of the accelerated domain. Valid values are `web`, `download`, `video`.
- `scope` - (Optional) Scope of the accelerated domain. Valid values are `domestic`, `overseas`, `global`. Default value is `domestic`. This parameter's setting is valid Only for the international users and domestic L3 and above users .
- `sources` - (Optional, Type: list) The source address list of the accelerated domain. Defaults to null. See Block Sources.

- `certificate_config` - (Optional, Type: list, Available in 1.52.0+) Certificate config of the accelerated domain. It's a list and consist of at most 1 item.
- `resource_group_id` - (Optional, Available in v1.67.0+) Resource group ID.

» **Block sources**

The `sources` block supports the following:

- `content` - (Required) The adress of source. Valid values can be ip or doaminName. Each item's `content` can not be repeated.
- `type` - (Required) The type of the source. Valid values are `ipaddr`, `domain` and `oss`.
- `port` - (Optional, Type: int) The port of source. Valid values are `443` and `80`. Default value is `80`.
- `priority` - (Optional, Type: int) Priority of the source. Valid values are `0` and `100`. Default value is `20`.
- `weight` - (Optional, Type: int) Weight of the source. Valid values are from `0` to `100`. Default value is `10`, but if type is `ipaddr`, the value can only be `10`.

» **Block certificate_config**

The `certificate_config` block supports the following:

- `server_certificate_status` - (Optional) This parameter indicates whether or not enable https. Valid values are `on` and `off`. Default value is `on`.
- `server_certificate` - (Optional) The SSL server certificate string. This is required if `server_certificate_status` is `on`
- `private_key` - (Optional) The SSL private key. This is required if `server_certificate_status` is `on`
- `force_set` - (Optional) Set `1` to ignore the repeated verification for certificate name, and cover the information of the origin certificate (with the same name). Set `0` to work the verification.
- `cert_name` - (Optional) The SSL certificate name.
- `cert_type` - (Optional) The SSL certificate type, can be "upload", "cas" and "free".
- `tags` - (Optional, Available in v1.55.2+) A mapping of tags to assign to the resource.

» Attributes Reference

The following attributes are exported:

- `id` - The cdn domain id. The value is same as the domain name.

» Import

CDN domain can be imported using the id, e.g.

```
terraform import alicloud_cdn_domain_new.example xxxx.com
```

» alicloud_yundun_bastionhost_instances

This data source provides a list of cloud Bastionhost instances in an Alibaba Cloud account according to the specified filters.

NOTE: Available in 1.63.0+ .

» Example Usage

```
data "alicloud_yundun_bastionhost_instances" "instance" {
  name_regex = "^bastionhost"
}

output "instance" {
  value = "${alicloud_yundun_bastionhost_instances.instance.*.id}"
}
```

» Argument Reference

The following arguments are supported:

- `description_regex` - (Optional) A regex string to filter results by the instance description.
- `ids` - (Optional) Matched instance IDs to filter data source result.
- `output_file` - (Optional) File name to persist data source output.
- `descriptions` - (Optional) Descriptions to filter data source result.
- `tags` - (Optional, Available in v1.67.0+) A map of tags assigned to the bastionhost instance. It must be in the format: `data "alicloud_yundun_bastionhost_instances" "instance" { tags = { tagKey1 = "tagValue1" } }`

» Attributes Reference

The following attributes are exported in addition to the arguments listed above: * `instances` - A list of apis. Each element contains the following attributes: * `id` - The instance's id. * `description` - The instance's remark. * `user_vswitch_id` - The instance's vSwitch ID. * `private_domain` - The instance's private domain name. * `public_domain` - The instance's public domain name. * `instance_status` - The instance's status. * `public_network_access` - The instance's public network access configuration. * `security_group_ids` - The instance's security group configuration. * `tags` - A map of tags assigned to the bastionhost instance.

» alicloud_yundun_bastionhost_instance

Cloud Bastionhost instance resource ("Yundun_bastionhost" is the short term of this product).

NOTE: The endpoint of bssopenapi used only support "business.aliyuncs.com" at present.

NOTE: Available in 1.63.0+ .

NOTE: In order to destroy Cloud Bastionhost instance , users are required to apply for white list first

» Example Usage

Basic Usage

```
provider "alicloud" {
  endpoints {
      bssopenapi = "business.aliyuncs.com"
      }
}

resource "alicloud_yundun_bastionhost_instance" "default" {
      description        = "Terraform-test"
      plan_code          = "alpha.professional"
      period             = "1"
      vswitch_id         = "v-testVswitch"
      security_group_ids = "sg-test"
}
```

» Argument Reference

The following arguments are supported:

- `plan_code` - (Required) Plan code of the Cloud Bastionhost to produce. (alpha.professional, alpha.basic, alpha.premium)
- `description` - (Required) Description of the instance. This name can have a string of 1 to 63 characters.
- `period` - (ForceNew) Duration for initially producing the instance. Valid values: [1~9], 12, 24, 36. Default to 1. At present, the provider does not support modify "period".
- `vswitch_id` - (Required, ForceNew) vSwtich ID configured to bastionhost
- `security_group_ids` - (Required) security group IDs configured to bastionhost
- `tags` - (Optional, Available in v1.67.0+) A mapping of tags to assign to the resource.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the instance resource of Yundun_bastionhost.

» Import

Yundun_bastionhost instance can be imported using the id, e.g.

```
$ terraform import alicloud_yundun_bastionhost.example bastionhost-exampe123456
```

» alicloud_cen_bandwidth_limits

This data source provides CEN Bandwidth Limits available to the user.

» Example Usage

```
data "alicloud_cen_bandwidth_limits" "bwl" {
  instance_ids = ["cen-id1"]
}

output "first_cen_bandwidth_limits_local_region_id" {
  value = "${data.alicloud_cen_bandwidth_limits.bwl.limits.0.local_region_id}"
}
```

» Argument Reference

The following arguments are supported:

- `instance_ids` - (Optional) A list of CEN instances IDs.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `limits` - A list of CEN Bandwidth Limits. Each element contains the following attributes:
  - `instance_id` - ID of the CEN instance.
  - `local_region_id` - ID of local region.
  - `opposite_region_id` - ID of opposite region.
  - `status` - Status of the CEN Bandwidth Limit, including "Active" and "Modifying".
  - `bandwidth_limit` - The bandwidth limit configured for the interconnected regions communication.

» alicloud_cen_bandwidth_packages

This data source provides CEN Bandwidth Packages available to the user.

» Example Usage

```
data "alicloud_cen_bandwidth_packages" "bwp" {
  instance_id = "cen-id1"
  name_regex  = "^foo"
}

output "first_cen_bandwidth_package_id" {
  value = "${data.alicloud_cen_bandwidth_packages.bwp.packages.0.id}"
}
```

» Argument Reference

The following arguments are supported:

- `instance_id` - (Optional) ID of a CEN instance.

- `ids` - (Optional) Limit search to a list of specific CEN Bandwidth Package IDs.
- `name_regex` - (Optional) A regex string to filter CEN Bandwidth Package by name.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `packages` - A list of CEN bandwidth package. Each element contains the following attributes:
    - `id` - ID of the CEN Bandwidth Package.
    - `instance_id` - ID of CEN instance that owns the CEN Bandwidth Package.
    - `name` - Name of the CEN Bandwidth Package.
    - `description` - Description of the CEN Bandwidth Package.
    - `business_status` - Status of the CEN Bandwidth Package, including "Normal", "FinancialLocked" and "SecurityLocked".
    - `status` - Status of the CEN Bandwidth Package in CEN instance, including "Idle" and "InUse".
    - `bandwidth` - The bandwidth in Mbps of the CEN bandwidth package.
    - `creation_time` - Creation time of the CEN bandwidth package.
    - `bandwidth_package_charge_type` - The billing method, including "POSTPAY" and "PREPAY".
    - `geographic_region_a_id` - Region ID of the interconnected regions.
    - `geographic_region_b_id` - Region ID of the interconnected regions.

» alicloud_cen_instances

This data source provides CEN instances available to the user.

» Example Usage

```
data "alicloud_cen_instances" "cen_instances_ds" {
  ids        = ["cen-id1"]
  name_regex = "^foo"
}

output "first_cen_instance_id" {
  value = "${data.alicloud_cen_instances.cen_instances_ds.instances.0.id}"
}
```

» Argument Reference

The following arguments are supported:

- `ids` - (Optional) A list of CEN instances IDs.
- `name_regex` - (Optional) A regex string to filter CEN instances by name.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of CEN instances IDs.
- `names` - A list of CEN instances names.
- `instances` - A list of CEN instances. Each element contains the following attributes:
    - `id` - ID of the CEN instance.
    - `name` - Name of the CEN instance.
    - `status` - Status of the CEN instance, including "Creating", "Active" and "Deleting".
    - `bandwidth_package_ids` - List of CEN Bandwidth Package IDs in the specified CEN instance.
    - `child_instance_ids` - List of child instance IDs in the specified CEN instance.
    - `description` - Description of the CEN instance.

» alicloud_cen_region_route_entries

This data source provides CEN Regional Route Entries available to the user.

» Example Usage

```
data "alicloud_cen_region_route_entries" "entry" {
  instance_id = "cen-id1"
  region_id   = "cn-beijing"
}

output "first_region_route_entries_route_entry_cidr_block" {
  value = "${data.alicloud_cen_region_route_entries.entry.entries.0.cidr_block}"
}
```

» Argument Reference

The following arguments are supported:

- `instance_id` - (Required) ID of the CEN instance.
- `region_id` - (Required) ID of the region.

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `entries` - A list of CEN Route Entries. Each element contains the following attributes:
    - `cidr_block` - The destination CIDR block of the route entry.
    - `type` - Type of the route entry.
    - `next_hop_id` - ID of the next hop.
    - `next_hop_type` - Type of the next hop.
    - `next_hop_region_id` - ID of the region where the next hop is located.

» alicloud_cen_route_entries

This data source provides CEN Route Entries available to the user.

» Example Usage

```
data "alicloud_cen_route_entries" "entry" {
  instance_id    = "cen-id1"
  route_table_id = "vtb-id1"
}

output "first_route_entries_route_entry_cidr_block" {
  value = "${data.alicloud_cen_route_entries.entry.entries.0.cidr_block}"
}
```

» Argument Reference

The following arguments are supported:

- `instance_id` - (Required) ID of the CEN instance.
- `route_table_id` - (Required) ID of the route table of the VPC or VBR.
- `cidr_block` - (Optional) The destination CIDR block of the route entry to query.

- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `entries` - A list of CEN Route Entries. Each element contains the following attributes:
  - `route_table_id` - ID of the route table.
  - `cidr_block` - The destination CIDR block of the route entry.
  - `next_hop_id` - ID of the next hop.
  - `next_hop_type` - Type of the next hop, including "Instance", "HaVip" and "RouterInterface".
  - `route_type` - Type of the route entry, including "System", "Custom" and "BGP".
  - `operational_mode` - Whether to allow the route entry to be published or removed to or from CEN.
  - `publish_status` - The publish status of the route entry in CEN, including "Published" and "NonPublished".
  - `conflicts` - A list of conflicted Route Entries. Each element contains the following attributes:
    * `cidr_block` - The destination CIDR block of the conflicted route entry.
    * `region_id` - ID of the region where the conflicted route entry is located.
    * `instance_id` - ID of the CEN child instance.
    * `instance_type` - The type of the CEN child instance.
    * `status` - Reasons of exceptions.

» alicloud_cen_bandwidth_limit

Provides a CEN cross-regional interconnection bandwidth resource. To connect networks in different regions, you must set cross-region interconnection bandwidth after buying a bandwidth package. The total bandwidth set for all the interconnected regions of a bandwidth package cannot exceed the bandwidth of the bandwidth package. By default, 1 Kbps bandwidth is provided for connectivity test. To run normal business, you must buy a bandwidth package and set a proper interconnection bandwidth.

For example, a CEN instance is bound to a bandwidth package of 20 Mbps and the interconnection areas are Mainland China and North America. You can set the cross-region interconnection bandwidth between US West 1 and China East

1, China East 2, China South 1, and so on. However, the total bandwidth set for all the interconnected regions cannot exceed 20 Mbps.

For information about CEN and how to use it, see Cross-region interconnection bandwidth

» Example Usage

Basic Usage

```
variable "name" {
  default = "tf-testAccCenBandwidthLimitConfig"
}

provider "alicloud" {
  alias  = "fra"
  region = "eu-central-1"
}

provider "alicloud" {
  alias  = "sh"
  region = "cn-shanghai"
}

resource "alicloud_vpc" "vpc1" {
  provider   = "alicloud.fra"
  name       = "${var.name}"
  cidr_block = "192.168.0.0/16"
}

resource "alicloud_vpc" "vpc2" {
  provider   = "alicloud.sh"
  name       = "${var.name}"
  cidr_block = "172.16.0.0/12"
}

resource "alicloud_cen_instance" "cen" {
  name        = "${var.name}"
  description = "tf-testAccCenBandwidthLimitConfigDescription"
}

resource "alicloud_cen_bandwidth_package" "bwp" {
  bandwidth = 5
  geographic_region_ids = [
    "Europe",
  "China"]
```

```
}

resource "alicloud_cen_bandwidth_package_attachment" "bwp_attach" {
  instance_id         = "${alicloud_cen_instance.cen.id}"
  bandwidth_package_id = "${alicloud_cen_bandwidth_package.bwp.id}"
}

resource "alicloud_cen_instance_attachment" "vpc_attach_1" {
  instance_id            = "${alicloud_cen_instance.cen.id}"
  child_instance_id      = "${alicloud_vpc.vpc1.id}"
  child_instance_region_id = "eu-central-1"
}

resource "alicloud_cen_instance_attachment" "vpc_attach_2" {
  instance_id            = "${alicloud_cen_instance.cen.id}"
  child_instance_id      = "${alicloud_vpc.vpc2.id}"
  child_instance_region_id = "cn-shanghai"
}

resource "alicloud_cen_bandwidth_limit" "foo" {
  instance_id = "${alicloud_cen_instance.cen.id}"
  region_ids = [
    "eu-central-1",
  "cn-shanghai"]
  bandwidth_limit = 4
  depends_on = [
    "alicloud_cen_bandwidth_package_attachment.bwp_attach",
    "alicloud_cen_instance_attachment.vpc_attach_1",
  "alicloud_cen_instance_attachment.vpc_attach_2"]
}
```

» Argument Reference

The following arguments are supported:

- `instance_id` - (Required, ForceNew) The ID of the CEN.
- `region_ids` - (Required, ForceNew) List of the two regions to interconnect. Must be two different regions.
- `bandwidth_limit` - (Required) The bandwidth configured for the interconnected regions communication.

->**NOTE:** The "alicloud_cen_bandwidthlimit" resource depends on the related "alicloud_cen_bandwidth_package_attachment" resource and "alicloud_cen_instance_attachment" resource.

» Timeouts

NOTE: Available in 1.48.0+.

The `timeouts` block allows you to specify timeouts for certain actions:

- `update` - (Defaults to 10 mins) Used when activating the cen bandwidth limit when necessary during update - when changing bandwidth limit.
- `delete` - (Defaults to 10 mins) Used when terminating the cen bandwidth limit.

» Attributes Reference

The following attributes are exported:

- `id` - ID of the resource, formatted as `<instance_id>:<region_id_1>:<region_id_2>`.

->**NOTE:** The region_id_1 and region_id_2 are sorted lexicographically.

» Import

CEN bandwidth limit can be imported using the id, e.g.

```
terraform import alicloud_cen_bandwidth_limit.example cen-abc123456:cn-beijing:eu-west-1
```

->**NOTE:** The sequence of the region_id_1 and region_id_2 makes no difference when import. But the in the id of the resource, they are sorted lexicographically.

» alicloud_cen_bandwidth_package

Provides a CEN bandwidth package resource. The CEN bandwidth package is an abstracted object that includes an interconnection bandwidth and interconnection areas. To buy a bandwidth package, you must specify the areas to connect. An area consists of one or more Alibaba Cloud regions. The areas in CEN include Mainland China, Asia Pacific, North America, and Europe.

For information about CEN and how to use it, see Manage bandwidth packages.

» Example Usage

Basic Usage

```
resource "alicloud_cen_bandwidth_package" "foo" {
  name      = "tf-testAccCenBandwidthPackageConfig"
  bandwidth = 5
  geographic_region_ids = [
    "China",
  "Asia-Pacific"]
}
```

» Argument Reference

The following arguments are supported:

- `bandwidth` - (Required) The bandwidth in Mbps of the bandwidth package. Cannot be less than 2Mbps.
- `geographic_region_ids` - (Required) List of the two areas to connect. Valid value: China | North-America | Asia-Pacific | Europe | Middle-East.
- `name` - (Optional) The name of the bandwidth package. Defaults to null.
- `description` - (Optional) The description of the bandwidth package. Default to null.
- `charge_type` - (Optional) The billing method. Valid value: PostPaid | PrePaid. Default to PostPaid. If set to PrePaid, the bandwidth package can't be deleted before expired time.
- `period` - (Optional) The purchase period in month. Valid value: 1, 2, 3, 6, 12. Default to 1.

->**NOTE:** PrePaid mode will deduct fees from the account directly and the bandwidth package can't be deleted before expired time.

->**NOTE:** The PostPaid mode is only for test. Please open a ticket if you need.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the bandwidth package.
- `expired_time` - The time of the bandwidth package to expire.
- `status` - The status of the bandwidth, including "InUse" and "Idle".

» Import

CEN bandwidth package can be imported using the id, e.g.

```
$ terraform import alicloud_cen_bandwidth_package.example cenbwp-abc123456
```

» alicloud_cen_bandwidth_package_attachment

Provides a CEN bandwidth package attachment resource. The resource can be used to bind a bandwidth package to a specified CEN instance.

» Example Usage

Basic Usage

```
# Create a new bandwidth package attachment and use it to attach a bandwidth package to a ne
resource "alicloud_cen_instance" "cen" {
  name        = "tf-testAccCenBandwidthPackageAttachmentConfig"
  description = "tf-testAccCenBandwidthPackageAttachmentDescription"
}

resource "alicloud_cen_bandwidth_package" "bwp" {
  bandwidth = 20
  geographic_region_ids = [
    "China",
  "Asia-Pacific"]
}

resource "alicloud_cen_bandwidth_package_attachment" "foo" {
  instance_id          = "${alicloud_cen_instance.cen.id}"
  bandwidth_package_id = "${alicloud_cen_bandwidth_package.bwp.id}"
}
```

» Argument Reference

The following arguments are supported:

- `instance_id` - (Required, ForceNew) The ID of the CEN.
- `bandwidth_package_id` - (Required, ForceNew) The ID of the bandwidth package.

» Attributes Reference

The following attributes are exported:

- `id` - ID of the resource, the same as bandwidth_package_id.

» Import

CEN bandwidth package attachment resource can be imported using the id, e.g.

```
$terraform import alicloud_cen_bandwidth_package_attachment.example bwp-abc123456
```

» alicloud_cen_instance

Provides a CEN instance resource. Cloud Enterprise Network (CEN) is a service that allows you to create a global network for rapidly building a distributed business system with a hybrid cloud computing solution. CEN enables you to build a secure, private, and enterprise-class interconnected network between VPCs in different regions and your local data centers. CEN provides enterprise-class scalability that automatically responds to your dynamic computing requirements.

For information about CEN and how to use it, see What is Cloud Enterprise Network.

» Example Usage

Basic Usage

```
resource "alicloud_cen_instance" "cen" {
  name        = "tf_test_foo"
  description = "an example for cen"
}
```

» Argument Reference

The following arguments are supported:

- `name` - (Optional) The name of the CEN instance. Defaults to null. The name must be 2 to 128 characters in length and can contain letters, numbers, periods (.), underscores (_), and hyphens (-). The name must start with a letter, but cannot start with http:// or https://.
- `description` - (Optional) The description of the CEN instance. Defaults to null. The description must be 2 to 256 characters in length. It must start with a letter, and cannot start with http:// or https://.

» Timeouts

NOTE: Available in 1.48.0+.

The `timeouts` block allows you to specify timeouts for certain actions:

- `create` - (Defaults to 5 mins) Used when creating the cen instance (until it reaches the initial `Active` status).
- `delete` - (Defaults to 3 mins) Used when terminating the cen instance.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the CEN instance.
- `name` - The name of the CEN instance.
- `description` - The description of the CEN instance.

» Import

CEN instance can be imported using the id, e.g.

```
$ terraform import alicloud_cen_instance.example cen-abc123456
```

» alicloud_cen_instance_attachment

Provides a CEN child instance attachment resource.

» Example Usage

Basic Usage

```
# Create a new instance-attachment and use it to attach one child instance to a new CEN
variable "name" {
  default = "tf-testAccCenInstanceAttachmentBasic"
}

resource "alicloud_cen_instance" "cen" {
  name        = "${var.name}"
  description = "terraform01"
}

resource "alicloud_vpc" "vpc" {
  name       = "${var.name}"
  cidr_block = "192.168.0.0/16"
}

resource "alicloud_cen_instance_attachment" "foo" {
  instance_id              = "${alicloud_cen_instance.cen.id}"
```

```
  child_instance_id        = "${alicloud_vpc.vpc.id}"
  child_instance_region_id = "cn-beijing"
}
```

» Argument Reference

The following arguments are supported:

- `instance_id` - (Required, ForceNew) The ID of the CEN.
- `child_instance_id` - (Required, ForceNew) The ID of the child instance to attach.
- `child_instance_region_id` - (Required, ForceNew) The region ID of the child instance to attach.
- `child_instance_owner_id` - (Optional, Available in 1.42.0+) The uid of the child instance. Only used when attach a child instance of other account.

->**NOTE:** Ensure that the child instance is not used in Express Connect.

» Attributes Reference

The following attributes are exported:

- `id` - ID of the resource, formatted as `<instance_id>:<child_instance_id>`.

» Import

CEN instance can be imported using the id, e.g.

```
$ terraform import alicloud_cen_instance_attachment.example cen-abc123456:vpc-abc123456
```

» alicloud_cen_instance_grant

Provides a CEN child instance grant resource, which allow you to authorize a VPC or VBR to a CEN of a different account.

For more information about how to use it, see Attach a network in a different account.

» Example Usage

Basic Usage

```
# Create a new instance-grant and use it to grant one child instance of account1 to a new CB
provider "alicloud" {
  access_key = "access123"
  secret_key = "secret123"
  alias      = "account1"
}

provider "alicloud" {
  access_key = "access456"
  secret_key = "secret456"
  alias      = "account2"
}

variable "name" {
  default = "tf-testAccCenInstanceGrantBasic"
}

resource "alicloud_cen_instance" "cen" {
  provider = "alicloud.account2"
  name     = "${var.name}"
}

resource "alicloud_vpc" "vpc" {
  provider   = "alicloud.account1"
  name       = "${var.name}"
  cidr_block = "192.168.0.0/16"
}

resource "alicloud_cen_instance_grant" "foo" {
  provider         = "alicloud.account1"
  cen_id           = "${alicloud_cen_instance.cen.id}"
  child_instance_id = "${alicloud_vpc.vpc.id}"
  cen_owner_id     = "uid2"
}

resource "alicloud_cen_instance_attachment" "foo" {
  provider                = "alicloud.account2"
  instance_id             = "${alicloud_cen_instance.cen.id}"
  child_instance_id       = "${alicloud_vpc.vpc.id}"
  child_instance_region_id = "cn-qingdao"
  child_instance_owner_id = "uid1"
  depends_on = [
  "alicloud_cen_instance_grant.foo"]
}
```

» **Argument Reference**

The following arguments are supported:

- `cen_id` - (Required) The ID of the CEN.
- `child_instance_id` - (Required) The ID of the child instance to grant.
- `cen_owner_id` - (Required) The owner UID of the CEN which the child instance granted to.

» **Attributes Reference**

The following attributes are exported:

- `id` - ID of the resource, formatted as `<cen_id>:<child_instance_id>:<cen_owner_id>`.

» **Import**

CEN instance can be imported using the id, e.g.

```
$ terraform import alicloud_cen_instance_grant.example cen-abc123456:vpc-abc123456:uid123456
```

» **alicloud_cen_route_entry**

Provides a CEN route entry resource. Cloud Enterprise Network (CEN) supports publishing and withdrawing route entries of attached networks. You can publish a route entry of an attached VPC or VBR to a CEN instance, then other attached networks can learn the route if there is no route conflict. You can withdraw a published route entry when CEN does not need it any more.

For information about CEN route entries publishment and how to use it, see Manage network routes.

» **Example Usage**

Basic Usage

```
# Create a cen_route_entry resource and use it to publish a route entry pointing to an ECS.

provider "alicloud" {
  alias  = "hz"
  region = "cn-hangzhou"
}

variable "name" {
```

```
    default = "tf-testAccCenRouteEntryConfig"
}

data "alicloud_zones" "default" {
  provider                    = "alicloud.hz"
  available_disk_category     = "cloud_efficiency"
  available_resource_creation = "VSwitch"
}

data "alicloud_instance_types" "default" {
  provider          = "alicloud.hz"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  cpu_core_count    = 1
  memory_size       = 2
}

data "alicloud_images" "default" {
  provider    = "alicloud.hz"
  name_regex  = "^ubuntu_18.*64"
  most_recent = true
  owners      = "system"
}

resource "alicloud_vpc" "vpc" {
  provider   = "alicloud.hz"
  name       = "${var.name}"
  cidr_block = "172.16.0.0/12"
}

resource "alicloud_vswitch" "default" {
  provider          = "alicloud.hz"
  vpc_id            = "${alicloud_vpc.vpc.id}"
  cidr_block        = "172.16.0.0/21"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  name              = "${var.name}"
}

resource "alicloud_security_group" "default" {
  provider    = "alicloud.hz"
  name        = "${var.name}"
  description = "foo"
  vpc_id      = "${alicloud_vpc.vpc.id}"
}

resource "alicloud_instance" "default" {
  provider                   = "alicloud.hz"
```

```
  vswitch_id               = "${alicloud_vswitch.default.id}"
  image_id                 = "${data.alicloud_images.default.images.0.id}"
  instance_type            = "${data.alicloud_instance_types.default.instance_types.0.id}'
  system_disk_category     = "cloud_efficiency"
  internet_charge_type     = "PayByTraffic"
  internet_max_bandwidth_out = 5
  security_groups          = ["${alicloud_security_group.default.id}"]
  instance_name            = "${var.name}"
}

resource "alicloud_cen_instance" "cen" {
  name = "${var.name}"
}

resource "alicloud_cen_instance_attachment" "attach" {
  instance_id             = "${alicloud_cen_instance.cen.id}"
  child_instance_id       = "${alicloud_vpc.vpc.id}"
  child_instance_region_id = "cn-hangzhou"
  depends_on = [
  "alicloud_vswitch.default"]
}

resource "alicloud_route_entry" "route" {
  provider            = "alicloud.hz"
  route_table_id      = "${alicloud_vpc.vpc.route_table_id}"
  destination_cidrblock = "11.0.0.0/16"
  nexthop_type        = "Instance"
  nexthop_id          = "${alicloud_instance.default.id}"
}

resource "alicloud_cen_route_entry" "foo" {
  provider       = "alicloud.hz"
  instance_id    = "${alicloud_cen_instance.cen.id}"
  route_table_id = "${alicloud_vpc.vpc.route_table_id}"
  cidr_block     = "${alicloud_route_entry.route.destination_cidrblock}"
  depends_on = [
  "alicloud_cen_instance_attachment.attach"]
}
```

» Argument Reference

The following arguments are supported:

- `instance_id` - (Required, ForceNew) The ID of the CEN.
- `route_table_id` - (Required, ForceNew) The route table of the attached

VBR or VPC.
- `cidr_block` - (Required, ForceNew) The destination CIDR block of the route entry to publish.

->**NOTE:** The "alicloud_cen_instance_route_entries" resource depends on the related "alicloud_cen_instance_attachment" resource.

->**NOTE:** The "alicloud_cen_instance_attachment" resource should depend on the related "alicloud_vswitch" resource.

» Attributes Reference

The following attributes are exported:

- `id` - ID of the resource, formatted as `<instance_id>:<route_table_id>:<cidr_block>`.

» Import

CEN instance can be imported using the id, e.g.

```
$ terraform import alicloud_cen_route_entry.example cen-abc123456:vtb-abc123:192.168.0.0/24
```

» alicloud_cloud_connect_networks

This data source provides Cloud Connect Networks available to the user.

NOTE: Available in 1.59.0+

NOTE: Only the following regions support create Cloud Connect Network. [`cn-shanghai`, `cn-shanghai-finance-1`, `cn-hongkong`, `ap-southeast-1`, `ap-southeast-2`, `ap-southeast-3`, `ap-southeast-5`, `ap-northeast-1`, `eu-central-1`]

» Example Usage

```
data "alicloud_cloud_connect_networks" "default" {
  ids        = ["${alicloud_cloud_connect_networks.default.id}"]
  name_regex = "^tf-testAcc.*"
}
resource "alicloud_cloud_connect_network" "default" {
  name        = "tf-testAccCloudConnectNetworkName"
  description = "tf-testAccCloudConnectNetworkDescription"
  cidr_block  = "192.168.0.0/24"
  is_default  = true
}
```

» Argument Reference

The following arguments are supported:

- `ids` - (Optional) A list of CCN instances IDs.
- `name_regex` - (Optional) A regex string to filter CCN instances by name.

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of CCN instances IDs.
- `names` - A list of CCN instances names.
- `networks` - A list of CCN instances. Each element contains the following attributes:
  - `id` - ID of the CCN instance.
  - `name` - Name of the CCN instance.
  - `cidr_block` - CidrBlock of the CCN instance.
  - `is_default` - IsDefault of the CCN instance.

» alicloud_cloud_connect_network

Provides a cloud connect network resource. Cloud Connect Network (CCN) is another important component of Smart Access Gateway. It is a device access matrix composed of Alibaba Cloud distributed access gateways. You can add multiple Smart Access Gateway (SAG) devices to a CCN instance and then attach the CCN instance to a Cloud Enterprise Network (CEN) instance to connect the local branches to the Alibaba Cloud.

For information about cloud connect network and how to use it, see What is Cloud Connect Network.

NOTE: Available in 1.59.0+

NOTE: Only the following regions support create Cloud Connect Network. [`cn-shanghai`, `cn-shanghai-finance-1`, `cn-hongkong`, `ap-southeast-1`, `ap-southeast-2`, `ap-southeast-3`, `ap-southeast-5`, `ap-northeast-1`, `eu-central-1`]

» Example Usage

Basic Usage

```
resource "alicloud_cloud_connect_network" "default" {
  name        = "tf-testAccCloudConnectNetworkName"
```

```
  description = "tf-testAccCloudConnectNetworkDescription"
  cidr_block  = "192.168.0.0/24"
  is_default  = true
}
```

» Argument Reference

The following arguments are supported:

- `name` - (Optional) The name of the CCN instance. The name can contain 2 to 128 characters including a-z, A-Z, 0-9, periods, underlines, and hyphens. The name must start with an English letter, but cannot start with http:// or https://.
- `description` - (Optional) The description of the CCN instance. The description can contain 2 to 256 characters. The description must start with English letters, but cannot start with http:// or https://.
- `cidr_block` - (Optional) The CidrBlock of the CCN instance. Defaults to null.
- `is_default` - (Required) Created by default. If the client does not have ccn in the binding, it will create a ccn for the user to replace.

» Attributes Reference

The following attributes are exported:

- `id` - The CcnId of the CCN instance. For example "ccn-xxx".

» Import

The cloud connect network instance can be imported using the id, e.g.

```
$ terraform import alicloud_cloud_connect_network.example ccn-abc123456
```

» alicloud_cloud_connect_network_attachment

Provides a Cloud Connect Network Attachment resource. This topic describes how to associate a Smart Access Gateway (SAG) instance with a network instance. You must associate an SAG instance with a network instance if you want to connect the SAG to Alibaba Cloud. You can connect an SAG to Alibaba Cloud through a leased line, the Internet, or the active and standby links.

For information about Cloud Connect Network Attachment and how to use it, see What is Cloud Connect Network Attachment.

NOTE: Available in 1.64.0+

NOTE: Only the following regions support. [`cn-shanghai`, `cn-shanghai-finance-1`, `cn-hongkong`, `ap-southeast-1`, `ap-southeast-2`, `ap-southeast-3`, `ap-southeast-5`, `ap-northeast-1`, `eu-central-1`]

» Example Usage

Basic Usage

```
resource "alicloud_cloud_connect_network" "ccn" {
  name       = "tf-testAccCloudConnectNetworkAttachment-xxx"
  is_default = "true"
}

resource "alicloud_cloud_connect_network_attachment" "default" {
  ccn_id     = "${alicloud_cloud_connect_network.ccn.id}"
  sag_id     = "sag-xxxxx"
  depends_on = ["alicloud_cloud_connect_network.ccn"]
}
```

» Argument Reference

The following arguments are supported:

- `ccn_id` - (Required,ForceNew) The ID of the CCN instance.
- `sag_id` - (Required,ForceNew) The ID of the Smart Access Gateway instance.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the Cloud Connect Network Attachment Id and formates as `<ccn_id>:<sag_id>`.

» Import

The Cloud Connect Network Attachment can be imported using the instance_id, e.g.

```
$ terraform import alicloud_cloud_connect_network_attachment.example ccn-abc123456:sag-abc12
```

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» alicloud_cloud_connect_network_grant

Provides a Cloud Connect Network Grant resource. If the CEN instance to be attached belongs to another account, authorization by the CEN instance is required.

For information about Cloud Connect Network Grant and how to use it, see What is Cloud Connect Network Grant.

NOTE: Available in 1.63.0+

NOTE: Only the following regions support create Cloud Connect Network Grant. [cn-shanghai, cn-shanghai-finance-1, cn-hongkong, ap-southeast-1, ap-southeast-2, ap-southeast-3, ap-southeast-5, ap-northeast-1, eu-central-1]

» Example Usage

Basic Usage

```
provider "alicloud" {
  alias = "ccn_account"
}

provider "alicloud" {
  region     = "cn-hangzhou"
  access_key = "xxxxxx"
  secret_key = "xxxxxx"
  alias      = "cen_account"
}

resource "alicloud_cen_instance" "cen" {
  provider = "alicloud.cen_account"
  name     = "tf-testAccCenInstance-xxx"
}

resource "alicloud_cloud_connect_network" "ccn" {
  provider   = "alicloud.ccn_account"
  name       = "tf-testAccCloudConnectNetwork-xxx"
  is_default = "true"
}

resource "alicloud_cloud_connect_network_grant" "default" {
  ccn_id  = "${alicloud_cloud_connect_network.ccn.id}"
  cen_id  = "${alicloud_cen_instance.cen.id}"
  cen_uid = "xxxxxx"
```

```
  depends_on = [
    "alicloud_cloud_connect_network.ccn",
  "alicloud_cen_instance.cen"]
}
```

» Argument Reference

The following arguments are supported:

- `ccn_id` - (Required,ForceNew) The ID of the CCN instance.
- `cen_id` - (Required,ForceNew) The ID of the CEN instance.
- `cen_uid` - (Required,ForceNew) The ID of the account to which the CEN instance belongs.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the Cloud Connect Network grant Id and formates as `<ccn_id>:<cen_id>`.

» Import

The Cloud Connect Network Grant can be imported using the instance_id, e.g.

```
$ terraform import alicloud_cloud_connect_network_grant.example ccn-abc123456:cen-abc123456
```

» alicloud_yundun_dbaudit_instances

This data source provides a list of cloud DBAudit instances in an Alibaba Cloud account according to the specified filters.

NOTE: Available in 1.62.0+ .

» Example Usage

```
data "alicloud_yundun_dbaudit_instances" "instance" {
  description_regex = "^dbaudit"
}

output "instance" {
  value = "${alicloud_yundun_dbaudit_instances.instance.*.id}"
}
```

» **Argument Reference**

The following arguments are supported:

- `description_regex` - (Optional) A regex string to filter results by the instance description.
- `ids` - (Optional) Matched instance IDs to filter data source result.
- `output_file` - (Optional) File name to persist data source output.
- `descriptions` - (Optional) Descriptions to filter data source result.
- `tags` - (Optional, Available in v1.67.0+) A map of tags assigned to the dbaudit instance. It must be in the format: `data "alicloud_yundun_dbaudit_instances"` `"instance" { tags = {   tagKey1 = "tagValue1" } }`

» **Attributes Reference**

The following attributes are exported in addition to the arguments listed above: * `instances` - A list of apis. Each element contains the following attributes: * `id` - The instance's id. * `description` - The instance's remark. * `user_vswitch_id` - The instance's vSwitch ID. * `private_domain` - The instance's private domain name. * `public_domain` - The instance's public domain name. * `instance_status` - The instance's status. * `public_network_access` - The instance's public network access configuration. * `tags` - A map of tags assigned to the dbaudit instance.

» **alicloud_yundun_dbaudit_instance**

Cloud DBaudit instance resource ("Yundun_dbaudit" is the short term of this product).

NOTE: The endpoint of bssopenapi used only support "business.aliyuncs.com" at present.

NOTE: Available in 1.62.0+ .

NOTE: In order to destroy Cloud DBaudit instance , users are required to apply for white list first

» **Example Usage**

Basic Usage

```
provider "alicloud" {
  endpoints {
      bssopenapi = "business.aliyuncs.com"
      }
```

```
}

resource "alicloud_yundun_dbaudit_instance" "default" {
    description         = "Terraform-test"
    plan_code           = "alpha.professional"
    period              = "1"
    vswitch_id          = "v-testVswitch"
}
```

» Argument Reference

The following arguments are supported:

- `plan_code` - (Required) Plan code of the Cloud DBAudit to produce. (alpha.professional, alpha.basic, alpha.premium)
- `description` - (Required) Description of the instance. This name can have a string of 1 to 63 characters.
- `period` - (Required, ForceNew) Duration for initially producing the instance. Valid values: [1~9], 12, 24, 36. Default to 12. At present, the provider does not support modify "period".
- `vswitch_id` - (Required, ForceNew) vSwtich ID configured to audit
- `tags` - (Optional, Available in v1.67.0+) A mapping of tags to assign to the resource.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the instance resource of Yundun_dbaudit.

» Import

Yundun_dbaudit instance can be imported using the id, e.g.

```
$ terraform import alicloud_yundun_dbaudit_instance.example dbaudit-exampe123456
```

» alicloud_cms_alarm

This resource provides a alarm rule resource and it can be used to monitor several cloud services according different metrics. Details for alarm rule.

» Example Usage

Basic Usage

```
resource "alicloud_cms_alarm" "basic" {
  name    = "tf-testAccCmsAlarm_basic"
  project = "acs_ecs_dashboard"
  metric  = "disk_writebytes"
  dimensions = {
    instanceId = "i-bp1247,i-bp11gd"
    device     = "/dev/vda1,/dev/vdb1"
  }
  statistics      = "Average"
  period          = 900
  operator        = "<="
  threshold       = 35
  triggered_count = 2
  contact_groups  = ["test-group"]
  end_time        = 20
  start_time      = 6
  notify_type     = 1
  webhook         = "https://${data.alicloud_account.current.id}.eu-central-1.fc.aliyuncs.co
}
```

» Argument Reference

The following arguments are supported:

- `name` - (Required) The alarm rule name.
- `project` - (Required, ForceNew) Monitor project name, such as "acs_ecs_dashboard" and "acs_rds_dashboard". For more information, see Metrics Reference.
- `metric` - (Required, ForceNew) Name of the monitoring metrics corresponding to a project, such as "CPUUtilization" and "networkin_rate". For more information, see Metrics Reference.
- `dimensions` - (Required, ForceNew) Map of the resources associated with the alarm rule, such as "instanceId", "device" and "port". Each key's value is a string and it uses comma to split multiple items. For more information, see Metrics Reference.
- `period` - Index query cycle, which must be consistent with that defined for metrics. Default to 300, in seconds.
- `statistics` - Statistical method. It must be consistent with that defined for metrics. Valid values: ["Average", "Minimum", "Maximum"]. Default to "Average".
- `operator` - Alarm comparison operator. Valid values: ["<=", "<", ">", ">=", "==", "!="]. Default to "==".

- `threshold` - (Required) Alarm threshold value, which must be a numeric value currently.
- `triggered_count` - Number of consecutive times it has been detected that the values exceed the threshold. Default to 3.
- `contact_groups` - (Required) List contact groups of the alarm rule, which must have been created on the console.
- `start_time` - Start time of the alarm effective period. Default to 0 and it indicates the time 00:00. Valid value range: [0, 24].
- `end_time` - End time of the alarm effective period. Default value 24 and it indicates the time 24:00. Valid value range: [0, 24].
- `silence_time` - Notification silence period in the alarm state, in seconds. Valid value range: [300, 86400]. Default to 86400
- `notify_type` - Notification type. Valid value [0, 1]. The value 0 indicates TradeManager+email, and the value 1 indicates that TradeManager+email+SMS
- `enabled` - Whether to enable alarm rule. Default to true.
- `webhook`- (Optional, Available in 1.46.0+) The webhook that should be called when the alarm is triggered. Currently, only http protocol is supported. Default is empty string.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the alarm rule.
- `name` - The alarm name.
- `project` - Monitor project name.
- `metric` - Name of the monitoring metrics.
- `dimensions` - Map of the resources associated with the alarm rule.
- `period` - Index query cycle.
- `statistics` - Statistical method.
- `operator` - Alarm comparison operator.
- `threshold` - Alarm threshold value.
- `triggered_count` - Number of trigger alarm.
- `contact_groups` - List contact groups of the alarm rule.
- `start_time` - Start time of the alarm effective period.
- `end_time` - End time of the alarm effective period.
- `silence_time` - Notification silence period in the alarm state.
- `notify_type` - Notification type.
- `enabled` - Whether to enable alarm rule.
- `status` - The current alarm rule status.
- `webhook`- The webhook that is called when the alarm is triggered.

» Import

Alarm rule can be imported using the id, e.g.

```
$ terraform import alicloud_cms_alarm.alarm abc12345
```

» alicloud__cs__kubernetes__clusters

This data source provides a list Container Service Kubernetes Clusters on Alibaba Cloud.

NOTE: Available in v1.34.0+.

» Example Usage

```
# Declare the data source
data "alicloud_cs_kubernetes_clusters" "k8s_clusters" {
  name_regex  = "my-first-k8s"
  output_file = "my-first-k8s-json"
}

output "output" {
  value = "${data.alicloud_cs_kubernetes_clusters.k8s_clusters.clusters}"
}
```

» Argument Reference

The following arguments are supported:

- `ids` - (Optional) Cluster IDs to filter.
- `name_regex` - (Optional) A regex string to filter results by cluster name.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).
- `enabled_details` - (Optional) Boolean, false by default, only `id` and `name` are exported. Set to true if more details are needed, e.g., `master_disk_category`, `slb_internet_enabled`, `connections`. See full list in attributes.

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of matched Kubernetes clusters' ids.

- **names** - A list of matched Kubernetes clusters' names.
- **clusters** - A list of matched Kubernetes clusters. Each element contains the following attributes:
    - **id** - The ID of the container cluster.
    - **name** - The name of the container cluster.
    - **availability_zone** - The ID of availability zone.
    - **key_name** - The keypair of ssh login cluster node, you have to create it first.
    - **worker_numbers** - The ECS instance node number in the current container cluster.
    - **vswitch_ids** - The ID of VSwitches where the current cluster is located.
    - **vpc_id** - The ID of VPC where the current cluster is located.
    - **slb_internet_enabled** - Whether internet load balancer for API Server is created
    - **security_group_id** - The ID of security group where the current cluster worker node is located.
    - **image_id** - The ID of node image.
    - **nat_gateway_id** - The ID of nat gateway used to launch kubernetes cluster.
    - **master_instance_types** - The instance type of master node.
    - **worker_instance_types** - The instance type of worker node.
    - **master_disk_category** - The system disk category of master node.
    - **master_disk_size** - The system disk size of master node.
    - **worker_disk_category** - The system disk category of worker node.
    - **worker_disk_size** - The system disk size of worker node.
    - **worker_data_disk_category** - The data disk size of worker node.
    - **worker_data_disk_size** - The data disk category of worker node.
    - **master_nodes** - List of cluster master nodes. It contains several attributes to `Block Nodes`.
    - **worker_nodes** - List of cluster worker nodes. It contains several attributes to `Block Nodes`.
    - **connections** - Map of kubernetes cluster connection information. It contains several attributes to `Block Connections`.
    - **node_cidr_mask** - The network mask used on pods for each node.
    - **log_config** - A list of one element containing information about the associated log store. It contains the following attributes:
    - **type** - Type of collecting logs.
    - **project** - Log Service project name.

» Block Nodes

- **id** - ID of the node.
- **name** - Node name.
- **private_ip** - The private IP address of node.

- `role` - (Deprecated from version 1.9.4)

» Block Connections

- `api_server_internet` - API Server Internet endpoint.
- `api_server_intranet` - API Server Intranet endpoint.
- `master_public_ip` - Master node SSH IP address.
- `service_domain` - Service Access Domain.

» alicloud_cs_managed_kubernetes_clusters

This data source provides a list Container Service Managed Kubernetes Clusters on Alibaba Cloud.

NOTE: Available in v1.35.0+

» Example Usage

```
# Declare the data source
data "alicloud_cs_managed_kubernetes_clusters" "k8s_clusters" {
  name_regex  = "my-first-k8s"
  output_file = "my-first-k8s-json"
}

output "output" {
  value = "${data.alicloud_cs_managed_kubernetes_clusters.k8s_clusters.clusters}"
}
```

» Argument Reference

The following arguments are supported:

- `ids` - (Optional) Cluster IDs to filter.
- `name_regex` - (Optional) A regex string to filter results by cluster name.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).
- `enabled_details` - (Optional) Boolean, false by default, only `id` and `name` are exported. Set to true if more details are needed, e.g., `master_disk_category`, `slb_internet_enabled`, `connections`. See full list in attributes.

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of matched Kubernetes clusters' ids.
- `names` - A list of matched Kubernetes clusters' names.
- `clusters` - A list of matched Kubernetes clusters. Each element contains the following attributes:
  - `id` - The ID of the container cluster.
  - `name` - The name of the container cluster.
  - `availability_zone` - The ID of availability zone.
  - `key_name` - The keypair of ssh login cluster node, you have to create it first.
  - `worker_numbers` - The ECS instance node number in the current container cluster.
  - `vswitch_ids` - The ID of VSwitches where the current cluster is located.
  - `vpc_id` - The ID of VPC where the current cluster is located.
  - `security_group_id` - The ID of security group where the current cluster worker node is located.
  - `nat_gateway_id` - The ID of nat gateway used to launch kubernetes cluster.
  - `worker_nodes` - List of cluster worker nodes. It contains several attributes to `Block Nodes`.
  - `connections` - Map of kubernetes cluster connection information. It contains several attributes to `Block Connections`.
  - `log_config` - A list of one element containing information about the associated log store. It contains the following attributes:
  - `type` - Type of collecting logs.
  - `project` - Log Service project name.

» Block Nodes

- `id` - ID of the node.
- `name` - Node name.
- `private_ip` - The private IP address of node.
- `role` - (Deprecated from version 1.9.4)

» Block Connections

- `api_server_internet` - API Server Internet endpoint.
- `api_server_intranet` - API Server Intranet endpoint.
- `master_public_ip` - Master node SSH IP address.
- `service_domain` - Service Access Domain.

» alicloud_cs_serverless_kubernetes_clusters

This data source provides a list Container Service Serverless Kubernetes Clusters on Alibaba Cloud.

NOTE: Available in 1.58.0+

» Example Usage

```
# Declare the data source
data "alicloud_cs_serverless_kubernetes_clusters" "k8s_clusters" {
  name_regex  = "my-first-k8s"
  output_file = "my-first-k8s-json"
}

output "output" {
  value = "${data.alicloud_cs_serverless_kubernetes_clusters.k8s_clusters.clusters}"
}
```

» Argument Reference

The following arguments are supported:

- `ids` - (Optional) Cluster IDs to filter.
- `name_regex` - (Optional) A regex string to filter results by cluster name.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).
- `enabled_details` - (Optional) Boolean, false by default, only `id` and `name` are exported. Set to true if more details are needed, e.g., `deletion_protection`, `connections`. See full list in attributes.

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of matched Kubernetes clusters' ids.
- `names` - A list of matched Kubernetes clusters' names.
- `clusters` - A list of matched Kubernetes clusters. Each element contains the following attributes:
    - `id` - The ID of the container cluster.
    - `name` - The name of the container cluster.
    - `vswitch_id` - The ID of VSwitch where the current cluster is located.
    - `vpc_id` - The ID of VPC where the current cluster is located.

- **security_group_id** - The ID of security group where the current cluster is located.
- **nat_gateway_id** - The ID of nat gateway used to launch kubernetes cluster.
- **deletion_protection** - Whether the cluster support delete protection.

- **connections** - Map of serverless cluster connection information. It contains several attributes to `Block Connections`.

» Block Connections

- **api_server_internet** - API Server Internet endpoint.
- **api_server_intranet** - API Server Intranet endpoint.
- **master_public_ip** - Master node SSH IP address.

» alicloud_container_cluster

NOTE: This resource name has been replaced by `alicloud_cs_swarm` from version 1.8.2. Please update it.

» alicloud_cs_application

DEPRECATED: This resource manages applications in swarm cluster only, which is being deprecated and will be replaced by Kubernetes cluster.

This resource use an orchestration template to define and deploy a multi-container application. An application is created by using an orchestration template. Each application can contain one or more services.

NOTE: Application orchestration template must be a valid Docker Compose YAML template.

NOTE: At present, this resource only support swarm cluster.

» Example Usage

Basic Usage

```
resource "alicloud_cs_application" "app" {
  cluster_name = "my-first-swarm"
  name         = "wordpress"
  version      = "1.2"
```

```
    template    = "${file("wordpress.yml")}"
    latest_image = true
    environment = {
      EXTERNAL_URL = "123.123.123.123:8080"
    }
}
```

» Argument Reference

The following arguments are supported:

- `cluster_name` - (Required, ForceNew) The swarm cluster's name.
- `name` - (Required, ForceNew) The application name. It should be 1-64 characters long, and can contain numbers, English letters and hyphens, but cannot start with hyphens.
- `description` - The description of application.
- `version` - The application deploying version. Each updating, it must be different with current. Default to "1.0"
- `template` - (Required) The application deployment template and it must be Docker Compose format.
- `environment` - A key/value map used to replace the variable parameter in the Compose template.
- `latest_image` - Whether to use latest docker image while each updating application. Default to false.
- `blue_green` - Wherther to use "Blue Green" method when release a new version. Default to false.
- `blue_green_confirm` - Whether to confirm a "Blue Green" application. Default to false. It will be ignored when `blue_green` is false.

NOTE: Each update of `template`, `environment`, `latest_image` and `blue_green`, it requires a new `version`. Otherwise, the update will be ignored.

NOTE: If you want to rollback a "Blue Green" application, just set `blue_green` as false.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the container application. It's formate is `<cluster_name>:<name>`.
- `cluster_name` - The name of the container cluster.
- `name` - The application name.
- `description` - The application description.
- `template` - The application deploying template.
- `environment` - The application environment variables.

- `services` - List of services in the application. It contains several attributes to `Block Nodes`.
- `default_domain` - The application default domain and it can be used to configure routing service.

» Block Nodes

- `id` - ID of the service.
- `name` - Service name.
- `status` - The current status of service.
- `version` - The current version of service.

» Import

Swarm application can be imported using the id, e.g.

```
$ terraform import alicloud_cs_application.app my-first-swarm:wordpress
```

» alicloud_cs_kubernetes

This resource will help you to manager a Kubernetes Cluster. The cluster is same as container service created by web console.

NOTE: Kubernetes cluster only supports VPC network and it can access internet while creating kubernetes cluster. A Nat Gateway and configuring a SNAT for it can ensure one VPC network access internet. If there is no nat gateway in the VPC, you can set `new_nat_gateway` to "true" to create one automatically.

NOTE: If there is no specified `vswitch_ids`, the resource will create a new VPC and VSwitch while creating kubernetes cluster.

NOTE: Each kubernetes cluster contains 3 master nodes and those number cannot be changed at now.

NOTE: Creating kubernetes cluster need to install several packages and it will cost about 15 minutes. Please be patient.

NOTE: From version 1.9.4, the provider supports to download kube config, client certificate, client key and cluster ca certificate after creating cluster successfully, and you can put them into the specified location, like '~/.kube/config'.

NOTE: From version 1.16.0, the provider supports Multiple Availability Zones Kubernetes Cluster. To create a cluster of this kind, you must specify three items in `vswitch_ids`, `master_instance_types` and `worker_instance_types`.

NOTE: From version 1.20.0, the provider supports disabling internet load balancer for API Server by setting `false` to `slb_internet_enabled`.

NOTE: If you want to manage Kubernetes, you can use Kubernetes Provider.

NOTE: You need to activate several other products and confirm Authorization Policy used by Container Service before using this resource. Please refer to the `Authorization management` and `Cluster management` sections in the Document Center.

NOTE: From version 1.50.0, when `force_update` is set to `false`, updates to the following arguments will be ignored: `vswitch_ids`, `master_instance_types`, `worker_instance_types`, `worker_numbers`, `password`, `key_name`, `user_ca`, `pod_cidr`, `service_cidr`, `cluster_network_type`, `node_cidr_mask`, `log_config`, `enable_ssh`, `master_disk_size`, `master_disk_category`, `worker_disk_size`, `worker_disk_category`, `worker_data_disk_category`, `master_instance_charge_type`, `worker_instance_charge_type`, `install_cloud_monitor`, `is_outdated`.

» Example Usage

Single AZ Kubernetes Cluster

```
data "alicloud_zones" "default" {
  available_resource_creation = "VSwitch"
}

resource "alicloud_cs_kubernetes" "main" {
  name_prefix           = "my-first-k8s"
  availability_zone     = "${data.alicloud_zones.default.zones.0.id}"
  new_nat_gateway       = true
  master_instance_types = ["ecs.n4.small"]
  worker_instance_types = ["ecs.n4.small"]
  worker_numbers        = [3]
  password              = "Yourpassword1234"
  pod_cidr              = "192.168.1.0/16"
  service_cidr          = "192.168.2.0/24"
  enable_ssh            = true
  install_cloud_monitor = true
}
```

Three AZ Kubernetes Cluster

```
variable "name" {
  default = "my-first-3az-k8s"
}

data "alicloud_zones" main {
```

```
      available_resource_creation = "VSwitch"
}

data "alicloud_instance_types" "instance_types_1_master" {
  availability_zone   = "${data.alicloud_zones.main.zones.0.id}"
  cpu_core_count      = 2
  memory_size         = 4
  kubernetes_node_role = "Master"
}
data "alicloud_instance_types" "instance_types_2_master" {
  availability_zone   = "${lookup(data.alicloud_zones.main.zones[(length(data.alicloud_zone
  cpu_core_count      = 2
  memory_size         = 4
  kubernetes_node_role = "Master"
}
data "alicloud_instance_types" "instance_types_3_master" {
  availability_zone   = "${lookup(data.alicloud_zones.main.zones[(length(data.alicloud_zone
  cpu_core_count      = 2
  memory_size         = 4
  kubernetes_node_role = "Master"
}

data "alicloud_instance_types" "instance_types_1_worker" {
  availability_zone   = "${data.alicloud_zones.main.zones.0.id}"
  cpu_core_count      = 2
  memory_size         = 4
  kubernetes_node_role = "Worker"
}
data "alicloud_instance_types" "instance_types_2_worker" {
  availability_zone   = "${lookup(data.alicloud_zones.main.zones[(length(data.alicloud_zone
  cpu_core_count      = 2
  memory_size         = 4
  kubernetes_node_role = "Worker"
}
data "alicloud_instance_types" "instance_types_3_worker" {
  availability_zone   = "${lookup(data.alicloud_zones.main.zones[(length(data.alicloud_zone
  cpu_core_count      = 2
  memory_size         = 4
  kubernetes_node_role = "Worker"
}
resource "alicloud_vpc" "foo" {
  name       = "${var.name}"
  cidr_block = "10.1.0.0/21"
}

resource "alicloud_vswitch" "vsw1" {
```

```
  name             = "${var.name}"
  vpc_id           = "${alicloud_vpc.foo.id}"
  cidr_block       = "10.1.1.0/24"
  availability_zone = "${data.alicloud_zones.main.zones.0.id}"
}

resource "alicloud_vswitch" "vsw2" {
  name             = "${var.name}"
  vpc_id           = "${alicloud_vpc.foo.id}"
  cidr_block       = "10.1.2.0/24"
  availability_zone = "${lookup(data.alicloud_zones.main.zones[(length(data.alicloud_zones.m
}

resource "alicloud_vswitch" "vsw3" {
  name             = "${var.name}"
  vpc_id           = "${alicloud_vpc.foo.id}"
  cidr_block       = "10.1.3.0/24"
  availability_zone = "${lookup(data.alicloud_zones.main.zones[(length(data.alicloud_zones.m
}

resource "alicloud_nat_gateway" "nat_gateway" {
  name          = "${var.name}"
  vpc_id        = "${alicloud_vpc.foo.id}"
  specification = "Small"
}

resource "alicloud_snat_entry" "snat_entry_1" {
  snat_table_id    = "${alicloud_nat_gateway.nat_gateway.snat_table_ids}"
  source_vswitch_id = "${alicloud_vswitch.vsw1.id}"
  snat_ip          = "${alicloud_eip.eip.ip_address}"
}

resource "alicloud_snat_entry" "snat_entry_2" {
  snat_table_id    = "${alicloud_nat_gateway.nat_gateway.snat_table_ids}"
  source_vswitch_id = "${alicloud_vswitch.vsw2.id}"
  snat_ip          = "${alicloud_eip.eip.ip_address}"
}

resource "alicloud_snat_entry" "snat_entry_3" {
  snat_table_id    = "${alicloud_nat_gateway.nat_gateway.snat_table_ids}"
  source_vswitch_id = "${alicloud_vswitch.vsw3.id}"
  snat_ip          = "${alicloud_eip.eip.ip_address}"
}

resource "alicloud_eip" "eip" {
  name      = "${var.name}"
```

```
  bandwidth = "100"
}

resource "alicloud_eip_association" "eip_asso" {
  allocation_id = "${alicloud_eip.eip.id}"
  instance_id   = "${alicloud_nat_gateway.nat_gateway.id}"
}


resource "alicloud_cs_kubernetes" "k8s" {
  name                       = "${var.name}"
  vswitch_ids                = ["${alicloud_vswitch.vsw1.id}", "${alicloud_vswitch.vsw2.id}",
  new_nat_gateway            = true
  master_instance_types      = ["${data.alicloud_instance_types.instance_types_1_master.insta
  worker_instance_types      = ["${data.alicloud_instance_types.instance_types_1_worker.insta
  worker_numbers             = [1, 2, 3]
  master_disk_category       = "cloud_ssd"
  worker_disk_size           = 50
  worker_data_disk_category  = "cloud_ssd"
  worker_data_disk_size      = 50
  password                   = "Yourpassword1234"
  pod_cidr                   = "192.168.1.0/16"
  service_cidr               = "192.168.2.0/24"
  enable_ssh                 = true
  slb_internet_enabled       = true
  node_cidr_mask             = 25
  install_cloud_monitor      = true
}
```

» Argument Reference

The following arguments are supported:

- `name` - (Optional) The kubernetes cluster's name. It is the only in one Alicloud account.
- `name_prefix` - (Optional) The kubernetes cluster name's prefix. It is conflict with `name`. If it is specified, terraform will using it to build the only cluster name. Default to "Terraform-Creation".
- `force_update` - (Optional, Available in 1.50.0+) Whether to force the update of kubernetes cluster arguments. Default to false.
- `availability_zone` - (Optional, ForceNew) The Zone where new kubernetes cluster will be located. If it is not be specified, the `vswitch_ids` should be set, its value will be vswitch's zone.
- `vswitch_id` - (Deprecated from version 1.16.0)(Force new resource) The vswitch where new kubernetes cluster will be located. If it is not specified, a new VPC and VSwicth will be built. It must be in the zone which

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`availability_zone` specified.

- `vswitch_ids` - (Required, ForceNew) The vswitch where new kubernetes cluster will be located. Specify one or more vswitch's id. It must be in the zone which `availability_zone` specified.
- `new_nat_gateway` - (Optional, ForceNew) Whether to create a new nat gateway while creating kubernetes cluster. Default to true.
- `master_instance_type` - (Deprecated from version 1.16.0)(Required, Force new resource) The instance type of master node.
- `master_instance_types` - (Required, ForceNew) The instance type of master node. Specify one type for single AZ Cluster, three types for MultiAZ Cluster. You can get the available kubetnetes master node instance types by datasource instance_types
- `worker_instance_type` - (Deprecated from version 1.16.0)(Required, Force new resource) The instance type of worker node.
- `worker_instance_types` - (Required, ForceNew) The instance type of worker node. Specify one type for single AZ Cluster, three types for MultiAZ Cluster. You can get the available kubetnetes master node instance types by datasource instance_types
- `worker_number` - (Required) The worker node number of the kubernetes cluster. Default to 3. It is limited up to 50 and if you want to enlarge it, please apply white list or contact with us.
- `password` - (Optional, ForceNew, Sensitive) The password of ssh login cluster node. You have to specify one of `password key_name kms_encrypted_password` fields.
- `key_name` - (Optional, ForceNew) The keypair of ssh login cluster node, you have to create it first.
- `kms_encrypted_password` - (Optional, ForceNew, Available in 1.57.1+) An KMS encrypts password used to a cs kubernetes. It is conflicted with `password` and `key_name`.
- `kms_encryption_context` - (Optional, ForceNew, MapString, Available in 1.57.1+) An KMS encryption context used to decrypt `kms_encrypted_password` before creating or updating a cs kubernetes with `kms_encrypted_password`. See Encryption Context. It is valid when `kms_encrypted_password` is set.
- `user_ca` - (Optional, ForceNew) The path of customized CA cert, you can use this CA to sign client certs to connect your cluster.
- `cluster_network_type` - (Optional, ForceNew) The network that cluster uses, use `flannel` or `terway`.
- `pod_cidr` - (Optional, ForceNew) The CIDR block for the pod network. It will be allocated automatically when `vswitch_ids` is not specified. It cannot be duplicated with the VPC CIDR and CIDR used by Kubernetes cluster in VPC, cannot be modified after creation. Maximum number of hosts allowed in the cluster: 256. Refer to Plan Kubernetes CIDR blocks under VPC.
- `service_cidr` - (Optional, ForceNew) The CIDR block for the service network. It cannot be duplicated with the VPC CIDR and CIDR used by

Kubernetes cluster in VPC, cannot be modified after creation.

- `master_instance_charge_type` - (Optional, ForceNew) Master payment type. `PrePaid` or `PostPaid`, defaults to `PostPaid`.
- `master_period_unit` - (Optional) Master payment period unit. `Month` or `Week`, defaults to `Month`.
- `master_period` - (Optional) Master payment period. When period unit is `Month`, it can be one of { "1", "2", "3", "4", "5", "6", "7", "8", "9", "12", "24", "36","48","60"}. When period unit is `Week`, it can be one of {"1", "2", "3", "4"}.
- `master_auto_renew` - (Optional) Enable master payment auto-renew, defaults to false.
- `master_auto_renew_period` - (Optional) Master payment auto-renew period. When period unit is `Month`, it can be one of {"1", "2", "3", "6", "12"}. When period unit is `Week`, it can be one of {"1", "2", "3"}.
- `worker_instance_charge_type` - (Optional, Force new resource) Worker payment type. `PrePaid` or `PostPaid`, defaults to `PostPaid`.
- `worker_period_unit` - (Optional) Worker payment period unit. `Month` or `Week`, defaults to `Month`.
- `worker_period` - (Optional) Worker payment period. When period unit is `Month`, it can be one of { "1", "2", "3", "4", "5", "6", "7", "8", "9", "12", "24", "36","48","60"}. When period unit is `Week`, it can be one of {"1", "2", "3", "4"}.
- `worker_auto_renew` - (Optional) Enable worker payment auto-renew, defaults to false.
- `worker_auto_renew_period` - (Optional) Worker payment auto-renew period. When period unit is `Month`, it can be one of {"1", "2", "3", "6", "12"}. When period unit is `Week`, it can be one of {"1", "2", "3"}.
- `node_cidr_mask` - (Optional, Force new resource) The network mask used on pods for each node, ranging from `24` to `28`. Larger this number is, less pods can be allocated on each node. Default value is `24`, means you can allocate 256 pods on each node.
- `log_config` - (Optional, ForceNew) A list of one element containing information about the associated log store. It contains the following attributes:
    - `type` - Type of collecting logs, only `SLS` are supported currently.
    - `project` - Log Service project name, cluster logs will output to this project.
- `enable_ssh` - (Optional, ForceNew) Whether to allow to SSH login kubernetes. Default to false.
- `slb_internet_enabled` - (Optional, ForceNew) Whether to create internet load balancer for API Server. Default to true.
- `master_disk_category` - (Optional, ForceNew) The system disk category of master node. Its valid value are `cloud_ssd` and `cloud_efficiency`. Default to `cloud_efficiency`.
- `master_disk_size` - (Optional, ForceNew) The system disk size of master node. Its valid value range [20~500] in GB. Default to 20.
- `worker_disk_category` - (Optional, ForceNew) The system disk category

of worker node. Its valid value are `cloud_ssd` and `cloud_efficiency`. Default to `cloud_efficiency`.

- `worker_disk_size` - (Optional, ForceNew) The system disk size of worker node. Its valid value range [20~32768] in GB. Default to 20.
- `worker_data_disk_size` - (Optional, ForceNew) The data disk size of worker node. Its valid value range [20~32768] in GB. When `worker_data_disk_category` is presented, it defaults to 40.
- `worker_data_disk_category` - (Optional, ForceNew) The data disk category of worker node. Its valid value are `cloud_ssd` and `cloud_efficiency`, if not set, data disk will not be created.
- `install_cloud_monitor` - (Optional, ForceNew) Whether to install cloud monitor for the kubernetes' node.
- `is_outdated` - (Optional) Whether to use outdated instance type. Default to false.
- `kube_config` - (Optional) The path of kube config, like `~/.kube/config`.
- `client_cert` - (Optional) The path of client certificate, like `~/.kube/client-cert.pem`.
- `client_key` - (Optional) The path of client key, like `~/.kube/client-key.pem`.
- `cluster_ca_cert` - (Optional) The path of cluster ca certificate, like `~/.kube/cluster-ca-cert.pem`

» Timeouts

NOTE: Available in 1.58.0+.

The `timeouts` block allows you to specify timeouts for certain actions:

- `create` - (Defaults to 90 mins) Used when creating the kubernetes cluster (until it reaches the initial `running` status).
- `update` - (Defaults to 60 mins) Used when activating the kubernetes cluster when necessary during update.
- `delete` - (Defaults to 60 mins) Used when terminating the kubernetes cluster.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the container cluster.
- `name` - The name of the container cluster.
- `availability_zone` - The ID of availability zone.
- `vpc_id` - The ID of VPC where the current cluster is located.
- `slb_intranet` - The ID of private load balancer where the current cluster master node is located.
- `security_group_id` - The ID of security group where the current cluster worker node is located.

- `nat_gateway_id` - The ID of nat gateway used to launch kubernetes cluster.
- `master_nodes` - List of cluster master nodes. It contains several attributes to `Block Nodes`.
- `worker_nodes` - List of cluster worker nodes. It contains several attributes to `Block Nodes`.
- `connections` - Map of kubernetes cluster connection information. It contains several attributes to `Block Connections`.

» Block Nodes

- `id` - ID of the node.
- `name` - Node name.
- `private_ip` - The private IP address of node.
- `role` - (Deprecated from version 1.9.4)

» Block Connections

- `api_server_internet` - API Server Internet endpoint.
- `api_server_intranet` - API Server Intranet endpoint.
- `master_public_ip` - Master node SSH IP address.
- `service_domain` - Service Access Domain.

» Import

Kubernetes cluster can be imported using the id, e.g.

```
$ terraform import alicloud_cs_kubernetes.main ce4273f9156874b46bb
```

» alicloud_cs_kubernetes_autoscaler

This resource will help you to manager cluster-autoscaler in Kubernetes Cluster.

NOTE: The scaling group must use CentOS7 or AliyunLinux2 as base image.

NOTE: The cluster-autoscaler can only use the same size of instanceTypes in one scaling group.

NOTE: Add Policy to RAM role of the node to deploy cluster-autoscaler if you need.

NOTE: Available in 1.65.0+.

» Example Usage

cluster-autoscaler in Kubernetes Cluster

```
resource "alicloud_cs_kubernetes_autoscaler" "default" {
  cluster_id              = "${var.cluster_id}"
  nodepools {
        id                = "scaling_group_id"
        taints            = "c=d:NoSchedule"
        labels            = "a=b"
  }
  utilization             = "${var.utilization}"
  cool_down_duration      = "${var.cool_down_duration}"
  defer_scale_in_duration = "${var.defer_scale_in_duration}"
}
```

» Argument Reference

The following arguments are supported:

- `cluster_id` - (Required) The id of kubernetes cluster.
- `nodepools` - (Required)
- `nodepools.id` - (Required) The scaling group id of the groups configured for cluster-autoscaler.
- `nodepools.taints` - (Required) The taints for the nodes in scaling group.
- `nodepools.labels` - (Required) The labels for the nodes in scaling group.
- `utilization` - (Required) The utilization option of cluster-autoscaler.
- `cool_down_duration` (Required) The cool_down_duration option of cluster-autoscaler.

- `defer_scale_in_duration` (Required) The defer_scale_in_duration option of cluster-autoscaler.

» Timeouts

The `timeouts` block allows you to specify timeouts for certain actions:

- `create` - (Defaults to 90 mins) Used when creating cluster-autoscaler in the kubernetes cluster (until it reaches the initial `running` status).
- `update` - (Defaults to 60 mins) Used when activating the cluster-autoscaler in the kubernetes cluster when necessary during update.
- `delete` - (Defaults to 60 mins) Used when deleting cluster-autoscaler in kubernetes cluster.

» alicloud_cs_managed_kubernetes

This resource will help you to manager a Managed Kubernetes Cluster. The cluster is same as container service created by web console.

NOTE: From version 1.53.0, we provide `force_update`. When you want to change `worker_instance_types` and `vswitch_ids`, you have to set this field to true, then the cluster will be recreated.

NOTE: From version 1.53.0, `worker_numbers` is deprecated, you should use `worker_number` to indicate a total number of workers.

NOTE: Managed Kubernetes cluster can support multiple availability zones. Arguments `vswitch_ids`, `worker_instance_types` are string arrays.

NOTE: Managed Kubernetes cluster only supports VPC network and it can access internet while creating kubernetes cluster. A Nat Gateway and configuring a SNAT for it can ensure one VPC network access internet. If there is no nat gateway in the VPC, you can set `new_nat_gateway` to "true" to create one automatically.

NOTE: Creating managed kubernetes cluster need to install several packages and it will cost about 10 minutes. Please be patient.

NOTE: The provider supports to download kube config, client certificate, client key and cluster ca certificate after creating cluster successfully, and you can put them into the specified location, like '~/.kube/config'.

NOTE: If you want to manage managed Kubernetes, you can use Kubernetes Provider.

NOTE: You need to activate several other products and confirm Authorization Policy used by Container Service before using this resource. Please refer to the `Authorization management` and `Cluster management` sections in the Document Center.

» Example Usage

Basic Usage

```
variable "name" {
  default = "my-first-kubernetes-demo"
}

variable "log_project_name" {
  default = "my-first-kubernetes-sls-demo"
}

data "alicloud_zones" default {
```

```
    available_resource_creation = "VSwitch"
}

data "alicloud_instance_types" "default" {
  availability_zone = data.alicloud_zones.default.zones[0].id
  cpu_core_count = 2
  memory_size = 4
  kubernetes_node_role = "Worker"
}

resource "alicloud_vpc" "default" {
  name = var.name
  cidr_block = "10.1.0.0/21"
}

resource "alicloud_vswitch" "default" {
  name = var.name
  vpc_id = alicloud_vpc.default.id
  cidr_block = "10.1.1.0/24"
  availability_zone = data.alicloud_zones.default.zones[0].id
}

resource "alicloud_log_project" "log" {
  name        = var.log_project_name
  description = "created by terraform for managedkubernetes cluster"
}

resource "alicloud_cs_managed_kubernetes" "default" {
  name_prefix = var.name
  availability_zone = data.alicloud_zones.default.zones[0].id
  vswitch_ids = [alicloud_vswitch.default.id]
  new_nat_gateway = true
  worker_instance_types = [data.alicloud_instance_types.default.instance_types[0].id]
  worker_number = 2
  password = "Yourpassword1234"
  pod_cidr = "172.20.0.0/16"
  service_cidr = "172.21.0.0/20"
  install_cloud_monitor = true
  slb_internet_enabled = true
  worker_disk_category  = "cloud_efficiency"
  worker_data_disk_category = "cloud_ssd"
  worker_data_disk_size =  200
  log_config {
    type = "SLS"
    project = alicloud_log_project.log.name
  }
```

```
}
```

» Module Support

You can use the existing managed-kubernetes module to create a managed kubernetes cluster one-click.

» Argument Reference

The following arguments are supported:

- `name` - (Optional) The kubernetes cluster's name. It is the only in one Alicloud account.
- `name_prefix` - (Optional) The kubernetes cluster name's prefix. It is conflict with `name`. If it is specified, terraform will using it to build the only cluster name. Default to "Terraform-Creation".
- `availability_zone` - (Optional, ForceNew) The Zone where new kubernetes cluster will be located. If it is not be specified, the `vswitch_ids` should be set, the value will be vswitch's zone.
- `vswitch_ids` - (Required, ForceNew) The vswitch where new kubernetes cluster will be located. Specify one or more vswitch's id. It must be in the zone which `availability_zone` specified.
- `new_nat_gateway` - (Optional, ForceNew) Whether to create a new nat gateway while creating kubernetes cluster. Default to true.
- `password` - (Optional, ForceNew, Sensitive) The password of ssh login cluster node. You have to specify one of `password key_name kms_encrypted_password` fields.
- `kms_encrypted_password` - (Optional, ForceNew, Available in 1.57.1+) An KMS encrypts password used to a cs managed kubernetes. It is conflicted with `password` and `key_name`.
- `kms_encryption_context` - (Optional, ForceNew, MapString, Available in 1.57.1+) An KMS encryption context used to decrypt `kms_encrypted_password` before creating or updating a cs managed kubernetes with `kms_encrypted_password`. See Encryption Context. It is valid when `kms_encrypted_password` is set.
- `key_name` - (Optional, ForceNew) The keypair of ssh login cluster node, you have to create it first.
- `pod_cidr` - (Optional, ForceNew) The CIDR block for the pod network. When `cluster_network_type` is set to `flanne`, you must set value to this filed . It cannot be duplicated with the VPC CIDR and CIDR used by Kubernetes cluster in VPC, cannot be modified after creation. Maximum number of hosts allowed in the cluster: 256. Refer to Plan Kubernetes CIDR blocks under VPC.

- `service_cidr` - (Required, ForceNew) The CIDR block for the service network.
  It cannot be duplicated with the VPC CIDR and CIDR used by Kubernetes cluster in VPC, cannot be modified after creation.
- `slb_internet_enabled` - (Optional, ForceNew) Whether to create internet load balancer for API Server. Default to false.
- `install_cloud_monitor` - (Optional, ForceNew) Whether to install cloud monitor for the kubernetes' node.
- `worker_disk_size` - (Optional, ForceNew) The system disk size of worker node. Its valid value range [20~32768] in GB. Default to 20.
- `worker_disk_category` - (Optional, ForceNew) The system disk category of worker node. Its valid value are `cloud_ssd` and `cloud_efficiency`. Default to `cloud_efficiency`.
- `worker_data_disk_size` - (Optional, ForceNew) The data disk size of worker node. Its valid value range [20~32768] in GB. When `worker_data_disk_category` is presented, it defaults to 40.
- `worker_data_disk_category` - (Optional, ForceNew) The data disk category of worker node. Its valid value are `cloud_ssd` and `cloud_efficiency`, if not set, data disk will not be created.
- `worker_number` - (Required) The total worker node number of the kubernetes cluster. Default to 3. It is limited up to 50 and if you want to enlarge it, please apply white list or contact with us.
- `force_update` - (Optional) Default false, when you want to change `worker_instance_types` and `vswitch_ids`, you have to set this field to true, then the cluster will be recreated.
- `worker_numbers` - (Deprecated from version 1.53.0) The worker node number of the kubernetes cluster. Default to [3]. It is limited up to 50 and if you want to enlarge it, please apply white list or contact with us.
- `worker_instance_types` - (Required, ForceNew) The instance type of worker node. Specify one type for single AZ Cluster, three types for MultiAZ Cluster. You can get the available kubernetes master node instance types by datasource instance_types
- `worker_instance_charge_type` - (Optional, ForceNew) Worker payment type. `PrePaid` or `PostPaid`, defaults to `PostPaid`.
- `worker_period_unit` - (Optional) Worker payment period unit. `Month` or `Week`, defaults to `Month`.
- `worker_period` - (Optional) Worker payment period. When period unit is `Month`, it can be one of { "1", "2", "3", "4", "5", "6", "7", "8", "9", "12", "24", "36","48","60"}. When period unit is `Week`, it can be one of {"1", "2", "3", "4"}.
- `worker_auto_renew` - (Optional) Enable worker payment auto-renew, defaults to false.
- `worker_auto_renew_period` - (Optional) Worker payment auto-renew period. When period unit is `Month`, it can be one of {"1", "2", "3", "6", "12"}. When period unit is `Week`, it can be one of {"1", "2", "3"}.
- `cluster_network_type` - (Optional, ForceNew) The network that cluster

uses, use `flannel` or `terway`.

- `kube_config` - (Optional) The path of kube config, like `~/.kube/config`.
- `client_cert` - (Optional) The path of client certificate, like `~/.kube/client-cert.pem`.
- `client_key` - (Optional) The path of client key, like `~/.kube/client-key.pem`.
- `cluster_ca_cert` - (Optional) The path of cluster ca certificate, like `~/.kube/cluster-ca-cert.pem`
- `log_config` - (Optional, ForceNew, Available in 1.57.1+) A list of one element containing information about the associated log store. It contains the following attributes:
    - `type` - Type of collecting logs, only `SLS` are supported currently.
    - `project` - Log Service project name, cluster logs will output to this project.

» Timeouts

NOTE: Available in 1.58.0+.

The `timeouts` block allows you to specify timeouts for certain actions:

- `create` - (Defaults to 90 mins) Used when creating the kubernetes cluster (until it reaches the initial `running` status).
- `update` - (Defaults to 60 mins) Used when activating the kubernetes cluster when necessary during update.
- `delete` - (Defaults to 60 mins) Used when terminating the kubernetes cluster.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the container cluster.
- `name` - The name of the container cluster.
- `availability_zone` - The ID of availability zone.
- `key_name` - The keypair of ssh login cluster node, you have to create it first.
- `vpc_id` - The ID of VPC where the current cluster is located.
- `security_group_id` - The ID of security group where the current cluster worker node is located.
- `image_id` - The ID of node image.
- `nat_gateway_id` - The ID of nat gateway used to launch kubernetes cluster.
- `worker_disk_size` - The system disk size of worker node.
- `worker_disk_category` - The system disk category of worker node.
- `worker_data_disk_size` - The data disk category of worker node.
- `worker_data_disk_category` - The data disk size of worker node.

- **worker_nodes** - List of cluster worker nodes. It contains several attributes to `Block Nodes`.

» Block Nodes

- **id** - ID of the node.
- **name** - Node name.
- **private_ip** - The private IP address of node.

» Import

Managed Kubernetes cluster can be imported using the id, e.g.

```
$ terraform import alicloud_cs_managed_kubernetes.main ce4273f9156874b46bb
```

» alicloud__cs__serverless__kubernetes

This resource will help you to manager a Serverless Kubernetes Cluster. The cluster is same as container service created by web console.

NOTE: Serverless Kubernetes cluster only supports VPC network and it can access internet while creating kubernetes cluster. A Nat Gateway and configuring a SNAT for it can ensure one VPC network access internet. If there is no nat gateway in the VPC, you can set `new_nat_gateway` to "true" to create one automatically.

NOTE: Creating serverless kubernetes cluster need to install several packages and it will cost about 5 minutes. Please be patient.

NOTE: The provider supports to download kube config, client certificate, client key and cluster ca certificate after creating cluster successfully, and you can put them into the specified location, like '~/.kube/config'.

NOTE: If you want to manage serverless Kubernetes, you can use Kubernetes Provider.

NOTE: You need to activate several other products and confirm Authorization Policy used by Container Service before using this resource. Please refer to the `Authorization management` and `Cluster management` sections in the Document Center.

NOTE: Available in 1.58.0+

» Example Usage

Basic Usage

```
variable "name" {
  default = "my-first-k8s"
}
data "alicloud_zones" main {
  available_resource_creation = "VSwitch"
}

resource "alicloud_vpc" "default" {
  name = "${var.name}"
  cidr_block = "10.1.0.0/21"
}

resource "alicloud_vswitch" "default" {
  name = "${var.name}"
  vpc_id = "${alicloud_vpc.default.id}"
  cidr_block = "10.1.1.0/24"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
}

resource "alicloud_cs_serverless_kubernetes" "serverless" {
  name_prefix = "${var.name}"
  vpc_id = "${alicloud_vpc.default.id}"
  vswitch_id = "${alicloud_vswitch.default.id}"
  new_nat_gateway = true
  endpoint_public_access_enabled = true
  private_zone = false
  deletion_protection = false
  tags = {
        "k-aa":"v-aa"
        "k-bb":"v-aa",
  }
}
```

» Argument Reference

The following arguments are supported:

- `name` - (Optional) The kubernetes cluster's name. It is the only in one Alicloud account.
- `name_prefix` - (Optional) The kubernetes cluster name's prefix. It is conflict with `name`. If it is specified, terraform will using it to build the only cluster name. Default to "Terraform-Creation".

- `vpc_id` - (Required, ForceNew) The vpc where new kubernetes cluster will be located. Specify one vpc's id, if it is not specified, a new VPC will be built.
- `vswitch_id` - (Required, ForceNew) The vswitch where new kubernetes cluster will be located. Specify one vswitch's id, if it is not specified, a new VPC and VSwicth will be built. It must be in the zone which `availability_zone` specified.
- `new_nat_gateway` - (Optional) Whether to create a new nat gateway while creating kubernetes cluster. Default to true.
- `endpoint_public_access_enabled` - (Optional, ForceNew) Whether to create internet eip for API Server. Default to false.
- `private_zone` - (Optional, ForceNew) Whether to create internet eip for API Server. Default to false.
- `deletion_protection` - (Optional, ForceNew) Whether enable the deletion protection or not.
    - true: Enable deletion protection.
    - false: Disable deletion protection.
- `force_update` - (Optional) Default false, when you want to change `vpc_id` and `vswitch_id`, you have to set this field to true, then the cluster will be recreated.
- `tags` - (Optional) Default nil, A map of tags assigned to the kubernetes cluster .
- `kube_config` - (Optional) The path of kube config, like `~/.kube/config`.
- `client_cert` - (Optional) The path of client certificate, like `~/.kube/client-cert.pem`.
- `client_key` - (Optional) The path of client key, like `~/.kube/client-key.pem`.
- `cluster_ca_cert` - (Optional) The path of cluster ca certificate, like `~/.kube/cluster-ca-cert.pem`

» Timeouts

NOTE: Available in 1.58.0+

The `timeouts` block allows you to specify timeouts for certain actions:

- `create` - (Defaults to 60 mins) Used when creating the kubernetes cluster (until it reaches the initial `running` status).
- `delete` - (Defaults to 30 mins) Used when terminating the kubernetes cluster.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the container cluster.
- `name` - The name of the container cluster.

- `vpc_id` - The ID of VPC where the current cluster is located.
- `vswitch_id` - The ID of VSwicth where the current cluster is located.
- `security_group_id` - The ID of security group where the current cluster worker node is located.
- `deletion_protection` - Whether enable the deletion protection or not.

» Import

Serverless Kubernetes cluster can be imported using the id, e.g.

```
$ terraform import alicloud_cs_serverless_kubernetes.main ce4273f9156874b46bb
```

» alicloud_cs_swarm

DEPRECATED: This resource manages swarm cluster, which is being deprecated and will be replaced by Kubernetes cluster.

This resource will help you to manager a Swarm Cluster.

NOTE: Swarm cluster only supports VPC network and you can specify a VPC network by filed `vswitch_id`.

» Example Usage

Basic Usage

```
resource "alicloud_cs_swarm" "my_cluster" {
  password      = "Yourpassword1234"
  instance_type = "ecs.n4.small"
  name          = "ClusterFromAlicloud"
  node_number   = 2
  disk_category = "cloud_efficiency"
  disk_size     = 20
  cidr_block    = "172.18.0.0/24"
  image_id      = "${var.image_id}"
  vswitch_id    = "${var.vswitch_id}"
}
```

» Argument Reference

The following arguments are supported:

- `name` - The container cluster's name. It is the only in one Alicloud account.

- **name_prefix** - The container cluster name's prefix. It is conflict with **name**. If it is specified, terraform will using it to build the only cluster name. Default to 'Terraform-Creation'.
- **size** - Field 'size' has been deprecated from provider version 1.9.1. New field 'node_number' replaces it.
- **node_number** - The ECS node number of the container cluster. Its value choices are 1~50, and default to 1.
- **cidr_block** - (Required, ForceNew) The CIDR block for the Container. It can not be same as the CIDR used by the VPC. Valid value:
  - 192.168.0.0/16
  - 172.19-30.0.0/16
  - 10.0.0.0/16

System reserved private network address: 172.16/17/18/31.0.0/16. Maximum number of hosts allowed in the cluster: 256.

- **image_id** - (ForceNew) The image ID of ECS instance node used. Default to System automate allocated.
- **instance_type** - (Required, ForceNew) The type of ECS instance node.
- **is_outdated** - (Optional) Whether to use outdated instance type. Default to false.
- **password** - (Required, ForceNew, Sensitive) The password of ECS instance node.
- **disk_category** - (ForceNew) The data disk category of ECS instance node. Its valid value are **cloud**, **cloud_ssd**, **cloud_essd**, **ephemeral_essd** and **cloud_efficiency**. Default to **cloud_efficiency**.
- **disk_size** - (ForceNew) The data disk size of ECS instance node. Its valid value is 20~32768 GB. Default to 20.
- **vswitch_id** - (Required, ForceNew) The password of ECS instance node. If it is not specified, the container cluster's network mode will be **Classic**.
- **release_eip** - Whether to release EIP after creating swarm cluster successfully. Default to false.
- **need_slb**- (ForceNew) Whether to create the default simple routing Server Load Balancer instance for the cluster. The default value is true.

» Attributes Reference

The following attributes are exported:

- **id** - The ID of the container cluster.
- **name** - The name of the container cluster.
- **size** - It has been deprecated from provider version 1.9.1. New field 'node_number' replaces it.
- **node_number** - The node number.
- **vpc_id** - The ID of VPC where the current cluster is located.
- **vswitch_id** - The ID of VSwitch where the current cluster is located.

- `slb_id` - The ID of load balancer where the current cluster worker node is located.
- `security_group_id` - The ID of security group where the current cluster worker node is located.
- `agent_version` - The nodes agent version.
- `instance_type` - The instance type of nodes.
- `disk_category` - The data disk category of nodes.
- `disk_size` - The data disk size of nodes.
- `nodes` - List of cluster nodes. It contains several attributes to `Block Nodes`.

» Block Nodes

- `id` - ID of the node.
- `name` - Node name.
- `private_ip` - The private IP address of node.
- `eip` - The Elastic IP address of node.
- `status` - The node current status. It is different with instance status.

» Import

Swarm cluster can be imported using the id, e.g.

```
$ terraform import alicloud_cs_swarm.foo cf123456789
```

» alicloud_cr_namespaces

This data source provides a list Container Registry namespaces on Alibaba Cloud.

NOTE: Available in v1.35.0+

» Example Usage

```
# Declare the data source
data "alicloud_cr_namespaces" "my_namespaces" {
  name_regex  = "my-namespace"
  output_file = "my-namespace-json"
}

output "output" {
  value = "${data.alicloud_cr_namespaces.my_namespaces.namespaces}"
}
```

» Argument Reference

The following arguments are supported:

- `name_regex` - (Optional) A regex string to filter results by namespace name.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of matched Container Registry namespaces. Its element is a namespace name.
- `names` - A list of namespace names.
- `namespaces` - A list of matched Container Registry namespaces. Each element contains the following attributes:
  - `name` - Name of Container Registry namespace.
  - `auto_create` - Boolean, when it set to true, repositories are automatically created when pushing new images. If it set to false, you create repository for images before pushing.
  - `default_visibility` - `PUBLIC` or `PRIVATE`, default repository visibility in this namespace.

» alicloud_cr_repos

This data source provides a list Container Registry repositories on Alibaba Cloud.

NOTE: Available in v1.35.0+

» Example Usage

```
# Declare the data source
data "alicloud_cr_repos" "my_repos" {
  name_regex  = "my-repos"
  output_file = "my-repo-json"
}

output "output" {
  value = "${data.alicloud_cr_repos.my_repos.repos}"
}
```

» Argument Reference

The following arguments are supported:

- `namespace` - (Optional) Name of container registry namespace where the repositories are located in.
- `name_regex` - (Optional) A regex string to filter results by repository name.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).
- `enable_details` - (Optional) Boolean, false by default, only repository attributes are exported. Set to true if domain list and tags belong to this repository are needed. See `tags` in attributes.

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of matched Container Registry Repositories. Its element is set to `names`.
- `names` - A list of repository names.
- `repos` - A list of matched Container Registry Namespaces. Each element contains the following attributes:
  - `namespace` - Name of container registry namespace where repo is located.
  - `name` - Name of container registry namespace.
  - `summary` - The repository general information.
  - `repo_type` - `PUBLIC` or `PRIVATE`, repository's visibility.
  - `domain_list` - The repository domain list.
  - `public` - Domain of public endpoint.
  - `internal` - Domain of internal endpoint, only in some regions.
  - `vpc` - Domain of vpc endpoint.
  - `tags` - A list of image tags belong to this repository. Each contains several attributes, see `Block Tag`.

» Block Tag

- `tag` - Tag of this image.
- `image_id` - Id of this image.
- `digest` - Digest of this image.
- `status` - Status of this image.
- `image_size` - Status of this image, in bytes.
- `image_update` - Last update time of this image, unix time in nanoseconds.
- `image_create` - Create time of this image, unix time in nanoseconds.

» alicloud_cr_namespace

This resource will help you to manager Container Registry namespaces.

NOTE: Available in v1.34.0+.

NOTE: You need to set your registry password in Container Registry console before use this resource.

» Example Usage

Basic Usage

```
resource "alicloud_cr_namespace" "my-namespace" {
  name              = "my-namespace"
  auto_create       = false
  default_visibility = "PUBLIC"
}
```

» Argument Reference

The following arguments are supported:

- `name` - (Required, ForceNew) Name of Container Registry namespace.
- `auto_create` - (Required) Boolean, when it set to true, repositories are automatically created when pushing new images. If it set to false, you create repository for images before pushing.
- `default_visibility` - (Required) `PUBLIC` or `PRIVATE`, default repository visibility in this namespace.

» Attributes Reference

The following attributes are exported:

- `id` - The id of Container Registry namespace. The value is same as its name.

» Import

Container Registry namespace can be imported using the namespace, e.g.

```
$ terraform import alicloud_cr_namespace.default my-namespace
```

» alicloud_cr_repo

This resource will help you to manager Container Registry repositories.

NOTE: Available in v1.35.0+.

NOTE: You need to set your registry password in Container Registry console before use this resource.

» Example Usage

Basic Usage

```
resource "alicloud_cr_namespace" "my-namespace" {
  name              = "my-namespace"
  auto_create       = false
  default_visibility = "PUBLIC"
}

resource "alicloud_cr_repo" "my-repo" {
  namespace = "${alicloud_cr_namespace.my-namespace.name}"
  name      = "my-repo"
  summary   = "this is summary of my new repo"
  repo_type = "PUBLIC"
  detail    = "this is a public repo"
}
```

» Argument Reference

The following arguments are supported:

- `namespace` - (Required, ForceNew) Name of container registry namespace where repository is located.
- `name` - (Required, ForceNew) Name of container registry repository.
- `summary` - (Required) The repository general information. It can contain 1 to 80 characters.
- `repo_type` - (Required) `PUBLIC` or `PRIVATE`, repo's visibility.
- `detail` - (Optional) The repository specific information. MarkDown format is supported, and the length limit is 2000.

» Attributes Reference

The following attributes are exported:

- `id` - The id of Container Registry repository. The value is in format `namespace/repository`.
- `domain_list` - The repository domain list.
  - `public` - Domain of public endpoint.
  - `internal` - Domain of internal endpoint, only in some regions.
  - `vpc` - Domain of vpc endpoint.

» Import

Container Registry repository can be imported using the `namespace/repository`, e.g.

```
$ terraform import alicloud_cr_repo.default `my-namespace/my-repo`
```

» alicloud_datahub_project

The project is the basic unit of resource management in Datahub Service and is used to isolate and control resources. It contains a set of Topics. You can manage the datahub sources of an application by using projects. Refer to details.

NOTE: Currently Datahub service only can be supported in the regions: cn-beijing, cn-hangzhou, cn-shanghai, cn-shenzhen, ap-southeast-1.

» Example Usage

Basic Usage

```
resource "alicloud_datahub_project" "example" {
  name    = "tf_datahub_project"
  comment = "created by terraform"
}
```

» Argument Reference

The following arguments are supported:

- `name` - (Required, ForceNew) The name of the datahub project. Its length is limited to 3-32 and only characters such as letters, digits and '_' are allowed. It is case-insensitive.
- `comment` - (Optional) Comment of the datahub project. It cannot be longer than 255 characters.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the datahub project. It is the same as its name.
- `create_time` - Create time of the datahub project. It is a human-readable string rather than 64-bits UTC.
- `last_modify_time` - Last modify time of the datahub project. It is the same as *create_time* at the beginning. It is also a human-readable string rather than 64-bits UTC.

» Import

Datahub project can be imported using the *name* or ID, e.g.

```
$ terraform import alicloud_datahub_project.example tf_datahub_project
```

» alicloud_datahub_subscription

The subscription is the basic unit of resource usage in Datahub Service under Publish/Subscribe model. You can manage the relationships between user and topics by using subscriptions. Refer to details.

» Example Usage

Basic Usage

```
resource "alicloud_datahub_subscription" "example" {
  project_name = "tf_datahub_project"
  topic_name   = "tf_datahub_topic"
  comment      = "created by terraform"
}
```

» Argument Reference

The following arguments are supported:

- `project_name` - (Required, ForceNew) The name of the datahub project that the subscription belongs to. Its length is limited to 3-32 and only characters such as letters, digits and '_' are allowed. It is case-insensitive.
- `topic_name` - (Required, ForceNew) The name of the datahub topic that the subscription belongs to. Its length is limited to 1-128 and only characters such as letters, digits and '_' are allowed. It is case-insensitive.

- `comment` - (Optional) Comment of the datahub subscription. It cannot be longer than 255 characters.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the datahub subscritpion as terraform resource. It was composed of project name, topic name and practical subscription ID generated from server side. Format to `<project_name>:<topic_name>:<sub_id>`.
- `sub_id` - The identidy of the subscritpion, generate from server side.
- `create_time` - Create time of the datahub subscription. It is a human-readable string rather than 64-bits UTC.
- `last_modify_time` - Last modify time of the datahub subscription. It is the same as *create_time* at the beginning. It is also a human-readable string rather than 64-bits UTC.

» Import

Datahub subscription can be imported using the ID, e.g.

```
$ terraform import alicloud_datahub_subscription.example tf_datahub_project:tf_datahub_topic
```

» alicloud_datahub_topic

The topic is the basic unit of Datahub data source and is used to define one kind of data or stream. It contains a set of subscriptions. You can manage the datahub source of an application by using topics. Refer to details.

» Example Usage

Basic Usage

- BLob Topic

```
resource "alicloud_datahub_topic" "example" {
  name         = "tf_datahub_topic"
  project_name = "tf_datahub_project"
  record_type  = "BLOB"
  shard_count  = 3
  life_cycle   = 7
  comment      = "created by terraform"
}
```

- Tuple Topic

```
resource "alicloud_datahub_topic" "example" {
  name         = "tf_datahub_topic"
  project_name = "tf_datahub_project"
  record_type  = "TUPLE"
  record_schema = {
    bigint_field    = "BIGINT"
    timestamp_field = "TIMESTAMP"
    string_field    = "STRING"
    double_field    = "DOUBLE"
    boolean_field   = "BOOLEAN"
  }
  shard_count = 3
  life_cycle  = 7
  comment      = "created by terraform"
}
```

» Argument Reference

The following arguments are supported:

- `name` - (Required, ForceNew) The name of the datahub topic. Its length is limited to 1-128 and only characters such as letters, digits and '_' are allowed. It is case-insensitive.
- `project_name` - (Required, ForceNew) The name of the datahub project that this topic belongs to. It is case-insensitive.
- `shard_count` - (Optional, ForceNew) The number of shards this topic contains. The permitted range of values is [1, 10]. The default value is 1.
- `life_cycle` - (Optional) How many days this topic lives. The permitted range of values is [1, 7]. The default value is 3.
- `record_type` - (Optional, ForceNew) The type of this topic. Its value must be one of {BLOB, TUPLE}. For BLOB topic, data will be organized as binary and encoded by BASE64. For TUPLE topic, data has fixed schema. The default value is "TUPLE" with a schema {STRING}.
- `record_schema` - (Optional, ForceNew) Schema of this topic, required only for TUPLE topic. Supported data types (case-insensitive) are:
  - BIGINT
  - STRING
  - BOOLEAN
  - DOUBLE
  - TIMESTAMP
- `comment` - (Optional) Comment of the datahub topic. It cannot be longer than 255 characters.

Notes: Currently `life_cycle` can not be modified and it will be supported in

the next future.

» **Attributes Reference**

The following attributes are exported:

- `id` - The ID of the datahub topic. It was composed of project name and its name, and formats to `<project_name>:<name>`.
- `create_time` - Create time of the datahub topic. It is a human-readable string rather than 64-bits UTC.
- `last_modify_time` - Last modify time of the datahub topic. It is the same as *create_time* at the beginning. It is also a human-readable string rather than 64-bits UTC.

» **Import**

Datahub topic can be imported using the ID, e.g.

```
$ terraform import alicloud_datahub_topic.example tf_datahub_project:tf_datahub_topic
```

» **alicloud_drds_instance**

The `alicloud_drds_instance` data source provides a collection of DRDS instances available in Alibaba Cloud account. Filters support regular expression for the instance name, searches by tags, and other filters which are listed below.

NOTE: Available in 1.35.0+.

» **Example Usage**

```
data "alicloud_drds_instances" "drds_instances_ds" {
  name_regex = "drds-\\d+"
  ids        = "drdsfacbz68g3299test"
}
output "first_db_instance_id" {
  value = "${data.alicloud_drds_instances.drds_instances_ds.instances.0.drdsInstanceId}"
}
```

» **Argument Reference**

The following arguments are supported:

- `name_regex` - A regex string to filter results by instance name.

- `ids` - (Optional) A list of DRDS instance IDs.

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of DRDS instance IDs.
- `descriptions` - A list of DRDS descriptions.
- `instances` - A list of DRDS instances.
    - `id` - The ID of the DRDS instance.
    - `description` - The DRDS instance description.
    - `name` - The name of the RDS instance.
    - `status` - Status of the instance.
    - `type` - The DRDS Instance type.
    - `create_time` - Creation time of the instance.
    - `network_type` - `Classic` for public classic network or `VPC` for private network.
    - `zone_id` - Zone ID the instance belongs to.
    - `version` - The DRDS Instance version.
    - `ids` - A list of DRDS instance IDs.

» alicloud_drds_instance

Distributed Relational Database Service (DRDS) is a lightweight (stateless), flexible, stable, and efficient middleware product independently developed by Alibaba Group to resolve scalability issues with single-host relational databases. With its compatibility with MySQL protocols and syntaxes, DRDS enables database/table sharding, smooth scaling, configuration upgrade/downgrade, transparent read/write splitting, and distributed transactions, providing O&M capabilities for distributed databases throughout their entire lifecycle.

For information about DRDS and how to use it, see What is DRDS.

NOTE: At present, DRDS instance only can be supported in the regions: cn-shenzhen, cn-beijing, cn-hangzhou, cn-hongkong, cn-qingdao.

NOTE: Currently, this resource only support `Domestic Site Account`.

» Example Usage

```
resource "alicloud_drds_instance" "default" {
  description          = "drds instance"
  instance_charge_type = "PostPaid"
  zone_id              = "cn-hangzhou-e"
```

```
  vswitch_id            = "vsw-bp1jlu3swk8rq2yoi40ey"
  instance_series       = "drds.sn1.4c8g"
  specification         = "drds.sn1.4c8g.8C16G"
}
```

» Argument Reference

The following arguments are supported:

- `description` - (Required) Description of the DRDS instance, This description can have a string of 2 to 256 characters.
- `zone_id` - (Optional, ForceNew) The Zone to launch the DRDS instance.
- `instance_charge_type` - (Optional, ForceNew) Valid values are `PrePaid`, `PostPaid`, Default to `PostPaid`.
- `vswitch_id` - (Optional, ForceNew) The VSwitch ID to launch in.
- `instance_series` - (Required, ForceNew) User-defined DRDS instance node spec. Value range:
  - `drds.sn1.4c8g` for DRDS instance Starter version;
  - `drds.sn1.8c16g` for DRDS instance Standard edition;
  - `drds.sn1.16c32g` for DRDS instance Enterprise Edition;
  - `drds.sn1.32c64g` for DRDS instance Extreme Edition;
- `specification` - (Required, ForceNew) User-defined DRDS instance specification. Value range:
  - `drds.sn1.4c8g` for DRDS instance Starter version;
    * value range : `drds.sn1.4c8g.8c16g`, `drds.sn1.4c8g.16c32g`, `drds.sn1.4c8g.32c64g`, `drds.sn1.4c8g.64c128g`
  - `drds.sn1.8c16g` for DRDS instance Standard edition;
    * value range : `drds.sn1.8c16g.16c32g`, `drds.sn1.8c16g.32c64g`, `drds.sn1.8c16g.64c128g`
  - `drds.sn1.16c32g` for DRDS instance Enterprise Edition;
    * value range : `drds.sn1.16c32g.32c64g`, `drds.sn1.16c32g.64c128g`
  - `drds.sn1.32c64g` for DRDS instance Extreme Edition;
    * value range : `drds.sn1.32c64g.128c256g`

» Timeouts

NOTE: Available in 1.49.0+.

The `timeouts` block allows you to specify timeouts for certain actions:

- `create` - (Defaults to 10 mins) Used when creating the drds instance (until it reaches running status).
- `delete` - (Defaults to 10 mins) Used when terminating the drds instance.

» Attributes Reference

The following attributes are exported:

- `id` - The DRDS instance ID.

» Import

Distributed Relational Database Service (DRDS) can be imported using the id, e.g.

```
$ terraform import alicloud_drds_instance.example drds-abc123456
```

» alicloud_dns_domain_groups

NOTE: This datasource has been deprecated from v1.3.2. Please use the data-source `alicloud_dns_groups` instead.

» alicloud_dns_domain_records

NOTE: This resource has been deprecated from v1.3.2. Please use the data-source `alicloud_dns_records` instead.

» alicloud_dns_domains

This data source provides a list of DNS Domains in an Alibaba Cloud account according to the specified filters.

» Example Usage

```
data "alicloud_dns_domains" "domains_ds" {
  domain_name_regex = "^hegu"
  output_file       = "domains.txt"
}

output "first_domain_id" {
  value = "${data.alicloud_dns_domains.domains_ds.domains.0.domain_id}"
}
```

» Argument Reference

The following arguments are supported:

- `domain_name_regex` - (Optional) A regex string to filter results by the domain name.
- `group_name_regex` - (Optional) A regex string to filter results by the group name.
- `ali_domain` - (Optional, type: bool) Specifies whether the domain is from Alibaba Cloud or not.
- `instance_id` - (Optional) Cloud analysis product ID.
- `version_code` - (Optional) Cloud analysis version code.
- `ids` (Optional, Available in 1.53.0+) - A list of domain IDs.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).
- `resource_group_id` - (Optional, ForceNew, Available in 1.59.0+) The Id of resource group which the dns belongs.

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of domain IDs.
- `names` - A list of domain names.
- `domains` - A list of domains. Each element contains the following attributes:
    - `domain_id` - ID of the domain.
    - `domain_name` - Name of the domain.
    - `ali_domain` - Indicates whether the domain is an Alibaba Cloud domain.
    - `group_id` - Id of group that contains the domain.
    - `group_name` - Name of group that contains the domain.
    - `instance_id` - Cloud analysis product ID of the domain.
    - `version_code` - Cloud analysis version code of the domain.
    - `puny_code` - Punycode of the Chinese domain.
    - `dns_servers` - DNS list of the domain in the analysis system.
    - `resource_group_id` - The Id of resource group which the dns belongs.

» alicloud_dns_groups

This data source provides a list of DNS Domain Groups in an Alibaba Cloud account according to the specified filters.

» Example Usage

```
data "alicloud_dns_groups" "groups_ds" {
  name_regex  = "^y[A-Za-z]+"
  output_file = "groups.txt"
}

output "first_group_name" {
  value = "${data.alicloud_dns_groups.groups_ds.groups.0.group_name}"
}
```

» Argument Reference

The following arguments are supported:

- `name_regex` - (Optional) A regex string to filter results by group name.
- `ids` - (Optional, Available 1.52.2+) A list of group IDs.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of group IDs.
- `names` - A list of group names.
- `groups` - A list of groups. Each element contains the following attributes:
    - `group_id` - Id of the group.
    - `group_name` - Name of the group.

» alicloud_dns_records

This data source provides a list of DNS Domain Records in an Alibaba Cloud account according to the specified filters.

» Example Usage

```
data "alicloud_dns_records" "records_ds" {
  domain_name       = "xiaozhu.top"
  is_locked         = false
  type              = "A"
  host_record_regex = "^@"
```

```
  output_file       = "records.txt"
}

output "first_record_id" {
  value = "${data.alicloud_dns_records.records_ds.records.0.record_id}"
}
```

» Argument Reference

The following arguments are supported:

- `domain_name` - (Required) The domain name associated to the records.
- `host_record_regex` - (Optional) Host record regex.
- `value_regex` - (Optional) Host record value regex.
- `type` - (Optional) Record type. Valid items are `A`, `NS`, `MX`, `TXT`, `CNAME`, `SRV`, `AAAA`, `REDIRECT_URL`, `FORWORD_URL` .
- `line` - (Optional) ISP line. Valid items are `default`, `telecom`, `unicom`, `mobile`, `oversea`, `edu`, `drpeng`, `btvn`, .etc. For checking all resolution lines enumeration please visit Alibaba Cloud DNS doc
- `status` - (Optional) Record status. Valid items are `ENABLE` and `DISABLE`.
- `is_locked` - (Optional, type: bool) Whether the record is locked or not.
- `ids` - (Optional, Available 1.52.2+) A list of record IDs.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of record IDs.
- `urls` - A list of entire URLs. Each item format as `<host_record>.<domain_name>`.
- `records` - A list of records. Each element contains the following attributes:
    - `record_id` - ID of the record.
    - `domain_name` - Name of the domain the record belongs to.
    - `host_record` - Host record of the domain.
    - `value` - Host record value of the domain.
    - `type` - Type of the record.
    - `ttl` - TTL of the record.
    - `priority` - Priority of the `MX` record.
    - `line` - ISP line of the record.
    - `status` - Status of the record.
    - `locked` - Indicates whether the record is locked.

```

# » alicloud_dns_resolution_lines

This data source provides a list of DNS Resolution Lines in an Alibaba Cloud account according to the specified filters.

**NOTE:** Available in 1.60.0.

## » Example Usage

```
data "alicloud_dns_resolution_lines" "resolution_lines_ds" {
  line_codes = ["cn_unicom_shanxi"]
  output_file   = "support_lines.txt"
}

output "first_line_code" {
  value = "${data.alicloud_dns_resolution_lines.resolution_lines_ds.lines.0.line_code}"
}
```

## » Argument Reference

The following arguments are supported:

- `domain_name` - (Optional) Domain Name.
- `line_codes` - (Optional) A list of lines codes.
- `line_display_names` - (Optional) A list of line display names.
- `user_client_ip` - (Optional) The ip of user client.
- `lang` - (Optional) language.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

## » Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `line_codes` - A list of lines codes.
- `line_display_names` - A list of line display names.
- `lines` - A list of cloud resolution line. Each element contains the following attributes:
    - `line_codes` - Line code.
    - `line_display_name` - Line display name.
    - `line_name` - Line name.

# » alicloud_dns

Provides a DNS resource.

**NOTE:** The domain name which you want to add must be already registered and had not added by another account. Every domain name can only exist in a unique group.

## » Example Usage

```
# Add a new Domain.
resource "alicloud_dns" "dns" {
  name     = "starmove.com"
  group_id = "85ab8713-4a30-4de4-9d20-155ff830f651"
}
```

» Argument Reference

The following arguments are supported:

- `name` - (Required, ForceNew) Name of the domain. This name without suffix can have a string of 1 to 63 characters, must contain only alphanumeric characters or "-", and must not begin or end with "-", and "-" must not in the 3th and 4th character positions at the same time. Suffix `.sh` and `.tel` are not supported.
- `group_id` - (Optional) Id of the group in which the domain will add. If not supplied, then use default group.
- `resource_group_id` - (Optional, ForceNew, Available in 1.59.0+) The Id of resource group which the dns belongs.

» Attributes Reference

The following attributes are exported:

- `id` - This ID of this resource. The value is set to `domain_name`.
- `domain_id` - The domain ID.
- `name` - The domain name.
- `group_id` - The group id of domain.
- `dns_server` - A list of the dns server name.

» Import

DNS can be imported using the id or domain name, e.g.

```
$ terraform import alicloud_dns.example "aliyun.com"
```

» alicloud_dns_group

Provides a DNS Group resource.

» Example Usage

```
# Add a new Domain group.
resource "alicloud_dns_group" "group" {
  name = "testgroup"
}
```

» Argument Reference

The following arguments are supported:

- `name` - (Required) Name of the domain group.

» Attributes Reference

The following attributes are exported:

- `id` - The group id.
- `name` - The group name.

» alicloud_dns_record

Provides a DNS Record resource.

NOTE: When the site is an international site, the `type` neither supports `REDIRECT_URL` nor `REDIRECT_URL`

» Example Usage

```
# Create a new Domain record
resource "alicloud_dns_record" "record" {
  name        = "domainname"
  host_record = "@"
```

```
  type      = "A"
  value     = "192.168.99.99"
}
```

» Argument Reference

The following arguments are supported:

- `name` - (Required) Name of the domain. This name without suffix can have a string of 1 to 63 characters, must contain only alphanumeric characters or "-", and must not begin or end with "-", and "-" must not in the 3th and 4th character positions at the same time. Suffix `.sh` and `.tel` are not supported.
- `host_record` - (Required) Host record for the domain record. This host_record can have at most 253 characters, and each part split with "." can have at most 63 characters, and must contain only alphanumeric characters or hyphens, such as "-","."."*","@", and must not begin or end with "-".
- `type` - (Required) The type of domain record. Valid values are `A,NS,MX,TXT,CNAME,SRV,AAAA,CAA`, `REDIRECT_URL` and `FORWORD_URL`.
- `value` - (Required) The value of domain record, When the `type` is `MX,NS,CNAME,SRV`, the server will treat the `value` as a fully qualified domain name, so it's no need to add a `.` at the end.
- `ttl` - (Optional) The effective time of domain record. Its scope depends on the edition of the cloud resolution. Free is `[600, 86400]`, Basic is `[120, 86400]`, Standard is `[60, 86400]`, Ultimate is `[10, 86400]`, Exclusive is `[1, 86400]`. Default value is `600`.
- `priority` - (Optional) The priority of domain record. Valid values are `[1-10]`. When the `type` is `MX`, this parameter is required.
- `routing` - (Optional) The resolution line of domain record. Valid values are `default`, `telecom`, `unicom`, `mobile`, `oversea`, `edu`, `drpeng`, `btvn`, .etc. When the `type` is `FORWORD_URL`, this parameter must be `default`. Default value is `default`. For checking all resolution lines enumeration please visit Alibaba Cloud DNS doc or using alicloud_dns_resolution_lines in data source to get the value.

» Attributes Reference

The following attributes are exported:

- `id` - The record id.
- `name` - (Required) The record domain name.
- `type` - (Required) The record type.
- `host_record` - The host record of record.
- `value` - The record value.

- `ttl` - The record effective time.
- `priority` - The record priority.
- `routing` - The record resolution line.
- `status` - The record status. `Enable` or `Disable`.
- `Locked` - The record locked state. `true` or `false`.

» Import

RDS record can be imported using the id, e.g.

```
$ terraform import alicloud_dns_record.example abc123456
```

» alicloud_disks

This data source provides the disks of the current Alibaba Cloud user.

» Example Usage

```
data "alicloud_disks" "disks_ds" {
  name_regex = "sample_disk"
}

output "first_disk_id" {
  value = "${data.alicloud_disks.disks_ds.disks.0.id}"
}
```

» Argument Reference

The following arguments are supported:

- `ids` - (Optional) A list of disks IDs.
- `name_regex` - (Optional) A regex string to filter results by disk name.
- `type` - (Optional) Disk type. Possible values: `system` and `data`.
- `category` - (Optional) Disk category. Possible values: `cloud` (basic cloud disk), `cloud_efficiency` (ultra cloud disk), `ephemeral_ssd` (local SSD cloud disk), `cloud_ssd` (SSD cloud disk), and `cloud_essd` (ESSD cloud disk).
- `encrypted` - (Optional) Indicate whether the disk is encrypted or not. Possible values: `on` and `off`.
- `instance_id` - (Optional) Filter the results by the specified ECS instance ID.

- `resource_group_id` - (Optional, ForceNew, Available in 1.57.0+) The Id of resource group which the disk belongs.
- `tags` - (Optional) A map of tags assigned to the disks. It must be in the format: `data "alicloud_disks" "disks_ds" { tags = {    tagKey1 = "tagValue1",    tagKey2 = "tagValue2" } }`
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `disks` - A list of disks. Each element contains the following attributes:
  - `id` - ID of the disk.
  - `name` - Disk name.
  - `description` - Disk description.
  - `region_id` - Region ID the disk belongs to.
  - `availability_zone` - Availability zone of the disk.
  - `status` - Current status. Possible values: `In_use`, `Available`, `Attaching`, `Detaching`, `Creating` and `ReIniting`.
  - `type` - Disk type. Possible values: `system` and `data`.
  - `category` - Disk category. Possible values: `cloud` (basic cloud disk), `cloud_efficiency` (ultra cloud disk), `ephemeral_ssd` (local SSD cloud disk), `cloud_ssd` (SSD cloud disk), and `cloud_essd` (ESSD cloud disk).
  - `encrypted` - Indicate whether the disk is encrypted or not. Possible values: `on` and `off`.
  - `size` - Disk size in GiB.
  - `image_id` - ID of the image from which the disk is created. It is null unless the disk is created using an image.
  - `snapshot_id` - Snapshot used to create the disk. It is null if no snapshot is used to create the disk.
  - `instance_id` - ID of the related instance. It is `null` unless the `status` is `In_use`.
  - `creation_time` - Disk creation time.
  - `attached_time` - Disk attachment time.
  - `detached_time` - Disk detachment time.
  - `expiration_time` - Disk expiration time.
  - `tags` - A map of tags assigned to the disk.
  - `resource_group_id` - The Id of resource group.

» alicloud_images

This data source provides available image resources. It contains user's private images, system images provided by Alibaba Cloud, other public images and the ones available on the image market.

» Example Usage

```
data "alicloud_images" "images_ds" {
  owners     = "system"
  name_regex = "^centos_6"
}

output "first_image_id" {
  value = "${data.alicloud_images.images_ds.images.0.id}"
}
```

» Argument Reference

The following arguments are supported:

- `name_regex` - (Optional) A regex string to filter resulting images by name.
- `most_recent` - (Optional, type: bool) If more than one result are returned, select the most recent one.
- `owners` - (Optional) Filter results by a specific image owner. Valid items are `system`, `self`, `others`, `marketplace`.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

NOTE: At least one of the `name_regex`, `most_recent` and `owners` must be set.

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of image IDs.
- `images` - A list of images. Each element contains the following attributes:
    - `id` - ID of the image.
    - `architecture` - Platform type of the image system: i386 or x86_64.
    - `creation_time` - Time of creation.
    - `description` - Description of the image.
    - `image_owner_alias` - Alias of the image owner.
    - `os_name` - Display Chinese name of the OS.
    - `os_name_en` - Display English name of the OS.

- **status** - Status of the image. Possible values: `UnAvailable`, `Available`, `Creating` and `CreateFailed`.
- **size** - Size of the image.
- **disk_device_mappings** - Description of the system with disks and snapshots under the image.
- **device** - Device information of the created disk: such as /dev/xvdb.
- **size** - Size of the created disk.
- **snapshot_id** - Snapshot ID.
- **product_code** - Product code of the image on the image market.
- **is_subscribed** - Whether the user has subscribed to the terms of service for the image product corresponding to the ProductCode.
- **image_version** - Version of the image.
- **progress** - Progress of image creation, presented in percentages.

» alicloud_instance_type_families

This data source provides the ECS instance type families of Alibaba Cloud.

NOTE: Available in 1.54.0+

» Example Usage

```
data "alicloud_instance_type_families" "default" {
  instance_charge_type = "PrePaid"
}

output "first_instance_type_family_id" {
  value = "${data.alicloud_instance_type_families.default.instance_type_families.0.id}"
}

output "instance_ids" {
  value = "${data.alicloud_instance_type_families.default.ids}"
}
```

» Argument Reference

The following arguments are supported:

- `zone_id` - (Optional, ForceNew) The Zone to launch the instance.
- `generation` - (Optional) The generation of the instance type family, Valid values: `ecs-1`, `ecs-2`, `ecs-3` and `ecs-4`. For more information, see Instance type families.

- `instance_charge_type` - (Optional, ForceNew) Valid values are `PrePaid`, `PostPaid`, Default to `PostPaid`.
- `spot_strategy` - (Optional, ForceNew) Filter the results by ECS spot type. Valid values: `NoSpot`, `SpotWithPriceLimit` and `SpotAsPriceGo`. Default to `NoSpot`.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of instance type family IDs.
- `instance_types` - A list of image type families. Each element contains the following attributes:
  - `id` - ID of the instance type family.
  - `generation` - The generation of the instance type family.
  - `zone_ids` - A list of Zone to launch the instance.

» alicloud_instance_types

This data source provides the ECS instance types of Alibaba Cloud.

NOTE: By default, only the upgraded instance types are returned. If you want to get outdated instance types, you must set `is_outdated` to true.

NOTE: If one instance type is sold out, it will not be exported.

» Example Usage

```
# Declare the data source
data "alicloud_instance_types" "types_ds" {
  cpu_core_count = 1
  memory_size    = 2
}

# Create ECS instance with the first matched instance_type

resource "alicloud_instance" "instance" {
  instance_type = "${data.alicloud_instance_types.types_ds.instance_types.0.id}"

  # Other properties...
}
```

» Argument Reference

The following arguments are supported:

- `availability_zone` - (Optional) The zone where instance types are supported.
- `cpu_core_count` - (Optional) Filter the results to a specific number of cpu cores.
- `memory_size` - (Optional) Filter the results to a specific memory size in GB.
- `gpu_amount` - (Optional, Available in 1.69.0+) The GPU amount of an instance type.
- `gpu_spec` - (Optional, Available in 1.69.0+) The GPU spec of an instance type.
- `instance_type_family` - (Optional) Filter the results based on their family name. For example: 'ecs.n4'.
- `instance_charge_type` - (Optional) Filter the results by charge type. Valid values: `PrePaid` and `PostPaid`. Default to `PostPaid`.
- `network_type` - (Optional) Filter the results by network type. Valid values: `Classic` and `Vpc`.
- `spot_strategy` - (Optional) Filter the results by ECS spot type. Valid values: `NoSpot`, `SpotWithPriceLimit` and `SpotAsPriceGo`. Default to `NoSpot`.
- `eni_amount` - (Optional) Filter the result whose network interface number is no more than `eni_amount`.
- `kubernetes_node_role` - (Optional) Filter the result which is used to create a kubernetes cluster and managed kubernetes cluster. Optional Values: `Master` and `Worker`.
- `is_outdated` - (Optional, type: bool) If true, outdated instance types are included in the results. Default to false.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of instance type IDs.
- `instance_types` - A list of image types. Each element contains the following attributes:
    - `id` - ID of the instance type.
    - `cpu_core_count` - Number of CPU cores.
    - `memory_size` - Size of memory, measured in GB.
    - `family` - The instance type family.
    - `availability_zones` - List of availability zones that support the instance type.

- gpu - The GPU attribution of an instance type:
- amount - The amount of GPU of an instance type.
- category - The category of GPU of an instance type.
- burstable_instance - The burstable instance attribution:
- initial_credit - The initial CPU credit of a burstable instance.
- baseline_credit - The compute performance benchmark CPU credit of a burstable instance.
- eni_amount - The maximum number of network interfaces that an instance type can be attached to.
- local_storage - Local storage of an instance type:
- capacity - The capacity of a local storage in GB.
- amount - The number of local storage devices that an instance has been attached to.
- category - The category of local storage that an instance has been attached to.

» alicloud_instances

The Instances data source list ECS instance resources according to their ID, name regex, image id, status and other fields.

» Example Usage

```
data "alicloud_instances" "instances_ds" {
  name_regex = "web_server"
  status     = "Running"
}

output "first_instance_id" {
  value = "${data.alicloud_instances.instances_ds.instances.0.id}"
}

output "instance_ids" {
  value = "${data.alicloud_instances.instances_ds.ids}"
}
```

» Argument Reference

The following arguments are supported:

- ids - (Optional) A list of ECS instance IDs.
- name_regex - (Optional) A regex string to filter results by instance name.
- image_id - (Optional) The image ID of some ECS instance used.

- **status** - (Optional) Instance status. Valid values: "Creating", "Starting", "Running", "Stopping" and "Stopped". If undefined, all statuses are considered.
- **vpc_id** - (Optional) ID of the VPC linked to the instances.
- **vswitch_id** - (Optional) ID of the VSwitch linked to the instances.
- **availability_zone** - (Optional) Availability zone where instances are located.
- **resource_group_id** - (Optional, ForceNew, Available in 1.57.0+) The Id of resource group which the instance belongs.
- **ram_role_name** - (Optional, ForceNew, Available in 1.69.0+) The RAM role name which the instance attaches.
- **tags** - (Optional) A map of tags assigned to the ECS instances. It must be in the format: `data "alicloud_instances" "taggedInstances" {` `tags = {   tagKey1 = "tagValue1",   tagKey2 = "tagValue2" }` `}`
- **output_file** - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- **ids** - A list of ECS instance IDs.
- **names** - A list of instances names.
- **instances** - A list of instances. Each element contains the following attributes:
    - **id** - ID of the instance.
    - **region_id** - Region ID the instance belongs to.
    - **availability_zone** - Availability zone the instance belongs to.
    - **status** - Instance current status.
    - **name** - Instance name.
    - **description** - Instance description.
    - **instance_type** - Instance type.
    - **vpc_id** - ID of the VPC the instance belongs to.
    - **vswitch_id** - ID of the VSwitch the instance belongs to.
    - **image_id** - Image ID the instance is using.
    - **private_ip** - Instance private IP address.
    - **public_ip** - Instance public IP address.
    - **eip** - EIP address the VPC instance is using.
    - **security_groups** - List of security group IDs the instance belongs to.
    - **key_name** - Key pair the instance is using.
    - **creation_time** - Instance creation time.
    - **instance_charge_type** - Instance charge type.
    - **internet_charge_type** - Instance network charge type.

- internet_max_bandwidth_out - Max output bandwidth for internet.
- spot_strategy - Spot strategy the instance is using.
- disk_device_mappings - Description of the attached disks.
- device - Device information of the created disk: such as /dev/xvdb.
- size - Size of the created disk.
- category - Cloud disk category.
- type - Cloud disk type: system disk or data disk.
- tags - A map of tags assigned to the ECS instance.
- resource_group_id - The Id of resource group.
- ram_role_name - The Ram role name.

» alicloud_key_pairs

This data source provides a list of key pairs in an Alibaba Cloud account according to the specified filters.

» Example Usage

```
# Declare the data source
resource "alicloud_key_pair" "default" {
  key_name = "keyPairDatasource"
}
data "alicloud_key_pairs" "default" {
  name_regex = "${alicloud_key_pair.default.key_name}"
}
```

» Argument Reference

The following arguments are supported:

- name_regex - (Optional) A regex string to apply to the resulting key pairs.
- ids - (Optional, Available 1.52.1+) A list of key pair IDs.
- finger_print - (Optional) A finger print used to retrieve specified key pair.
- output_file - (Optional) File name where to save data source results (after running terraform plan).
- resource_group_id - (Optional, ForceNew, Available in 1.57.0+) The Id of resource group which the key pair belongs.
- tags - (Optional, Available in v1.66.0+) A mapping of tags to assign to the resource. ## Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- names - A list of key pair names.

- **key_pairs** - A list of key pairs. Each element contains the following attributes:
    - **id** - ID of the key pair.
    - **key_name** - Name of the key pair.
    - **finger_print** - Finger print of the key pair.
    - **instances** - A list of ECS instances that has been bound this key pair.
    - **availability_zone** - The ID of the availability zone where the ECS instance is located.
    - **instance_id** - The ID of the ECS instance.
    - **instance_name** - The name of the ECS instance.
    - **vswitch_id** - The ID of the VSwitch attached to the ECS instance.
    - **public_ip** - The public IP address or EIP of the ECS instance.
    - **private_ip** - The private IP address of the ECS instance.
    - **resource_group_id** - The Id of resource group.
    - **tags** - (Optional, Available in v1.66.0+) A mapping of tags to assign to the resource.

» alicloud_network_interfaces

Use this data source to get a list of elastic network interfaces according to the specified filters in an Alibaba Cloud account.

For information about elastic network interface and how to use it, see Elastic Network Interface

» Example Usage

```
variable "name" {
  default = "networkInterfacesName"
}

resource "alicloud_vpc" "vpc" {
  name = "${var.name}"
  cidr_block = "192.168.0.0/24"
}

data "alicloud_zones" "default" {
  available_resource_creation = "VSwitch"
}

resource "alicloud_vswitch" "vswitch" {
  name = "${var.name}"
  cidr_block = "192.168.0.0/24"
```

```
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  vpc_id = "${alicloud_vpc.vpc.id}"
}

resource "alicloud_security_group" "group" {
  name = "${var.name}"
  vpc_id = "${alicloud_vpc.vpc.id}"
}

resource "alicloud_network_interface" "interface" {
  name = "${var.name}%d"
  vswitch_id = "${alicloud_vswitch.vswitch.id}"
  security_groups = [
    "${alicloud_security_group.group.id}"]
  description = "Basic test"
  private_ip = "192.168.0.2"
  tags = {
    TF-VER = "0.11.3"
  }
}

resource "alicloud_instance" "instance" {
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  security_groups = [
    "${alicloud_security_group.group.id}"]
  instance_type = "ecs.e3.xlarge"
  system_disk_category = "cloud_efficiency"
  image_id = "centos_7_04_64_20G_alibase_201701015.vhd"
  instance_name = "${var.name}"
  vswitch_id = "${alicloud_vswitch.vswitch.id}"
  internet_max_bandwidth_out = 10
}

resource "alicloud_network_interface_attachment" "attachment" {
  instance_id = "${alicloud_instance.instance.id}"
  network_interface_id = "${alicloud_network_interface.interface.id}"
}

data "alicloud_network_interfaces" "default" {
  ids = [
    "${alicloud_network_interface_attachment.attachment.network_interface_id}"],
  name_regex = "tf-testAccNetworkInterfacesBasic%d",
  tags = {
    TF-VER = "0.11.3"
  },
  vpc_id = "${alicloud_vpc.vpc.id}",
```

```
  vswitch_id = "${alicloud_vswitch.vswitch.id}",
  private_ip = "192.168.0.2",
  security_group_id = "${alicloud_security_group.group.id}",
  type = "Secondary",
  instance_id = "${alicloud_instance.instance.id}",
}

output "eni0_name" {
    value = "${data.alicloud_network_interfaces.default.interfaces.0.name}"
}
```

» Argument Reference

The following arguments are supported:

- `ids` - (Optional) A list of ENI IDs.
- `name_regex` - (Optional) A regex string to filter results by ENI name.
- `vpc_id` - (Optional) The VPC ID linked to ENIs.
- `vswitch_id` - (Optional) The VSwitch ID linked to ENIs.
- `private_ip` - (Optional) The primary private IP address of the ENI.
- `security_group_id` - (Optional) The security group ID linked to ENIs.
- `name` - (Optional) The name of the ENIs.
- `type` - (Optional) The type of ENIs, Only support for "Primary" or "Secondary".
- `instance_id` - (Optional) The ECS instance ID that the ENI is attached to.
- `tags` - (Optional) A map of tags assigned to ENIs.
- `output_file` - (Optional) The name of output file that saves the filter results.
- `resource_group_id` - (Optional, ForceNew, Available in 1.57.0+) The Id of resource group which the network interface belongs.

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `interfaces` - A list of ENIs. Each element contains the following attributes:
    - `id` - ID of the ENI.
    - `status` - Current status of the ENI.
    - `vpc_id` - ID of the VPC that the ENI belongs to.
    - `vswitch_id` - ID of the VSwitch that the ENI is linked to.
    - `zone_id` - ID of the availability zone that the ENI belongs to.
    - `public_ip` - Public IP of the ENI.
    - `private_ip` - Primary private IP of the ENI.

- **private_ips** - A list of secondary private IP address that is assigned to the ENI.
- **mac** - MAC address of the ENI.
- **security_groups** - A list of security group that the ENI belongs to.
- **name** - Name of the ENI.
- **description** - Description of the ENI.
- **instance_id** - ID of the instance that the ENI is attached to.
- **creation_time** - Creation time of the ENI.
- **tags** - A map of tags assigned to the ENI.
- **resource_group_id** - The Id of resource group.

» alicloud_security_group_rules

The `alicloud_security_group_rules` data source provides a collection of security permissions of a specific security group. Each collection item represents a single `ingress` or `egress` permission rule. The ID of the security group can be provided via a variable or the result from the other data source `alicloud_security_groups`.

» Example Usage

The following example shows how to obtain details about a security group rule and how to pass its data to an instance at launch time.

```
# Get the security group id from a variable
variable "security_group_id" {}

# Or get it from the alicloud_security_groups data source.
# Please note that the data source arguments must be enough to filter results to one securit
data "alicloud_security_groups" "groups_ds" {
  name_regex = "api"
}

# Filter the security group rule by group
data "alicloud_security_group_rules" "ingress_rules_ds" {
  group_id    = "${data.alicloud_security_groups.groups_ds.groups.0.id}" # or ${var.security
  nic_type    = "internet"
  direction   = "ingress"
  ip_protocol = "TCP"
}

# Pass port_range to the backend service
resource "alicloud_instance" "backend" {
  # ...
```

```
  user_data = "config_service.sh --portrange=${data.alicloud_security_group_rules.ingress_ru
}
```

» Argument Reference

The following arguments are supported:

- `group_id` - (Required) The ID of the security group that owns the rules.
- `nic_type` - (Optional) Refers to the network type. Can be either `internet` or `intranet`. The default value is `internet`.
- `direction` - (Optional) Authorization direction. Valid values are: `ingress` or `egress`.
- `ip_protocol` - (Optional) The IP protocol. Valid values are: `tcp`, `udp`, `icmp`, `gre` and `all`.
- `policy` - (Optional) Authorization policy. Can be either `accept` or `drop`. The default value is `accept`.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `rules` - A list of rules. Each element contains the following attributes:
  - `group_name` - The name of the security group that owns the rules.
  - `group_desc` - The description of the security group that owns the rules.
  - `rules` - A list of security group rules. Each element contains the following attributes:
  - `ip_protocol` - The protocol. Can be `tcp`, `udp`, `icmp`, `gre` or `all`.
  - `port_range` - The range of port numbers.
  - `source_cidr_ip` - Source IP address segment for ingress authorization.
  - `source_security_group_id` - Source security group ID for ingress authorization.
  - `source_group_owner_account` - Alibaba Cloud account of the source security group.
  - `dest_cidr_ip` - Target IP address segment for egress authorization.
  - `dest_security_group_id` - Target security group id for ingress authorization.
  - `dest_group_owner_account` - Alibaba Cloud account of the target security group.
  - `policy` - Authorization policy. Can be either `accept` or `drop`.
  - `nic_type` - Network type, `internet` or `intranet`.
  - `priority` - Rule priority.

- **direction** - Authorization direction, `ingress` or `egress`.
- **description** - The description of the rule.

» alicloud_security_groups

This data source provides a list of Security Groups in an Alibaba Cloud account according to the specified filters.

» Example Usage

```
# Filter security groups and print the results into a file
data "alicloud_security_groups" "sec_groups_ds" {
  name_regex  = "^web-"
  output_file = "web_access.json"
}

# In conjunction with a VPC
resource "alicloud_vpc" "primary_vpc_ds" {
  # ...
}

data "alicloud_security_groups" "primary_sec_groups_ds" {
  vpc_id = "${alicloud_vpc.primary_vpc_ds.id}"
}

output "first_group_id" {
  value = "${data.alicloud_security_groups.primary_sec_groups_ds.groups.0.id}"
}
```

» Argument Reference

The following arguments are supported:

- **ids** - (Optional, Available 1.52.0+) A list of Security Group IDs.
- **name_regex** - (Optional) A regex string to filter the resulting security groups by their names.
- **vpc_id** - (Optional) Used to retrieve security groups that belong to the specified VPC ID.
- **resource_group_id** - (Optional, ForceNew, Available in 1.58.0+) The Id of resource group which the security_group belongs.
- **output_file** - (Optional) File name where to save data source results (after running `terraform plan`).

- `tags` - (Optional) A map of tags assigned to the ECS instances. It must be in the format: `data "alicloud_security_groups" "taggedSecurityGroups" { tags = { tagKey1 = "tagValue1", tagKey2 = "tagValue2" } }`

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of Security Group IDs.
- `names` - A list of Security Group names.
- `groups` - A list of Security Groups. Each element contains the following attributes:
    - `id` - The ID of the security group.
    - `name` - The name of the security group.
    - `description` - The description of the security group.
    - `vpc_id` - The ID of the VPC that owns the security group.
    - `resource_group_id` - The Id of resource group which the security_group belongs.
    - `security_group_type` - The type of the security group.
    - `inner_access` - Whether to allow inner network access.
    - `creation_time` - Creation time of the security group.
    - `tags` - A map of tags assigned to the ECS instance.

» alicloud_snapshots

Use this data source to get a list of snapshot according to the specified filters in an Alibaba Cloud account.

For information about snapshot and how to use it, see Snapshot.

NOTE: Available in 1.40.0+.

» Example Usage

```
data "alicloud_snapshots" "snapshots" {
  ids        = ["s-123456890abcdef"]
  name_regex = "tf-testAcc-snapshot"
}
```

» Argument Reference

The following arguments are supported:

- **instance_id** - (Optional) The specified instance ID.
- **disk_id** - (Optional) The specified disk ID.
- **encrypted** - (Optional) Queries the encrypted snapshots. Optional values:
  - true: Encrypted snapshots.
  - false: No encryption attribute limit.

Default value: false. * **ids** - (Optional) A list of snapshot IDs. * **name_regex** - (Optional) A regex string to filter results by snapshot name. * **status** - (Optional) The specified snapshot status. * The snapshot status. Optional values: * progressing: The snapshots are being created. * accomplished: The snapshots are ready to use. * failed: The snapshot creation failed. * all: All status.

Default value: all.

- **type** - (Optional) The snapshot category. Optional values:
  - auto: Auto snapshots.
  - user: Manual snapshots.
  - all: Auto and manual snapshots.

Default value: all. * **source_disk_type** - (Optional) The type of source disk: * System: The snapshots are created for system disks. * Data: The snapshots are created for data disks.

- **usage** - (Optional) The usage of the snapshot:
  - image: The snapshots are used to create custom images.
  - disk: The snapshots are used to CreateDisk.
  - mage_disk: The snapshots are used to create custom images and data disks.
  - none: The snapshots are not used yet.
- **tags** - (Optional) A map of tags assigned to snapshots.
- **output_file** - (Optional) The name of output file that saves the filter results.

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- **ids** - A list of snapshot IDs.
- **names** - A list of snapshots names.
- **snapshots** - A list of snapshots. Each element contains the following attributes:
  - **id** - ID of the snapshot.
  - **name** - Name of the snapshot.
  - **description** - Description of the snapshot.
  - **encrypted** - Whether the snapshot is encrypted or not.
  - **progress** - Progress of snapshot creation, presented in percentage.
  - **source_disk_id** - Source disk ID, which is retained after the source disk of the snapshot is deleted.

- **source_disk_size** - Size of the source disk, measured in GB.
- **source_disk_type** - Source disk attribute. Value range:
  * System
  * Data
- **product_code** - Product code on the image market place.
- **retention_days** - The number of days that an automatic snapshot retains in the console for your instance.
- **remain_time** - The remaining time of a snapshot creation task, in seconds.
- **creation_time** - Creation time. Time of creation. It is represented according to ISO8601, and UTC time is used. Format: YYYY-MM-DDThh:mmZ.
- **status** - The snapshot status. Value range:
  * progressing
  * accomplished
  * failed
- **usage** - Whether the snapshots are used to create resources or not. Value range:
  * image
  * disk
  * image_disk
  * none
- **tags** - A map of tags assigned to the snapshot.

» alicloud_disk

Provides a ECS disk resource.

NOTE: One of `size` or `snapshot_id` is required when specifying an ECS disk. If all of them be specified, `size` must more than the size of snapshot which `snapshot_id` represents. Currently, `alicloud_disk` doesn't resize disk.

» Example Usage

```
# Create a new ECS disk.
resource "alicloud_disk" "ecs_disk" {
  # cn-beijing
  availability_zone = "cn-beijing-b"
  name              = "New-disk"
  description       = "Hello ecs disk."
  category          = "cloud_efficiency"
  size              = "30"

  tags = {
```

```
    Name = "TerraformTest"
  }
}
```

» Argument Reference

The following arguments are supported:

- `availability_zone` - (Required, ForceNew) The Zone to create the disk in.
- `name` - (Optional) Name of the ECS disk. This name can have a string of 2 to 128 characters, must contain only alphanumeric characters or hyphens, such as "-",".","_", and must not begin or end with a hyphen, and must not begin with http:// or https://. Default value is null.
- `description` - (Optional) Description of the disk. This description can have a string of 2 to 256 characters, It cannot begin with http:// or https://. Default value is null.
- `category` - (Optional, ForceNew) Category of the disk. Valid values are `cloud`, `cloud_efficiency`, `cloud_ssd`, `cloud_essd`. Default is `cloud_efficiency`.
- `size` - (Required) The size of the disk in GiBs. When resize the disk, the new size must be greater than the former value, or you would get an error `InvalidDiskSize.TooSmall`.
- `snapshot_id` - (Optional) A snapshot to base the disk off of. If the disk size required by snapshot is greater than `size`, the `size` will be ignored, conflict with `encrypted`.
- `tags` - (Optional) A mapping of tags to assign to the resource.
- `encrypted` - (Optional) If true, the disk will be encrypted, conflict with `snapshot_id`.
- `delete_auto_snapshot` - (Optional Available in 1.53.0+) Indicates whether the automatic snapshot is deleted when the disk is released. Default value: false.
- `delete_with_instance` - (Optional Available in 1.53.0+) Indicates whether the disk is released together with the instance: Default value: false.
- `enable_auto_snapshot` - (Optional Available in 1.53.0+) Indicates whether to apply a created automatic snapshot policy to the disk. Default value: false.
- `resource_group_id` - (ForceNew, ForceNew, Available in 1.57.0+) The Id of resource group which the disk belongs. -> **NOTE:** Disk category `cloud` has been outdated and it only can be used none I/O Optimized ECS instances. Recommend `cloud_efficiency` and `cloud_ssd` disk.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the disk.
- `status` - The disk status.

» Import

Cloud disk can be imported using the id, e.g.

```
$ terraform import alicloud_disk.example d-abc12345678
```

» alicloud_disk_attachment

Provides an Alicloud ECS Disk Attachment as a resource, to attach and detach disks from ECS Instances.

» Example Usage

Basic usage

```
# Create a new ECS disk-attachment and use it attach one disk to a new instance.

resource "alicloud_security_group" "ecs_sg" {
  name        = "terraform-test-group"
  description = "New security group"
}

resource "alicloud_disk" "ecs_disk" {
  availability_zone = "cn-beijing-a"
  size              = "50"

  tags = {
    Name = "TerraformTest-disk"
  }
}

resource "alicloud_instance" "ecs_instance" {
  image_id             = "ubuntu_18_04_64_20G_alibase_20190624.vhd"
  instance_type        = "ecs.n4.small"
  availability_zone    = "cn-beijing-a"
  security_groups      = ["${alicloud_security_group.ecs_sg.id}"]
  instance_name        = "Hello"
```

```
  instance_network_type = "classic"
  internet_charge_type  = "PayByBandwidth"

  tags = {
    Name = "TerraformTest-instance"
  }
}

resource "alicloud_disk_attachment" "ecs_disk_att" {
  disk_id     = "${alicloud_disk.ecs_disk.id}"
  instance_id = "${alicloud_instance.ecs_instance.id}"
}
```

» Argument Reference

The following arguments are supported:

- `instance_id` - (Required, Forces new resource) ID of the Instance to attach to.
- `disk_id` - (Required, Forces new resource) ID of the Disk to be attached.
- `device_name` - (Deprecated) The device name has been deprecated, and when attaching disk, it will be allocated automatically by system according to default order from /dev/xvdb to /dev/xvdz.

» Attributes Reference

The following attributes are exported:

- `instance_id` - ID of the Instance.
- `disk_id` - ID of the Disk.
- `device_name` - The device name exposed to the instance.

» alicloud_image

Creates a custom image. You can then use a custom image to create ECS instances (RunInstances) or change the system disk for an existing instance (ReplaceSystemDisk).

NOTE: If you want to create a template from an ECS instance, you can specify the instance ID (InstanceId) to create a custom image. You must make sure that the status of the specified instance is Running or Stopped. After a successful invocation, each disk of the specified instance has a new snapshot created.

NOTE: If you want to create a custom image based on the system disk of your ECS instance, you can specify one of the system disk snapshots (SnapshotId) to create a custom image. However, the specified snapshot cannot be created on or before July 15, 2013.

NOTE: If you want to combine snapshots of multiple disks into an image template, you can specify DiskDeviceMapping to create a custom image.

NOTE: Available in 1.64.0+

» Example Usage

```
resource "alicloud_image" "default" {
  instance_id       = "i-bp1g6zv0ce8oghu7k***"
  image_name        = "test-image"
  description       = "test-image"
  architecture      = "x86_64"
  platform          = "CentOS"
  resource_group_id = "rg-bp67acfmxazb4ph***"
  tags = {
    FinanceDept = "FinanceDeptJoshua"
  }
}
```

» Argument Reference

The following arguments are supported:

- `instance_id` - (Optional, ForceNew, Conflict with `snapshot_id` and `disk_device_mapping`) The instance ID.
- `image_name` - (Optional) The image name. It must be 2 to 128 characters in length, and must begin with a letter or Chinese character (beginning with http:// or https:// is not allowed). It can contain digits, colons (:), underscores (_), or hyphens (-). Default value: null.
- `description` - (Optional) The description of the image. It must be 2 to 256 characters in length and must not start with http:// or https://. Default value: null.
- `snapshot_id` - (Optional, ForceNew, Conflict with `instance_id` and `disk_device_mapping`) Specifies a snapshot that is used to create a custom image.
- `architecture` - (Optional, ForceNew) Specifies the architecture of the system disk after you specify a data disk snapshot as the data source of the system disk for creating an image. Valid values: `i386` , Default is `x86_64`.

- `platform` - (Optional, ForceNew) Specifies the operating system platform of the system disk after you specify a data disk snapshot as the data source of the system disk for creating an image. Valid values: `CentOS`, `Ubuntu`, `SUSE`, `OpenSUSE`, `RedHat`, `Debian`, `CoreOS`, `Aliyun Linux`, `Windows Server 2003`, `Windows Server 2008`, `Windows Server 2012`, `Windows 7`, Default is `Others Linux`, `Customized Linux`.
- `tags` - (Optional) The tag value of an image. The value of N ranges from 1 to 20.
- `resource_group_id` - (Optional, ForceNew) The ID of the enterprise resource group to which a custom image belongs
- `disk_device_mapping` - (Optional, ForceNew, Conflict with `snapshot_id` and `instance_id`) Description of the system with disks and snapshots under the image.
  - `disk_type` - (Optional, ForceNew) Specifies the type of a disk in the combined custom image. If you specify this parameter, you can use a data disk snapshot as the data source of a system disk for creating an image. If it is not specified, the disk type is determined by the corresponding snapshot. Valid values: `system`, `data`,
  - `size` - (Optional, ForceNew) Specifies the size of a disk in the combined custom image, in GiB. Value range: 5 to 2000.
  - `snapshot_id` - (Optional, ForceNew) Specifies a snapshot that is used to create a combined custom image.
  - `device` - (Optional, ForceNew)Specifies the name of a disk in the combined custom image. Value range: /dev/xvda to /dev/xvdz.
- `force` - (Optional) Indicates whether to force delete the custom image, Default is `false`.
  - true Force deletes the custom image, regardless of whether the image is currently being used by other instances.
  - false Verifies that the image is not currently in use by any other instances before deleting the image.

» Timeouts

The `timeouts` block allows you to specify timeouts for certain actions:

- `create` - (Defaults to 10 mins) Used when creating the image (until it reaches the initial `Available` status).
- `delete` - (Defaults to 10 mins) Used when terminating the image.

Attributes Reference

The following attributes are exported:

- `id` - ID of the image.

Import

image can be imported using the id, e.g.

```
$ terraform import alicloud_image.default m-uf66871ape***yg1q***
```

» alicloud_image_export

Export a custom image to the OSS bucket in the same region as the custom image.

NOTE: If you create an ECS instance using a mirror image and create a system disk snapshot again, exporting a custom image created from the system disk snapshot is not supported.

NOTE: Support for exporting custom images that include data disk snapshot information in the image. The number of data disks cannot exceed 4 and the maximum capacity of a single data disk cannot exceed 500 GiB.

NOTE: Before exporting the image, you must authorize the cloud server ECS official service account to write OSS permissions through RAM.

NOTE: Available in 1.68.0+.

» Example Usage

```
resource "alicloud_image_export" "default" {
  image_id          = "m-bp1gxy***"
  oss_bucket        = "ecsimageexportconfig"
  oss_prefix        = "ecsExport"
}
```

» Argument Reference

The following arguments are supported:

- `image_id` - (Required, ForceNew) The source image ID.
- `oss_bucket` - (Required, ForceNew) Save the exported OSS bucket.
- `oss_prefix` - (Optional, ForceNew) The prefix of your OSS Object. It can be composed of numbers or letters, and the character length is 1 ~ 30.

» Timeouts

The `timeouts` block allows you to specify timeouts for certain actions:

- `create` - (Defaults to 10 mins) Used when exporting the image (until it reaches the initial `Available` status).

Attributes Reference0

The following attributes are exported:

- `id` - ID of the image.

» alicloud_image_copy

Copies a custom image from one region to another. You can use copied images to perform operations in the target region, such as creating instances (RunInstances) and replacing system disks (ReplaceSystemDisk).

NOTE: You can only copy the custom image when it is in the Available state.

NOTE: You can only copy the image belonging to your Alibaba Cloud account. Images cannot be copied from one account to another.

NOTE: If the copying is not completed, you cannot call DeleteImage to delete the image but you can call CancelCopyImage to cancel the copying.

NOTE: Available in 1.66.0+.

» Example Usage

```
resource "alicloud_image_copy" "default" {
  source_image_id    = "m-bp1gxyhdswlsn18tu***"
  source_region_id   = "cn-hangzhou"
  image_name         = "test-image"
  description        = "test-image"
  tags               = {
        FinanceDept = "FinanceDeptJoshua"
    }
}
```

» Argument Reference

The following arguments are supported:

- `source_image_id` - (Required, ForceNew) The source image ID.
- `source_region_id` - (Required, ForceNew) The ID of the region to which the source custom image belongs. You can call DescribeRegions to view the latest regions of Alibaba Cloud.
- `image_name` - (Optional) The image name. It must be 2 to 128 characters in length, and must begin with a letter or Chinese character (beginning with http:// or https:// is not allowed). It can contain digits, colons (:), underscores (_), or hyphens (-). Default value: null.

- **description** - (Optional) The description of the image. It must be 2 to 256 characters in length and must not start with http:// or https://. Default value: null.
- **encrypted** - (Optional, ForceNew) Indicates whether to encrypt the image.
- **kms_key_id** - (Optional, ForceNew) Key ID used to encrypt the image.
- **tags** - (Optional) The tag value of an image. The value of N ranges from 1 to 20.
- **force** - (Optional) Indicates whether to force delete the custom image, Default is `false`.
  - true Force deletes the custom image, regardless of whether the image is currently being used by other instances.
  - false Verifies that the image is not currently in use by any other instances before deleting the image.

» Timeouts

The `timeouts` block allows you to specify timeouts for certain actions:

- **create** - (Defaults to 10 mins) Used when copying the image (until it reaches the initial `Available` status).
- **delete** - (Defaults to 10 mins) Used when terminating the image.

Attributes Reference0

The following attributes are exported:

- **id** - ID of the image.

Import

image can be imported using the id, e.g.

```
$ terraform import alicloud_image_copy.default m-uf66871ape***yg1q***
```

» alicloud_image_import

Import a copy of your local on-premise file to ECS, and appear as a custom replacement in the corresponding domain.

NOTE: You must upload the image file to the object storage OSS in advance.

NOTE: The region where the image is imported must be the same region as the OSS bucket where the image file is uploaded.

NOTE: Available in 1.69.0+.

» Example Usage

```
resource "alicloud_image_import" "this" {
  description  = "test import image"
  architecture = "x86_64"
  image_name   = "test-import-image"
  license_type = "Auto"
  platform     = "Ubuntu"
  os_type      = "linux"
  disk_device_mapping {
    disk_image_size = 5
      oss_bucket = "testimportimage"
      oss_object = "root.img"
    }
}
```

» Argument Reference

The following arguments are supported:

- `architecture` - (Optional, ForceNew) Specifies the architecture of the system disk after you specify a data disk snapshot as the data source of the system disk for creating an image. Valid values: `i386` , Default is `x86_64`.
- `description` - (Optional) Description of the image. The length is 2 to 256 English or Chinese characters, and cannot begin with http: // and https: //.
- `image_name` - (Optional) The image name. The length is 2 ~ 128 English or Chinese characters. Must start with a capital letter or Chinese, and cannot start with http: // and https: //. Can contain numbers, colons (:), underscores (_), or hyphens (-).
- `license_type` - (Optional, ForceNew)
- `platform` - (Optional, ForceNew) Specifies the operating system platform of the system disk after you specify a data disk snapshot as the data source of the system disk for creating an image. Valid values: `CentOS`, `Ubuntu`, `SUSE`, `OpenSUSE`, `Debian`, `CoreOS`, `Windows Server 2003`, `Windows Server 2008`, `Windows Server 2012`, `Windows 7`, Default is `Others Linux`, `Customized Linux`.
- `os_type` - (Optional, ForceNew) Operating system platform type. Valid values: `windows`, Default is `linux`.
- `disk_device_mapping` - (Optional, ForceNew) Description of the system with disks and snapshots under the image.
  - `device` - (Optional, ForceNew) Specifies the type of a disk in the combined custom image. If you specify this parameter, you can use a data disk snapshot as the data source of a system disk for creating

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an image. If it is not specified, the disk type is determined by the corresponding snapshot. Valid values: `system`, `data`,

– `disk_image_size` - (Optional, ForceNew) Resolution size. You must ensure that the system disk space   file system space. Ranges: When n = 1, the system disk: 5 ~ 500GiB, When n = 2 ~ 17, that is, data disk: 5 ~ 1000GiB, When temporary is introduced, the system automatically detects the size, which is subject to the detection result.
– `format` - (Optional, ForceNew) Image format. Value range: When the `RAW`, `VHD`, `qcow2` is imported into the image, the system automatically detects the image format, whichever comes first.
– `oss_bucket` - (Optional) Save the exported OSS bucket.
– `oss_prefix` - (Optional, ForceNew) The prefix of your OSS Object. It can be composed of numbers or letters, and the character length is 1 ~ 30.

NOTE: The disk_device_mapping is a list and it's first item will be used to system disk and other items are used to data disks.

» Timeouts

The `timeouts` block allows you to specify timeouts for certain actions:

- `create` - (Defaults to 20 mins) Used when copying the image (until it reaches the initial `Available` status).
- `delete` - (Defaults to 20 mins) Used when terminating the image.

Attributes Reference0

The following attributes are exported:

- `id` - ID of the image.

Import

image can be imported using the id, e.g.

```
$ terraform import alicloud_image_import.default m-uf66871ape***yg1q***
```

» alicloud_image_share_permission

Manage image sharing permissions. You can share your custom image to other Alibaba Cloud users. The user can use the shared custom image to create ECS instances or replace the system disk of the instance.

NOTE: You can only share your own custom images to other Alibaba Cloud users.

NOTE: Each custom image can be shared with up to 50 Alibaba Cloud accounts. You can submit a ticket to share with more users.

NOTE: After creating an ECS instance using a shared image, once the custom image owner releases the image sharing relationship or deletes the custom image, the instance cannot initialize the system disk.

NOTE: Available in 1.68.0+.

» Example Usage

```
resource "alicloud_image_share_permission" "default" {
  image_id        = "m-bp1gxyh***"
  account_id      = "1234567890"
}
```

» Argument Reference

The following arguments are supported:

- `image_id` - (Required, ForceNew) The source image ID.
- `account_id` - (Required, ForceNew) Alibaba Cloud Account ID. It is used to share images.

Attributes Reference0

The following attributes are exported:

- `id` - ID of the image. It formats as `<image_id>:<account_id>`

Import

image can be imported using the id, e.g.

```
$ terraform import alicloud_image_share_permission.default m-uf66yg1q:123456789
```

» alicloud_instance

Provides a ECS instance resource.

NOTE: You can launch an ECS instance for a VPC network via specifying parameter `vswitch_id`. One instance can only belong to one VSwitch.

NOTE: If a VSwitchId is specified for creating an instance, SecurityGroupId and VSwitchId must belong to one VPC.

NOTE: Several instance types have outdated in some regions and availability zones, such as `ecs.t1.*`, `ecs.s2.*`, `ecs.n1.*` and so on. If you want to

keep them, you should set `is_outdated` to true. For more about the upgraded instance type, refer to `alicloud_instance_types` datasource.

NOTE: At present, 'PrePaid' instance cannot be deleted and must wait it to be outdated and release it automatically.

NOTE: The resource supports modifying instance charge type from 'PrePaid' to 'PostPaid' from version 1.9.6. However, at present, this modification has some limitation about CPU core count in one month, so strongly recommand that `Don't modify instance charge type frequentlly in one month`.

NOTE: There is unsupported 'deletion_protection' attribute when the instance is spot

» Example Usage

```
# Create a new ECS instance for a VPC
resource "alicloud_security_group" "group" {
  name        = "tf_test_foo"
  description = "foo"
  vpc_id      = "${alicloud_vpc.vpc.id}"
}

resource "alicloud_instance" "instance" {
  # cn-beijing
  availability_zone = "cn-beijing-b"
  security_groups   = "${alicloud_security_group.group.*.id}"

  # series III
  instance_type             = "ecs.n4.large"
  system_disk_category      = "cloud_efficiency"
  image_id                  = "ubuntu_18_04_64_20G_alibase_20190624.vhd"
  instance_name             = "test_foo"
  vswitch_id                = "${alicloud_vswitch.vswitch.id}"
  internet_max_bandwidth_out = 10
}

# Create a new ECS instance for VPC
resource "alicloud_vpc" "vpc" {
  # Other parameters...
}

resource "alicloud_vswitch" "vswitch" {
  vpc_id = "${alicloud_vpc.vpc.id}"
  # Other parameters...
}
```

```
resource "alicloud_slb" "slb" {
  name        = "test-slb-tf"
  vpc_id      = "${alicloud_vpc.vpc.id}"
  vswitch_id  = "${alicloud_vswitch.vswitch.id}"
}
```

» Module Support

You can use the existing ecs-instance module to create several ECS instances one-click.

» Argument Reference

The following arguments are supported:

- `image_id` - (Required) The Image to use for the instance. ECS instance's image can be replaced via changing 'image_id'. When it is changed, the instance will reboot to make the change take effect.

- `instance_type` - (Required) The type of instance to start. When it is changed, the instance will reboot to make the change take effect.

- `io_optimized` - (Deprecated) It has been deprecated on instance resource. All the launched alicloud instances will be I/O optimized.

- `is_outdated` - (Optional) Whether to use outdated instance type. Default to false.

- `security_groups` - (Required) A list of security group ids to associate with.

- `availability_zone` - (Optional) The Zone to start the instance in. It is ignored and will be computed when set `vswitch_id`.

- `instance_name` - (Optional) The name of the ECS. This instance_name can have a string of 2 to 128 characters, must contain only alphanumeric characters or hyphens, such as "-",".","_", and must not begin or end with a hyphen, and must not begin with http:// or https://. If not specified, Terraform will autogenerate a default name is `ECS-Instance`.

- `allocate_public_ip` - (Deprecated) It has been deprecated from version "1.7.0". Setting "internet_max_bandwidth_out" larger than 0 can allocate a public ip address for an instance.

- `system_disk_category` - (Optional) Valid values are `ephemeral_ssd`, `cloud_efficiency`, `cloud_ssd`, `cloud_essd`, `cloud`. `cloud` only is used to some none I/O optimized instance. Default to `cloud_efficiency`.

- `system_disk_size` - (Optional) Size of the system disk, measured in GiB. Value range: [20, 500]. The specified value must be equal to or greater than max{20, Imagesize}. Default value: max{40, ImageSize}. ECS instance's system disk can be reset when replacing system disk. When it is changed, the instance will reboot to make the change take effect.

- `description` - (Optional) Description of the instance, This description can have a string of 2 to 256 characters, It cannot begin with http:// or https://. Default value is null.

- `internet_charge_type` - (Optional) Internet charge type of the instance, Valid values are `PayByBandwidth`, `PayByTraffic`. Default is `PayByTraffic`. At present, 'PrePaid' instance cannot change the value to "PayByBandwidth" from "PayByTraffic".

- `internet_max_bandwidth_in` - (Optional) Maximum incoming bandwidth from the public network, measured in Mbps (Mega bit per second). Value range: [1, 200]. If this value is not specified, then automatically sets it to 200 Mbps.

- `internet_max_bandwidth_out` - (Optional) Maximum outgoing bandwidth to the public network, measured in Mbps (Mega bit per second). Value range: [0, 100]. Default to 0 Mbps.

- `host_name` - (Optional) Host name of the ECS, which is a string of at least two characters. "hostname" cannot start or end with "." or "-". In addition, two or more consecutive "." or "-" symbols are not allowed. On Windows, the host name can contain a maximum of 15 characters, which can be a combination of uppercase/lowercase letters, numerals, and "-". The host name cannot contain dots (".") or contain only numeric characters. When it is changed, the instance will reboot to make the change take effect. On other OSs such as Linux, the host name can contain a maximum of 30 characters, which can be segments separated by dots ("."), where each segment can contain uppercase/lowercase letters, numerals, or "_". When it is changed, the instance will reboot to make the change take effect.

- `password` - (Optional, Sensitive) Password to an instance is a string of 8 to 30 characters. It must contain uppercase/lowercase letters and numerals, but cannot contain special symbols. When it is changed, the instance will reboot to make the change take effect.

- `kms_encrypted_password` - (Optional, Available in 1.57.1+) An KMS encrypts password used to an instance. If the `password` is filled in, this field will be ignored. When it is changed, the instance will reboot to make the change take effect.

- `kms_encryption_context` - (Optional, MapString, Available in 1.57.1+) An KMS encryption context used to decrypt `kms_encrypted_password` before creating or updating an instance with `kms_encrypted_password`. See Encryption Context. It is valid when `kms_encrypted_password` is

set. When it is changed, the instance will reboot to make the change take effect.

- `vswitch_id` - (Optional) The virtual switch ID to launch in VPC. This parameter must be set unless you can create classic network instances. When it is changed, the instance will reboot to make the change take effect.

- `instance_charge_type` - (Optional) Valid values are `PrePaid`, `PostPaid`, The default is `PostPaid`.

- `resource_group_id` - (ForceNew, ForceNew, Available in 1.57.0+) The Id of resource group which the instance belongs.

- `period_unit` - (Optional) The duration unit that you will buy the resource. It is valid when `instance_charge_type` is 'PrePaid'. Valid value: ["Week", "Month"]. Default to "Month".

- `period` - (Optional) The duration that you will buy the resource, in month. It is valid when `instance_charge_type` is `PrePaid`. Default to 1. Valid values:

  - [1-9, 12, 24, 36, 48, 60] when `period_unit` in "Month"
  - [1-3] when `period_unit` in "Week"

- `renewal_status` - (Optional) Whether to renew an ECS instance automatically or not. It is valid when `instance_charge_type` is `PrePaid`. Default to "Normal". Valid values:

  - `AutoRenewal`: Enable auto renewal.
  - `Normal`: Disable auto renewal.
  - `NotRenewal`: No renewal any longer. After you specify this value, Alibaba Cloud stop sending notification of instance expiry, and only gives a brief reminder on the third day before the instance expiry.

- `auto_renew_period` - (Optional) Auto renewal period of an instance, in the unit of month. It is valid when `instance_charge_type` is `PrePaid`. Default to 1. Valid value:

  - [1, 2, 3, 6, 12] when `period_unit` in "Month"
  - [1, 2, 3] when `period_unit` in "Week"

- `tags` - (Optional) A mapping of tags to assign to the resource.

  - Key: It can be up to 64 characters in length. It cannot begin with "aliyun", "acs:", "http://", or "https://". It cannot be a null string.
  - Value: It can be up to 128 characters in length. It cannot begin with "aliyun", "acs:", "http://", or "https://". It can be a null string.

- `volume_tags` - (Optional) A mapping of tags to assign to the devices created by the instance at launch time.

- – Key: It can be up to 64 characters in length. It cannot begin with "aliyun", "acs:", "http://", or "https://". It cannot be a null string.
  - – Value: It can be up to 128 characters in length. It cannot begin with "aliyun", "acs:", "http://", or "https://". It can be a null string.

- `user_data` - (Optional) User-defined data to customize the startup behaviors of an ECS instance and to pass data into an ECS instance. From version 1.60.0, it can be update in-place. If updated, the instance will reboot to make the change take effect. Note: Not all of changes will take effect and it depends on cloud-init module type.

- `key_name` - (Optional, Force new resource) The name of key pair that can login ECS instance successfully without password. If it is specified, the password would be invalid.

- `role_name` - (Optional, Force new resource) Instance RAM role name. The name is provided and maintained by RAM. You can use `alicloud_ram_role` to create a new one.

- `include_data_disks` - (Optional) Whether to change instance disks charge type when changing instance charge type.

- `dry_run` - (Optional) Specifies whether to send a dry-run request. Default to false.

  - – true: Only a dry-run request is sent and no instance is created. The system checks whether the required parameters are set, and validates the request format, service permissions, and available ECS instances. If the validation fails, the corresponding error code is returned. If the validation succeeds, the `DryRunOperation` error code is returned.
  - – false: A request is sent. If the validation succeeds, the instance is created.

- `private_ip` - (Optional) Instance private IP address can be specified when you creating new instance. It is valid when `vswitch_id` is specified. When it is changed, the instance will reboot to make the change take effect.

- `credit_specification` - (Optional, Available in 1.57.1+) Performance mode of the t5 burstable instance. Valid values: 'Standard', 'Unlimited'.

- `spot_strategy` - (Optional, ForceNew) The spot strategy of a Pay-As-You-Go instance, and it takes effect only when parameter `instance_charge_type` is 'PostPaid'. Value range:

  - – NoSpot: A regular Pay-As-You-Go instance.
  - – SpotWithPriceLimit: A price threshold for a spot instance
  - – SpotAsPriceGo: A price that is based on the highest Pay-As-You-Go instance

Default to NoSpot. Note: Currently, the spot instance only supports domestic site account.

- `spot_price_limit` - (Optional, Float, ForceNew) The hourly price threshold of a instance, and it takes effect only when parameter 'spot_strategy' is 'SpotWithPriceLimit'. Three decimals is allowed at most.

- `deletion_protection` - (Optional, true) Whether enable the deletion protection or not.

  – true: Enable deletion protection.
  – false: Disable deletion protection.

  Default to false.

- `force_delete` - (Optional, Available in 1.18.0+) If it is true, the "PrePaid" instance will be change to "PostPaid" and then deleted forcibly. However, because of changing instance charge type has CPU core count quota limitation, so strongly recommand that "Don't modify instance charge type frequentlly in one month".

- `auto_release_time` - (Optional, Available in 1.70.0+) The automatic release time of the `PostPaid` instance. The time follows the ISO 8601 standard and is in UTC time. Format: yyyy-MM-ddTHH:mm:ssZ. It must be at least half an hour later than the current time and less than 3 years since the current time. Set it to null can cancel automatic release attribute and the ECS instance will not be released automatically.

- `security_enhancement_strategy` - (Optional, ForceNew) The security enhancement strategy.

  – Active: Enable security enhancement strategy, it only works on system images.
  – Deactive: Disable security enhancement strategy, it works on all images.

- `data_disks` - (Optional, ForceNew, Available 1.23.1+) The list of data disks created with instance.

  – `name` - (Optional, ForceNew) The name of the data disk.

  – `size` - (Required, ForceNew) The size of the data disk.

    * cloud [5, 2000]
    * cloud_efficiency [20, 32768]
    * cloud_ssd [20, 32768]
    * cloud_essd [20, 32768]
    * ephemeral_ssd: [5, 800]

  – `category` - (Optional, ForceNew) The category of the disk:

    * `cloud`: The general cloud disk.
    * `cloud_efficiency`: The efficiency cloud disk.
    * `cloud_ssd`: The SSD cloud disk.
    * `cloud_essd`: The ESSD cloud disk.

* ∗ `ephemeral_ssd`: The local SSD disk. Default to `cloud_efficiency`.

  – `encrypted` -(Optional, Bool, ForceNew) Encrypted the data in this disk.

  Default to false

  – `snapshot_id` - (Optional, ForceNew) The snapshot ID used to initialize the data disk. If the size specified by snapshot is greater that the size of the disk, use the size specified by snapshot as the size of the data disk.

  – `delete_with_instance` - (Optional, ForceNew) Delete this data disk when the instance is destroyed. It only works on cloud, cloud_efficiency, cloud_essd, cloud_ssd disk. If the category of this data disk was ephemeral_ssd, please don't set this param.

  Default to true

  – `description` - (Optional, ForceNew) The description of the data disk.

NOTE: System disk category `cloud` has been outdated and it only can be used none I/O Optimized ECS instances. Recommend `cloud_efficiency` and `cloud_ssd` disk.

NOTE: From version 1.5.0, instance's charge type can be changed to "PrePaid" by specifying `period` and `period_unit`, but it is irreversible.

NOTE: From version 1.5.0, instance's private IP address can be specified when creating VPC network instance.

NOTE: From version 1.5.0, instance's vswitch and private IP can be changed in the same availability zone. When they are changed, the instance will reboot to make the change take effect.

NOTE: From version 1.7.0, setting "internet_max_bandwidth_out" larger than 0 can allocate a public IP for an instance. Setting "internet_max_bandwidth_out" to 0 can release allocated public IP for VPC instance(For Classic instnace, its public IP cannot be release once it allocated, even thougth its bandwidth out is 0). However, at present, 'PrePaid' instance cannot narrow its max bandwidth out when its 'internet_charge_type' is "PayByBandwidth".

NOTE: From version 1.7.0, instance's type can be changed. When it is changed, the instance will reboot to make the change take effect.

» Timeouts

NOTE: Available in 1.46.0+.

The `timeouts` block allows you to specify timeouts for certain actions:

- `create` - (Defaults to 10 mins) Used when creating the instance (until it reaches the initial `Running` status). `Note`: There are extra at most 2 minutes used to retry to aviod some needless API errors and it is not in the timeouts configure.
- `update` - (Defaults to 10 mins) Used when stopping and starting the instance when necessary during update - e.g. when changing instance type, password, image, vswitch and private IP.
- `delete` - (Defaults to 20 mins) Used when terminating the instance. `Note`: There are extra at most 5 minutes used to retry to aviod some needless API errors and it is not in the timeouts configure.

» Attributes Reference

The following attributes are exported:

- `id` - The instance ID.
- `status` - The instance status.
- `public_ip` - The instance public ip.

» Import

Instance can be imported using the id, e.g.

```
$ terraform import alicloud_instance.example i-abc12345678
```

» alicloud_key_pair

Provides a key pair resource.

» Example Usage

Basic Usage

```
resource "alicloud_key_pair" "basic" {
  key_name = "terraform-test-key-pair"
}

// Using name prefix to build key pair
resource "alicloud_key_pair" "prefix" {
  key_name_prefix = "terraform-test-key-pair-prefix"
}
```

```
// Import an existing public key to build a alicloud key pair
resource "alicloud_key_pair" "publickey" {
  key_name   = "my_public_key"
  public_key = "ssh-rsa AAAAB3Nza12345678qwertyuudsfsg"
}
```

» Argument Reference

The following arguments are supported:

- `key_name` - (ForceNew) The key pair's name. It is the only in one Alicloud account.
- `key_name_prefix` - (ForceNew) The key pair name's prefix. It is conflict with `key_name`. If it is specified, terraform will using it to build the only key name.
- `public_key` - (ForceNew) You can import an existing public key and using Alicloud key pair to manage it.
- `key_file` - (ForceNew) The name of file to save your new key pair's private key. Strongly suggest you to specified it when you creating key pair, otherwise, you wouldn't get its private key ever.
- `resource_group_id` - (ForceNew, Available in 1.57.0+) The Id of resource group which the key pair belongs.
- `tags` - (Optional, Available in v1.66.0+) A mapping of tags to assign to the resource. -> **NOTE:** If `key_name` and `key_name_prefix` are not set, terraform will produce a specified ID to replace.

» Attributes Reference

- `key_name` - The name of the key pair.
- `fingerprint` The finger print of the key pair.

» Import

Key pair can be imported using the name, e.g.

`$ terraform import alicloud_key_pair.example my_public_key`

» alicloud_key_pair_attachment

Provides a key pair attachment resource to bind key pair for several ECS instances.

NOTE: After the key pair is attached with sone instances, there instances must be rebooted to make the key pair affect.

» Example Usage

Basic Usage

```
data "alicloud_zones" "default" {
  available_disk_category     = "cloud_ssd"
  available_resource_creation = "VSwitch"
}
data "alicloud_instance_types" "type" {
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  cpu_core_count    = 1
  memory_size       = 2
}
data "alicloud_images" "images" {
  name_regex  = "^ubuntu_18.*64"
  most_recent = true
  owners      = "system"
}
variable "name" {
  default = "keyPairAttachmentName"
}

resource "alicloud_vpc" "vpc" {
  name       = "${var.name}"
  cidr_block = "10.1.0.0/21"
}

resource "alicloud_vswitch" "vswitch" {
  vpc_id            = "${alicloud_vpc.vpc.id}"
  cidr_block        = "10.1.1.0/24"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  name              = "${var.name}"
}
resource "alicloud_security_group" "group" {
  name        = "${var.name}"
  description = "New security group"
  vpc_id      = "${alicloud_vpc.vpc.id}"
}

resource "alicloud_instance" "instance" {
  instance_name  = "${var.name}-${count.index + 1}"
  image_id       = "${data.alicloud_images.images.images.0.id}"
```

```
  instance_type  = "${data.alicloud_instance_types.type.instance_types.0.id}"
  count          = 2
  security_groups = ["${alicloud_security_group.group.id}"]
  vswitch_id      = "${alicloud_vswitch.vswitch.id}"

  internet_charge_type      = "PayByTraffic"
  internet_max_bandwidth_out = 5
  password                  = "Test12345"

  instance_charge_type = "PostPaid"
  system_disk_category = "cloud_ssd"
}

resource "alicloud_key_pair" "pair" {
  key_name = "${var.name}"
}

resource "alicloud_key_pair_attachment" "attachment" {
  key_name    = "${alicloud_key_pair.pair.id}"
  instance_ids = ["${alicloud_instance.instance.*.id}"]
}
```

» Argument Reference

The following arguments are supported:

- `key_name` - (Required, ForceNew) The name of key pair used to bind.
- `instance_ids` - (Required, ForceNew) The list of ECS instance's IDs.
- `force` - (ForceNew) Set it to true and it will reboot instances which attached with the key pair to make key pair affect immediately.

» Attributes Reference

- `key_name` - The name of the key pair.
- `instance_ids` The list of ECS instance's IDs.

» alicloud_network_interface

Provides an ECS Elastic Network Interface resource.

For information about Elastic Network Interface and how to use it, see Elastic Network Interface.

NOTE Only one of private_ips or private_ips_count can be specified when assign private IPs.

» Example Usage

```
variable "name" {
  default = "networkInterfaceName"
}

resource "alicloud_vpc" "vpc" {
  name       = "${var.name}"
  cidr_block = "192.168.0.0/24"
}

data "alicloud_zones" "default" {
  available_resource_creation = "VSwitch"
}

resource "alicloud_vswitch" "vswitch" {
  name              = "${var.name}"
  cidr_block        = "192.168.0.0/24"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  vpc_id            = "${alicloud_vpc.vpc.id}"
}

resource "alicloud_security_group" "group" {
  name   = "${var.name}"
  vpc_id = "${alicloud_vpc.vpc.id}"
}

resource "alicloud_network_interface" "default" {
  name              = "${var.name}%d"
  vswitch_id        = "${alicloud_vswitch.vswitch.id}"
  security_groups   = ["${alicloud_security_group.group.id}"]
  private_ip        = "192.168.0.2"
  private_ips_count = 3
}
```

» Argument Reference

The following arguments are supported:

- **vswitch_id** - (Required, ForceNew) The VSwitch to create the ENI in.
- `security_groups` - (Require) A list of security group ids to associate with.

- `private_ip` - (Optional, ForceNew) The primary private IP of the ENI.
- `name` - (Optional) Name of the ENI. This name can have a string of 2 to 128 characters, must contain only alphanumeric characters or hyphens, such as "-", ".", "_", and must not begin or end with a hyphen, and must not begin with http:// or https://. Default value is null.
- `description` - (Optional) Description of the ENI. This description can have a string of 2 to 256 characters, It cannot begin with http:// or https://. Default value is null.
- `private_ips` - (Optional) List of secondary private IPs to assign to the ENI. Don't use both private_ips and private_ips_count in the same ENI resource block.
- `private_ips_count` - (Optional) Number of secondary private IPs to assign to the ENI. Don't use both private_ips and private_ips_count in the same ENI resource block.
- `tags` - (Optional) A mapping of tags to assign to the resource.
- `resource_group_id` - (ForceNew, ForceNew, Available in 1.57.0+) The Id of resource group which the network interface belongs.

» Attributes Reference

The following attributes are exported:

- `id` - The ENI ID.
- `mac` - (Available in 1.54.0+) The MAC address of an ENI.

» Import

ENI can be imported using the id, e.g.

```
$ terraform import alicloud_network_interface.eni eni-abc1234567890000
```

» alicloud_network_interface_attachment

Provides an Alicloud ECS Elastic Network Interface Attachment as a resource to attach ENI to or detach ENI from ECS Instances.

For information about Elastic Network Interface and how to use it, see Elastic Network Interface.

» Example Usage

Bacis Usage

```
variable "name" {
  default = "networkInterfaceAttachment"
}

variable "number" {
  default = "2"
}

resource "alicloud_vpc" "vpc" {
  name       = "${var.name}"
  cidr_block = "192.168.0.0/24"
}

data "alicloud_zones" "default" {
  available_resource_creation = "VSwitch"
}

resource "alicloud_vswitch" "vswitch" {
  name              = "${var.name}"
  cidr_block        = "192.168.0.0/24"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  vpc_id            = "${alicloud_vpc.vpc.id}"
}

resource "alicloud_security_group" "group" {
  name   = "${var.name}"
  vpc_id = "${alicloud_vpc.vpc.id}"
}

data "alicloud_instance_types" "instance_type" {
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  eni_amount        = 2
}

data "alicloud_images" "default" {
  name_regex  = "^ubuntu_18.*64"
  most_recent = true
  owners      = "system"
}

resource "alicloud_instance" "instance" {
  count             = "${var.number}"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  security_groups   = ["${alicloud_security_group.group.id}"]

  instance_type              = "${data.alicloud_instance_types.instance_type.instance_types.
```

```
  system_disk_category     = "cloud_efficiency"
  image_id                 = "${data.alicloud_images.default.images.0.id}"
  instance_name            = "${var.name}"
  vswitch_id               = "${alicloud_vswitch.vswitch.id}"
  internet_max_bandwidth_out = 10
}

resource "alicloud_network_interface" "interface" {
  count           = "${var.number}"
  name            = "${var.name}"
  vswitch_id      = "${alicloud_vswitch.vswitch.id}"
  security_groups = ["${alicloud_security_group.group.id}"]
}

resource "alicloud_network_interface_attachment" "attachment" {
  count                = "${var.number}"
  instance_id          = "${element(alicloud_instance.instance.*.id, count.index)}"
  network_interface_id = "${element(alicloud_network_interface.interface.*.id, count.index)]
}
```

» Argument Reference

The following argument are supported:

- `instance_id` - (Required, ForceNew) The instance ID to attach.
- `network_interface_id` - (Required, ForceNew) The ENI ID to attach.

» Attributes Reference

In addition to all arguments above, the following attributes are exported:

- `id` - The ID of the resource, formatted as `<network_interface_id>:<instance_id>`.

» Import

Network Interfaces Attachment resource can be imported using the id, e.g.

```
$ terraform import alicloud_network_interface.eni eni-abc123456789000:i-abc123456789000
```

» alicloud_reserved_instance_offering

Provides an Reserved Instance resource.

NOTE: Available in 1.65.0+

» Example Usage

```
resource "alicloud_reserved_instance" "default" {
  instance_type      ="ecs.g6.large"
  instance_amount    ="1"
  period_unit        ="Year"
  offering_type      ="All Upfront"
  name               =name
  description        ="ReservedInstance"
  zone_id            ="cn-shanghai-g"
  scope              ="Zone"
  period             ="1"
}
```

» Argument Reference

The following arguments are supported:

- `offering_type` - (Required, ForceNew) Payment type of the RI. Optional values: `No Upfront`: No upfront payment is required., `Partial Upfront`: A portion of upfront payment is required.`All Upfront`: Full upfront payment is required.
- `zone_id` - (Optional, ForceNew) ID of the zone to which the RI belongs. When Scope is set to Zone, this parameter is required. For information about the zone list, see DescribeZones.
- `scope` - (Optional, ForceNew) Scope of the RI. Optional values: `Region`: region-level, `Zone`: zone-level. Default is `Region`.
- `instance_type` - (Optional, ForceNew) Instance type of the RI. For more information, see Instance type families.
- `instance_amount` - (Optional, ForceNew) Number of instances allocated to an RI (An RI is a coupon that includes one or more allocated instances.).
- `Period` - (Optional, ForceNew) Term of the RI. Unit: years. Optional values: 1 and 3.
- `period_unit` - (Optional, ForceNew) Term unit. Optional value: Year.
- `resource_group_id` - (Optional, ForceNew) Resource group ID.
- `description` - (Optional) Description of the RI. 2 to 256 English or Chinese characters. It cannot start with http:// or https://.
- `name` - (Optional) Name of the RI. The name must be a string of 2 to 128 characters in length and can contain letters, numbers, colons (:), underscores (_), and hyphens. It must start with a letter. It cannot start with http:// or https://.
- `platform` - (Optional, ForceNew) The operating system type of the image used by the instance. Optional values: `Windows`, `Linux`. Default is `Linux`.

» Removing alicloud_reserved_instance from your configuration

The alicloud_reserved_instance resource allows you to manage your ReservedInstance, but Terraform cannot destroy it. Removing this resource from your configuration will remove it from your statefile and management, but will not destroy the ReservedInstance.

» Attributes Reference

The following attributes are exported:

- `id` - ID of the ReservedInstance.

» Import

reservedInstance can be imported using id, e.g.

```
$ terraform import alicloud_reserved_instance.default ecsri-uf6df4xm0h3licit****
```

» alicloud_security_group

Provides a security group resource.

NOTE: `alicloud_security_group` is used to build and manage a security group, and `alicloud_security_group_rule` can define ingress or egress rules for it.

NOTE: From version 1.7.2, `alicloud_security_group` has supported to segregate different ECS instance in which the same security group.

» Example Usage

Basic Usage

```
resource "alicloud_security_group" "group" {
  name        = "terraform-test-group"
  description = "New security group"
}
```

Basic usage for vpc

```
resource "alicloud_security_group" "group" {
  name  = "new-group"
  vpc_id = "${alicloud_vpc.vpc.id}"
}
```

```
resource "alicloud_vpc" "vpc" {
  cidr_block = "10.1.0.0/21"
}
```

» Module Support

You can use the existing security-group module to create a security group and add several rules one-click.

» Argument Reference

The following arguments are supported:

- `name` - (Optional) The name of the security group. Defaults to null.
- `description` - (Optional, Forces new resource) The security group description. Defaults to null.
- `vpc_id` - (Optional, ForceNew) The VPC ID.

- `resource_group_id` - (Optional, ForceNew, Available in 1.58.0+) The Id of resource group which the security_group belongs.
- `security_group_type` - (Optional, ForceNew, Available in 1.58.0+) The type of the security group. Valid values: `normal`: basic security group. `enterprise`: advanced security group For more information.
- `inner_access` - (Deprecated) Field 'inner_access' has been deprecated from provider version 1.55.3. Use 'inner_access_policy' replaces it.
- `inner_access_policy` - (Optional, Available in 1.55.3+) Whether to allow both machines to access each other on all ports in the same security group. Valid values: ["Accept", "Drop"]
- `tags` - (Optional) A mapping of tags to assign to the resource.

Combining security group rules, the policy can define multiple application scenario. Default to true. It is valid from verison `1.7.2`.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the security group

» Import

Security Group can be imported using the id, e.g.

```
$ terraform import alicloud_security_group.example sg-abc123456
```

» alicloud_security_group_rule

Provides a security group rule resource. Represents a single `ingress` or `egress` group rule, which can be added to external Security Groups.

NOTE: `nic_type` should set to `intranet` when security group type is `vpc` or specifying the `source_security_group_id`. In this situation it does not distinguish between intranet and internet, the rule is effective on them both.

» Example Usage

Basic Usage

```
resource "alicloud_security_group" "default" {
  name = "default"
}

resource "alicloud_security_group_rule" "allow_all_tcp" {
  type              = "ingress"
  ip_protocol       = "tcp"
  nic_type          = "internet"
  policy            = "accept"
  port_range        = "1/65535"
  priority          = 1
  security_group_id = "${alicloud_security_group.default.id}"
  cidr_ip           = "0.0.0.0/0"
}
```

» Module Support

You can use the existing security-group module to create a security group and add several rules one-click.

» Argument Reference

The following arguments are supported:

- `type` - (Required, ForceNew) The type of rule being created. Valid options are `ingress` (inbound) or `egress` (outbound).
- `ip_protocol` - (Required, ForceNew) The protocol. Can be `tcp`, `udp`, `icmp`, `gre` or `all`.

- `port_range` - (ForceNew) The range of port numbers relevant to the IP protocol. Default to "-1/-1". When the protocol is tcp or udp, each side port number range from 1 to 65535 and '-1/-1' will be invalid. For example, `1/200` means that the range of the port numbers is 1-200. Other protocols' 'port_range' can only be "-1/-1", and other values will be invalid.
- `security_group_id` - (Required, ForceNew) The security group to apply this rule to.
- `nic_type` - (Optional, ForceNew) Network type, can be either `internet` or `intranet`, the default value is `internet`.
- `policy` - (Optional, ForceNew) Authorization policy, can be either `accept` or `drop`, the default value is `accept`.
- `priority` - (Optional, ForceNew) Authorization policy priority, with parameter values: `1-100`, default value: 1.
- `cidr_ip` - (Optional, ForceNew) The target IP address range. The default value is 0.0.0.0/0 (which means no restriction will be applied). Other supported formats include 10.159.6.18/12. Only IPv4 is supported.
- `source_security_group_id` - (Optional, ForceNew) The target security group ID within the same region. If this field is specified, the `nic_type` can only select `intranet`.
- `source_group_owner_account` - (Optional, ForceNew) The Alibaba Cloud user account Id of the target security group when security groups are authorized across accounts. This parameter is invalid if `cidr_ip` has already been set.
- `description` - (Optional) The description of the security group rule. The description can be up to 1 to 512 characters in length. Defaults to null.

NOTE: Either the `source_security_group_id` or `cidr_ip` must be set.

» **Attributes Reference**

The following attributes are exported:

- `id` - The ID of the security group rule
- `type` - The type of rule, `ingress` or `egress`
- `name` - The name of the security group
- `port_range` - The range of port numbers
- `ip_protocol` - The protocol of the security group rule

» **alicloud_snapshot**

Provides an ECS snapshot resource.

For information about snapshot and how to use it, see Snapshot.

» Example Usage

```
resource "alicloud_snapshot" "snapshot" {
  disk_id     = "${alicloud_disk_attachment.instance-attachment.disk_id}"
  name        = "test-snapshot"
  description = "this snapshot is created for testing"
  tags = {
    version = "1.2"
  }
}
```

» Argument Reference

The following arguments are supported:

- `disk_id` - (Required, ForceNew) The source disk ID.
- `name` - (Optional, ForceNew) Name of the snapshot. This name can have a string of 2 to 128 characters, must contain only alphanumeric characters or hyphens, such as "-", ".", "_", and must not begin or end with a hyphen, and must not begin with http:// or https://. Default value is null.
- `description` - (Optional, ForceNew) Description of the snapshot. This description can have a string of 2 to 256 characters, It cannot begin with http:// or https://. Default value is null.
- `tags` - (Optional) A mapping of tags to assign to the resource.

» Timeouts

NOTE: Available in 1.51.0+.

The `timeouts` block allows you to specify timeouts for certain actions:

- `create` - (Defaults to 2 mins) Used when creating the snapshot (until it reaches the initial `SnapshotCreatingAccomplished` status).
- `delete` - (Defaults to 2 mins) Used when terminating the snapshot.

» Attributes Reference

The following attributes are exported:

- `id` - The snapshot ID.

» Import

Snapshot can be imported using the id, e.g.

```
$ terraform import alicloud_snapshot.snapshot s-abc1234567890000
```

» alicloud_snapshot_policy

Provides an ECS snapshot policy resource.

For information about snapshot policy and how to use it, see Snapshot.

NOTE: Available in 1.42.0+.

» Example Usage

```
resource "alicloud_snapshot_policy" "sp" {
  name            = "tf-testAcc-sp"
  repeat_weekdays = ["1", "2", "3"]
  retention_days  = -1
  time_points     = ["1", "22", "23"]
}
```

» Argument Reference

The following arguments are supported:

- `name` - (Optional) The snapshot policy name.

- `repeat_weekdays` - (Required) The automatic snapshot repetition dates. The unit of measurement is day and the repeating cycle is a week. Value range: [1, 7], which represents days starting from Monday to Sunday, for example 1 indicates Monday. When you want to schedule multiple automatic snapshot tasks for a disk in a week, you can set the RepeatWeekdays to an array.

  - A maximum of seven time points can be selected.
  - The format is an JSON array of [”1”, ”2”, … ”7”] and the time points are separated by commas (,).

- `retention_days` - (Required) The snapshot retention time, and the unit of measurement is day. Optional values:

  - -1: The automatic snapshots are retained permanently.
  - [1, 65536]: The number of days retained.

  Default value: -1.

- `time_points` - (Required) The automatic snapshot creation schedule, and the unit of measurement is hour. Value range: [0, 23], which represents from 00:00 to 24:00, for example 1 indicates 01:00. When you want to

schedule multiple automatic snapshot tasks for a disk in a day, you can set the TimePoints to an array.

- – A maximum of 24 time points can be selected.
- – The format is an JSON array of [”0”, ”1”, … ”23”] and the time points are separated by commas (,).

» Attributes Reference

The following attributes are exported:

- `id` - The snapshot policy ID.

» Import

Snapshot can be imported using the id, e.g.

```
$ terraform import alicloud_snapshot.snapshot s-abc1234567890000
```

» alicloud_launch_template

Provides an ECS Launch Template resource.

For information about Launch Template and how to use it, see Launch Template.

» Example Usage

```
data "alicloud_images" "images" {
  owners = "system"
}

data "alicloud_instances" "instances" {
}

resource "alicloud_launch_template" "template" {
  name                      = "tf-test-template"
  description               = "test1"
  image_id                  = "${data.alicloud_images.images.images.0.id}"
  host_name                 = "tf-test-host"
  instance_charge_type      = "PrePaid"
  instance_name             = "tf-instance-name"
  instance_type             = "${data.alicloud_instances.instances.instances.0.instance_
  internet_charge_type      = "PayByBandwidth"
```

```
    internet_max_bandwidth_in    = 5
    internet_max_bandwidth_out   = 0
    io_optimized                 = "none"
    key_pair_name                = "test-key-pair"
    ram_role_name                = "xxxxx"
    network_type                 = "vpc"
    security_enhancement_strategy = "Active"
    spot_price_limit             = 5
    spot_strategy                = "SpotWithPriceLimit"
    security_group_id            = "sg-zxcvj0lasdf102350asdf9a"
    system_disk_category         = "cloud_ssd"
    system_disk_description       = "test disk"
    system_disk_name             = "hello"
    system_disk_size             = 40
    resource_group_id            = "rg-zkdfjahg9zxncv0"
    userdata                     = "xxxxxxxxxxxxxx"
    vswitch_id                   = "sw-ljkngaksdjfj0nnasdf"
    vpc_id                       = "vpc-asdfnbg0as8dfk1nb2"
    zone_id                      = "beijing-a"

    tags = {
      tag1 = "hello"
      tag2 = "world"
    }
    network_interfaces {
      name             = "eth0"
      description      = "hello1"
      primary_ip       = "10.0.0.2"
      security_group_id = "xxxx"
      vswitch_id       = "xxxxxxx"
    }
    data_disks {
      name        = "disk1"
      description = "test1"
    }
    data_disks {
      name        = "disk2"
      description = "test2"
    }
}
```

» Argument Reference

The following arguments are supported:

- `name` - (Optional, ForceNew) Instance launch template name. Can contain [2, 128] characters in length. It must start with an English letter (uppercase or lowercase) and can contain numbers, periods (.), colons (:), underscores (_), and hyphens (-). It cannot start with "http://" or "https://".

- `description` - (Optional) Description of instance launch template version 1. It can be [2, 256] characters in length. It cannot start with "http://" or "https://". The default value is null.

- `host_name` - (Optional) Instance host name.It cannot start or end with a period (.) or a hyphen (-) and it cannot have two or more consecutive periods (.) or hyphens (-).For Windows: The host name can be [2, 15] characters in length. It can contain A-Z, a-z, numbers, periods (.), and hyphens (-). It cannot only contain numbers. For other operating systems: The host name can be [2, 64] characters in length. It can be segments separated by periods (.). It can contain A-Z, a-z, numbers, and hyphens (-).

- `image_id` - (Optional) Image ID.

- `instance_name` - (Optional) The name of the instance. The name is a string of 2 to 128 characters. It must begin with an English or a Chinese character. It can contain A-Z, a-z, Chinese characters, numbers, periods (.), colons (:), underscores (_), and hyphens (-).

- `instance_charge_type` - (Optional)Billing methods. Optional values:

  - PrePaid: Monthly, or annual subscription. Make sure that your registered credit card is invalid or you have insufficient balance in your PayPal account. Otherwise, InvalidPayMethod error may occur.
  - PostPaid: Pay-As-You-Go.

  Default value: PostPaid.

- `instance_type` - (Optional) Instance type. For more information, call resource_alicloud_instances to obtain the latest instance type list.

- `auto_release_time` - (Optional) Instance auto release time. The time is presented using the ISO8601 standard and in UTC time. The format is YYYY-MM-DDTHH:MM:SSZ.

- `internet_charge_type` - (Optional) Internet bandwidth billing method. Optional values: PayByTraffic.

- `internet_max_bandwidth_in` - (Optional) The maximum inbound bandwidth from the Internet network, measured in Mbit/s. Value range: [1, 200].

- `internet_max_bandwidth_out` - (Optional) Maximum outbound bandwidth from the Internet, its unit of measurement is Mbit/s. Value range: [0, 100].

- `io_optimized` - (Optional) Whether it is an I/O-optimized instance or not. Optional values:

  - none
  - optimized

- `key_pair_name` - (Optional) The name of the key pair.

  - Ignore this parameter for Windows instances. It is null by default. Even if you enter this parameter, only the Password content is used.
  - The password logon method for Linux instances is set to forbidden upon initialization.

- `network_type` - (Optional) Network type of the instance. Value options: Classic | VPC.

- `ram_role_name` - (Optional) The RAM role name of the instance. You can use the RAM API ListRoles to query instance RAM role names.

- `security_enhancement_strategy` - (Optional) Whether or not to activate the security enhancement feature and install network security software free of charge. Optional values: Active | Deactive.

- `security_group_id` - (Optional) The security group ID.

- `spot_price_limit` -(Optional) Sets the maximum hourly instance price. Supports up to three decimal places.

- `spot_strategy` - (Optional) The spot strategy for a Pay-As-You-Go instance. This parameter is valid and required only when InstanceChargeType is set to PostPaid. Value range:

  - NoSpot: Normal Pay-As-You-Go instance.
  - SpotWithPriceLimit: Sets the maximum price for a spot instance.
  - SpotAsPriceGo: The system automatically calculates the price. The maximum value is the Pay-As-You-Go price.

- `system_disk_category` - (Optional) The category of the system disk. System disk type. Optional values:

  - cloud: Basic cloud disk.
  - cloud_efficiency: Ultra cloud disk.
  - cloud_ssd: SSD cloud Disks.
  - ephemeral_ssd: local SSD Disks
  - cloud_essd: ESSD cloud Disks.

- `system_disk_description` - (Optional) System disk description. It cannot begin with http:// or https://.

- `system_disk_name` - (Optional) System disk name. The name is a string of 2 to 128 characters. It must begin with an English or a Chinese character. It can contain A-Z, a-z, Chinese characters, numbers, periods (.), colons (:), underscores (_), and hyphens (-).

- **system_disk_size** - (Optional) Size of the system disk, measured in GB. Value range: [20, 500].

- **userdata** - (Optional) User data of the instance, which is Base64-encoded. Size of the raw data cannot exceed 16 KB.

- **vswitch_id** - (Optional) When creating a VPC-Connected instance, you must specify its VSwitch ID.

- **zone_id** - (Optional) The zone ID of the instance.

- **network_interfaces** - (Optional) The list of network interfaces created with instance.

  - **name** - (Optional) ENI name.
  - **description** - (Optional) The ENI description.
  - **primary_ip** - (Optional) The primary private IP address of the ENI.
  - **security_group_id** - (Optional) The security group ID must be one in the same VPC.
  - **vswitch_id** - (Optional) The VSwitch ID for ENI. The instance must be in the same zone of the same VPC network as the ENI, but they may belong to different VSwitches.

- **data_disks** - (Optional) The list of data disks created with instance.

  - **name** - (Optional) The name of the data disk.

  - **size** - (Required) The size of the data disk.

    * cloud [5, 2000]
    * cloud_efficiency [20, 32768]
    * cloud_ssd [20, 32768]
    * cloud_essd [20, 32768]
    * ephemeral_ssd: [5, 800]

  - **category** - (Optional) The category of the disk:

    * cloud: Basic cloud disk.
    * cloud_efficiency: Ultra cloud disk.
    * cloud_ssd: SSD cloud Disks.
    * ephemeral_ssd: local SSD Disks
    * cloud_essd: ESSD cloud Disks.

    Default to **cloud_efficiency**.

  - **encrypted** -(Optional, Bool) Encrypted the data in this disk.

    Default to false

  - **snapshot_id** - (Optional) The snapshot ID used to initialize the data disk. If the size specified by snapshot is greater that the size of the disk, use the size specified by snapshot as the size of the data disk.

- **delete_with_instance** - (Optional) Delete this data disk when the instance is destroyed. It only works on cloud, cloud_efficiency, cloud_ssd and cloud_essd disk. If the category of this data disk was ephemeral_ssd, please don't set this param.

    Default to true

  - **description** - (Optional) The description of the data disk.
- **tags** - (Optional) A mapping of tags to assign to the resource.

  - Key: It can be up to 64 characters in length. It cannot begin with "aliyun", "acs:", "http://", or "https://". It cannot be a null string.
  - Value: It can be up to 128 characters in length. It cannot begin with "aliyun", "acs:", "http://", or "https://". It can be a null string.

» Attributes Reference

The following attributes are exported:

- **id** - The Launch Template ID.

» Import

Launch Template can be imported using the id, e.g.

```
$ terraform import alicloud_launch_template.lt lt-abc1234567890000
```

» alicloud_elasticsearch_instances

The `alicloud_elasticsearch_instances` data source provides a collection of Elasticsearch instances available in Alicloud account. Filters support description regex and other filters which are listed below.

» Example Usage

```
data "alicloud_elasticsearch_instances" "instances" {
  description_regex = "myes"
  version           = "5.5.3_with_X-Pack"
}
```

» Argument Reference

The following arguments are supported:

- `description_regex` - (Optional) A regex string to apply to the instance description.
- `ids` - (Optional, Available 1.52.1+) A list of Elasticsearch instance IDs.
- `version` - (Optional) Elasticsearch version. Options are `5.5.3_with_X-Pack`, `6.3.2_with_X-Pack` and `6.7.0_with_X-Pack`. If no value is specified, all versions are returned.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of Elasticsearch instance IDs.
- `descriptions` - A list of Elasticsearch instance descriptions.
- `instances` - A list of Elasticsearch instances. Its every element contains the following attributes:
  - `id` - The ID of the Elasticsearch instance.
  - `description` - The description of the Elasticsearch instance.
  - `instance_charge_type` - Billing method. Value options: `PostPaid` for Pay-As-You-Go and `PrePaid` for subscription.
  - `data_node_amount` - The Elasticsearch cluster's data node quantity, between 2 and 50.
  - `data_node_spec` - The data node specifications of the elasticsearch instance.
  - `data_node_disk_size` - The single data node storage space. Unit: GB.
  - `data_node_disk_type` - The data node disk type. Included values: `cloud_ssd` and `cloud_efficiency`.
  - `vswitch_id` - VSwitch ID the instance belongs to.
  - `version` - Elasticsearch version includes `5.5.3_with_X-Pack`, `6.3.2_with_X-Pack` and `6.7.0_with_X-Pack`.
  - `cerated_at` - The creation time of the instance. It's a GTM format, such as: "2019-01-08T15:50:50.623Z".
  - `updated_at` - The last modified time of the instance. It's a GMT format, such as: "2019-01-08T15:50:50.623Z".
  - `status` - Status of the instance. It includes `active`, `activating`, `inactive`

» alicloud_elasticsearch_instance

Provides a Elasticsearch instance resource. It contains data nodes, dedicated master node(optional) and etc. It can be associated with private IP whitelists and kibana IP whitelist.

NOTE: Only one operation is supported in a request. So if `data_node_spec` and `data_node_disk_size` are both changed, system will respond error.

NOTE: At present, `version` can not be modified once instance has been created.

» Example Usage

Basic Usage

```
resource "alicloud_elasticsearch_instance" "instance" {
  instance_charge_type = "PostPaid"
  data_node_amount     = "2"
  data_node_spec       = "elasticsearch.sn2ne.large"
  data_node_disk_size  = "20"
  data_node_disk_type  = "cloud_ssd"
  vswitch_id           = "some vswitch id"
  password             = "Your password"
  version              = "5.5.3_with_X-Pack"
  description          = "description"
  zone_count           = "2"
}
```

» Argument Reference

The following arguments are supported:

- `description` - (Optional) The description of instance. It a string of 0 to 30 characters.
- `instance_charge_type` - (Optional) Valid values are `PrePaid`, `PostPaid`, Default to `PostPaid`. From version 1.69.0, the Elasticsearch cluster allows you to update your instance_charge_ype from `PostPaid` to `PrePaid`, the following attributes are required: `period`. But, updating from `PostPaid` to `PrePaid` is not supported.
- `period` - (Optional) The duration that you will buy Elasticsearch instance (in month). It is valid when instance_charge_type is `PrePaid`. Valid values: [1~9], 12, 24, 36. Default to 1. From version 1.69.2, when to modify this value, the resource can renewal a `PrePaid` instance.
- `data_node_amount` - (Required) The Elasticsearch cluster's data node quantity, between 2 and 50.

- `data_node_spec` - (Required) The data node specifications of the Elasticsearch instance.
- `data_node_disk_size` - (Required) The single data node storage space.
    - `cloud_ssd`: An SSD disk, supports a maximum of 2048 GiB (2 TB).
    - `cloud_efficiency` An ultra disk, supports a maximum of 5120 GiB (5 TB). If the data to be stored is larger than 2048 GiB, an ultra disk can only support the following data sizes (GiB): [2560, 3072, 3584, 4096, 4608, 5120].
- `data_node_disk_type` - (Required) The data node disk type. Supported values: cloud_ssd, cloud_efficiency.
- `vswitch_id` - (Required, ForceNew) The ID of VSwitch.
- `password` - (Optional, Sensitive) The password of the instance. The password can be 8 to 30 characters in length and must contain three of the following conditions: uppercase letters, lowercase letters, numbers, and special characters (`!@#$%^&*()_+-=`).
- `kms_encrypted_password` - (Optional, Available in 1.57.1+) An KMS encrypts password used to a instance. If the `password` is filled in, this field will be ignored, but you have to specify one of `password` and `kms_encrypted_password` fields.
- `kms_encryption_context` - (Optional, MapString, Available in 1.57.1+) An KMS encryption context used to decrypt `kms_encrypted_password` before creating or updating instance with `kms_encrypted_password`. See Encryption Context. It is valid when `kms_encrypted_password` is set.
- `version` - (Required, ForceNew) Elasticsearch version. Supported values: `5.5.3_with_X-Pack`, `6.3_with_X-Pack` and `6.7_with_X-Pack`.
- `private_whitelist` - (Optional) Set the instance's IP whitelist in VPC network.
- `kibana_whitelist` - (Optional) Set the Kibana's IP whitelist in internet network.
- `master_node_spec` - (Optional) The dedicated master node spec. If specified, dedicated master node will be created.
- `zone_count` - (Optional, Available in 1.44.0+) The Multi-AZ supported for Elasticsearch, between 1 and 3. The `data_node_amount` value must be an integral multiple of the `zone_count` value.

» Timeouts

NOTE: Available in 1.48.0+.

The `timeouts` block allows you to specify timeouts for certain actions:

- `create` - (Defaults to 120 mins) Used when creating the elasticsearch instance (until it reaches the initial `active` status).
- `update` - (Defaults to 120 mins) Used when activating the elasticsearch instance when necessary during update - e.g. when changing elasticsearch instance description, whitelist, data node settings, master node spec and

password.

- `delete` - (Defaults to 120 mins) Used when terminating the elasticsearch instance. `Note:` There are 5 minutes to sleep to eusure the instance is deleted. It is not in the timeouts configure.

» **Attributes Reference**

The following attributes are exported:

- `id` - The ID of the Elasticsearch instance.
- `domain` - Instance connection domain (only VPC network access supported).
- `port` - Instance connection port.
- `kibana_domain` - Kibana console domain (Internet access supported).
- `kibana_port` - Kibana console port.
- `status` - The Elasticsearch instance status. Includes `active`, `activating`, `inactive`. Some operations are denied when status is not `active`.

» **Import**

Elasticsearch can be imported using the id, e.g.

```
$ terraform import alicloud_elasticsearch_instance.example es-cn-abcde123456
```

» **alicloud_emr_disk_types**

The `alicloud_emr_disk_types` data source provides a collection of data disk and system disk types available in Alibaba Cloud account when create a emr cluster.

NOTE: Available in 1.60.0+

» **Example Usage**

```
data "alicloud_emr_disk_types" "default" {
  destination_resource = "DataDisk"
  instance_charge_type = "PostPaid"
  cluster_type         = "HADOOP"
  instance_type        = "ecs.g5.xlarge"
  zone_id              = "cn-huhehaote-a"
}

output "data_disk_type" {
```

```
  value = "${data.alicloud_emr_disk_types.default.types.0.value}"
}
```

» Argument Reference

The following arguments are supported:

- `destination_resource` - (Required) The destination resource of emr cluster instance
- `instance_charge_type` - (Required) Filter the results by charge type. Valid values: `PrePaid` and `PostPaid`. Default to `PostPaid`.
- `cluster_type` - (Required) The cluster type of the emr cluster instance. Possible values: `HADOOP`, `KAFKA`, `ZOOKEEPER`, `DRUID`.
- `instance_type` - (Required) The ecs instance type of create emr cluster instance.
- `zone_id` - (Optional) The Zone to create emr cluster instance.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of data disk and system disk type IDs.
- `types` - A list of emr instance types. Each element contains the following attributes:
    - `value` - The value of the data disk or system disk
    - `min` - The mininum value of the data disk to supported the specific instance type
    - `max` - The maximum value of the data disk to supported the specific instance type

» alicloud_emr_instance_types

The `alicloud_emr_instance_types` data source provides a collection of ecs instance types available in Alibaba Cloud account when create a emr cluster.

NOTE: Available in 1.59.0+

» Example Usage

```
data "alicloud_emr_instance_types" "default" {
  destination_resource  = "InstanceType"
```

```
  instance_charge_type  = "PostPaid"
  support_local_storage = false
  cluster_type          = "HADOOP"
  support_node_type     = ["MASTER", "CORE"]
}

output "first_instance_type" {
  value = "${data.alicloud_emr_instance_types.default.types.0.id}"
}
```

» Argument Reference

The following arguments are supported:

- `destination_resource` - (Required) The destination resource of emr cluster instance
- `instance_charge_type` - (Required) Filter the results by charge type. Valid values: `PrePaid` and `PostPaid`. Default to `PostPaid`.
- `cluster_type` - (Required) The cluster type of the emr cluster instance. Possible values: `HADOOP`, `KAFKA`, `ZOOKEEPER`, `DRUID`.
- `support_local_storage` - (Optional,Available in 1.61.0+) Whether the current storage disk is local or not.
- `support_node_type` - (Optional,Available in 1.63.0+) The specific supported node type list. Possible values may be any one or combination of these: ["MASTER", "CORE", "TASK", "GATEWAY"]
- `zone_id` - (Optional,Available in 1.69.0+) The supported resources of specific zoneId.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of emr instance types IDs.
- `types` - A list of emr instance types. Each element contains the following attributes:
  - `id` - The ID of the instance type.
  - `zone_id` - The available zone id in Alibaba Cloud account
  - `local_storage_capacity` - Local capacity of the applied ecs instance for emr cluster. Unit: GB.

» alicloud_emr_main_versions

The `alicloud_emr_main_versions` data source provides a collection of emr main versions available in Alibaba Cloud account when create a emr cluster.

NOTE: Available in 1.59.0+

» Example Usage

```
data "alicloud_emr_main_versions" "default" {
  emr_version = "EMR-3.22.0"
}

output "first_main_version" {
  value = "${data.alicloud_emr_main_versions.default.main_versions.0.emr_version}"
}
```

» Argument Reference

The following arguments are supported:

- `emr_version` - (Optional) The version of the emr cluster instance. Possible values: `EMR-4.0.0`, `EMR-3.23.0`, `EMR-3.22.0`.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of emr instance types IDs.
- `main_versions` - A list of versions of the emr cluster instance. Each element contains the following attributes:
  - `emr_version` - The version of the emr cluster instance.
  - `image_id` - The image id of the emr cluster instance.
  - `cluster_types` - A list of cluster types the emr cluster supported. Possible values: `HADOOP`, `ZOOKEEPER`, `KAFKA`, `DRUID`.

» alicloud_emr_cluster

Provides a EMR Cluster resource. With this you can create, read, and release EMR Cluster.

NOTE: Available in 1.57.0+.

» Example Usage

» 1. Create A Cluster

```
data "alicloud_emr_main_versions" "default" {
}

data "alicloud_emr_instance_types" "default" {
    destination_resource = "InstanceType"
    cluster_type = data.alicloud_emr_main_versions.default.main_versions.0.cluster_types.0
    support_local_storage = false
    instance_charge_type = "PostPaid"
    support_node_type = ["MASTER", "CORE", "TASK"]
}

data "alicloud_emr_disk_types" "data_disk" {
    destination_resource = "DataDisk"
    cluster_type = data.alicloud_emr_main_versions.default.main_versions.0.cluster_types.0
    instance_charge_type = "PostPaid"
    instance_type = data.alicloud_emr_instance_types.default.types.0.id
    zone_id = data.alicloud_emr_instance_types.default.types.0.zone_id
}

data "alicloud_emr_disk_types" "system_disk" {
    destination_resource = "SystemDisk"
    cluster_type = data.alicloud_emr_main_versions.default.main_versions.0.cluster_types.0
    instance_charge_type = "PostPaid"
    instance_type = data.alicloud_emr_instance_types.default.types.0.id
    zone_id = data.alicloud_emr_instance_types.default.types.0.zone_id
}

resource "alicloud_vpc" "vpc" {
    count = var.vpc_id == "" ? 1 : 0

    name       = var.vpc_name
    cidr_block = var.vpc_cidr
}

resource "alicloud_security_group" "default" {
    count = var.security_group_id == "" ? 1 : 0

    name = var.security_group_name
    vpc_id = var.vpc_id == "" ? alicloud_vpc.vpc[0].id : var.vpc_id
```

```
}

// VSwitch Resource for Module
resource "alicloud_vswitch" "vswitch" {
    count = var.vswitch_id == "" ? 1 : 0

    availability_zone = var.availability_zone == "" ? data.alicloud_emr_instance_types.defau
    name              = var.vswitch_name
    cidr_block        = var.vswitch_cidr
    vpc_id            = var.vpc_id == "" ? alicloud_vpc.vpc[0].id : var.vpc_id
}

// Ram role Resource for Module
resource "alicloud_ram_role" "default" {
    name = var.ram_name
    document = <<EOF
    {
        "Statement": [
        {
            "Action": "sts:AssumeRole",
            "Effect": "Allow",
            "Principal": {
            "Service": [
                "emr.aliyuncs.com",
                "ecs.aliyuncs.com"
            ]
            }
        }
        ],
        "Version": "1"
    }
    EOF
    description = "this is a role test."
    force = true
}

resource "alicloud_emr_cluster" "default" {
    name = "terraform-resize-test-0926"

    emr_ver = data.alicloud_emr_main_versions.default.main_versions.0.emr_version

    cluster_type = data.alicloud_emr_main_versions.default.main_versions.0.cluster_types.0

    host_group {
        host_group_name = "master_group"
        host_group_type = "MASTER"
```

```
        node_count = "2"
        instance_type = data.alicloud_emr_instance_types.default.types.0.id
        disk_type = data.alicloud_emr_disk_types.data_disk.types.0.value
        disk_capacity = data.alicloud_emr_disk_types.data_disk.types.0.min > 160 ? data.alic
        disk_count = "1"
        sys_disk_type = data.alicloud_emr_disk_types.system_disk.types.0.value
        sys_disk_capacity = data.alicloud_emr_disk_types.system_disk.types.0.min > 160 ? dat
    }

    host_group {
        host_group_name = "core_group"
        host_group_type = "CORE"
        node_count = "3"
        instance_type = data.alicloud_emr_instance_types.default.types.0.id
        disk_type = data.alicloud_emr_disk_types.data_disk.types.0.value
        disk_capacity = data.alicloud_emr_disk_types.data_disk.types.0.min > 160 ? data.alic
        disk_count = "4"
        sys_disk_type = data.alicloud_emr_disk_types.system_disk.types.0.value
        sys_disk_capacity = data.alicloud_emr_disk_types.system_disk.types.0.min > 160 ? dat
    }

    host_group {
        host_group_name = "task_group"
        host_group_type = "TASK"
        node_count = "2"
        instance_type = data.alicloud_emr_instance_types.default.types.0.id
        disk_type = data.alicloud_emr_disk_types.data_disk.types.0.value
        disk_capacity = data.alicloud_emr_disk_types.data_disk.types.0.min > 160 ? data.alic
        disk_count = "4"
        sys_disk_type = data.alicloud_emr_disk_types.system_disk.types.0.value
        sys_disk_capacity = data.alicloud_emr_disk_types.system_disk.types.0.min > 160 ? dat
    }

    high_availability_enable = true
    option_software_list = ["HBASE","PRESTO",]
    zone_id = data.alicloud_emr_instance_types.default.types.0.zone_id
    security_group_id = var.security_group_id == "" ? alicloud_security_group.default[0].id
    is_open_public_ip = true
    charge_type = "PostPaid"
    vswitch_id = var.vswitch_id == "" ? alicloud_vswitch.vswitch[0].id : var.vswitch_id
    user_defined_emr_ecs_role = alicloud_ram_role.default.name
    ssh_enable = true
    master_pwd = "ABCtest1234!"
}
```

» 2. Scale Up

The hosts of EMR Cluster are orginized as host group. Scaling up/down is operating host group.

In the case of scaling up cluster, we should add the node_count of some host group.

NOTE: Scaling up is only applicable to CORE and TASK group. Cost time of scaling up will vary with the number of scaling-up nodes. Scaling down is only applicable to TASK group. If you want to scale down CORE group, please submit tickets or contact EMR support team.

As the following case, we scale up the TASK group 2 nodes by increasing host_group.node_count by 2.

```
data "alicloud_emr_main_versions" "default" {
}

data "alicloud_emr_instance_types" "default" {
    destination_resource = "InstanceType"
    cluster_type = data.alicloud_emr_main_versions.default.main_versions.0.cluster_types.0
    support_local_storage = false
    instance_charge_type = "PostPaid"
    support_node_type = ["MASTER", "CORE", "TASK"]
}

data "alicloud_emr_disk_types" "data_disk" {
    destination_resource = "DataDisk"
    cluster_type = data.alicloud_emr_main_versions.default.main_versions.0.cluster_types.0
    instance_charge_type = "PostPaid"
    instance_type = data.alicloud_emr_instance_types.default.types.0.id
    zone_id = data.alicloud_emr_instance_types.default.types.0.zone_id
}

data "alicloud_emr_disk_types" "system_disk" {
    destination_resource = "SystemDisk"
    cluster_type = data.alicloud_emr_main_versions.default.main_versions.0.cluster_types.0
    instance_charge_type = "PostPaid"
    instance_type = data.alicloud_emr_instance_types.default.types.0.id
    zone_id = data.alicloud_emr_instance_types.default.types.0.zone_id
}

resource "alicloud_vpc" "vpc" {
    count = var.vpc_id == "" ? 1 : 0

    name       = var.vpc_name
    cidr_block = var.vpc_cidr
```

```
}

resource "alicloud_security_group" "default" {
    count = var.security_group_id == "" ? 1 : 0

    name = var.security_group_name
    vpc_id = var.vpc_id == "" ? alicloud_vpc.vpc[0].id : var.vpc_id
}

// VSwitch Resource for Module
resource "alicloud_vswitch" "vswitch" {
    count = var.vswitch_id == "" ? 1 : 0

    availability_zone = var.availability_zone == "" ? data.alicloud_emr_instance_types.defau
    name              = var.vswitch_name
    cidr_block        = var.vswitch_cidr
    vpc_id            = var.vpc_id == "" ? alicloud_vpc.vpc[0].id : var.vpc_id
}

// Ram role Resource for Module
resource "alicloud_ram_role" "default" {
    name = var.ram_name
    document = <<EOF
    {
        "Statement": [
        {
            "Action": "sts:AssumeRole",
            "Effect": "Allow",
            "Principal": {
            "Service": [
                "emr.aliyuncs.com",
                "ecs.aliyuncs.com"
            ]
            }
        }
        ],
        "Version": "1"
    }
    EOF
    description = "this is a role test."
    force = true
}

resource "alicloud_emr_cluster" "default" {
    name = "terraform-resize-test-0926"
```

```
emr_ver = data.alicloud_emr_main_versions.default.main_versions.0.emr_version

cluster_type = data.alicloud_emr_main_versions.default.main_versions.0.cluster_types.0

host_group {
    host_group_name = "master_group"
    host_group_type = "MASTER"
    node_count = "2"
    instance_type = data.alicloud_emr_instance_types.default.types.0.id
    disk_type = data.alicloud_emr_disk_types.data_disk.types.0.value
    disk_capacity = data.alicloud_emr_disk_types.data_disk.types.0.min > 160 ? data.alic
    disk_count = "1"
    sys_disk_type = data.alicloud_emr_disk_types.system_disk.types.0.value
    sys_disk_capacity = data.alicloud_emr_disk_types.system_disk.types.0.min > 160 ? dat
}

host_group {
    host_group_name = "core_group"
    host_group_type = "CORE"
    node_count = "2"
    instance_type = data.alicloud_emr_instance_types.default.types.0.id
    disk_type = data.alicloud_emr_disk_types.data_disk.types.0.value
    disk_capacity = data.alicloud_emr_disk_types.data_disk.types.0.min > 160 ? data.alic
    disk_count = "4"
    sys_disk_type = data.alicloud_emr_disk_types.system_disk.types.0.value
    sys_disk_capacity = data.alicloud_emr_disk_types.system_disk.types.0.min > 160 ? dat
}

host_group {
    host_group_name = "task_group"
    host_group_type = "TASK"
    node_count = "4"
    instance_type = data.alicloud_emr_instance_types.default.types.0.id
    disk_type = data.alicloud_emr_disk_types.data_disk.types.0.value
    disk_capacity = data.alicloud_emr_disk_types.data_disk.types.0.min > 160 ? data.alic
    disk_count = "4"
    sys_disk_type = data.alicloud_emr_disk_types.system_disk.types.0.value
    sys_disk_capacity = data.alicloud_emr_disk_types.system_disk.types.0.min > 160 ? dat
}

high_availability_enable = true
option_software_list = ["HBASE","PRESTO",]
zone_id = data.alicloud_emr_instance_types.default.types.0.zone_id
security_group_id = var.security_group_id == "" ? alicloud_security_group.default[0].id
is_open_public_ip = true
charge_type = "PostPaid"
```

```
    vswitch_id = var.vswitch_id == "" ? alicloud_vswitch.vswitch[0].id : var.vswitch_id
    user_defined_emr_ecs_role = alicloud_ram_role.default.name
    ssh_enable = true
    master_pwd = "ABCtest1234!"
}
```

» 3. Scale Down

In the case of scaling down a cluster, we need to specified the host group and
the instance list.

The following is an example. We scale down the cluster by decreasing the node
count by 2, and specifying the scale-down instance list.

```
data "alicloud_emr_main_versions" "default" {
}

data "alicloud_emr_instance_types" "default" {
    destination_resource = "InstanceType"
    cluster_type = data.alicloud_emr_main_versions.default.main_versions.0.cluster_types.0
    support_local_storage = false
    instance_charge_type = "PostPaid"
    support_node_type = ["MASTER", "CORE", "TASK"]
}

data "alicloud_emr_disk_types" "data_disk" {
    destination_resource = "DataDisk"
    cluster_type = data.alicloud_emr_main_versions.default.main_versions.0.cluster_types.0
    instance_charge_type = "PostPaid"
    instance_type = data.alicloud_emr_instance_types.default.types.0.id
    zone_id = data.alicloud_emr_instance_types.default.types.0.zone_id
}

data "alicloud_emr_disk_types" "system_disk" {
    destination_resource = "SystemDisk"
    cluster_type = data.alicloud_emr_main_versions.default.main_versions.0.cluster_types.0
    instance_charge_type = "PostPaid"
    instance_type = data.alicloud_emr_instance_types.default.types.0.id
    zone_id = data.alicloud_emr_instance_types.default.types.0.zone_id
}

resource "alicloud_vpc" "vpc" {
    count = var.vpc_id == "" ? 1 : 0

    name       = var.vpc_name
    cidr_block = var.vpc_cidr
```

```
}

resource "alicloud_security_group" "default" {
    count = var.security_group_id == "" ? 1 : 0

    name = var.security_group_name
    vpc_id = var.vpc_id == "" ? alicloud_vpc.vpc[0].id : var.vpc_id
}

// VSwitch Resource for Module
resource "alicloud_vswitch" "vswitch" {
    count = var.vswitch_id == "" ? 1 : 0

    availability_zone = var.availability_zone == "" ? data.alicloud_emr_instance_types.defau
    name              = var.vswitch_name
    cidr_block        = var.vswitch_cidr
    vpc_id            = var.vpc_id == "" ? alicloud_vpc.vpc[0].id : var.vpc_id
}

// Ram role Resource for Module
resource "alicloud_ram_role" "default" {
    name = var.ram_name
    document = <<EOF
    {
        "Statement": [
        {
            "Action": "sts:AssumeRole",
            "Effect": "Allow",
            "Principal": {
            "Service": [
                "emr.aliyuncs.com",
                "ecs.aliyuncs.com"
            ]
            }
        }
        ],
        "Version": "1"
    }
    EOF
    description = "this is a role test."
    force = true
}

resource "alicloud_emr_cluster" "default" {
    name = "terraform-resize-test-0926"
```

```
emr_ver = data.alicloud_emr_main_versions.default.main_versions.0.emr_version

cluster_type = data.alicloud_emr_main_versions.default.main_versions.0.cluster_types.0

host_group {
    host_group_name = "master_group"
    host_group_type = "MASTER"
    node_count = "2"
    instance_type = data.alicloud_emr_instance_types.default.types.0.id
    disk_type = data.alicloud_emr_disk_types.data_disk.types.0.value
    disk_capacity = data.alicloud_emr_disk_types.data_disk.types.0.min > 160 ? data.alic
    disk_count = "1"
    sys_disk_type = data.alicloud_emr_disk_types.system_disk.types.0.value
    sys_disk_capacity = data.alicloud_emr_disk_types.system_disk.types.0.min > 160 ? dat
}

host_group {
    host_group_name = "core_group"
    host_group_type = "CORE"
    node_count = "2"
    instance_type = data.alicloud_emr_instance_types.default.types.0.id
    disk_type = data.alicloud_emr_disk_types.data_disk.types.0.value
    disk_capacity = data.alicloud_emr_disk_types.data_disk.types.0.min > 160 ? data.alic
    disk_count = "4"
    sys_disk_type = data.alicloud_emr_disk_types.system_disk.types.0.value
    sys_disk_capacity = data.alicloud_emr_disk_types.system_disk.types.0.min > 160 ? dat
}

host_group {
    host_group_name = "task_group"
    host_group_type = "TASK"
    node_count = "2"
    instance_type = data.alicloud_emr_instance_types.default.types.0.id
    disk_type = data.alicloud_emr_disk_types.data_disk.types.0.value
    disk_capacity = data.alicloud_emr_disk_types.data_disk.types.0.min > 160 ? data.alic
    disk_count = "4"
    sys_disk_type = data.alicloud_emr_disk_types.system_disk.types.0.value
    sys_disk_capacity = data.alicloud_emr_disk_types.system_disk.types.0.min > 160 ? dat
}

high_availability_enable = true
option_software_list = ["HBASE","PRESTO",]
zone_id = data.alicloud_emr_instance_types.default.types.0.zone_id
security_group_id = var.security_group_id == "" ? alicloud_security_group.default[0].id
is_open_public_ip = true
charge_type = "PostPaid"
```

```
        vswitch_id = var.vswitch_id == "" ? alicloud_vswitch.vswitch[0].id : var.vswitch_id
        user_defined_emr_ecs_role = alicloud_ram_role.default.name
        ssh_enable = true
        master_pwd = "ABCtest1234!"
}
```

» 4. Create a emr gateway cluster

```
data "alicloud_emr_main_versions" "default" {
}

data "alicloud_emr_instance_types" "default" {
        destination_resource = "InstanceType"
        cluster_type = data.alicloud_emr_main_versions.default.main_versions.0.cluster_types.0
        support_local_storage = false
        instance_charge_type = "PostPaid"
        support_node_type = ["GATEWAY"]
}

data "alicloud_emr_disk_types" "data_disk" {
        destination_resource = "DataDisk"
        cluster_type = data.alicloud_emr_main_versions.default.main_versions.0.cluster_types.0
        instance_charge_type = "PostPaid"
        instance_type = data.alicloud_emr_instance_types.default.types.0.id
        zone_id = data.alicloud_emr_instance_types.default.types.0.zone_id
}

data "alicloud_emr_disk_types" "system_disk" {
        destination_resource = "SystemDisk"
        cluster_type = data.alicloud_emr_main_versions.default.main_versions.0.cluster_types.0
        instance_charge_type = "PostPaid"
        instance_type = data.alicloud_emr_instance_types.default.types.0.id
        zone_id = data.alicloud_emr_instance_types.default.types.0.zone_id
}

resource "alicloud_vpc" "vpc" {
        count = var.vpc_id == "" ? 1 : 0

        name       = var.vpc_name
        cidr_block = var.vpc_cidr
}

resource "alicloud_security_group" "default" {
        count = var.security_group_id == "" ? 1 : 0
```

```
    name = var.security_group_name
    vpc_id = var.vpc_id == "" ? alicloud_vpc.vpc[0].id : var.vpc_id
}

// VSwitch Resource for Module
resource "alicloud_vswitch" "vswitch" {
    count = var.vswitch_id == "" ? 1 : 0

    availability_zone = var.availability_zone == "" ? data.alicloud_emr_instance_types.defau
    name              = var.vswitch_name
    cidr_block        = var.vswitch_cidr
    vpc_id            = var.vpc_id == "" ? alicloud_vpc.vpc[0].id : var.vpc_id
}

// Ram role Resource for Module
resource "alicloud_ram_role" "default" {
    name = var.ram_name
    document = <<EOF
    {
        "Statement": [
        {
            "Action": "sts:AssumeRole",
            "Effect": "Allow",
            "Principal": {
            "Service": [
                "emr.aliyuncs.com",
                "ecs.aliyuncs.com"
            ]
            }
        }
        ],
        "Version": "1"
    }
    EOF
    description = "this is a role test."
    force = true
}

resource "alicloud_emr_cluster" "gateway" {
    name = "terraform-gateway-test-1101"

    emr_ver = data.alicloud_emr_main_versions.default.main_versions.0.emr_version

    # supported 'GATEWAY' available in 1.61.0+.
    cluster_type = "GATEWAY"
```

```
    host_group {
        host_group_name = "master_group"
        host_group_type = "GATEWAY"
        node_count = "1"
        instance_type = data.alicloud_emr_instance_types.default.types.0.id
        disk_type = data.alicloud_emr_disk_types.data_disk.types.0.value
        disk_capacity = data.alicloud_emr_disk_types.data_disk.types.0.min > 160 ? data.alic
        disk_count = "1"
        sys_disk_type = data.alicloud_emr_disk_types.system_disk.types.0.value
        sys_disk_capacity = data.alicloud_emr_disk_types.system_disk.types.0.min > 160 ? dat
    }

    high_availability_enable = true
    option_software_list = ["HBASE","PRESTO",]
    zone_id = data.alicloud_emr_instance_types.default.types.0.zone_id
    security_group_id = var.security_group_id == "" ? alicloud_security_group.default[0].id
    is_open_public_ip = true
    charge_type = "PostPaid"
    vswitch_id = var.vswitch_id == "" ? alicloud_vswitch.vswitch[0].id : var.vswitch_id
    user_defined_emr_ecs_role = alicloud_ram_role.default.name
    ssh_enable = true
    master_pwd = "ABCtest1234!"

    // the gateway related emr cluster id, if you want to bind a cluster dynamically, please
    related_cluster_id = ${related_cluster_id}
}
```

» Argument Reference

The following arguments are supported:

- `name` - (Required) The name of emr cluster. The name length must be less than 64. Supported characters: chinese character, english character, number, "-", "_".
- `emr_ver` - (Required, ForceNew) EMR Version, e.g. EMR-3.22.0. You can find the all valid EMR Version in emr web console.
- `cluster_type` - (Required, ForceNew) EMR Cluster Type, e.g. HADOOP, KAFKA, DRUID, GATEWAY etc. You can find all valid EMR cluster type in emr web console. Supported 'GATEWAY' available in 1.61.0+.
- `charge_type` - (Required, ForceNew) Charge Type for this cluster. Supported value: PostPaid or PrePaid. Default value: PostPaid.
- `zone_id` - (Required, ForceNew) Zone ID, e.g. cn-huhehaote-a
- `security_group_id` (Optional, ForceNew) Security Group ID for Cluster, you can also specify this key for each host group.
- `vswitch_id` (Optional, ForceNew) Global vswitch id, you can also specify

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it in host group.

- `option_software_list` (Optional, ForceNew) Optional software list.
- `high_availability_enable` (Optional, ForceNew) High Available for HDFS and YARN. If this is set true, MASTER group must have two nodes.
- `use_local_metadb` (Optional, ForceNew) Use local metadb. Default is false.
- `ssh_enable` (Optional, ForceNew) If this is set true, we can ssh into cluster. Default value is false.
- `master_pwd` (Optional, ForceNew) Master ssh password.
- `eas_enable` (Optional, ForceNew) High security cluster (true) or not. Default value is false.
- `user_defined_emr_ecs_role` (Optional, ForceNew) Alicloud EMR uses roles to perform actions on your behalf when provisioning cluster resources, running applications, dynamically scaling resources. EMR uses the following roles when interacting with other Alicloud services. Default value is AliyunEmrEcsDefaultRole.
- `key_pair_name` (Optional, ForceNew) Ssh key pair.
- `deposit_type` (Optional, ForceNew) Cluster deposit type, HALF_MANAGED or FULL_MANAGED.
- `related_cluster_id` (Optional, ForceNew) This specify the related cluster id, if this cluster is a Gateway.
- `host_group` - (Optional) Groups of Host, You can specify MASTER as a group, CORE as a group (just like the above example).
- `tags` - (Optional, Available in v1.67.0+) A mapping of tags to assign to the resource.

» Block host_group

The host_group mapping supports the following:

- `host_group_name` - (Required, ForceNew) host group name.
- `host_group_type` - (Required) host group type, supported value: MASTER, CORE or TASK, supported 'GATEWAY' available in 1.61.0+.
- `charge_type` - (Optional) Charge Type for this group of hosts: Post-Paid or PrePaid. If this is not specified, charge type will follow global charge_type value.
- `period` - (Optional) If charge type is PrePaid, this should be specified, unit is month. Supported value: 1 2 3 4 5 6 7 8 9 12 24 36.
- `node_count` - (Required) Host number in this group.
- `instance_type` - (Required) Host Ecs instance type.
- `disk_type` - (Required) Data disk type. Supported value: cloud,cloud_efficiency,cloud_ssd,local_disk,clo
- `disk_capacity` - (Required) Data disk capacity.
- `disk_count` - (Required) Data disk count.
- `sys_disk_type` - (Required) System disk type. Supported value: cloud,cloud_efficiency,cloud_ssd,cloud_essd.

- `sys_disk_capacity` - (Required) System disk capacity.
- `auto_renew` - (Optional) Auto renew for prepaid, true of false. Default is false.
- `instance_list` - (Optional) Instance list for cluster scale down. This value follows the json format, e.g. ["instance_id1","instance_id2"]. escape character for " is \".

» Timeouts

The `timeouts` block allows you to specify timeouts for certain actions:

- `create` - (Defaults to 20 mins) Used when creating the cluster (until it reaches the initial `IDLE` status).
- `delete` - (Defaults to 10 mins) Used when terminating the instance.

» Attribute Reference

The following attributes are exported:

- `id` - The cluster ID.

» alicloud_fc_functions

This data source provides the Function Compute functions of the current Alibaba Cloud user.

» Example Usage

```
data "alicloud_fc_functions" "functions_ds" {
  service_name = "sample_service"
  name_regex   = "sample_fc_function"
}

output "first_fc_function_name" {
  value = "${data.alicloud_fc_functions.functions_ds.functions.0.name}"
}
```

» Argument Reference

The following arguments are supported:

- `service_name` - Name of the service that contains the functions to find.
- `name_regex` - (Optional) A regex string to filter results by function name.

- `ids` (Optional, Available in 1.53.0+) - A list of functions ids.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of functions ids.
- `names` - A list of functions names.
- `functions` - A list of functions. Each element contains the following attributes:
  - `id` - Function ID.
  - `name` - Function name.
  - `description` - Function description.
  - `runtime` - Function runtime. The list of possible values is available here.
  - `handler` - Function entry point in the code.
  - `timeout` - Maximum amount of time the function can run in seconds.
  - `memory_size` - Amount of memory in MB the function can use at runtime.
  - `code_size` - Function code size in bytes.
  - `code_checksum` - Checksum (crc64) of the function code.
  - `creation_time` - Function creation time.
  - `last_modification_time` - Function last modification time.
  - `environment_variables` - A map that defines environment variables for the function.

» alicloud_fc_services

This data source provides the Function Compute services of the current Alibaba Cloud user.

» Example Usage

```
data "alicloud_fc_services" "fc_services_ds" {
  name_regex = "sample_fc_service"
}

output "first_fc_service_name" {
  value = "${data.alicloud_fc_services.fc_services_ds.services.0.name}"
}
```

» Argument Reference

The following arguments are supported:

- `name_regex` - (Optional) A regex string to filter results by FC service name.
- `ids` (Optional, Available in 1.53.0+) - A list of FC services ids.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of FC services ids.
- `names` - A list of FC services names.
- `services` - A list of FC services. Each element contains the following attributes:
  - `id` - FC service ID.
  - `name` - FC service name.
  - `description` - FC service description.
  - `role` - FC service role ARN.
  - `internet_access` - Indicate whether the service can access to internet or not.
  - `creation_time` - FC service creation time.
  - `last_modification_time` - FC service last modification time.
  - `log_config` - A list of one element containing information about the associated log store. It contains the following attributes:
  - `project` - Log Service project name.
  - `logstore` - Log Service store name.
  - `vpc_config` - A list of one element containing information about accessible VPC resources. It contains the following attributes:
  - `vpc_id` - Associated VPC ID.
  - `vswitch_ids` - Associated VSwitch IDs.
  - `security_group_id` - Associated security group ID.

» alicloud_fc_triggers

This data source provides the Function Compute triggers of the current Alibaba Cloud user.

» Example Usage

```
data "alicloud_fc_triggers" "fc_triggers_ds" {
  service_name  = "sample_service"
  function_name = "sample_function"
  name_regex    = "sample_fc_trigger"
}

output "first_fc_trigger_name" {
  value = "${data.alicloud_fc_triggers.fc_triggers_ds.triggers.0.name}"
}
```

» Argument Reference

The following arguments are supported:

- `service_name` - FC service name.
- `function_name` - FC function name.
- `name_regex` - (Optional) A regex string to filter results by FC trigger name.
- `ids` (Optional, Available in 1.53.0+) - A list of FC triggers ids.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of FC triggers ids.
- `names` - A list of FC triggers names.
- `triggers` - A list of FC triggers. Each element contains the following attributes:
    - `id` - FC trigger ID.
    - `name` - FC trigger name.
    - `source_arn` - Event source resource address. See Create a trigger for more details.
    - `type` - Type of the trigger. Valid values: `oss`, `log`, `timer`, `http` and `mns_topic`.
    - `invocation_role` - RAM role arn attached to the Function Compute trigger. Role used by the event source to call the function. The value format is "acs:ram::$account-id:role/$role-name". See Create a trigger for more details.
    - `config` - JSON-encoded trigger configuration. See Configure triggers and events for more details.
    - `creation_time` - FC trigger creation time.

– `last_modification_time` - FC trigger last modification time.

» alicloud_fc_function

Provides a Alicloud Function Compute Function resource. Function allows you to trigger execution of code in response to events in Alibaba Cloud. The Function itself includes source code and runtime configuration. For information about Service and how to use it, see What is Function Compute.

NOTE: The resource requires a provider field 'account_id'. See account_id.

» Example Usage

Basic Usage

```
variable "name" {
  default = "alicloudfcfunctionconfig"
}
resource "alicloud_log_project" "default" {
  name        = "${var.name}"
  description = "tf unit test"
}

resource "alicloud_log_store" "default" {
  project          = "${alicloud_log_project.default.name}"
  name             = "${var.name}"
  retention_period = "3000"
  shard_count      = 1
}
resource "alicloud_fc_service" "default" {
  name        = "${var.name}"
  description = "tf unit test"
  log_config {
    project  = "${alicloud_log_project.default.name}"
    logstore = "${alicloud_log_store.default.name}"
  }
  role       = "${alicloud_ram_role.default.arn}"
  depends_on = ["alicloud_ram_role_policy_attachment.default"]
}
resource "alicloud_oss_bucket" "default" {
  bucket = "${var.name}"
}

resource "alicloud_oss_bucket_object" "default" {
```

```
  bucket  = "${alicloud_oss_bucket.default.id}"
  key     = "fc/hello.zip"
  content = <<EOF
        # -*- coding: utf-8 -*-
        def handler(event, context):
            print "hello world"
            return 'hello world'
    EOF
}

resource "alicloud_ram_role" "default" {
  name = "${var.name}"
  document = <<EOF
        {
          "Statement": [
            {
              "Action": "sts:AssumeRole",
              "Effect": "Allow",
              "Principal": {
                "Service": [
                  "fc.aliyuncs.com"
                ]
              }
            }
          ],
          "Version": "1"
        }
    EOF
    description = "this is a test"
    force       = true
}

resource "alicloud_ram_role_policy_attachment" "default" {
    role_name   = "${alicloud_ram_role.default.name}"
    policy_name = "AliyunLogFullAccess"
    policy_type = "System"
}

resource "alicloud_fc_function" "foo" {
    service     = "${alicloud_fc_service.default.name}"
    name        = "${var.name}"
    description = "tf"
    oss_bucket  = "${alicloud_oss_bucket.default.id}"
    oss_key     = "${alicloud_oss_bucket_object.default.key}"
    memory_size = "512"
    runtime     = "python2.7"
```

```
    handler     = "hello.handler"
    environment_variables = {
        prefix = "terraform"
    }
}
```

» Module Support

You can use to the existing fc module to create a function quickly and set several triggers for it.

» Argument Reference

The following arguments are supported:

- `service` - (Required, ForceNew) The Function Compute service name.
- `name` - (Optional, ForceNew) The Function Compute function name. It is the only in one service and is conflict with "name_prefix".
- `name_prefix` - (Optional, ForceNew) Setting a prefix to get a only function name. It is conflict with "name".
- `description` - (Optional) The Function Compute function description.
- `filename` - (Optional) The path to the function's deployment package within the local filesystem. It is conflict with the `oss_`-prefixed options.
- `oss_bucket` - (Optional) The OSS bucket location containing the function's deployment package. Conflicts with `filename`. This bucket must reside in the same Alibaba Cloud region where you are creating the function.
- `oss_key` - (Optional) The OSS key of an object containing the function's deployment package. Conflicts with `filename`.
- `handler` - (Required) The function entry point in your code.
- `memory_size` - (Optional) Amount of memory in MB your Function can use at runtime. Defaults to `128`. Limits to [128, 3072].
- `runtime` - (Required) See [Runtimes][https://www.alibabacloud.com/help/doc-detail/52077.htm] for valid values.
- `timeout` - (Optional) The amount of time your Function has to run in seconds.
- `environment_variables` - (Optional, Available in 1.36.0+) A map that defines environment variables for the function.
- `code_checksum` - (Optional, Available in 1.59.0+) The checksum (crc64) of the function code.The value can be generated by data source alicloud_file_crc64_checksum. -> **NOTE:** For more information, see Limits.

» Attributes Reference

The following arguments are exported:

- `id` - The ID of the function. The value is formate as `<service>:<name>`.
- `last_modified` - The date this resource was last modified.
- `function_id` - The Function Compute service ID.
- `code_checksum` - The checksum (crc64) of the function code.

» Import

Function Compute function can be imported using the id, e.g.

```
$ terraform import alicloud_fc_service.foo my-fc-service:hello-world
```

» alicloud_fc_service

Provides a Alicloud Function Compute Service resource. The resource is the base of launching Function and Trigger configuration. For information about Service and how to use it, see What is Function Compute.

NOTE: The resource requires a provider field 'account_id'. See account_id.

NOTE: If you happen the error "Argument 'internetAccess' is not supported", you need to log on web console and click button "Apply VPC Function" which is in the upper of Function Service Web Console page.

NOTE: Currently not all regions support Function Compute Service. For more details supported regions, see Service endpoints

» Example Usage

Basic Usage

```
variable "name" {
  default = "tf-testaccalicloudfcservice"
}

resource "alicloud_log_project" "foo" {
  name = "${var.name}"
}

resource "alicloud_log_store" "foo" {
  project = "${alicloud_log_project.foo.name}"
  name    = "${var.name}"
```

```
}

resource "alicloud_ram_role" "role" {
  name     = "${var.name}"
  document = <<DEFINITION
  {
  "Statement": [
    {
      "Action": "sts:AssumeRole",
      "Effect": "Allow",
      "Principal": {
        "Service": [
          "fc.aliyuncs.com"
        ]
      }
    }
  ],
  "Version": "1"
}
  DEFINITION
  description = "this is a test"
  force = true
}

resource "alicloud_ram_role_policy_attachment" "attac" {
  role_name = "${alicloud_ram_role.role.name}"
  policy_name = "AliyunLogFullAccess"
  policy_type = "System"
}

resource "alicloud_fc_service" "foo" {
  name = "${var.name}"
  description = "tf unit test"
  role = "${alicloud_ram_role.role.arn}"
  depends_on = ["alicloud_ram_role_policy_attachment.attac"]
}
```

» Module Support

You can use to the existing fc module to create a service and a function quickly
and then set several triggers for it.

» Argument Reference

The following arguments are supported:

- `name` - (ForceNew) The Function Compute service name. It is the only in one Alicloud account and is conflict with "name_prefix".
- `name_prefix` - (ForceNew) Setting a prefix to get a only name. It is conflict with "name".
- `description` - (Optional) The function compute service description.
- `internet_access` - (Optional) Whether to allow the service to access Internet. Default to "true".
- `role` - (Optional) RAM role arn attached to the Function Compute service. This governs both who / what can invoke your Function, as well as what resources our Function has access to. See User Permissions for more details.
- `log_config` - (Optional) Provide this to store your FC service logs. Fields documented below. See Create a Service.
- `vpc_config` - (Optional) Provide this to allow your FC service to access your VPC. Fields documented below. See Function Compute Service in VPC.

log_config requires the following:

- `project` - (Required) The project name of Logs service.
- `logstore` - (Required) The log store name of Logs service.

NOTE: If both `project` and `logstore` are empty, log_config is considered to be empty or unset.

vpc_config requires the following:

- `vswitch_ids` - (Required) A list of vswitch IDs associated with the FC service.
- `security_group_id` - (Required) A security group ID associated with the FC service.

NOTE: If both `vswitch_ids` and `security_group_id` are empty, vpc_config is considered to be empty or unset.

» Attributes Reference

The following arguments are exported:

- `id` - The ID of the FC service. The value is same as name.
- `service_id` - The Function Compute service ID.
- `last_modified` - The date this resource was last modified.

» Import

Function Compute Service can be imported using the id or name, e.g.

```
$ terraform import alicloud_fc_service.foo my-fc-service
```

» alicloud_fc_trigger

Provides an Alicloud Function Compute Trigger resource. Based on trigger, execute your code in response to events in Alibaba Cloud. For information about Service and how to use it, see What is Function Compute.

NOTE: The resource requires a provider field 'account_id'. See account_id.

» Example Usage

Basic Usage

```
variable "region" {
  default = "cn-hangzhou"
}
variable "account" {
  default = "12345"
}

provider "alicloud" {
  account_id = "${var.account}"
  region     = "${var.region}"
}

resource "alicloud_fc_trigger" "foo" {
  service    = "my-fc-service"
  function   = "hello-world"
  name       = "hello-trigger"
  role       = "${alicloud_ram_role.foo.arn}"
  source_arn = "acs:log:${var.region}:${var.account}:project/${alicloud_log_project.foo.name
  type       = "log"
  config     = <<EOF
    {
        "sourceConfig": {
            "project": "project-for-fc",
            "logstore": "project-for-fc"
        },
        "jobConfig": {
            "maxRetryTime": 3,
```

```
            "triggerInterval": 60
        },
        "functionParameter": {
            "a": "b",
            "c": "d"
        },
        "logConfig": {
            "project": "project-for-fc",
            "logstore": "project-for-fc"
        },
        "enable": true
    }
  EOF
  depends_on = ["alicloud_ram_role_policy_attachment.foo"]
}

resource "alicloud_ram_role" "foo" {
  name = "${var.name}-trigger"
  document = <<EOF
  {
    "Statement": [
      {
        "Action": "sts:AssumeRole",
        "Effect": "Allow",
        "Principal": {
          "Service": [
            "log.aliyuncs.com"
          ]
        }
      }
    ],
    "Version": "1"
  }
  EOF
  description = "this is a test"
  force       = true
}

resource "alicloud_ram_role_policy_attachment" "foo" {
  role_name    = "${alicloud_ram_role.foo.name}"
  policy_name = "AliyunLogFullAccess"
  policy_type = "System"
}
```

MNS topic trigger: variable "name" {   default = "fctriggermnstopic"
} data "alicloud_regions" "current_region" {   current = true }

```
data "alicloud_account" "current" { } resource "alicloud_log_project"
"foo" {    name          = "${var.name}"    description = "tf unit
test" } resource "alicloud_log_store" "bar" {    project          =
"${alicloud_log_project.foo.name}"    name            = "${var.name}-source"
retention_period = "3000"    shard_count        = 1 } resource
"alicloud_log_store" "foo" {    project          = "${alicloud_log_project.foo.name}"
name            = "${var.name}"    retention_period = "3000"
shard_count        = 1 } resource "alicloud_mns_topic" "foo" {
name = "${var.name}" } resource "alicloud_fc_service" "foo"
{    name          = "${var.name}"    internet_access = false
} resource "alicloud_oss_bucket" "foo" {    bucket = "${var.name}"
} resource "alicloud_oss_bucket_object" "foo" {    bucket  =
"${alicloud_oss_bucket.foo.id}"    key      = "fc/hello.zip"    content
= <<EOF      # -*- coding: utf-8 -*-      def handler(event, context):
print "hello world"          return 'hello world'    EOF } resource
"alicloud_fc_function" "foo" {    service = "${alicloud_fc_service.foo.name}"
name = "${var.name}"    oss_bucket = "${alicloud_oss_bucket.foo.id}"
oss_key = "${alicloud_oss_bucket_object.foo.key}"    memory_size
= 512    runtime = "python2.7"    handler = "hello.handler" }
resource "alicloud_ram_role" "foo" {    name = "${var.name}-trigger"
document = <<EOF    {      "Statement": [        {            "Action":
"sts:AssumeRole",          "Effect": "Allow",          "Principal":
{            "Service": [            "mns.aliyuncs.com"          ]
}        }      ],      "Version": "1"    }  EOF    description =
"this is a test"    force        = true } resource "alicloud_ram_policy"
"foo" {    name      = "${var.name}-trigger"    document = <<EOF    {
"Version": "1",      "Statement": [        {            "Action":
[              "log:PostLogStoreLogs"            ],            "Resource":
"*",            "Effect": "Allow"        }      ]    }  EOF
description = "this is a test"    force = true } resource "alicloud_ram_role_policy_attachmen
"foo" {    role_name = "${alicloud_ram_role.foo.name}"    policy_name
= "${alicloud_ram_policy.foo.name}"    policy_type = "Custom" }
resource "alicloud_fc_trigger" "foo" {    service = "${alicloud_fc_service.foo.name}"
function = "${alicloud_fc_function.foo.name}"    name = "${var.name}"
role = "${alicloud_ram_role.foo.arn}"    source_arn = "acs:mns:${data.alicloud_regions.curren
type = "mns_topic"    config_mns = <<EOF    {      "filterTag":"testTag",
"notifyContentFormat":"STREAM",     "notifyStrategy":"BACKOFF_RETRY"
}  EOF    depends_on = ["alicloud_ram_role_policy_attachment.foo"]
}
```

CDN events trigger: "' variable "name" { default = "fctriggercdneventsconfig"
}

data "alicloud_account" "current" { }

resource "alicloud_cdn_domain_new" "domain" {   domain_name   =
"${var.name}.tf.com" cdn_type = "web" scope = "overseas" sources {

content = "1.1.1.1" type = "ipaddr" priority = 20 port = 80 weight = 10 } }

resource "alicloud_fc_service" "foo" { name = "${var.name}" internet_access = false } resource "alicloud_oss_bucket" "foo" { bucket = "${var.name}" } resource "alicloud_oss_bucket_object" "foo" { bucket = "${alicloud_oss_bucket.foo.id}" key = "fc/hello.zip" content = <<EOF # -- *coding: utf-8* -- def handler(event, context): print "hello world" return 'hello world' EOF } resource "alicloud_fc_function" "foo" { service = "${alicloud_fc_service.foo.name}" name = "${var.name}" oss_bucket = "${alicloud_oss_bucket.foo.id}" oss_key = "${alicloud_oss_bucket_object.foo.key}" memory_size = 512 runtime = "python2.7" handler = "hello.handler" } resource "alicloud_ram_role" "foo" { name = "${var.name}-trigger" document = <<EOF { "Version": "1", "Statement": [{ "Action": "cdn:Describe*", "Resource": "*", "Effect": "Allow", "Principal": { "Service": ["log.aliyuncs.com"] } }] } EOF description = "this is a test" force = true }

resource "alicloud_ram_policy" "foo" { name = "${var.name}-trigger" document = <<EOF { "Version": "1", "Statement": [{ "Action": ["fc:InvokeFunction"], "Resource": ["acs:fc:::services/tf_cdnEvents/functions/*", "acs:fc:::services/tf_cdnEvents./functions/*"], "Effect": "Allow" }] } EOF description = "this is a test" force = true } resource "alicloud_ram_role_policy_attachment" "foo" { role_name = "${alicloud_ram_role.foo.name}" policy_name = "${alicloud_ram_policy.foo.name}" policy_type = "Custom" } resource "alicloud_fc_trigger" "default" { service = "${alicloud_fc_service.foo.name}" function = "${alicloud_fc_function.foo.name}" name = "${var.name}" role = "${alicloud_ram_role.foo.arn}" source_arn = "acs:cdn::${data.alicloud_account.current.id}" type = "cdn_events" config = <<EOF {"eventName":"LogFileCreated", "eventVersion":"1.0.0", "notes":"cdn events trigger", "filter":{ "domain": ["${alicloud_cdn_domain_new.domain.domain_name}"] } }EOF depends_on = ["alicloud_ram_role_policy_attachment.foo"] } "'

» Module Support

You can use to the existing fc module to create several triggers quickly.

» Argument Reference

The following arguments are supported:

- `service` - (Required, ForceNew) The Function Compute service name.
- `function` - (Required, ForceNew) The Function Compute function name.
- `name` - (ForceNew) The Function Compute trigger name. It is the only in one service and is conflict with "name_prefix".
- `name_prefix` - (ForceNew) Setting a prefix to get a only trigger name. It is conflict with "name".

- `role` - (Optional) RAM role arn attached to the Function Compute trigger. Role used by the event source to call the function. The value format is "acs:ram::$account-id:role/$role-name". See Create a trigger for more details.
- `source_arn` - (Optional, ForceNew) Event source resource address. See Create a trigger for more details.
- `config` - (Optional) The config of Function Compute trigger.It is valid when `type` is not "mns_topic".See Configure triggers and events for more details.
- `config_mns` - (Optional, ForceNew, Available in 1.41.0) The config of Function Compute trigger when the type is "mns_topic".It is conflict with `config`.
- `type` - (Required, ForceNew) The Type of the trigger. Valid values: ["oss", "log", "timer", "http", "mns_topic", "cdn_events"].

NOTE: Config does not support modification when type is mns_topic.
NOTE: type = cdn_events, available in 1.47.0+.

» Attributes Reference

The following arguments are exported:

- `id` - The ID of the function. The value is formate as `<service>:<function>:<name>`.
- `last_modified` - The date this resource was last modified.
- `trigger_id` - The Function Compute trigger ID.

» Import

Function Compute trigger can be imported using the id, e.g.

```
$ terraform import alicloud_fc_service.foo my-fc-service:hello-world:hello-trigger
```

» alicloud_hbase_instances

The `alicloud_hbase_instances` data source provides a collection of HBase instances available in Alicloud account. Filters support regular expression for the instance name, ids or availability_zone.

NOTE: Available in 1.67.0+

» Example Usage

```
data "alicloud_hbase_instances" "hbase" {
```

```
  name_regex        = "tf_testAccHBase"
  availability_zone = "cn-shenzhen-b"
}
```

» Argument Reference

The following arguments are supported:

- `name_regex` - (Optional) A regex string to apply to the instance name.
- `ids` - (Optional) The ids list of HBase instances
- `availability_zone` - (Optional) Instance availability zone.
- `output_file` - (Optional) The name of file that can save the collection of instances after running `terraform plan`.

» Attributes Reference

The following attributes are exported in addition to the arguments listed above: * `ids` - The ids list of HBase instances * `names` - The names list of HBase instances * `instances` - A list of HBase instances. Its every element contains the following attributes: * `id` - The ID of the HBase instance. * `name` - The name of the HBase instance. * `region_id` - Region ID the instance belongs to. * `zone_id` - Zone ID the instance belongs to. * `engine` - the engine of the instance. * `engine_version` - the engine_version of the instance. * `network_type` - Classic network or VPC. * `master_instance_type` - hbase.n1.medium, hbase.n1.large, hbase.n1.2xlarge and so on. * `master_node_count` - the node count of master * `core_instance_type` - hbase.n1.medium, hbase.n1.large, hbase.n1.2xlarge and so on. * `core_node_count` - same with "core_instance_quantity" * `core_disk_type` - cloud_ssd or cloud_efficiency * `core_disk_size` - core node disk size, unit:GB. * `vpc_id` - VPC ID the instance belongs to. * `vswitch_id` - VSwitch ID the instance belongs to. * `pay_type` - Billing method. Value options are `PostPaid` for Pay-As-You-Go and `PrePaid` for yearly or monthly subscription. * `status` - Status of the instance. * `backup_status` - the Backup Status of the instance. * `create_time` - the create time of the instance. * `expire_time` - the expire time of the instance.

» alicloud_hbase_instance

Provides a HBase instance resource supports replica set instances only. the HBase provides stable, reliable, and automatic scalable database services. It offers a full range of database solutions, such as disaster recovery, backup, recovery, monitoring, and alarms. You can see detail product introduction here

NOTE: Available in 1.67.0+

NOTE: The following regions don't support create Classic network HBase instance. [`cn-hangzhou`,`cn-shanghai`,`cn-qingdao`,`cn-beijing`,`cn-shenzhen`,.....] the official website mark more regions. or you can call DescribeRegions

NOTE: Create HBase instance or change instance type and storage would cost 15 minutes. Please make full preparation

» Example Usage

» Create a hbase instance

```
resource "alicloud_hbase_instance" "default" {
  name = "tf_testAccHBase_classic"
  zone_id = "cn-shenzhen-b"
  engine_version = "2.0"
  master_instance_type = "hbase.n1.medium"
  core_instance_type = "hbase.n1.large"
  core_instance_quantity = 2
  core_disk_type = "cloud_efficiency"
  core_disk_size = 100
  pay_type = "PostPaid"
  cold_storage_size = 0
}
```

this is a example for class netType instance. you can find more detail with the examples/hbase dir.

» Argument Reference

The following arguments are supported:

- `name` - (Required) HBase instance name. Length must be 2-128 characters long. Only Chinese characters, English letters, numbers, period (.), underline (_), or dash (-) are permitted.
- `zone_id` - (Optional, ForceNew) The Zone to launch the HBase instance. if vswitch_id is not empty, this zone_id can be "" or consistent.
- `hbase` - (Optional, ForceNew) "hbase".
- `engine_version` - (Required, ForceNew) hbase major version. hbase:1.1, 2.0; unsupport other engine temporarily. Value options can refer to the latest docs CreateInstance.
- `master_instance_type core_instance_type` - (Required, ForceNew) Instance specification. see Instance specifications. or you can call describeInstanceType api.

- `core_instance_quantity`- (Optional. ForceNew) default=2. if core_instance_quantity > 1,this is cluster's instance. if core_instance_quantity = 1,this is a single instance.
- `core_disk_type`- (Required, ForceNew) Valid values are `cloud_ssd`, `cloud_efficiency`, `local_hdd_pro`, `local_ssd_pro`. local_disk size is fixed.
- `core_disk_size` - (Optional, ForceNew) User-defined HBase instance one core node's storage space.Unit: GB. Value range:
  - Custom storage space; value range: [100,2000]
  - 10-GB increments.
- `pay_type` - (Optional, ForceNew) Valid values are `PrePaid`, `PostPaid`,System default to `PostPaid`.
- `duration` - (Optional, ForceNew) 1, 2, 3, 4, 5, 6, 7, 8, 9, 12, 24, 36, 60, valid when pay_type = PrePaid. unit: month.
- `auto_renew` - (Optional, ForceNew) `true`, `false`, System default to `false`, valid when pay_type = PrePaid.
- `vswitch_id` - (Optional, ForceNew) if vswitch_id is not empty, that mean net_type = vpc and has a same region. if vswitch_id is empty, net_type_classic
- `cold_storage_size` - (Optional, ForceNew) 0 or 0+. 0 means is_cold_storage = false. 0+ means is_cold_storage = true

NOTE: now only instance name can be change. the others(instance_type, disk_size, core_instance_quantity and so on) will be supported in the furture.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the HBase.

» Timeouts

The `timeouts` block allows you to specify timeouts for certain actions:

- `create` - (Defaults to 30 mins) Used when creating the HBase instance (until it reaches the initial `ACTIVATION` status).
- `delete` - (Defaults to 30 mins) Used when terminating the HBase instance.

» Import

HBase can be imported using the id, e.g.

```
$ terraform import alicloud_hbase_instance.example hb-wz96815u13k659fvd
```

» alicloud_kms_keys

This data source provides a list of KMS keys in an Alibaba Cloud account according to the specified filters.

» Example Usage

```
# Declare the data source
data "alicloud_kms_keys" "kms_keys_ds" {
  description_regex = "Hello KMS"
  output_file       = "kms_keys.json"
}

output "first_key_id" {
  value = "${data.alicloud_kms_keys.kms_keys_ds.keys.0.id}"
}
```

» Argument Reference

The following arguments are supported:

- `ids` - (Optional) A list of KMS key IDs.
- `description_regex` - (Optional) A regex string to filter the results by the KMS key description.
- `status` - (Optional) Filter the results by status of the KMS keys. Valid values: `Enabled`, `Disabled`, `PendingDeletion`.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of KMS key IDs.
- `keys` - A list of KMS keys. Each element contains the following attributes:
  - `id` - ID of the key.
  - `arn` - The Alibaba Cloud Resource Name (ARN) of the key.
  - `description` - Description of the key.
  - `status` - Status of the key. Possible values: `Enabled`, `Disabled` and `PendingDeletion`.
  - `creation_date` - Creation date of key.
  - `delete_date` - Deletion date of key.
  - `creator` - The owner of the key.

» alicloud_kms_ciphertext

Encrypt a given plaintext with KMS. The plaintext gets re-encrypted on each apply, resulting in a changed ciphertext. If a stable ciphertext is needed use the `alicloud_kms_ciphertext` resource.

NOTE: Using this data provider will allow you to conceal secret data within your resource definitions but does not take care of protecting that data in all Terraform logging and state output. Please take care to secure your secret data beyond just the Terraform configuration.

» Example Usage

```
resource "alicloud_kms_key" "key" {
  description             = "example key"
  is_enabled              = true
}

data "alicloud_kms_ciphertext" "encrypted" {
  key_id    = alicloud_kms_key.key.id
  plaintext = "example"
}
```

» Argument Reference

The following arguments are supported:

- `plaintext` - The plaintext to be encrypted which must be encoded in Base64.
- `key_id` - The globally unique ID of the CMK.
- `encryption_context` - (Optional) The Encryption context. If you specify this parameter here, it is also required when you call the Decrypt API operation. For more information, see Encryption Context.

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ciphertext_blob` - The ciphertext of the data key encrypted with the primary CMK version.

» alicloud_kms_plaintext

Decrypt a given ciphertext with KMS to use the resulting plaintext in resources.

NOTE: Using this data provider will allow you to conceal secret data within your resource definitions but does not take care of protecting that data in all Terraform logging and state output. Please take care to secure your secret data beyond just the Terraform configuration.

» Example Usage

```
resource "alicloud_kms_key" "key" {
  description           = "example key"
  is_enabled            = true
}

# Encrypt plaintext 'example'
resource "alicloud_kms_ciphertext" "encrypted" {
  key_id    = alicloud_kms_key.key.id
  plaintext = "example"
}

# Decrypt encrypted ciphertext
data "alicloud_kms_plaintext" "plaintext" {
  ciphertext_blob = alicloud_kms_ciphertext.encrypted.ciphertext_blob
}

# Output 'example' should match the plaintext encrypted in the beginning
output "decrypted" {
  value = data.alicloud_kms_plaintext.plaintext.plaintext
}
```

» Argument Reference

The following arguments are supported:

- `encryption_context` - (Optional) The Encryption context. If you specify this parameter in the Encrypt or GenerateDataKey API operation, it is also required when you call the Decrypt API operation. For more information, see Encryption Context.
- `ciphertext_blob` - The ciphertext to be decrypted.

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `plaintext` - The decrypted plaintext.
- `key_id` - The globally unique ID of the CMK. It is the ID of the CMK used to decrypt ciphertext.

» alicloud_kms_key

A kms key can help user to protect data security in the transmission process.

» Example Usage

Basic Usage

```
resource "alicloud_kms_key" "key" {
  description           = "Hello KMS"
  deletion_window_in_days = "7"
  is_enabled            = true
}
```

» Argument Reference

The following arguments are supported:

- `description` - (Optional, ForceNew) The description of the key as viewed in Alicloud console. Default to "From Terraform".
- `key_usage` - (Optional) Specifies the usage of CMK. Currently, default to 'ENCRYPT/DECRYPT', indicating that CMK is used for encryption and decryption.
- `deletion_window_in_days` - (Optional) Duration in days after which the key is deleted after destruction of the resource, must be between 7 and 30 days. Defaults to 30 days.
- `is_enabled` - (Optional) Specifies whether the key is enabled. Defaults to true.

NOTE: At present, the resource only supports to modify `is_enabled`.

NOTE: When the pre-deletion days elapses, the key is permanently deleted and cannot be recovered.

» Attributes Reference

- `id` - The ID of the key.
- `arn` - The Alicloud Resource Name (ARN) of the key.
- `description` - The description of the key.
- `key_usage` - (ForceNew) Specifies the usage of CMK.
- `deletion_window_in_days` - During pre-deletion days.
- `is_enabled` - Whether the key is enabled.

» Import

KMS key can be imported using the id, e.g.

```
$ terraform import alicloud_kms_key.example abc123456
```

» alicloud_kms_ciphertext

Encrypt a given plaintext with KMS. The produced ciphertext stays stable across applies. If the plaintext should be re-encrypted on each apply use the `alicloud_kms_ciphertext` data source.

NOTE: Using this data provider will allow you to conceal secret data within your resource definitions but does not take care of protecting that data in all Terraform logging and state output. Please take care to secure your secret data beyond just the Terraform configuration.

» Example Usage

```
resource "alicloud_kms_key" "key" {
  description            = "example key"
  is_enabled             = true
}

resource "alicloud_kms_ciphertext" "encrypted" {
  key_id    = alicloud_kms_key.key.id
  plaintext = "example"
}
```

» Argument Reference

The following arguments are supported:

- `plaintext` - (ForceNew) The plaintext to be encrypted which must be encoded in Base64.
- `key_id` - (ForceNew) The globally unique ID of the CMK.
- `encryption_context` - (Optional, ForceNew) The Encryption context. If you specify this parameter here, it is also required when you call the Decrypt API operation. For more information, see Encryption Context.

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ciphertext_blob` - The ciphertext of the data key encrypted with the primary CMK version.

» alicloud_log_machine_group

Log Service manages all the ECS instances whose logs need to be collected by using the Logtail client in the form of machine groups. Refer to details

» Example Usage

Basic Usage

```
resource "alicloud_log_project" "example" {
  name        = "tf-log"
  description = "created by terraform"
}
resource "alicloud_log_machine_group" "example" {
  project       = "${alicloud_log_project.example.name}"
  name          = "tf-machine-group"
  identify_type = "ip"
  topic         = "terraform"
  identify_list = ["10.0.0.1", "10.0.0.2"]
}
```

» Module Support

You can use the existing sls-logtail module to create logtail config, machine group, install logtail on ECS instances and join instances into machine group one-click.

» **Argument Reference**

The following arguments are supported:

- `project` - (Required, ForceNew) The project name to the machine group belongs.
- `name` - (Required, ForceNew) The machine group name, which is unique in the same project.
- `identify_type` - (Optional) The machine identification type, including IP and user-defined identity. Valid values are "ip" and "userdefined". Default to "ip".
- `identify_list`- (Required) The specific machine identification, which can be an IP address or user-defined identity.
- `topic` - (Optional) The topic of a machine group.

» **Attributes Reference**

The following attributes are exported:

- `id` - The ID of the log machine group. It formats of `<project>:<name>`.
- `project` - The project name.
- `name` - The machine group name.
- `identify_type` - The machine identification type.
- `identify_list` - The machine identification.
- `topic` - The machine group topic.

» **Import**

Log machine group can be imported using the id, e.g.

```
$ terraform import alicloud_log_machine_group.example tf-log:tf-machine-group
```

» **alicloud_log_project**

The project is the resource management unit in Log Service and is used to isolate and control resources. You can manage all the logs and the related log sources of an application by using projects. Refer to details.

» **Example Usage**

Basic Usage

```
resource "alicloud_log_project" "example" {
  name        = "tf-log"
  description = "created by terraform"
}
```

» Module Support

You can use the existing sls module to create SLS project, store and store index
one-click, like ECS instances.

» Argument Reference

The following arguments are supported:

- `name` - (Required, ForceNew) The name of the log project. It is the only
  in one Alicloud account.
- `description` - (Optional) Description of the log project.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the log project. It sames as its name.
- `name` - Log project name.
- `description` - Log project description.

» Import

Log project can be imported using the id or name, e.g.

```
$ terraform import alicloud_log_project.example tf-log
```

» alicloud_log_store

The log store is a unit in Log Service to collect, store, and query the log data.
Each log store belongs to a project, and each project can create multiple Log-
stores. Refer to details

» Example Usage

Basic Usage

```
resource "alicloud_log_project" "example" {
  name        = "tf-log"
  description = "created by terraform"
}

resource "alicloud_log_store" "example" {
  project               = "${alicloud_log_project.example.name}"
  name                  = "tf-log-store"
  shard_count           = 3
  auto_split            = true
  max_split_shard_count = 60
  append_meta           = true
}
```

» Module Support

You can use the existing sls module to create SLS project, store and store index one-click, like ECS instances.

» Argument Reference

The following arguments are supported:

- `project` - (Required, ForceNew) The project name to the log store belongs.
- `name` - (Required, ForceNew) The log store, which is unique in the same project.
- `retention_period` - (Optional) The data retention time (in days). Valid values: [1-3650]. Default to 30. Log store data will be stored permanently when the value is "3650".
- `shard_count` - (Optional) The number of shards in this log store. Default to 2. You can modify it by "Split" or "Merge" operations. Refer to details
- `auto_split` - (Optional) Determines whether to automatically split a shard. Default to true.
- `max_split_shard_count` - (Optional) The maximum number of shards for automatic split, which is in the range of 1 to 64. You must specify this parameter when autoSplit is true.
- `append_meta` - (Optional) Determines whether to append log meta automatically. The meta includes log receive time and client IP address. Default to true.

- `enable_web_tracking` - (Optional) Determines whether to enable Web Tracking. Default false.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the log project. It formats of `<project>:<name>`.
- `project` - The project name.
- `name` - Log store name.
- `retention_period` - The data retention time.
- `shard_count` - The number of shards.
- `auto_split` - Determines whether to automatically split a shard.
- `max_split_shard_count` - The maximum number of shards for automatic split.
- `append_meta` - Determines whether to append log meta automatically.
- `enable_web_tracking` - Determines whether to enable Web Tracking.

» Import

Log store can be imported using the id, e.g.

```
$ terraform import alicloud_log_store.example tf-log:tf-log-store
```

» alicloud_log_store_index

Log Service provides the LogSearch/Analytics function to query and analyze large amounts of logs in real time. You can use this function by enabling the index and field statistics. Refer to details

» Example Usage

Basic Usage

```
resource "alicloud_log_project" "example" {
  name        = "tf-log"
  description = "created by terraform"
}
resource "alicloud_log_store" "example" {
  project     = "${alicloud_log_project.example.name}"
  name        = "tf-log-store"
  description = "created by terraform"
}
```

```
resource "alicloud_log_store_index" "example" {
  project  = "${alicloud_log_project.example.name}"
  logstore = "${alicloud_log_store.example.name}"
  full_text {
    case_sensitive = true
    token          = " #$%^*\r\n\t"
  }
  field_search {
    name            = "terraform"
    enable_analytics = true
  }
}
```

» Module Support

You can use the existing sls module to create SLS project, store and store index one-click, like ECS instances.

» Argument Reference

The following arguments are supported:

- `project` - (Required, ForceNew) The project name to the log store belongs.

- `logstore` - (Required, ForceNew) The log store name to the query index belongs.

- `full_text` - The configuration of full text index. Valid item as follows:

  - `case_sensitive` - (Optional) Whether the case sensitive. Default to false.
  - `include_chinese` - (Optional) Whether includes the chinese. Default to false.
  - `token` - (Optional) The string of several split words, like ”\r”, ”#”

- `field_search` - List configurations of field search index. Valid item as follows:

  - `name` - (Required) The field name, which is unique in the same log store.
  - `type` - (Optional) The type of one field. Valid values: [”long”, ”text”, ”double”, ”json”]. Default to ”long”.
  - `alias` - (Optional) The alias of one field
  - `case_sensitive` - (Optional) Whether the case sensitive for the field. Default to false. It is valid when ”type” is ”text” or ”json”.

- **include_chinese** - (Optional) Whether includes the chinese for the field. Default to false. It is valid when "type" is "text" or "json".
- **token** - (Optional) The string of several split words, like "\r", "#". It is valid when "type" is "text" or "json".
- **enable_analytics** - (Optional) Whether to enable field analytics. Default to true.
- **json_keys** - (Optional, Available in 1.66.0+) Use nested index when type is json
    * **name** - (Required) When using the json_keys field, this field is required.
    * **type** - (Optional) The type of one field. Valid values: ["long", "text", "double"]. Default to "long"
    * **alias** - (Optional) The alias of one field.
    * **doc_value** - (Optional) Whether to enable statistics. default to true.

Note: At least one of the "full_text" and "field_search" should be specified.

» Attributes Reference

The following attributes are exported:

- **id** - The ID of the log store index. It formats of `<project>:<logstore>`.

» Import

Log store index can be imported using the id, e.g.

```
$ terraform import alicloud_log_store_index.example tf-log:tf-log-store
```

» alicloud_logtail_attachment

The Logtail access service is a log collection agent provided by Log Service. You can use Logtail to collect logs from servers such as Alibaba Cloud Elastic Compute Service (ECS) instances in real time in the Log Service console. Refer to details

This resource amis to attach one logtail configure to a machine group.

NOTE: One logtail configure can be attached to multiple machine groups and one machine group can attach several logtail configures.

» Example Usage

Basic Usage

```
resource "alicloud_log_project" "test" {
  name        = "test-tf2"
  description = "create by terraform"
}
resource "alicloud_log_store" "test" {
  project               = "${alicloud_log_project.test.name}"
  name                  = "tf-test-logstore"
  retention_period      = 3650
  shard_count           = 3
  auto_split            = true
  max_split_shard_count = 60
  append_meta           = true
}
resource "alicloud_log_machine_group" "test" {
  project       = "${alicloud_log_project.test.name}"
  name          = "tf-log-machine-group"
  topic         = "terraform"
  identify_list = ["10.0.0.1", "10.0.0.3", "10.0.0.2"]
}
resource "alicloud_logtail_config" "test" {
  project      = "${alicloud_log_project.test.name}"
  logstore     = "${alicloud_log_store.test.name}"
  input_type   = "file"
  log_sample   = "test"
  name         = "tf-log-config"
  output_type  = "LogService"
  input_detail = <<DEFINITION
    {
        "logPath": "/logPath",
        "filePattern": "access.log",
        "logType": "json_log",
        "topicFormat": "default",
        "discardUnmatch": false,
        "enableRawLog": true,
        "fileEncoding": "gbk",
        "maxDepth": 10
    }
    DEFINITION
}
resource "alicloud_logtail_attachment" "test" {
  project = "${alicloud_log_project.test.name}"
  logtail_config_name = "${alicloud_logtail_config.test.name}"
```

```
  machine_group_name = "${alicloud_log_machine_group.test.name}"
}
```

» Argument Reference

The following arguments are supported:

- `project` - (Required, ForceNew) The project name to the log store belongs.
- `logtail_config_name` - (Required, ForceNew) The Logtail configuration name, which is unique in the same project.
- `machine_group_name` - (Required, ForceNew) The machine group name, which is unique in the same project.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the logtail to machine group. It formats of `<project>:<logtail_config_name>:<machine_group_name>`.

» Import

Logtial to machine group can be imported using the id, e.g.

```
$ terraform import alicloud_logtail_to_machine_group.example tf-log:tf-log-config:tf-log-ma
```

» alicloud_logtail_config

The Logtail access service is a log collection agent provided by Log Service. You can use Logtail to collect logs from servers such as Alibaba Cloud Elastic Compute Service (ECS) instances in real time in the Log Service console. Refer to details

» Example Usage

Basic Usage

```
resource "alicloud_log_project" "example" {
  name        = "test-tf"
  description = "create by terraform"
}
resource "alicloud_log_store" "example" {
```

```
  project               = "${alicloud_log_project.example.name}"
  name                  = "tf-test-logstore"
  retention_period      = 3650
  shard_count           = 3
  auto_split            = true
  max_split_shard_count = 60
  append_meta           = true
}
resource "alicloud_logtail_config" "example" {
  project      = "${alicloud_log_project.example.name}"
  logstore     = "${alicloud_log_store.example.name}"
  input_type   = "file"
  log_sample   = "test"
  name         = "tf-log-config"
  output_type  = "LogService"
  input_detail = "${file("config.json")}"
}
```

» Module Support

You can use the existing sls-logtail module to create logtail config, machine group, install logtail on ECS instances and join instances into machine group one-click.

» Argument Reference

The following arguments are supported:

- `project` - (Required, ForceNew) The project name to the log store belongs.
- `logstore` - (Required, ForceNew) The log store name to the query index belongs.
- `input_type` - (Required) The input type. Currently only two types of files and plugin are supported.
- `log_sample` - Optional The log sample of the Logtail configuration. The log size cannot exceed 1,000 bytes.
- `name` - (Required, ForceNew) The Logtail configuration name, which is unique in the same project.
- `output_type` - (Required) The output type. Currently, only LogService is supported.
- `input_detail` - (Required) The logtail configure the required JSON files. (Refer to details)

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» Attributes Reference

The following attributes are exported:

- `id` - The ID of the log store index. It formats of `<project>:<logstore>:<config_name>`.

» Import

Logtial config can be imported using the id, e.g.

```
$ terraform import alicloud_logtail_config.example tf-log:tf-log-store:tf-log-config
```

» alicloud_market_product

This data source provides the Market product item details of Alibaba Cloud.

NOTE: Available in 1.69.0+

» Example Usage

```
data "alicloud_market_product" "default" {
  product_code = "cmapi022206"
}

output "product_name" {
  value = "${data.alicloud_market_product.default.product.0.name}"
}

output "first_product_sku_code" {
  value = "${data.alicloud_market_product.default.product.0.skus.0.sku_code}"
}

output "first_product_package_version" {
  value = "${data.alicloud_market_product.default.product.0.skus.0.package_versions.0.packag
}
```

» Argument Reference

The following arguments are supported:

- `product_code` - (Required) The product code of the market product.

» **Attributes Reference**

The following attributes are exported in addition to the arguments listed above:

- `product` - A product. It contains the following attributes:
    - `code` - The code of the product.
    - `name` - The name of the product.
    - `description` - The description of the product.
    - `skus` - A list of one element containing sku attributes of an object. Each element contains the following attributes:
    - `sku_code` - The sku code of this product sku.
    - `sku_name` - The sku name of this product sku.
    - `package_versions` - The list of package version details of this product sku, Each element contains the following attributes:
        * `package_name` - The package name of this product sku package.
        * `package_version` - The package version of this product sku package. Currently, the API products can return package_version, but others can not for ensure.

» **alicloud_market_products**

This data source provides the Market product items of Alibaba Cloud.

NOTE: Available in 1.64.0+

» **Example Usage**

```
data "alicloud_market_products" "default" {
  sort        = "created_on-desc"
  category_id = "53690006"
  product_type = "SERVICE"
}

output "first_product_code" {
  value = "${data.alicloud_market_products.default.product_items.0.code}"
}

output "product_codes" {
  value = "${data.alicloud_market_products.default.ids}"
}
```

» Argument Reference

The following arguments are supported:

- `name_regex` - (Optional, Available 1.66.0+) A regex string to apply to the product name.
- `ids` - (Optional, Available 1.66.0+) A list of product code.
- `sort` - (Optional, ForceNew) This field determines how to sort the filtered results, Valid values: `user_count-desc`, `created_on-desc`, `price-desc` and `score-desc`.
- `category_id` - (Optional, ForceNew) The Category ID of products. For more information, see DescribeProducts.
- `product_type` - (Optional, ForceNew) The type of products, Valid values: `APP`, `SERVICE`, `MIRROR`, `DOWNLOAD` and `API_SERVICE`.
- `search_term` - (Optional, ForceNew, Available 1.69.0+) Search term in this query.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of product codes.
- `products` - A list of products. Each element contains the following attributes:
    - `code` - The code of the product.
    - `name` - The name of the product.
    - `category_id` - The category id of the product.
    - `supplier_id` - The supplier id of the product.
    - `supplier_name` - The supplier name of the product.
    - `short_description` - The short description of the product.
    - `tags` - The tags of the product.
    - `suggested_price` - The suggested price of the product.
    - `target_url` - The detail page URL of the product.
    - `image_url` - The image URL of the product.
    - `score` - The rating information of the product.
    - `operation_system` - The operation system of the product.
    - `warranty_date` - The warranty date of the product.
    - `delivery_date` - The delivery date of the product.
    - `delivery_way` - The delivery way of the product.

» alicloud_market_order

Provides a market order resource.

NOTE: Terraform will auto build a market order while it uses `alicloud_market_order` to build a market order resource.

NOTE: Available in 1.69.0+

» Example Usage

Basic Usage

```
resource "alicloud_market_order" "order" {
  product_code    = "cmapi033136"
  pay_type        = "prepay"
  quantity        = 1
  duration        = 1
  pricing_cycle   = "Month"
  package_version = "yuncode2713600001"
  coupon_id       = ""
}
```

» Argument Reference

The following arguments are supported:

- `product_code` - (Required, ForceNew) The product_code of market place product.
- `pay_type` - (Optional, ForceNew) Valid values are `PrePaid`, `PostPaid`,System default to `PostPaid`.
- `duration` - (Optional, ForceNew) The number of purchase cycles.
- `pricing_cycle` - (Required, ForceNew) The purchase cycle of the product, valid values are `Day`, `Month` and `Year`.
- `package_version` - (Required, ForceNew) The package version of the market product.
- `quantity` - (Optional, ForceNew) The quantity of the market product will be purchased.
- `coupon_id` - (Optional, ForceNew) The coupon id of the market product.
- `components` - (Optional, ForceNew) Service providers customize additional components.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the market order.

» Import

Market order can be imported using the id, e.g.

```
$ terraform import alicloud_market_order.order your-order-id
```

» alicloud_mns_queues

This data source provides a list of MNS queues in an Alibaba Cloud account according to the specified parameters.

» Example Usage

```
data "alicloud_mns_queues" "queues" {
  name_prefix = "tf-"
}

output "first_queue_id" {
  value = "${data.alicloud_mns_queues.queues.queues.0.id}"
}
```

» Argument Reference

The following arguments are supported:

- `name_prefix` - (Optional) A string to filter resulting queues by their name prefixs.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `names` - A list of queue names.
- `queues` - A list of queues. Each element contains the following attributes:
  - `id` - The id of the queue, The value is set to `name`.
  - `name` - The name of the queue
  - `delay_seconds` - This attribute defines the length of time, in seconds, after which every message sent to the queue is dequeued.

- **maximum_message_size** - This indicates the maximum length, in bytes, of any message body sent to the queue.
- **message_retention_period** - Messages are deleted from the queue after a specified length of time, whether they have been activated or not. This attribute defines the viability period, in seconds, for every message in the queue.
- **visibility_timeouts** - Dequeued messages change from active (visible) status to inactive (invisible) status. This attribute defines the length of time, in seconds, that messages remain invisible. Messages return to active status after the set period.
- **polling_wait_seconds** - Long polling is measured in seconds. When this attribute is set to 0, long polling is disabled. When it is not set to 0, long polling is enabled and message dequeue requests will be processed only when valid messages are received or when long polling times out.

» alicloud_mns_topic_subscriptions

This data source provides a list of MNS topic subscriptions in an Alibaba Cloud account according to the specified parameters.

» Example Usage

```
data "alicloud_mns_topic_subscriptions" "subscriptions" {
  topic_name  = "topic_name"
  name_prefix = "tf-"
}

output "first_topic_subscription_id" {
  value = "${data.alicloud_mns_topic_subscriptions.subscriptions.subscriptions.0.id}"
}
```

» Argument Reference

The following arguments are supported:

- **topic_name** - (Required) Two topics on a single account in the same region cannot have the same name. A topic name must start with an English letter or a digit, and can contain English letters, digits, and hyphens, with the length not exceeding 256 characters.
- **name_prefix** - (Optional) A string to filter resulting subscriptions of the topic by their name prefixs.

- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `names` - A list of subscription names.
- `subscriptions` - A list of subscriptions. Each element contains the following attributes:
  - `id` - The ID of the topic subscription. The value is set to `name`.
  - `name` - The name of the subscription.
  - `topic_name`- The topic which The subscription belongs to was named with the name.
  - `notify_strategy` - The NotifyStrategy attribute of Subscription. This attribute specifies the retry strategy when message sending fails.
  - `notify_content_format` - The NotifyContentFormat attribute of Subscription. This attribute specifies the content format of the messages pushed to users.
  - `endpoint` - Describe the terminal address of the message received in this subscription.
  - `filter_tag`- A string to filter resulting messages of the topic by their message tag.

» alicloud_mns_topics

This data source provides a list of MNS topics in an Alibaba Cloud account according to the specified parameters.

» Example Usage

```
data "alicloud_mns_topics" "topics" {
  name_prefix = "tf-"
}

output "first_topic_id" {
  value = "${data.alicloud_mns_topics.topics.topics.0.id}"
}
```

» Argument Reference

The following arguments are supported:

- `name_prefix` - (Optional) A string to filter resulting topics by their name prefixs.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `names` - A list of topic names.
- `topics` - A list of topics. Each element contains the following attributes:
  - `id` - The id of the topic. The value is set to `name`.
  - `name` - The name of the topic.
  - `maximum_message_size` - This indicates the maximum length, in bytes, of any message body sent to the topic.
  - `logging_enabled` - Whether to enable logging.

» alicloud_mns_queue

Provides a MNS queue resource.

NOTE: Terraform will auto build a mns queue while it uses `alicloud_mns_queue` to build a mns queue resource.

» Example Usage

Basic Usage

```
resource "alicloud_mns_queue" "queue" {
  name                     = "tf-example-mnsqueue"
  delay_seconds            = 0
  maximum_message_size     = 65536
  message_retention_period = 345600
  visibility_timeout       = 30
  polling_wait_seconds     = 0
}
```

» Argument Reference

The following arguments are supported:

- `name` - (Required, ForcesNew)Two queues on a single account in the same region cannot have the same name. A queue name must start with an English letter or a digit, and can contain English letters, digits, and hyphens, with the length not exceeding 256 characters .
- `delay_seconds` - (Optional)This attribute defines the length of time, in seconds, after which every message sent to the queue is dequeued. Valid value range: 0-604800 seconds, i.e., 0 to 7 days. Default value to 0.
- `maximum_message_size` - (Optional)This indicates the maximum length, in bytes, of any message body sent to the queue. Valid value range: 1024-65536, i.e., 1K to 64K. Default value to 65536.
- `message_retention_period` - (Optional) Messages are deleted from the queue after a specified length of time, whether they have been activated or not. This attribute defines the viability period, in seconds, for every message in the queue. Valid value range: 60-604800 seconds, i.e., 1 minutes to 7 days. Default value to 345600.
- `visibility_timeout` - (Optional) The VisibilityTimeout attribute of the queue. A dequeued messages will change from active (visible) status to inactive (invisible) status, and this attribute defines the length of time, in seconds, that messages remain invisible. Messages return to active status after the set period. Valid value range: 1-43200 seconds, i.e., 1 seconds to 12 hours. Default value to 30.
- `polling_wait_seconds` - (Optional) Long polling is measured in seconds. When this attribute is set to 0, long polling is disabled. When it is not set to 0, long polling is enabled and message dequeue requests will be processed only when valid messages are received or when long polling times out. Valid value range: 0-30 seconds. Default value to 0.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the queue is equal to name.

» Import

MNS QUEUE can be imported using the id or name, e.g.

```
$ terraform import alicloud_mns_queue.queue queuename
```

» alicloud_mns_topic_subscription

Provides a MNS topic subscription resource.

NOTE: Terraform will auto build a mns topic subscription while it uses `alicloud_mns_topic_subscription` to build a mns topic subscription resource.

» Example Usage

Basic Usage

```
resource "alicloud_mns_topic" "topic" {
  name                = "tf-example-mnstopic"
  maximum_message_size = 65536
  logging_enabled     = false
}

resource "alicloud_mns_topic_subscription" "subscription" {
  topic_name           = "tf-example-mnstopic"
  name                 = "tf-example-mnstopic-sub"
  filter_tag           = "test"
  endpoint             = "http://www.xxx.com/xxx"
  notify_strategy      = "BACKOFF_RETRY"
  notify_content_format = "XML"
}
```

» Argument Reference

The following arguments are supported:

- `topic_name`- (Required, ForceNew) The topic which The subscription belongs to was named with the name.A topic name must start with an English letter or a digit, and can contain English letters, digits, and hyphens, with the length not exceeding 256 characters.

- `name` - (Required, ForceNew) Two topics subscription on a single account in the same topic cannot have the same name. A topic subscription name must start with an English letter or a digit, and can contain English letters, digits, and hyphens, with the length not exceeding 256 characters.

- `notify_strategy` - (Optional) The NotifyStrategy attribute of Subscription. This attribute specifies the retry strategy when message sending fails. the attribute has two value EXPONENTIAL_DECAY_RETR or BACKOFF_RETRY. Default value to BACKOFF_RETRY .

- `notify_content_format` - (Optional, ForceNew) The NotifyContentFormat attribute of Subscription. This attribute specifies the content format of the messages pushed to users. the attribute has two value SIMPLIFIED or XML.Default value to SIMPLIFIED .

- **endpoint** - (Required, ForceNew) The endpoint has three format. Available values format:

    – HTTP Format: http://xxx.com/xxx
    – Queue Format: acs:mns:{REGION}:{AccountID}:queues/{QueueName}
    – Email Format: mail:directmail:{MailAddress}

- **filter_tag** - (Optional, ForceNew) The length should be shorter than 16.

» **Attributes Reference**

The following attributes are exported:

- **id** - The ID of the topic subscription.Format to topic_name:name

» **Import**

MNS Topic subscription can be imported using the id, e.g.

```
$ terraform import alicloud_mns_topic_subscription.subscription tf-example-mnstopic:tf-examp
```

» **alicloud_mns_topic**

Provides a MNS topic resource.

NOTE: Terraform will auto build a mns topic while it uses `alicloud_mns_topic` to build a mns topic resource.

» **Example Usage**

Basic Usage

```
resource "alicloud_mns_topic" "topic" {
  name                 = "tf-example-mnstopic"
  maximum_message_size = 65536
  logging_enabled      = false
}
```

» **Argument Reference**

The following arguments are supported:

- `name` - (Required, ForceNew)Two topics on a single account in the same region cannot have the same name. A topic name must start with an English letter or a digit, and can contain English letters, digits, and hyphens, with the length not exceeding 256 characters.
- `maximum_message_size` - (Optional)This indicates the maximum length, in bytes, of any message body sent to the topic. Valid value range: 1024-65536, i.e., 1K to 64K. Default value to 65536.
- `logging_enabled` - (Optional) Is logging enabled? true or false. Default value to false.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the topic is equal to name.

» Import

MNS Topic can be imported using the id or name, e.g.

```
$ terraform import alicloud_mns_topic.topic topicName
```

» alicloud_mongodb_instances

The `alicloud_mongodb_instances` data source provides a collection of MongoDB instances available in Alicloud account. Filters support regular expression for the instance name, engine or instance type.

» Example Usage

```
data "alicloud_mongodb_instances" "mongo" {
  name_regex        = "dds-.+\\d+"
  instance_type     = "replicate"
  instance_class    = "dds.mongo.mid"
  availability_zone = "eu-central-1a"
}
```

» Argument Reference

The following arguments are supported:

- `name_regex` - (Optional) A regex string to apply to the instance name.

- `ids` - (Optional, Available 1.53.0+) The ids list of MongoDB instances
- `instance_type` - (Optional) Type of the instance to be queried. If it is set to `sharding`, the sharded cluster instances are listed. If it is set to `replicate`, replica set instances are listed. Default value `replicate`.
- `instance_class` - (Optional) Sizing of the instance to be queried.
- `availability_zone` - (Optional) Instance availability zone.
- `tags` - (Optional, Available in v1.66.0+) A mapping of tags to assign to the resource.
- `output_file` - (Optional) The name of file that can save the collection of instances after running `terraform plan`.

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - The ids list of MongoDB instances
- `names` - The names list of MongoDB instances
- `instances` - A list of MongoDB instances. Its every element contains the following attributes:
  - `id` - The ID of the MongoDB instance.
  - `name` - The name of the MongoDB instance.
  - `charge_type` - Billing method. Value options are `PostPaid` for Pay-As-You-Go and `PrePaid` for yearly or monthly subscription.
  - `instance_type` - Instance type. Optional values `sharding` or `replicate`.
  - `region_id` - Region ID the instance belongs to.
  - `creation_time` - Creation time of the instance in RFC3339 format.
  - `expiration_time` - Expiration time in RFC3339 format. Pay-As-You-Go instances are never expire.
  - `status` - Status of the instance.
  - `replication` - Replication factor corresponds to number of nodes. Optional values are `1` for single node and `3` for three nodes replica set.
  - `engine` - Database engine type. Supported option is `MongoDB`.
  - `engine_version` - Database engine version.
  - `network_type` - Classic network or VPC.
  - `instance_class` - Sizing of the MongoDB instance.
  - `lock_mode` - Lock status of the instance.
  - `storage` - Storage size.
  - `mongos` - Array composed of Mongos.
  - `node_id` - Mongos instance ID.
  - `description` - Mongos instance description.
  - `class` - Mongos instance specification.
  - `shards` - Array composed of shards.
  - `node_id` - Shard instance ID.

- **description** - Shard instance description.
- **class** - Shard instance specification.
- **storage** - Shard disk.
- **availability_zone** - Instance availability zone.

» alicloud_mongodb_instance

Provides a MongoDB instance resource supports replica set instances only. the MongoDB provides stable, reliable, and automatic scalable database services. It offers a full range of database solutions, such as disaster recovery, backup, recovery, monitoring, and alarms. You can see detail product introduction here

NOTE: Available in 1.37.0+

NOTE: The following regions don't support create Classic network MongoDB instance. [`cn-zhangjiakou,cn-huhehaote,ap-southeast-2,ap-southeast-3,ap-southeast-5,ap-south-1,me`

NOTE: Create MongoDB instance or change instance type and storage would cost 5~10 minutes. Please make full preparation

» Example Usage

» Create a Mongodb instance

```
data "alicloud_zones" "default" {
  available_resource_creation = "MongoDB"
}

resource "alicloud_vpc" "default" {
  name       = "vpc-123456"
  cidr_block = "172.16.0.0/16"
}

resource "alicloud_vswitch" "default" {
  vpc_id            = "${alicloud_vpc.default.id}"
  cidr_block        = "172.16.0.0/24"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  name              = "vpc-123456"
}

resource "alicloud_mongodb_instance" "example" {
  engine_version     = "3.4"
  db_instance_class  = "dds.mongo.mid"
  db_instance_storage = 10
  vswitch_id         = "${alicloud_vswitch.default.id}"
```

```
  security_ip_list    = ["10.168.1.12", "100.69.7.112"]
}
```

» Module Support

You can use to the existing mongodb module to create a MongoDB instance resource one-click.

» Argument Reference

The following arguments are supported:

- `engine_version` - (Required, ForceNew) Database version. Value options can refer to the latest docs CreateDBInstance `EngineVersion`.
- `db_instance_class` - (Required) Instance specification. see Instance specifications.
- `db_instance_storage` - (Required) User-defined DB instance storage space.Unit: GB. Value range:
    - Custom storage space; value range: [10,2000]
    - 10-GB increments.
- `replication_factor` - (Optional) Number of replica set nodes. Valid values: [3, 5, 7]
- `storage_engine` (Optional, ForceNew) Storage engine: WiredTiger or RocksDB. System Default value: WiredTiger.
- `name` - (Optional) The name of DB instance. It a string of 2 to 256 characters.
- `instance_charge_type` - (Optional) Valid values are `PrePaid`, `PostPaid`, System default to `PostPaid`. It can be modified from `PostPaid` to `PrePaid` after version 1.63.0.
- `period` - (Optional) The duration that you will buy DB instance (in month). It is valid when instance_charge_type is `PrePaid`. Valid values: [1~9], 12, 24, 36. System default to 1.
- `zone_id` - (Optional, ForceNew) The Zone to launch the DB instance. it supports multiple zone. If it is a multi-zone and `vswitch_id` is specified, the vswitch must in one of them. The multiple zone ID can be retrieved by setting `multi` to "true" in the data source `alicloud_zones`.
- `vswitch_id` - (Optional, ForceNew) The virtual switch ID to launch DB instances in one VPC.
- `account_password` - (Optional, Sensitive) Password of the root account. It is a string of 6 to 32 characters and is composed of letters, numbers, and underlines.
- `kms_encrypted_password` - (Optional, Available in 1.57.1+) An KMS encrypts password used to a instance. If the `account_password` is filled in, this field will be ignored.

- `kms_encryption_context` - (Optional, MapString, Available in 1.57.1+) An KMS encryption context used to decrypt `kms_encrypted_password` before creating or updating instance with `kms_encrypted_password`. See Encryption Context. It is valid when `kms_encrypted_password` is set.
- `security_ip_list` - (Optional) List of IP addresses allowed to access all databases of an instance. The list contains up to 1,000 IP addresses, separated by commas. Supported formats include 0.0.0.0/0, 10.23.12.24 (IP), and 10.23.12.24/24 (Classless Inter-Domain Routing (CIDR) mode. /24 represents the length of the prefix in an IP address. The range of the prefix length is [1,32]).
- `backup_period` - (Optional, Available in 1.42.0+) MongoDB Instance backup period. It is required when `backup_time` was existed. Valid values: [Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday]. Default to [Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday]
- `backup_time` - (Optional, Available in 1.42.0+) MongoDB instance backup time. It is required when `backup_period` was existed. In the format of HH:mmZ- HH:mmZ. Time setting interval is one hour. If not set, the system will return a default, like "23:00Z-24:00Z".
- `maintain_start_time` - (Optional, Available in v1.56.0+) The start time of the operation and maintenance time period of the instance, in the format of HH:mmZ (UTC time).
- `maintain_end_time` - (Optional, Available in v1.56.0+) The end time of the operation and maintenance time period of the instance, in the format of HH:mmZ (UTC time).
- `tags` - (Optional, Available in v1.66.0+) A mapping of tags to assign to the resource.

NOTE: The start time to the end time must be 1 hour. For example, the MaintainStartTime is 01:00Z, then the MaintainEndTime must be 02:00Z.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the MongoDB.
- `retention_period` - Instance log backup retention days. Available in 1.42.0+.
- `replica_set_name` - The name of the mongo replica set

» Timeouts

NOTE: Available in 1.53.0+.

The `timeouts` block allows you to specify timeouts for certain actions:

- `create` - (Defaults to 30 mins) Used when creating the MongoDB instance (until it reaches the initial `Running` status).
- `update` - (Defaults to 30 mins) Used when updating the MongoDB instance (until it reaches the initial `Running` status).
- `delete` - (Defaults to 30 mins) Used when terminating the MongoDB instance.

» Import

MongoDB can be imported using the id, e.g.

```
$ terraform import alicloud_mongodb_instance.example dds-bp1291daeda44194
```

» alicloud_mongodb_sharding_instance

Provides a MongoDB sharding instance resource supports replica set instances only. the MongoDB provides stable, reliable, and automatic scalable database services. It offers a full range of database solutions, such as disaster recovery, backup, recovery, monitoring, and alarms. You can see detail product introduction here

NOTE: Available in 1.40.0+

NOTE: The following regions don't support create Classic network MongoDB sharding instance. [`cn-zhangjiakou,cn-huhehaote,ap-southeast-2,ap-southeast-3,ap-southeast-5,ap-so`

NOTE: Create MongoDB Sharding instance or change instance type and storage would cost 10~20 minutes. Please make full preparation

» Example Usage

» Create a Mongodb Sharding instance

```
variable "name" {
  default = "tf-example"
}

variable "shard" {
  default = {
    node_class   = "dds.shard.mid"
    node_storage = 10
  }
}
```

```
variable "mongo" {
  default = {
    node_class = "dds.mongos.mid"
  }
}

data "alicloud_zones" "default" {
  available_resource_creation = "MongoDB"
}

resource "alicloud_vpc" "default" {
  name       = "${var.name}"
  cidr_block = "172.16.0.0/16"
}

resource "alicloud_vswitch" "default" {
  vpc_id            = "${alicloud_vpc.default.id}"
  cidr_block        = "172.16.0.0/24"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  name              = "${var.name}"
}

resource "alicloud_mongodb_sharding_instance" "foo" {
  zone_id        = "${data.alicloud_zones.default.zones.0.id}"
  vswitch_id     = "${alicloud_vswitch.default.id}"
  engine_version = "3.4"
  name           = "${var.name}"
  shard_list     = ["${var.shard}", "${var.shard}"]
  mongo_list     = ["${var.mongo}", "${var.mongo}"]
}
```

» Module Support

You can use to the existing mongodb-sharding module to create a MongoDB sharding instance resource one-click.

» Argument Reference

The following arguments are supported:

- `engine_version` - (Required, ForceNew) Database version. Value options can refer to the latest docs CreateDBInstance `EngineVersion`.
- `storage_engine` (Optional, ForceNew) Storage engine: WiredTiger or RocksDB. System Default value: WiredTiger.

- `name` - (Optional) The name of DB instance. It a string of 2 to 256 characters.
- `instance_charge_type` - (Optional, ForceNew) Valid values are `PrePaid`, `PostPaid`,System default to `PostPaid`.
- `period` - (Optional) The duration that you will buy DB instance (in month). It is valid when instance_charge_type is `PrePaid`. Valid values: [1~9], 12, 24, 36. System default to 1.
- `zone_id` - (Optional, ForceNew) The Zone to launch the DB instance. MongoDB sharding instance does not support multiple-zone. If it is a multi-zone and `vswitch_id` is specified, the vswitch must in one of them.
- `vswitch_id` - (Optional, ForceNew) The virtual switch ID to launch DB instances in one VPC.
- `account_password` - (Optional, Sensitive) Password of the root account. It is a string of 6 to 32 characters and is composed of letters, numbers, and underlines.
- `kms_encrypted_password` - (Optional, Available in 1.57.1+) An KMS encrypts password used to a instance. If the `account_password` is filled in, this field will be ignored.
- `kms_encryption_context` - (Optional, MapString, Available in 1.57.1+) An KMS encryption context used to decrypt `kms_encrypted_password` before creating or updating instance with `kms_encrypted_password`. See Encryption Context. It is valid when `kms_encrypted_password` is set.
- `security_ip_list` - (Optional) List of IP addresses allowed to access all databases of an instance. The list contains up to 1,000 IP addresses, separated by commas. Supported formats include 0.0.0.0/0, 10.23.12.24 (IP), and 10.23.12.24/24 (Classless Inter-Domain Routing (CIDR) mode. /24 represents the length of the prefix in an IP address. The range of the prefix length is [1,32]). System default to `["127.0.0.1"]`.
- `mongo_list` - (Required) The mongo-node count can be purchased is in range of [2, 32].
  - `node_class` -(Required) Node specification. see Instance specifications.
- `shard_list` - (Required) the shard-node count can be purchased is in range of [2, 32].
  - `node_class` -(Required) Node specification. see Instance specifications.
  - `node_storage` - (Required)
    * Custom storage space; value range: [10, 1,000]
    * 10-GB increments. Unit: GB.
- `backup_period` - (Optional, Available in 1.42.0+) MongoDB Instance backup period. It is required when `backup_time` was existed. Valid values: [Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday]. Default to [Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday]
- `backup_time` - (Optional, Available in 1.42.0+) MongoDB instance backup time. It is required when `backup_period` was existed. In the

format of HH:mmZ- HH:mmZ. Time setting interval is one hour. If not
set, the system will return a default, like "23:00Z-24:00Z".

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the MongoDB.
- `mongo_list`
  - `node_id` - The ID of the mongo-node.
  - `connect_string` - Mongo node connection string
  - `port` - Mongo node port
- `shard_list`
  - `node_id` - The ID of the shard-node.
- `retention_period` - Instance log backup retention days. Available in
  1.42.0+.

» Import

MongoDB can be imported using the id, e.g.

```
$ terraform import alicloud_mongodb_sharding_instance.example dds-bp1291daeda44195
```

» alicloud_nas_access_groups

This data source provides user-available access groups. Use when you can create
mount points

NOTE: Available in 1.35.0+

» Example Usage

```
data "alicloud_nas_access_groups" "ag" {
  name_regex  = "^foo"
  type        = "Classic"
  description = "tf-testAccAccessGroupsdatasource"
}

output "alicloud_nas_access_groups_id" {
  value = "${data.alicloud_nas_access_groups.ag.groups.0.id}"
}
```

» Argument Reference

The following arguments are supported:

- `name_regex` - (Required) A regex string to filter AccessGroups by name.
- `type` - (Optional) Filter results by a specific AccessGroupType.
- `description` - (Optional) Filter results by a specific Description.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of AccessGroup IDs, the value is set to `names` .
- `names` - A list of AccessGroup names.
- `groups` - A list of AccessGroups. Each element contains the following attributes:
  - `id` - AccessGroupName of the AccessGroup.
  - `rule_count` - RuleCount of the AccessGroup.
  - `type` - AccessGroupType of the AccessGroup.
  - `mount_target_count` - MountTargetCount block of the AccessGroup
  - `description` - Destription of the AccessGroup.

» alicloud_nas_access_rules

This data source provides AccessRule available to the user.

NOTE: Available in 1.35.0+

» Example Usage

```
data "alicloud_nas_access_rules" "foo" {
  access_group_name = "tf-testAccAccessGroupsdatasource"
  source_cidr_ip    = "168.1.1.0/16"
  rw_access         = "RDWR"
  user_access       = "no_squash"
}

output "alicloud_nas_access_rules_id" {
  value = "${data.alicloud_nas_access_rules.foo.rules.0.id}"
}
```

» **Argument Reference**

The following arguments are supported:

- `access_group_name` - (Required ForceNew) Filter results by a specific AccessGroupName.
- `ids` - (Optional, Available in 1.53.0+) A list of rule IDs.
- `source_cidr_ip` - (Optional) Filter results by a specific SourceCidrIp.
- `user_access` - (Optional) Filter results by a specific UserAccess.
- `rw_access` - (Optional) Filter results by a specific RWAccess.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» **Attributes Reference**

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of rule IDs, Each element set to `access_rule_id` (Each element formats as `<access_group_name>:<access rule id>` before 1.53.0).
- `rules` - A list of AccessRules. Each element contains the following attributes:
  - `source_cidr_ip` - SourceCidrIp of the AccessRule.
  - `priority` - Priority of the AccessRule.
  - `access_rule_id` - AccessRuleId of the AccessRule.
  - `user_access` - UserAccess of the AccessRule
  - `rw_access` - RWAccess of the AccessRule.

» **alicloud_nas_file_systems**

This data source provides FileSystems available to the user.

NOTE: Available in 1.35.0+

» **Example Usage**

```
data "alicloud_nas_file_systems" "fs" {
  protocol_type = "NFS"
  description   = "${alicloud_nas_file_system.foo.description}"
}

output "alicloud_nas_file_systems_id" {
  value = "${data.alicloud_nas_file_systems.fs.systems.0.id}"
}
```

» Argument Reference

The following arguments are supported:

- `ids` - (Optional) A list of FileSystemId.
- `storage_type` - (Optional) Filter results by a specific StorageType.
- `protocol_type` - (Optional) Filter results by a specific ProtocolType.
- `description_regex` - (Optional) A regex string to filter the results by the FileSystem description.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of FileSystem Id.
- `descriptions` - A list of FileSystem descriptions.
- `systems` - A list of VPCs. Each element contains the following attributes:
  - `id` - ID of the FileSystem.
  - `region_id` - ID of the region where the FileSystem is located.
  - `description` - Destription of the FileSystem.
  - `protocol_type` - ProtocolType block of the FileSystem
  - `storage_type` - StorageType block of the FileSystem.
  - `metered_size` - MeteredSize of the FileSystem.
  - `create_time` - Time of creation.

» alicloud_nas_mount_targets

This data source provides MountTargets available to the user.

NOTE: Available in 1.35.0+

» Example Usage

```
data "alicloud_nas_mount_targets" "mt" {
  file_system_id    = "1a2sc4d"
  access_group_name = "tf-testAccNasConfig"
}

output "alicloud_nas_mount_targets_id" {
  value = "${data.alicloud_nas_mount_targets.mt.targets.0.id}"
}
```

» Argument Reference

The following arguments are supported:

- `file_system_id` - (Required ForceNew) The ID of the FileSystem that owns the MountTarget.
- `access_group_name` - (Optional) Filter results by a specific AccessGroup-Name.
- `type` - (Optional) Filter results by a specific NetworkType.
- `mount_target_domain` - (Deprecated, Optional) Filter results by a specific MountTargetDomain.
- `vpc_id` - (Optional) Filter results by a specific VpcId.
- `vswitch_id` - (Optional) Filter results by a specific VSwitchId.
- `ids` - (Optional, Available 1.53.0+) A list of MountTargetDomain.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of MountTargetDomain.
- `targets` - A list of MountTargetDomains. Each element contains the following attributes:
    - `id` - ID of the MountTargetDomain.
    - `mount_target_domain` - MountTargetDomain of the MountTarget.
    - `type`- NetworkType of The MountTarget.
    - `vpc_id` - VpcId of The MountTarget.
    - `vswitch_id` - VSwitchId of The MountTarget.
    - `access_group_name` - AccessGroup of The MountTarget.

» alicloud_nas_protocols

Provide a data source to retrieve the type of protocol used to create NAS file system.

NOTE: Available in 1.42.0

» Example Usage

```
data "alicloud_nas_protocols" "default" {
  type        = "Performance"
  zone_id     = "cn-beijing-e"
  output_file = "protocols.txt"
```

```
}

output "nas_protocols_protocol" {
  value = "${data.alicloud_nas_protocols.default.protocols.0}"
}
```

» Argument Reference

The following arguments are supported:

- `type` - (Required) The file system type. Valid Values: Performance and Capacity.

- `zone_id` - (Optional) String to filter results by zone id.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `protocols` - A list of supported protocol type..

» alicloud_nas_access_group

Provides a Nas Access Group resource.

In NAS, the permission group acts as a whitelist that allows you to restrict file system access. You can allow specified IP addresses or CIDR blocks to access the file system, and assign different levels of access permission to different IP addresses or CIDR blocks by adding rules to the permission group.

NOTE: Available in v1.33.0+.

» Example Usage

Basic Usage

```
resource "alicloud_nas_access_group" "foo" {
  name        = "CreateAccessGroup"
  type        = "Classic"
  description = "test_AccessG"

}
```

» Argument Reference

The following arguments are supported:

- `name` - (Required, ForceNew) A Name of one Access Group.
- `type` - (Required, ForceNew) A Type of one Access Group. Valid values:
  `Vpc` and `Classic`.
- `description` - (Optional) The Access Group description.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the Access Group.

» Import

Nas Access Group can be imported using the id, e.g.

```
$ terraform import alicloud_nas_access_group.foo tf_testAccNasConfig
```

» alicloud_nas_access_rule

Provides a Nas Access Rule resource.

When NAS is activated, the Default VPC Permission Group is automatically
generated. It allows all IP addresses in a VPC to access the mount point with full
permissions. Full permissions include Read/Write permission with no restriction
on root users.

NOTE: Available in v1.34.0+.

» Example Usage

Basic Usage

```
resource "alicloud_nas_access_group" "foo" {
  name        = "tf-NasConfigName-%d"
  type        = "Vpc"
  description = "tf-testAccNasConfig"
}
resource "alicloud_nas_access_rule" "foo" {
  access_group_name = "${alicloud_nas_access_group.foo.id}"
  source_cidr_ip    = "168.1.1.0/16"
```

```
  rw_access_type    = "RDWR"
  user_access_type  = "no_squash"
  priority          = 2
}
```

» Argument Reference

The following arguments are supported:

- `access_group_name` - (Required, ForceNew) Permission group name.
- `source_cidr_ip` - (Required) Address or address segment.
- `rw_access_type` - (Optional) Read-write permission type: RDWR (default), RDONLY.
- `user_access_type` - (Optional) User permission type: no_squash (default), root_squash, all_squash.
- `priority` - (Optional) Priority level. Range: 1-100. Default value: 1.

» Attributes Reference

The following attributes are exported:

- `id` - This ID of this resource. The value is formate as `<access_group_name>:<access rule id>`.
- `access_rule_id` - The nas access rule ID.

» Import

Nas Access Rule can be imported using the id, e.g.

`$ terraform import alicloud_nas_access_rule.foo tf-testAccNasConfigName:1`

» alicloud_nas_file_system

Provides a Nas File System resource.

After activating NAS, you can create a file system and purchase a storage package for it in the NAS console. The NAS console also enables you to view the file system details and remove unnecessary file systems.

For information about NAS file system and how to use it, see Manage file systems

NOTE: Available in v1.33.0+.

» Example Usage

Basic Usage

```
resource "alicloud_nas_file_system" "foo" {
  protocol_type = "NFS"
  storage_type  = "Performance"
  description   = "tf-testAccNasConfig"

}
```

» Argument Reference

The following arguments are supported:

- `protocol_type` - (Required, ForceNew) The Protocol Type of a File System. Valid values: `NFS` and `SMB`.
- `storage_type` - (Required, ForceNew) The Storage Type of a File System. Valid values: `Capacity` and `Performance`.
- `description` - (Optional) The File System description.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the File System.

» Import

Nas File System can be imported using the id, e.g.

```
$ terraform import alicloud_nas_file_system.foo 1337849c59
```

» alicloud_nas_mount_target

Provides a Nas Mount Target resource.

NOTE: Available in v1.34.0+.

NOTE: Currently this resource support create a mount point in a classic network only when current region is China mainland regions.

NOTE: You must grant NAS with specific RAM permissions when creating a classic mount targets, and it only can be achieved by creating a classic mount

target mannually. See Add a mount point and Why do I need RAM permissions to create a mount point in a classic network.

» Example Usage

Basic Usage

```
resource "alicloud_nas_file_system" "foo" {
  protocol_type = "NFS"
  storage_type  = "Performance"
  description   = "tf-testAccNasConfigFs"
}
resource "alicloud_nas_access_group" "foo" {
  name        = "tf-NasConfig-%d"
  type        = "Classic"
  description = "tf-testAccNasConfig"
}
resource "alicloud_nas_access_group" "bar" {
  name        = "tf-cNasConfig-2-%d"
  type        = "Classic"
  description = "tf-testAccNasConfig-2"
}
resource "alicloud_nas_mount_target" "foo" {
  file_system_id    = "${alicloud_nas_file_system.foo.id}"
  access_group_name = "${alicloud_nas_access_group.foo.id}"
}
```

» Argument Reference

The following arguments are supported:

- `file_system_id` - (Required, ForceNew) File system ID.
- `access_group_name` - (Required) Permission group name.
- `vswitch_id` - (Optional, ForceNew) VSwitch ID.
- `status` - (Optional) Whether the MountTarget is active. An inactive MountTarget is inusable. Valid values are Active(default) and Inactive.

» Attributes Reference

The following attributes are exported:

- `id` - This ID of this resource. The value is a mount target domain.

» Import

Nas MountTarget can be imported using the id, e.g.

```
$ terraform import alicloud_nas_mount_target.foo 192094b415-luw38.cn-beijing.nas.aliyuncs.cc
```

» alicloud_polardb_accounts

The `alicloud_polardb_accounts` data source provides a collection of PolarDB
cluster database account available in Alibaba Cloud account. Filters support
regular expression for the account name, searches by clusterId.

NOTE: Available in v1.70.0+.

» Example Usage

```
data "alicloud_polardb_clusters" "polardb_clusters_ds" {
  description_regex = "pc-\\w+"
  status      = "Running"
}

data "alicloud_polardb_accounts" "default" {
  db_cluster_id    = "${data.alicloud_polardb_clusters.polardb_clusters_ds.clusters.0.id}"
}

output "ends" {
    value = "${data.alicloud_polardb_accounts.default.accounts[0].account_name}"
}
```

» Argument Reference

The following arguments are supported:

- `db_cluster_id` - (Required) The polarDB cluster ID.
- `name_regex` - (Optional) A regex string to filter results by account name.

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `names` - Account name of the cluster.
- `accounts` - A list of PolarDB cluster accounts. Each element contains the
  following attributes:

303

- account_description - Account description.
- account_lock_state - Account lock state, Valid values are Lock, UnLock.
- account_name - Account name.
- account_status - Cluster address type.Cluster: the default address of the Cluster.Primary: Primary address.Custom: Custom cluster addresses.
- account_type - Account type, Valid values are Normal, Super.
- database_privileges - A list of database privilege. Each element contains the following attributes.
    * account_privilege - Account privilege of database
    * db_name - The account owned database name

» alicloud_polardb_clusters

The alicloud_polardb_clusters data source provides a collection of PolarDB clusters available in Alibaba Cloud account. Filters support regular expression for the cluster description, searches by tags, and other filters which are listed below.

NOTE: Available in v1.66.0+.

» Example Usage

```
data "alicloud_polardb_clusters" "polardb_clusters_ds" {
  description_regex = "pc-\\w+"
  status     = "Running"
}

output "first_polardb_cluster_id" {
  value = "${data.alicloud_polardb_clusters.polardb_clusters_ds.clusters.0.id}"
}
```

» Argument Reference

The following arguments are supported:

- description_regex - (Optional) A regex string to filter results by cluster description.

- ids - (Optional) A list of PolarDB cluster IDs.

- status - (Optional) status of the cluster.

- **db_type** - (Optional) Database type. Options are `MySQL`, `Oracle` and `PostgreSQL`. If no value is specified, all types are returned.

- **tags** - (Optional, Available in v1.68.0+) A mapping of tags to assign to the resource.

  - Key: It can be up to 64 characters in length. It cannot begin with "aliyun", "acs:", "http://", or "https://". It cannot be a null string.
  - Value: It can be up to 128 characters in length. It cannot begin with "aliyun", "acs:", "http://", or "https://". It can be a null string.

- **output_file** - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- **ids** - A list of RDS cluster IDs.
- **descriptions** - A list of RDS cluster descriptions.
- **clusters** - A list of PolarDB clusters. Each element contains the following attributes:
  - **id** - The ID of the PolarDB cluster.
  - **description** - The description of the PolarDB cluster.
  - **charge_type** - Billing method. Value options: `PostPaid` for Pay-As-You-Go and `PrePaid` for subscription.
  - **network_type** - The DBClusterNetworkType of the PolarDB cluster.
  - **region_id** - Region ID the cluster belongs to.
  - **zone_id** - The ZoneId of the PolarDB cluster.
  - **expire_time** - Expiration time. Pay-As-You-Go clusters never expire.
  - **expired** - The expired of the PolarDB cluster.
  - **status** - Status of the cluster.
  - **engine** - Database type. Options are `MySQL`, `Oracle` and `PostgreSQL`. If no value is specified, all types are returned.
  - **db_type** - `Primary` for primary cluster, `ReadOnly` for read-only cluster, `Guard` for disaster recovery cluster, and `Temp` for temporary cluster.
  - **db_version** - The DBVersion of the PolarDB cluster.
  - **lock_mode** - The LockMode of the PolarDB cluster.
  - **delete_lock** - The DeleteLock of the PolarDB cluster.
  - **create_time** - The CreateTime of the PolarDB cluster.
  - **vpc_id** - ID of the VPC the cluster belongs to.
  - **db_node_number** - The DBNodeNumber of the PolarDB cluster.
  - **db_node_class** - The DBNodeClass of the PolarDB cluster.
  - **storage_used** - The StorageUsed of the PolarDB cluster.
  - **db_nodes** - The DBNodes of the PolarDB cluster.

- **db_node_class** - The db_node_class of the db_nodes.
- **max_iops** - The max_iops of the db_nodes.
- **region_id** - The region_id of the db_nodes.
- **db_node_role** - The db_node_role of the db_nodes.
- **max_connections** - The max_connections of the db_nodes.
- **zone_id** - The zone_id of the db_nodes.
- **db_node_status** - The db_node_status of the db_nodes.
- **db_node_id** - The db_node_id of the db_nodes.
- **create_time** - The create_time of the db_nodes.

» alicloud_polardb_databases

The `alicloud_polardb_databases` data source provides a collection of PolarDB cluster database available in Alibaba Cloud account. Filters support regular expression for the database name, searches by clusterId.

NOTE: Available in v1.70.0+.

» Example Usage

```
data "alicloud_polardb_clusters" "polardb_clusters_ds" {
  description_regex = "pc-\\w+"
  status     = "Running"
}

data "alicloud_polardb_databases" "default" {
  db_cluster_id    = "${data.alicloud_polardb_clusters.polardb_clusters_ds.clusters.0.id}"
}

output "ends" {
    value = "${data.alicloud_polardb_databases.default.databases[0].db_name}"
}
```

» Argument Reference

The following arguments are supported:

- **db_cluster_id** - (Required) The polarDB cluster ID.
- **name_regex** - (Optional) A regex string to filter results by database name.

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `names` - database name of the cluster.
- `databases` - A list of PolarDB cluster databases. Each element contains the following attributes:
    - `character_set_name` - The character set name of database.
    - `db_description` - Database description.
    - `db_name` - Database name.
    - `db_status` - The status of database.
    - `engine` - The engine of database.
    - `accounts` - A list of accounts of database. Each element contains the following attributes.
        * `account_name` - Account name.
        * `account_status` - Account status.
        * `privilege_status` - The privilege status of account.

» alicloud_polardb_endpoints

The `alicloud_polardb_endpoints` data source provides a collection of PolarDB endpoints available in Alibaba Cloud account. Filters support regular expression for the cluster name, searches by clusterId, and other filters which are listed below.

NOTE: Available in v1.68.0+.

» Example Usage

```
data "alicloud_polardb_clusters" "polardb_clusters_ds" {
  description_regex = "pc-\\w+"
  status     = "Running"
}

data "alicloud_polardb_endpoints" "default" {
  db_cluster_id    = "${data.alicloud_polardb_clusters.polardb_clusters_ds.clusters.0.id}"
}

output "ends" {
    value = "${data.alicloud_polardb_endpoints.default.endpoints[0].db_endpoint_id}"
}
```

» Argument Reference

The following arguments are supported:

- `db_cluster_id` - (Required, ForceNew) PolarDB cluster ID.

- `db_endpoint_id` - (Optional) endpoint of the cluster.

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `endpoints` - A list of PolarDB cluster endpoints. Each element contains the following attributes:
  - `db_endpoint_id` - The endpoint ID.
  - `auto_add_new_nodes` - Whether the new node is automatically added to the default cluster address.Options are `Enable` and `Disable`.
  - `endpoint_config` - The Endpoint configuration. `ConsistLevel`: session consistency level, value:`0`: final consistency,`1`: session consistency;`LoadBalanceStrategy`: load balancing strategy. Based on the automatic scheduling of load, the value is: `load`.
  - `endpoint_type` - Cluster address type.`Cluster`: the default address of the Cluster.`Primary`: Primary address.`Custom`: Custom cluster addresses.
  - `nodes` - A list of nodes that connect to the address configuration.
  - `read_write_mode` - Read-write mode:`ReadWrite`: readable and writable (automatic read-write separation).`ReadOnly`: ReadOnly.
  - `address_items` - A list of endpoint addresses. Each element contains the following attributes.
    * `net_type` - IP network type:`Public` or `Private`.
    * `connection_string` - Connection instance string.
    * `port` - Intranet connection port.
    * `vpc_id` - ID of the VPC the instance belongs to.
    * `vswitch_id` - ID of the VSwitch the cluster belongs to.
    * `ip_address` - The ip address of connection string.

» alicloud_polardb_account

Provides a PolarDB account resource and used to manage databases.

NOTE: Available in v1.67.0+.

» Example Usage

```
variable "creation" {
  default = "PolarDB"
}
```

```
variable "name" {
  default = "polardbaccountmysql"
}

data "alicloud_zones" "default" {
  available_resource_creation = "${var.creation}"
}

resource "alicloud_vpc" "default" {
  name       = "${var.name}"
  cidr_block = "172.16.0.0/16"
}

resource "alicloud_vswitch" "default" {
  vpc_id            = "${alicloud_vpc.default.id}"
  cidr_block        = "172.16.0.0/24"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  name              = "${var.name}"
}

resource "alicloud_polardb_cluster" "cluster" {
  db_type           = "MySQL"
  db_version        = "8.0"
  db_node_class     = "polar.mysql.x4.large"
  pay_type          = "PostPaid"
  vswitch_id        = "${alicloud_vswitch.default.id}"
  description       = "${var.name}"
}

resource "alicloud_db_account" "account" {
  db_cluster_id       = "${alicloud_db_instance.cluster.id}"
  account_name        = "tftestnormal"
  account_password    = "Test12345"
  account_description = "${var.name}"
}
```

» Argument Reference

The following arguments are supported:

- `db_cluster_id` - (Required, ForceNew) The Id of cluster in which account belongs.
- `account_name` - (Required, ForceNew) Operation account requiring a uniqueness check. It may consist of lower case letters, numbers, and underlines, and must start with a letter and have no more than 16

characters.

- `account_password` - (Required) Operation password. It may consist of letters, digits, or underlines, with a length of 6 to 32 characters.
- `kms_encrypted_password` - (Optional) An KMS encrypts password used to a db account. If the `account_password` is filled in, this field will be ignored.
- `kms_encryption_context` - (Optional) An KMS encryption context used to decrypt `kms_encrypted_password` before creating or updating a db account with `kms_encrypted_password`. See Encryption Context. It is valid when `kms_encrypted_password` is set.
- `account_description` - (Optional) Account description. It cannot begin with https://. It must start with a Chinese character or English letter. It can include Chinese and English characters, underlines (_), hyphens (-), and numbers. The length may be 2-256 characters.
- `account_type` - (Optional, ForceNew) Account type, Valid values are `Normal`, `Super`, Default to `Normal`.

» Attributes Reference

The following attributes are exported:

- `id` - The current account resource ID. Composed of instance ID and account name with format `<instance_id>:<name>`.

» Import

PolarDB account can be imported using the id, e.g.

```
$ terraform import alicloud_polardb_account.example "pc-12345:tf_account"
```

» alicloud_polardb_account_privilege

Provides a PolarDB account privilege resource and used to grant several database some access privilege. A database can be granted by multiple account.

NOTE: Available in v1.67.0+.

» Example Usage

```
variable "creation" {
  default = "PolarDB"
}
```

```
variable "name" {
  default = "dbaccountprivilegebasic"
}

data "alicloud_zones" "default" {
  available_resource_creation = "${var.creation}"
}

resource "alicloud_vpc" "default" {
  name       = "${var.name}"
  cidr_block = "172.16.0.0/16"
}

resource "alicloud_vswitch" "default" {
  vpc_id            = "${alicloud_vpc.default.id}"
  cidr_block        = "172.16.0.0/24"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  name              = "${var.name}"
}

resource "alicloud_polardb_cluster" "default" {
  db_type = "MySQL"
  db_version = "8.0"
  pay_type = "PostPaid"
  db_node_class    = "polar.mysql.x4.large"
  vswitch_id = "${alicloud_vswitch.default.id}"
  description = "${var.name}"
}

resource "alicloud_polardb_database" "db" {
  count       = 2
  instance_id = "${alicloud_polardb_instance.cluster.id}"
  name        = "tfaccountpri_${count.index}"
  description = "from terraform"
}

resource "alicloud_polardb_account" "account" {
  instance_id = "${alicloud_polardb_instance.cluster.id}"
  name        = "tftestprivilege"
  password    = "Test12345"
  description = "from terraform"
}

resource "alicloud_polardb_account_privilege" "privilege" {
  cluster_id    = "${alicloud_polardb_instance.cluster.id}"
```

```
  account_name  = "${alicloud_polardb_account.account.name}"
  privilege     = "ReadOnly"
  db_names      = "${alicloud_polardb_database.db.*.name}"
}
```

» Argument Reference

The following arguments are supported:

- `db_cluster_id` - (Required, ForceNew) The Id of cluster in which account
  belongs.
- `account_name` - (Required, ForceNew) A specified account name.
- `account_privilege` - (Optional, ForceNew) The privilege of one account
  access database. Valid values: ["ReadOnly", "ReadWrite"]. Default to
  "ReadOnly".
- `db_names` - (Required) List of specified database name.

» Attributes Reference

The following attributes are exported:

- `id` - The current account resource ID. Composed of instance ID, account
  name and privilege with format `<db_cluster_id>:<account_name>:<account_privilege>`.

» Import

PolarDB account privilege can be imported using the id, e.g.

```
$ terraform import alicloud_polardb_account_privilege.example "pc-12345:tf_account:ReadOnly'
```

» alicloud_polardb_backup_policy

Provides a PolarDB cluster backup policy resource and used to configure cluster
backup policy.

NOTE: Available in v1.66.0+. Each DB cluster has a backup policy and it will
be set default values when destroying the resource.

» Example Usage

```
variable "name" {
  default = "polardbClusterconfig"
}
```

```
variable "creation" {
  default = "PolarDB"
}

data "alicloud_zones" "default" {
  available_resource_creation = "${var.creation}"
}

resource "alicloud_vpc" "default" {
  name       = "${var.name}"
  cidr_block = "172.16.0.0/16"
}

resource "alicloud_vswitch" "default" {
  vpc_id            = "${alicloud_vpc.default.id}"
  cidr_block        = "172.16.0.0/24"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  name              = "${var.name}"
}

resource "alicloud_polardb_cluster" "default" {
  db_type           = "MySQL"
  db_version        = "8.0"
  db_node_class     = "polar.mysql.x4.large"
  pay_type          = "PostPaid"
  description       = "${var.name}"
  vswitch_id        = "vsw-t4nq4tr8wcuj7397rbws2"
}


resource "alicloud_polardb_backup_policy" "policy" {
  db_cluster_id          = "${alicloud_polardb_cluster.default.id}"
  preferred_backup_period = "Tuesday,Wednesday"
  preferred_backup_time   = "10:00Z-11:00Z"
}
```

» Removing alicloud_polardb_cluster from your configuration

The alicloud_polardb_backup_policy resource allows you to manage your po-
lardb cluster policy, but Terraform cannot destroy it. Removing this resource
from your configuration will remove it from your statefile and management, but
will not destroy the cluster policy. You can resume managing the cluster via
the polardb Console.

» Argument Reference

The following arguments are supported:

- `db_cluster_id` - (Required, ForceNew) The Id of cluster that can run database.
- `preferred_backup_period` - (Optional) PolarDB Cluster backup period. Valid values: [Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday]. Default to ["Tuesday", "Thursday", "Saturday"].
- `preferred_backup_time` - (Optional) PolarDB Cluster backup time, in the format of HH:mmZ- HH:mmZ. Time setting interval is one hour. Default to "02:00Z-03:00Z". China time is 8 hours behind it.

» Attributes Reference

The following attributes are exported:

- `id` - The current backup policy resource ID. It is same as 'db_cluster_id'.
- `backup_retention_period` - Cluster backup retention days, Fixed for 7 days, not modified.

» Import

PolarDB backup policy can be imported using the id or cluster id, e.g.

```
$ terraform import alicloud_polardb_backup_policy.example "rm-12345678"
```

» alicloud_polardb_cluster

Provides a PolarDB cluster resource. A PolarDB cluster is an isolated database environment in the cloud. A PolarDB cluster can contain multiple user-created databases.

NOTE: Available in v1.66.0+.

» Example Usage

» Create a PolarDB MySQL cluster

```
variable "name" {
  default = "polardbClusterconfig"
}
variable "creation" {
```

```
  default = "PolarDB"
}
data "alicloud_zones" "default" {
  available_resource_creation = "${var.creation}"
}
resource "alicloud_vpc" "default" {
  name       = "${var.name}"
  cidr_block = "172.16.0.0/16"
}
resource "alicloud_vswitch" "default" {
  vpc_id            = "${alicloud_vpc.default.id}"
  cidr_block        = "172.16.0.0/24"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  name              = "${var.name}"
}
resource "alicloud_polardb_cluster" "default" {
  db_type              = "MySQL"
  db_version           = "5.6"
  db_node_class        = "rds.mysql.s2.large"
  pay_type             = "PostPaid"
  description          = "${var.name}"
  vswitch_id           = "${alicloud_vswitch.default.id}"
}
```

» Argument Reference

The following arguments are supported:

- `db_type` - (Required,ForceNew) Database type. Value options: MySQL, Oracle, PostgreSQL.
- `db_version` - (Required,ForceNew) Database version. Value options can refer to the latest docs CreateDBCluster `DBVersion`.
- `db_node_class` - (Required,ForceNew) The db_node_class of cluster node.
- `zone_id` - (Optional) The Zone to launch the DB cluster. it supports multiple zone.
- `pay_type` - (Optional,ForceNew) Valid values are `PrePaid`, `PostPaid`, Default to `PostPaid`. Currently, the resource can not supports change pay type.
- `renewal_status` - (Optional) Valid values are `AutoRenewal`, `Normal`, `NotRenewal`, Default to `NotRenewal`.
- `auto_renew_period` - (Optional) Auto-renewal period of an cluster, in the unit of the month. It is valid when pay_type is `PrePaid`. Valid value:1, 2, 3, 6, 12, 24, 36, Default to 1.
- `period` - (Optional) The duration that you will buy DB cluster (in month).

It is valid when pay_type is `PrePaid`. Valid values: [1~9], 12, 24, 36. Default to 1.

- `security_ips` - (Optional) List of IP addresses allowed to access all databases of an cluster. The list contains up to 1,000 IP addresses, separated by commas. Supported formats include 0.0.0.0/0, 10.23.12.24 (IP), and 10.23.12.24/24 (Classless Inter-Domain Routing (CIDR) mode. /24 represents the length of the prefix in an IP address. The range of the prefix length is [1,32]).
- `vswitch_id` - (Optional,ForceNew) The virtual switch ID to launch DB instances in one VPC.
- `maintain_time` - (Optional) Maintainable time period format of the instance: HH:MMZ-HH:MMZ (UTC time)
- `description` - (Optional) The description of cluster.
- `parameters` - (Optional) Set of parameters needs to be set after DB cluster was launched. Available parameters can refer to the latest docs View database parameter templates .
- `tags` - (Optional, Available in v1.68.0+) A mapping of tags to assign to the resource.
    - Key: It can be up to 64 characters in length. It cannot begin with "aliyun", "acs:", "http://", or "https://". It cannot be a null string.
    - Value: It can be up to 128 characters in length. It cannot begin with "aliyun", "acs:", "http://", or "https://". It can be a null string.

NOTE: Because of data backup and migration, change DB cluster type and storage would cost 15~20 minutes. Please make full preparation before changing them.

» Removing alicloud_polardb_cluster from your configuration

The alicloud_polardb_cluster resource allows you to manage your polardb cluster, but Terraform cannot destroy it if your cluster type is pre paid(post paid type can destroy normally). Removing this resource from your configuration will remove it from your statefile and management, but will not destroy the cluster. You can resume managing the cluster via the polardb Console.

» Attributes Reference

The following attributes are exported:

- `id` - The PolarDB cluster ID.

» Timeouts

The `timeouts` block allows you to specify timeouts for certain actions:

- `create` - (Defaults to 30 mins) Used when creating the polardb cluster (until it reaches the initial `Running` status).
- `update` - (Defaults to 20 mins) Used when updating the polardb cluster (until it reaches the initial `Running` status).
- `delete` - (Defaults to 10 mins) Used when terminating the polardb cluster.

» Import

PolarDB cluster can be imported using the id, e.g.

```
$ terraform import alicloud_polardb_cluster.example pc-abc12345678
```

» alicloud_db_database

Provides a PolarDB database resource. A DB database deployed in a DB cluster. A DB cluster can own multiple databases.

NOTE: Available in v1.66.0+.

» Example Usage

```
resource "alicloud_polardb_cluster" "cluster" {
    db_type = "MySQL"
    db_version = "8.0"
    pay_type = "PostPaid"
    db_node_class = "${var.clusterclass}"
    vswitch_id = "polar.mysql.x4.large"
    description = "testDB"
}

resource "alicloud_polardb_database" "default" {
  db_cluster_id = "${alicloud_polardb_cluster.cluster.id}"
  db_name       = "tftestdatabase"
}
```

» Argument Reference

The following arguments are supported:

- `db_cluster_id` - (Required, ForceNew) The Id of cluster that can run database.

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- **db_name** - (Required, ForceNew) Name of the database requiring a uniqueness check. It may consist of lower case letters, numbers, and underlines, and must start with a letterand have no more than 64 characters.
- **character_set_name** - (Optional,ForceNew) Character set. The value range is limited to the following: [utf8, gbk, latin1, utf8mb4, Chinese_PRC_CI_AS, Chinese_PRC_CS_AS, SQL_Latin1_General_CP1_CI_AS, SQL_Latin1_General_CP1_CS_AS, Chinese_PRC_BIN], default is "utf8" (**utf8mb4** only supports versions 5.5 and 5.6).
- **db_description** - (Optional) Database description. It cannot begin with https://. It must start with a Chinese character or English letter. It can include Chinese and English characters, underlines (_), hyphens (-), and numbers. The length may be 2-256 characters.

» Attributes Reference

The following attributes are exported:

- **id** - The current database resource ID. Composed of cluster ID and database name with format `<cluster_id>:<name>`.

» Import

PolarDB database can be imported using the id, e.g.

```
$ terraform import alicloud_polardb_database.example "pc-12345:tf_database"
```

» alicloud_polardb_endpoint_address

Provides a PolarDB endpoint address resource to allocate an Internet endpoint address string for PolarDB instance.

NOTE: Available in v1.68.0+. Each PolarDB instance will allocate a intranet connection string automatically and its prefix is Cluster ID. To avoid unnecessary conflict, please specified a internet connection prefix before applying the resource.

» Example Usage

```
variable "creation" {
  default = "PolarDB"
}

variable "name" {
```

```
    default = "polardbconnectionbasic"
}

data "alicloud_zones" "default" {
  available_resource_creation = "${var.creation}"
}

resource "alicloud_vpc" "default" {
  name       = "${var.name}"
  cidr_block = "172.16.0.0/16"
}

resource "alicloud_vswitch" "default" {
  vpc_id            = "${alicloud_vpc.default.id}"
  cidr_block        = "172.16.0.0/24"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  name              = "${var.name}"
}

resource "alicloud_polardb_cluster" "default" {
  db_type       = "MySQL"
  db_version    = "8.0"
  pay_type      = "PostPaid"
  db_node_class = "polar.mysql.x4.large"
  vswitch_id    = "${alicloud_vswitch.default.id}"
  description   = "${var.name}"
}

data "alicloud_polardb_endpoints" "default" {
  db_cluster_id   = "${alicloud_polardb_cluster.default.id}"
}

resource "alicloud_polardb_endpoint_address" "endpoint" {
  db_cluster_id     = "${alicloud_polardb_cluster.default.id}"
  db_endpoint_id    = "${data.alicloud_polardb_endpoints.default.endpoints[0].db_endpoint_id}"
  connection_prefix = "testpolardbconn"
  net_type          = "Public"
}
```

» Argument Reference

The following arguments are supported:

- `db_cluster_id` - (Required, ForceNew) The Id of cluster that can run database.

- `db_endpoint_id` - (Required, ForceNew) The Id of endpoint that can run database.
- `connection_prefix` - (Optional) Prefix of an Internet connection string. It must be checked for uniqueness. It may consist of lowercase letters, numbers, and underlines, and must start with a letter and have no more than 30 characters. Default to + 'tf'.
- `net_type` - (Optional, ForceNew) Internet connection net type. Valid value: `Public`. Default to `Public`. Currently supported only `Public`.

» Attributes Reference

The following attributes are exported:

- `id` - The current instance connection resource ID. Composed of instance ID and connection string with format `<db_cluster_id>:<db_endpoint_id>`.
- `port` - Connection cluster or endpoint port.
- `connection_string` - Connection cluster or endpoint string.
- `ip_address` - The ip address of connection string.

» Import

PolarDB endpoint address can be imported using the id, e.g.

```
$ terraform import alicloud_polardb_endpoint_address.example pc-abc123456:pe-abc123456
```

» alicloud_kvstore_instances

The `alicloud_kvstore_instances` data source provides a collection of kvstore instances available in Alicloud account. Filters support regular expression for the instance name, searches by tags, and other filters which are listed below.

» Example Usage

```
data "alicloud_kvstore_instances" "default" {
    name_regex: "checkalicloudkvinstancesdatasoource`
}
output "first_instance_name" {
    value = "${data.alicloud_kvstore_instances.default.instances.name}"
}
```

» Argument Reference

The following arguments are supported:

- `name_regex` - (Optional) A regex string to apply to the instance name.
- `ids` - (Optional, Available 1.52.2+) A list of RKV instance IDs.
- `instance_type` - (Optional) Database type. Options are `Memcache`, and `Redis`. If no value is specified, all types are returned.
- `status` - (Optional) Status of the instance.
- `instance_class`- (Optional) Type of the applied ApsaraDB for Redis instance. For more information, see Instance type table.
- `vpc_id` - (Optional) Used to retrieve instances belong to specified VPC.
- `vswitch_id` - (Optional) Used to retrieve instances belong to specified `vswitch` resources.
- `tags` - (Optional) Query the instance bound to the tag. The format of the incoming value is `json` string, including `TagKey` and `TagValue`. `TagKey` cannot be null, and `TagValue` can be empty. Format example `{"key1":"value1"}`.
- `output_file` - (Optional) The name of file that can save the collection of instances after running `terraform plan`.

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of RKV instance IDs.
- `instances` - A list of RKV instances. Its every element contains the following attributes:
  - `id` - The ID of the RKV instance.
  - `name` - The name of the RKV instance.
  - `charge_type` - Billing method. Value options: `PostPaid` for Pay-As-You-Go and `PrePaid` for subscription.
  - `region_id` - Region ID the instance belongs to.
  - `create_time` - Creation time of the instance.
  - `expire_time` - Expiration time. Pay-As-You-Go instances are never expire.
  - `status` - Status of the instance.
  - `instance_type` - (Optional) Database type. Options are `Memcache`, and `Redis`. If no value is specified, all types are returned.
  - `instance_class`- (Optional) Type of the applied ApsaraDB for Redis instance. For more information, see Instance type table.
  - `availability_zone` - Availability zone.
  - `vpc_id` - VPC ID the instance belongs to.
  - `vswitch_id` - VSwitch ID the instance belongs to.
  - `private_ip` - Private IP address of the instance.
  - `username` - The username of the instance.

- **capacity** - Capacity of the applied ApsaraDB for Redis instance. Unit: MB.
- **bandwidth** - Instance bandwidth limit. Unit: Mbit/s.
- **connections** - Instance connection quantity limit. Unit: count.
- **connections_domain** - Instance connection domain (only Intranet access supported).
- **port** - Connection port of the instance.

» alicloud_kvstore_instances_classes

This data source provides the KVStore instance classes resource available info of Alibaba Cloud.

NOTE: Available in v1.49.0+

» Example Usage

```
data "alicloud_zones" "resources" {
  available_resource_creation = "KVStore"
}

data "alicloud_kvstore_instance_classes" "resources" {
  zone_id             = "${data.alicloud_zones.resources.zones.0.id}"
  instance_charge_type = "PrePaid"
  engine              = "Redis"
  engine_version      = "5.0"
  output_file         = "./classes.txt"
}

output "first_kvstore_instance_class" {
  value = "${data.alicloud_kvstore_instance_classes.resources.instance_classes}"
}
```

» Argument Reference

The following arguments are supported:

- **zone_id** - (Required) The Zone to launch the KVStore instance.
- **instance_charge_type** - (Optional) Filter the results by charge type. Valid values: `PrePaid` and `PostPaid`. Default to `PrePaid`.
- **engine** - (Optional) Database type. Options are `Redis`, `Memcache`. Default to `Redis`.

- `engine_version` - (Optional) Database version required by the user. Value options of Redis can refer to the latest docs detail info `EngineVersion`. Value of Memcache should be empty.
- `architecture` - (Optional) The KVStore instance system architecture required by the user. Valid values: `standard`, `cluster` and `rwsplit`.
- `performance_type` - (Optional, Deprecated) It has been deprecated from 1.68.0.
- `storage_type` - (Optional, Deprecated) It has been deprecated from 1.68.0.
- `node_type` - (Optional) The KVStore instance node type required by the user. Valid values: `double`, `single`, `readone`, `readthree` and `readfive`.
- `package_type` - (Optional, Deprecated) It has been deprecated from 1.68.0.
- `output_file` - (Optional) File name where to save data source results (after running `terraform apply`).
- `edition_type` - (Optional, Available in 1.68.0+) The KVStore instance edition type required by the user. Valid values: `Community` and `Enterprise`.
- `series_type` - (Optional, Available in 1.68.0+) The KVStore instance series type required by the user. Valid values: `enhanced_performance_type` and `hybrid_storage`.
- `shard_number` - (Optional, Available in 1.68.0+) The number of shard.Valid values: `1`, `2`, `4`, `8`, `16`, `32`, `64`, `128`, `256`.

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `instance_classes` - A list of KVStore available instance classes.
- `classes` - A list of KVStore available instance classes when the `sorted_by` is "Price". include:
    - `instance_class` - KVStore available instance class.

» alicloud_kvstore_instances_engines

This data source provides the KVStore instance engines resource available info of Alibaba Cloud.

NOTE: Available in v1.51.0+

» Example Usage

```
data "alicloud_zones" "resources" {
```

```
  available_resource_creation = "KVStore"
}

data "alicloud_kvstore_instance_engines" "resources" {
  zone_id             = "${data.alicloud_zones.resources.zones.0.id}"
  instance_charge_type = "PrePaid"
  engine              = "Redis"
  engine_version      = "5.0"
  output_file         = "./engines.txt"
}

output "first_kvstore_instance_class" {
  value = "${data.alicloud_kvstore_instance_engines.resources.instance_engines.0.engine}"
}
```

» Argument Reference

The following arguments are supported:

- `zone_id` - (Required) The Zone to launch the KVStore instance.
- `instance_charge_type` - (Optional) Filter the results by charge type. Valid values: `PrePaid` and `PostPaid`. Default to `PrePaid`.
- `engine` - (Optional) Database type. Options are `Redis`, `Memcache`. Default to `Redis`.
- `engine_version` - (Optional) Database version required by the user. Value options of Redis can refer to the latest docs detail info `EngineVersion`. Value of Memcache should be empty.
- `output_file` - (Optional) File name where to save data source results (after running `terraform apply`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `instance_engines` - A list of KVStore available instance engines. Each element contains the following attributes:
    - `zone_id` - The Zone to launch the KVStore instance.
    - `engine` - Database type.
    - `engine_version` - KVStore Instance version.

» alicloud_kvstore_account

Provides a kvstore account resource and used to manage databases.

NOTE: Available in 1.66.0+

» Example Usage

```
variable "creation" {
  default = "KVStore"
}
variable "name" {
  default = "kvstoreinstancevpc"
}
data "alicloud_zones" "default" {
  available_resource_creation = "${var.creation}"
}
resource "alicloud_vpc" "default" {
  name       = "${var.name}"
  cidr_block = "172.16.0.0/16"
}
resource "alicloud_vswitch" "default" {
  vpc_id            = "${alicloud_vpc.default.id}"
  cidr_block        = "172.16.0.0/24"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  name              = "${var.name}"
}
resource "alicloud_kvstore_instance" "default" {
  instance_class = "redis.master.small.default"
  instance_name  = "${var.name}"
  vswitch_id     = "${alicloud_vswitch.default.id}"
  private_ip     = "172.16.0.10"
  security_ips   = ["10.0.0.1"]
  instance_type  = "Redis"
  engine_version = "4.0"
}

resource "alicloud_kvstore_account" "account" {
  instance_id = "${alicloud_kvstore_instance.default.id}"
  account_name       = "tftestnormal"
  account_password   = "Test12345"
}
```

» Argument Reference

The following arguments are supported:

- `instance_id` - (Required, ForceNew) The Id of instance in which account belongs. (The engine version of instance must be 4.0 or 4.0+)
- `account_name` - (Required, ForceNew) Operation account requiring a uniqueness check. It may consist of lower case letters, numbers, and underlines, and must start with a letter and have no more than 16 characters.
- `account_password` - (Optional, Sensitive) Operation password. It may consist of letters, digits, or underlines, with a length of 6 to 32 characters. You have to specify one of `account_password` and `kms_encrypted_password` fields.
- `kms_encrypted_password` - (Optional) An KMS encrypts password used to a KVStore account. If the `account_password` is filled in, this field will be ignored.
- `kms_encryption_context` - (Optional) An KMS encryption context used to decrypt `kms_encrypted_password` before creating or updating a KVStore account with `kms_encrypted_password`. See Encryption Context. It is valid when `kms_encrypted_password` is set.
- `description` - (Optional) Database description. It cannot begin with https://. It must start with a Chinese character or English letter. It can include Chinese and English characters, underlines (_), hyphens (-), and numbers. The length may be 2-256 characters.
- `account_type` - (Optional, ForceNew)Privilege type of account.
  - Normal: Common privilege. Default to Normal.
- `account_privilege` - (Optional) The privilege of account access database. Valid values:
  - RoleReadOnly: This value is only for Redis and Memcache
  - RoleReadWrite: This value is only for Redis and Memcache
  - RoleRepl: This value supports instance to read, write, and open SYNC / PSYNC commands. Only for Redis which engine version is 4.0 and architecture type is standard

Default to "RoleReadWrite".

» Attributes Reference

The following attributes are exported:

- `id` - The current account resource ID. Composed of instance ID and account name with format `<instance_id>:<name>`.

» Import

kvstore account can be imported using the id, e.g.

```
$ terraform import alicloud_KVStore_account.example "rm-12345:tf_account"
```

» alicloud_kvstore_backup_policy

Provides a backup policy for ApsaraDB Redis / Memcache instance resource.

» Example Usage

Basic Usage

```
variable "creation" {
  default = "KVStore"
}
variable "multi_az" {
  default = "false"
}
variable "name" {
  default = "kvstorebackuppolicyvpc"
}
data "alicloud_zones" "default" {
  available_resource_creation = "${var.creation}"
}
resource "alicloud_vpc" "default" {
  name       = "${var.name}"
  cidr_block = "172.16.0.0/16"
}
resource "alicloud_vswitch" "default" {
  vpc_id            = "${alicloud_vpc.default.id}"
  cidr_block        = "172.16.0.0/24"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  name              = "${var.name}"
}
resource "alicloud_kvstore_instance" "default" {
  instance_class = "Memcache"
  instance_name  = "${var.name}"
  vswitch_id     = "${alicloud_vswitch.default.id}"
  private_ip     = "172.16.0.10"
  security_ips   = ["10.0.0.1"]
  instance_type  = "memcache.master.small.default"
  engine_version = "2.8"
}
resource "alicloud_kvstore_backup_policy" "default" {
  instance_id   = "${alicloud_kvstore_instance.default.id}"
  backup_period = ["Tuesday", "Wednesday"]
  backup_time   = "10:00Z-11:00Z"
}
```

» Argument Reference

The following arguments are supported:

- `instance_id` - (Required, ForceNew) The id of ApsaraDB for Redis or Memcache intance.
- `backup_time` - (Optional) Backup time, in the format of HH:mmZ-HH:mm Z
- `backup_period` - (Optional) Backup Cycle. Allowed values: Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday

» Attributes Reference

The following attributes are exported:

- `id` - The id of the backup policy.
- `instance_id` - The id of ApsaraDB for Redis or Memcache intance.
- `backup_time` - Backup time, in the format of HH:mmZ- HH:mm Z
- `backup_period` - Backup Cycle. Allowed values: Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday

» Import

KVStore backup policy can be imported using the id, e.g.

```
$ terraform import alicloud_kvstore_backup_policy.example r-abc12345678
```

» alicloud_kvstore_instance

Provides an ApsaraDB Redis / Memcache instance resource. A DB instance is an isolated database environment in the cloud. It can be associated with IP whitelists and backup configuration which are separate resource providers.

» Example Usage

Basic Usage

```
variable "creation" {
  default = "KVStore"
}
variable "name" {
  default = "kvstoreinstancevpc"
}
```

```
data "alicloud_zones" "default" {
  available_resource_creation = "${var.creation}"
}
resource "alicloud_vpc" "default" {
  name       = "${var.name}"
  cidr_block = "172.16.0.0/16"
}
resource "alicloud_vswitch" "default" {
  vpc_id            = "${alicloud_vpc.default.id}"
  cidr_block        = "172.16.0.0/24"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  name              = "${var.name}"
}
resource "alicloud_kvstore_instance" "default" {
  instance_class = "redis.master.small.default"
  instance_name  = "${var.name}"
  vswitch_id     = "${alicloud_vswitch.default.id}"
  private_ip     = "172.16.0.10"
  security_ips   = ["10.0.0.1"]
  instance_type  = "Redis"
  engine_version = "4.0"
}
```

» Argument Reference

The following arguments are supported:

- `instance_name` - (Optional) The name of DB instance. It a string of 2 to 256 characters.
- `password`- (Optional, Sensitive) The password of the DB instance. The password is a string of 8 to 30 characters and must contain uppercase letters, lowercase letters, and numbers.
- `kms_encrypted_password` - (Optional, Available in 1.57.1+) An KMS encrypts password used to a instance. If the `password` is filled in, this field will be ignored.
- `kms_encryption_context` - (Optional, MapString, Available in 1.57.1+) An KMS encryption context used to decrypt `kms_encrypted_password` before creating or updating instance with `kms_encrypted_password`. See Encryption Context. It is valid when `kms_encrypted_password` is set.
- `instance_class` - (Required) Type of the applied ApsaraDB for Redis instance. It can be retrieved by data source `alicloud_kvstore_instance_classes` or referring to help-docs Instance type table.
- `availability_zone` - (Optional, ForceNew) The Zone to launch the DB instance.
- `instance_charge_type` - (Optional) Valid values are `PrePaid`, `PostPaid`,

Default to `PostPaid`.

- `period` - (Optional) The duration that you will buy DB instance (in month). It is valid when instance_charge_type is `PrePaid`. Valid values: [1~9], 12, 24, 36. Default to 1.
- `auto_renew` - (Optional, Available in 1.36.0+) Whether to renewal a DB instance automatically or not. It is valid when instance_charge_type is `PrePaid`. Default to `false`.
- `auto_renew_period` - (Optional, Available in 1.36.0+) Auto-renewal period of an instance, in the unit of the month. It is valid when instance_charge_type is `PrePaid`. Valid value:[1~12], Default to 1.
- `instance_type` - (Optional, ForceNew) The engine to use: `Redis` or `Memcache`. Defaults to `Redis`.
- `vswitch_id` - (Optional, ForceNew) The ID of VSwitch.
- `engine_version`- (Optional, ForceNew) Engine version. Supported values: 2.8, 4.0 and 5.0. Default value: 2.8. Only 2.8 can be supported for Memcache Instance.
- `security_ips`- (Optional) Set the instance's IP whitelist of the default security group.
- `private_ip`- (Optional) Set the instance's private IP.
- `backup_id`- (Optional) If an instance created based on a backup set generated by another instance is valid, this parameter indicates the ID of the generated backup set.
- `vpc_auth_mode`- (Optional) Only meaningful if instance_type is `Redis` and network type is VPC. Valid values are `Close`, `Open`. Defaults to `Open`. `Close` means the redis instance can be accessed without authentication. `Open` means authentication is required.
- `parameters` - (Optional) Set of parameters needs to be set after instance was launched. Available parameters can refer to the latest docs Instance configurations table .
- `tags` - (Optional, Available in v1.55.3+) A mapping of tags to assign to the resource.
- `maintain_start_time` - (Optional, Available in v1.56.0+) The start time of the operation and maintenance time period of the instance, in the format of HH:mmZ (UTC time).
- `maintain_end_time` - (Optional, Available in v1.56.0+) The end time of the operation and maintenance time period of the instance, in the format of HH:mmZ (UTC time).

NOTE: The start time to the end time must be 1 hour. For example, the MaintainStartTime is 01:00Z, then the MaintainEndTime must be 02:00Z.

» Attributes Reference

The following attributes are exported:

- `id` - The KVStore instance ID.

- `connection_domain` - Instance connection domain (only Intranet access supported).

NOTE: Available in 1.54.0+.

The `timeouts` block allows you to specify timeouts for certain actions:

- `create` - (Defaults to 20 mins) Used when creating the KVStore instance (until it reaches the initial `Normal` status).
- `update` - (Defaults to 30 mins) Used when updating the KVStore instance (until it reaches the initial `Normal` status).
- `delete` - (Defaults to 20 mins) Used when terminating the KVStore instance.

» Import

KVStore instance can be imported using the id, e.g.

```
$ terraform import alicloud_kvstore_instance.example r-abc12345678
```

» alicloud_ons_groups

This data source provides a list of ONS Groups in an Alibaba Cloud account according to the specified filters.

NOTE: Available in 1.53.0+

» Example Usage

```
variable "name" {
  default = "onsInstanceName"
}

variable "group_id" {
  default = "GID-onsGroupDatasourceName"
}

resource "alicloud_ons_instance" "default" {
  name = "${var.name}"
  remark = "default_ons_instance_remark"
}
```

```
resource "alicloud_ons_group" "default" {
  group_id = "${var.group_id}"
  instance_id = "${alicloud_ons_instance.default.id}"
  remark = "dafault_ons_group_remark"
}

data "alicloud_ons_groups" "groups_ds" {
  instance_id = "${alicloud_ons_group.default.instance_id}"
  group_id_regex = "${var.group_id}"
  output_file = "groups.txt"
}

output "first_group_name" {
  value = "${data.alicloud_ons_groups.groups_ds.groups.0.group_id}"
}
```

» Argument Reference

The following arguments are supported:

- `instance_id` - (Required) ID of the ONS Instance that owns the groups.
- `group_id_regex` - (Optional) A regex string to filter results by the group name.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of group names.
- `groups` - A list of groups. Each element contains the following attributes:
  - `id` - The name of the group.
  - `owner` - The ID of the group owner, which is the Alibaba Cloud UID.
  - `independent_naming` - Indicates whether namespaces are available. Read Fields in SubscribeInfoDo for further details.
  - `remark` - Remark of the group.

» alicloud_ons_instances

This data source provides a list of ONS Instances in an Alibaba Cloud account according to the specified filters.

NOTE: Available in 1.52.0+

» Example Usage

```
variable "name" {
  default = "onsInstanceDatasourceName"
}

resource "alicloud_ons_instance" "default" {
  name   = "${var.name}"
  remark = "default_ons_instance_remark"
}

data "alicloud_ons_instances" "instances_ds" {
  ids         = ["${alicloud_ons_instance.default.id}"]
  name_regex  = "${alicloud_ons_instance.default.name}"
  output_file = "instances.txt"
}

output "first_instance_id" {
  value = "${data.alicloud_ons_instances.instances_ds.instances.0.instance_id}"
}
```

» Argument Reference

The following arguments are supported:

- `ids` - (Optional) A list of instance IDs to filter results.
- `name_regex` - (Optional) A regex string to filter results by the instance name.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of instance IDs.
- `names` - A list of instance names.
- `instances` - A list of instances. Each element contains the following attributes:
  - `id` - ID of the instance.
  - `instance_id` - ID of the instance.
  - `instance_name` - Name of the instance.
  - `instance_type` - The type of the instance. Read Fields in InstanceVO for further details.

- **instance_status** - The status of the instance. Read Fields in InstanceVO for further details.
- **release_time** - The automatic release time of an Enterprise Platinum Edition instance.

» alicloud_ons_topics

This data source provides a list of ONS Topics in an Alibaba Cloud account according to the specified filters.

NOTE: Available in 1.53.0+

» Example Usage

```
variable "name" {
  default = "onsInstanceName"
}

variable "topic" {
  default = "onsTopicDatasourceName"
}

resource "alicloud_ons_instance" "default" {
  name = "${var.name}"
  remark = "default_ons_instance_remark"
}

resource "alicloud_ons_topic" "default" {
  topic = "${var.topic}"
  instance_id = "${alicloud_ons_instance.default.id}"
  message_type = 0
  remark = "dafault_ons_topic_remark"
}

data "alicloud_ons_topics" "topics_ds" {
  instance_id = "${alicloud_ons_topic.default.instance_id}"
  name_regex = "${var.topic}"
  output_file = "topics.txt"
}

output "first_topic_name" {
  value = "${data.alicloud_ons_topics.topics_ds.topics.0.topic}"
}
```

» **Argument Reference**

The following arguments are supported:

- `instance_id` - (Required) ID of the ONS Instance that owns the topics.
- `name_regex` - (Optional) A regex string to filter results by the topic name.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» **Attributes Reference**

The following attributes are exported in addition to the arguments listed above:

- `names` - A list of topic names.
- `topics` - A list of topics. Each element contains the following attributes:
  - `topic` - The name of the topic.
  - `owner` - The ID of the topic owner, which is the Alibaba Cloud UID.
  - `relation` - The relation ID. Read Fields in PublishInfoDo for further details.
  - `relation_name` - The name of the relation, for example, owner, publishable, subscribable, and publishable and subscribable.
  - `message_type` - The type of the message. Read Fields in PublishInfoDo for further details.
  - `independent_naming` - Indicates whether namespaces are available. Read Fields in PublishInfoDo for further details.
  - `create_time` - Time of creation.
  - `remark` - Remark of the topic.

» **alicloud_ons_group**

Provides an ONS group resource.

For more information about how to use it, see RocketMQ Group Management API.

NOTE: Available in 1.53.0+

» **Example Usage**

Basic Usage

```
variable "name" {
  default = "onsInstanceName"
}
```

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```
variable "group_id" {
  default = "GID-onsGroupDatasourceName"
}

resource "alicloud_ons_instance" "default" {
  name = "${var.name}"
  remark = "default_ons_instance_remark"
}

resource "alicloud_ons_group" "default" {
  group_id = "${var.group_id}"
  instance_id = "${alicloud_ons_instance.default.id}"
  remark = "dafault_ons_group_remark"
}
```

» Argument Reference

The following arguments are supported:

- `instance_id` - (Required) ID of the ONS Instance that owns the groups.
- `group_id` - (Required) Name of the group. Two groups on a single instance cannot have the same name. A `group_id` starts with "GID_" or "GID-", and contains letters, numbers, hyphens (-), and underscores (_).
- `remark` - (Optional) This attribute is a concise description of group. The length cannot exceed 256.
- `read_enable` - (Optional) This attribute is used to set the message reading enabled or disabled. It can only be set after the group is used by the client.

» Attributes Reference

The following attributes are exported:

- `id` - The `key` of the resource supplied above. The value is formulated as `<instance_id>:<group_id>`.

» Import

ONS GROUP can be imported using the id, e.g.

```
$ terraform import alicloud_ons_group.group MQ_INST_1234567890_Baso1234567:GID-onsGroupDemo
```

» alicloud_ons_instance

Provides an ONS instance resource.

For more information about how to use it, see RocketMQ Instance Management API.

NOTE: The number of instances in the same region cannot exceed 8. At present, the resource does not support region "mq-internet-access" and "ap-southeast-5".

NOTE: Available in 1.51.0+

» Example Usage

Basic Usage

```
resource "alicloud_ons_instance" "example" {
  name   = "tf-example-ons-instance"
  remark = "tf-example-ons-instance-remark"
}
```

» Argument Reference

The following arguments are supported:

- `name` - (Required)Two instances on a single account in the same region cannot have the same name. The length must be 3 to 64 characters. Chinese characters, English letters digits and hyphen are allowed.
- `remark` - (Optional)This attribute is a concise description of instance. The length cannot exceed 128.

» Attributes Reference

The following attributes are exported:

- `id` - The `key` of the resource supplied above.
- `instance_type` - The edition of instance. 1 represents the postPaid edition, and 2 represents the platinum edition.
- `instance_status` - The status of instance. 1 represents the platinum edition instance is in deployment. 2 represents the postpaid edition instance are overdue. 5 represents the postpaid or platinum edition instance is in service. 7 represents the platinum version instance is in upgrade and the service is available.
- `release_time` - Platinum edition instance expiration time.

» Import

ONS INSTANCE can be imported using the id, e.g.

```
$ terraform import alicloud_ons_instance.instance MQ_INST_1234567890_Baso1234567
```

» alicloud_ons_topic

Provides an ONS topic resource.

For more information about how to use it, see RocketMQ Topic Management API.

NOTE: Available in 1.53.0+

» Example Usage

Basic Usage

```
variable "name" {
  default = "onsInstanceName"
}

variable "topic" {
  default = "onsTopicName"
}

resource "alicloud_ons_instance" "default" {
  name = "${var.name}"
  remark = "default_ons_instance_remark"
}

resource "alicloud_ons_topic" "default" {
  topic = "${var.topic}"
  instance_id = "${alicloud_ons_instance.default.id}"
  message_type = 0
  remark = "dafault_ons_topic_remark"
}
```

» Argument Reference

The following arguments are supported:

- `instance_id` - (Required) ID of the ONS Instance that owns the topics.

- `topic` - (Required) Name of the topic. Two topics on a single instance cannot have the same name and the name cannot start with 'GID' or 'CID'. The length cannot exceed 64 characters.
- `message_type` - (Required) The type of the message. Read Ons Topic Create for further details.
- `remark` - (Optional) This attribute is a concise description of topic. The length cannot exceed 128.
- `perm` - (Optional) This attribute is used to set the read-write mode for the topic. Read Request parameters for further details.

» Attributes Reference

The following attributes are exported:

- `id` - The `key` of the resource supplied above. The value is formulated as `<instance_id>:<topic>`.

» Import

ONS TOPIC can be imported using the id, e.g.

```
$ terraform import alicloud_ons_topic.topic MQ_INST_1234567890_Baso1234567:onsTopicDemo
```

» alicloud_oss_bucket_objects

This data source provides the objects of an OSS bucket.

» Example Usage

```
data "alicloud_oss_bucket_objects" "bucket_objects_ds" {
  bucket_name = "sample_bucket"
  key_regex   = "sample/sample_object.txt"
}

output "first_object_key" {
  value = "${data.alicloud_oss_bucket_objects.bucket_objects_ds.objects.0.key}"
}
```

» Argument Reference

The following arguments are supported:

- `bucket_name` - Name of the bucket that contains the objects to find.
- `key_regex` - (Optional) A regex string to filter results by key.
- `key_prefix` - (Optional) Filter results by the given key prefix (such as "path/to/folder/logs-").
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `objects` - A list of bucket objects. Each element contains the following attributes:
  - `key` - Object key.
  - `acl` - Object access control list. Possible values: `default`, `private`, `public-read` and `public-read-write`.
  - `content_type` - Standard MIME type describing the format of the object data, e.g. "application/octet-stream".
  - `content_length` - Size of the object in bytes.
  - `cache_control` - Caching behavior along the request/reply chain. Read RFC2616 Cache-Control for further details.
  - `content_disposition` - Presentational information for the object. Read RFC2616 Content-Disposition for further details.
  - `content_encoding` - Content encodings that have been applied to the object and thus what decoding mechanisms must be applied to obtain the media-type referenced by the Content-Type header field. Read RFC2616 Content-Encoding for further details.
  - `content_md5` - MD5 value of the content. Read MD5 for computing method.
  - `expires` - Expiration date for the the request/response. Read RFC2616 Expires for further details.
  - `server_side_encryption` - Server-side encryption of the object in OSS. It can be empty or `AES256`.
  - `sse_kms_key_id` - If present, specifies the ID of the Key Management Service(KMS) master encryption key that was used for the object.
  - `etag` - ETag generated for the object (MD5 sum of the object content).
  - `storage_class` - Object storage type. Possible values: `Standard`, `IA` and `Archive`.
  - `last_modification_time` - Last modification time of the object.

» alicloud_oss_buckets

This data source provides the OSS buckets of the current Alibaba Cloud user.

» Example Usage

```
data "alicloud_oss_buckets" "oss_buckets_ds" {
  name_regex = "sample_oss_bucket"
}

output "first_oss_bucket_name" {
  value = "${data.alicloud_oss_buckets.oss_buckets_ds.buckets.0.name}"
}
```

» Argument Reference

The following arguments are supported:

- `name_regex` - (Optional) A regex string to filter results by bucket name.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `names` - A list of bucket names.
- `buckets` - A list of buckets. Each element contains the following attributes:
  - `name` - Bucket name.
  - `acl` - Bucket access control list. Possible values: `private`, `public-read` and `public-read-write`.
  - `extranet_endpoint` - Internet domain name for accessing the bucket from outside.
  - `intranet_endpoint` - Intranet domain name for accessing the bucket from an ECS instance in the same region.
  - `location` - Region of the data center where the bucket is located.
  - `owner` - Bucket owner.
  - `storage_class` - Object storage type. Possible values: `Standard`, `IA` and `Archive`.
  - `creation_date` - Bucket creation date.
  - `cors_rules` - A list of CORS rule configurations. Each element contains the following attributes:
  - `allowed_origins` - The origins allowed for cross-domain requests. Multiple elements can be used to specify multiple allowed origins. Each rule allows up to one wildcard "*". If "*" is specified, cross-domain requests of all origins are allowed.
  - `allowed_methods` - Specify the allowed methods for cross-domain requests. Possible values: `GET`, `PUT`, `DELETE`, `POST` and `HEAD`.

– `allowed_headers` - Control whether the headers specified by Access-Control-Request-Headers in the OPTIONS prefetch command are allowed. Each header specified by Access-Control-Request-Headers must match a value in AllowedHeader. Each rule allows up to one wildcard "*" .

– `expose_headers` - Specify the response headers allowing users to access from an application (for example, a Javascript XMLHttpRequest object). The wildcard "*" is not allowed.

– `max_age_seconds` - Specify the cache time for the returned result of a browser prefetch (OPTIONS) request to a specific resource.

– `website` - A list of one element containing configuration parameters used when the bucket is used as a website. It contains the following attributes:

– `index_document` - Key of the HTML document containing the home page.

– `error_document` - Key of the HTML document containing the error page.

– `logging` - A list of one element containing configuration parameters used for storing access log information. It contains the following attributes:

– `target_bucket` - Bucket for storing access logs.

– `target_prefix` - Prefix of the saved access log file paths.

– `referer_config` - A list of one element containing referer configuration. It contains the following attributes:

– `allow_empty` - Indicate whether the access request referer field can be empty.

– `referers` - Referer access whitelist.

– `lifecycle_rule` - A list CORS of lifecycle configurations. When Lifecycle is enabled, OSS automatically deletes the objects or transitions the objects (to another storage class) corresponding the lifecycle rules on a regular basis. Each element contains the following attributes:

– `id` - Unique ID of the rule.

– `prefix` - Prefix applicable to a rule. Only those objects with a matching prefix can be affected by the rule.

– `enabled` - Indicate whether the rule is enabled or not.

– `expiration` - A list of one element containing expiration attributes of an object. It contains the following attributes:
   * `date` - Date after which the rule to take effect. The format is like 2017-03-09.
   * `days` - Indicate the number of days after the last object update until the rules take effect.

– `server_side_encryption_rule` - A configuration of default encryption for a bucket. It contains the following attributes:

– `sse_algorithm` - The server-side encryption algorithm to use.

– `tags` - A mapping of tags.

– `versioning` - If present , the versioning state has been set on the

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bucket. It contains the following attribute.
* **status** - A bucket versioning state. Possible values:**Enabled** and **Suspended**.

» alicloud_oss_bucket

Provides a resource to create a oss bucket and set its attribution.

NOTE: The bucket namespace is shared by all users of the OSS system. Please set bucket name as unique as possible.

» Example Usage

Private Bucket

```
resource "alicloud_oss_bucket" "bucket-acl" {
  bucket = "bucket-170309-acl"
  acl    = "private"
}
```

Static Website

```
resource "alicloud_oss_bucket" "bucket-website" {
  bucket = "bucket-170309-website"

  website {
    index_document = "index.html"
    error_document = "error.html"
  }
}
```

Enable Logging

```
resource "alicloud_oss_bucket" "bucket-target" {
  bucket = "bucket-170309-acl"
  acl    = "public-read"
}

resource "alicloud_oss_bucket" "bucket-logging" {
  bucket = "bucket-170309-logging"

  logging {
    target_bucket = "${alicloud_oss_bucket.bucket-target.id}"
    target_prefix = "log/"
  }
}
```

Referer configuration

```
resource "alicloud_oss_bucket" "bucket-referer" {
  bucket = "bucket-170309-referer"
  acl    = "private"

  referer_config {
    allow_empty = false
    referers    = ["http://www.aliyun.com", "https://www.aliyun.com"]
  }
}
```

Set lifecycle rule

```
resource "alicloud_oss_bucket" "bucket-lifecycle" {
  bucket = "bucket-170309-lifecycle"
  acl    = "public-read"

  lifecycle_rule {
    id      = "rule-days"
    prefix  = "path1/"
    enabled = true

    expiration {
      days = 365
    }
  }
  lifecycle_rule {
    id      = "rule-date"
    prefix  = "path2/"
    enabled = true

    expiration {
      date = "2018-01-12"
    }
  }
}

resource "alicloud_oss_bucket" "bucket-lifecycle" {
  bucket = "bucket-170309-lifecycle"
  acl    = "public-read"

  lifecycle_rule {
    id      = "rule-days-transition"
    prefix  = "path3/"
    enabled = true
```

```
        transitions {
            days =         "3"
            storage_class= "IA"
        }
        transitions {
            days=          "30"
            storage_class= "Archive"
        }
    }
}

resource "alicloud_oss_bucket" "bucket-lifecycle" {
  bucket = "bucket-170309-lifecycle"
  acl    = "public-read"

  lifecycle_rule {
    id      = "rule-days-transition"
    prefix  = "path3/"
    enabled = true

    transitions {
      created_before_date = "2020-11-11"
      storage_class = "IA"
    }
    transitions {
      created_before_date = "2021-11-11"
      storage_class = "Archive"
    }
  }
}
```

Set bucket policy

```
resource "alicloud_oss_bucket" "bucket-policy" {
  bucket = "bucket-170309-policy"
  acl    = "private"

  policy = <<POLICY
  {"Statement":
      [{"Action":
          ["oss:PutObject", "oss:GetObject", "oss:DeleteBucket"],
        "Effect":"Allow",
        "Resource":
            ["acs:oss:*:*:*"]}],
   "Version":"1"}
  POLICY
}
```

IA Bucket

```
resource "alicloud_oss_bucket" "bucket-storageclass" {
  bucket        = "bucket-170309-storageclass"
  storage_class = "IA"
}
```

Set bucket server-side encryption rule

```
resource "alicloud_oss_bucket" "bucket-sserule" {
  bucket = "bucket-170309-sserule"
  acl    = "private"

  server_side_encryption_rule {
    sse_algorithm = "AES256"
  }
}
```

Set bucket tags

```
resource "alicloud_oss_bucket" "bucket-tags" {
  bucket = "bucket-170309-tags"
  acl    = "private"

  tags = {
    key1 = "value1"
    key2 = "value2"
  }
}
```

Enable bucket versioning

```
resource "alicloud_oss_bucket" "bucket-versioning" {
  bucket = "bucket-170309-versioning"
  acl    = "private"

  versioning {
    status = "Enabled"
  }
}
```

» Argument Reference

The following arguments are supported:

- `bucket` - (Optional, ForceNew) The name of the bucket. If omitted, Terraform will assign a random and unique name.
- `acl` - (Optional) The canned ACL to apply. Defaults to "private".

- **cors_rule** - (Optional) A rule of Cross-Origin Resource Sharing (documented below). The items of core rule are no more than 10 for every OSS bucket.
- **website** - (Optional) A website object(documented below).
- **logging** - (Optional) A Settings of bucket logging (documented below).
- **logging_isenable** - (Optional) The flag of using logging enable container. Defaults true.
- **referer_config** - (Optional) The configuration of referer (documented below).
- **lifecycle_rule** - (Optional) A configuration of object lifecycle management (documented below).
- **policy** - (Optional, Available in 1.41.0) Json format text of bucket policy bucket policy management (documented below).
- **storage_class** - (Optional, ForceNew) The storage class to apply. Can be "Standard", "IA" and "Archive". Defaults to "Standard".
- **server_side_encryption_rule** - (Optional, Available in 1.45.0+) A configuration of server-side encryption (documented below).
- **tags** - (Optional, Available in 1.45.0+) A mapping of tags to assign to the bucket. The items are no more than 10 for a bucket.
- **versioning** - (Optional, Available in 1.45.0+) A state of versioning (documented below).
- **force_destroy** - (Optional, Available in 1.45.0+) A boolean that indicates all objects should be deleted from the bucket so that the bucket can be destroyed without error. These objects are not recoverable. Defaults to "false".

» Block cors_rule

The cors_rule mapping supports the following:

- **allowed_headers** - (Optional) Specifies which headers are allowed.
- **allowed_methods** - (Required) Specifies which methods are allowed. Can be GET, PUT, POST, DELETE or HEAD.
- **allowed_origins** - (Required) Specifies which origins are allowed.
- **expose_headers** - (Optional) Specifies expose header in the response.
- **max_age_seconds** - (Optional) Specifies time in seconds that browser can cache the response for a preflight request.

» Block website

The website mapping supports the following:

- **index_document** - (Required) Alicloud OSS returns this index document when requests are made to the root domain or any of the subfolders.
- **error_document** - (Optional) An absolute path to the document to return in case of a 4XX error.

» Block logging

The logging object supports the following:

- `target_bucket` - (Required) The name of the bucket that will receive the log objects.
- `target_prefix` - (Optional) To specify a key prefix for log objects.

» Block referer configuration

The referer configuration supports the following:

- `allow_empty` - (Optional, Type: bool) Allows referer to be empty. Defaults true.
- `referers` - (Required, Type: list) The list of referer.

» Block lifecycle_rule

The lifecycle_rule object supports the following:

- `id` - (Optional) Unique identifier for the rule. If omitted, OSS bucket will assign a unique name.
- `prefix` - (Required) Object key prefix identifying one or more objects to which the rule applies.
- `enabled` - (Required, Type: bool) Specifies lifecycle rule status.
- `expiration` - (Optional, Type: set) Specifies a period in the object's expire (documented below).
- `transitions` - (Optional, Type: set, Available in 1.62.1+) Specifies the time when an object is converted to the IA or archive storage class during a valid life cycle. (documented below).

» Block expiration

The lifecycle_rule expiration object supports the following:

- `date` - (Optional) Specifies the date after which you want the corresponding action to take effect. The value obeys ISO8601 format like `2017-03-09`.
- `days` - (Optional, Type: int) Specifies the number of days after object creation when the specific rule action takes effect.

`NOTE`: One and only one of "date" and "days" can be specified in one expiration configuration.

» Block transitions

The lifecycle_rule transitions object supports the following:

- `created_before_date` - (Optional) Specifies the time before which the rules take effect. The date must conform to the ISO8601 format and always be UTC 00:00. For example: 2002-10-11T00:00:00.000Z indicates that objects updated before 2002-10-11T00:00:00.000Z are deleted or converted to another storage class, and objects updated after this time (including this time) are not deleted or converted.
- `days` - (Optional, Type: int) Specifies the number of days after object creation when the specific rule action takes effect.
- `storage_class` - (Required) Specifies the storage class that objects that conform to the rule are converted into. The storage class of the objects in a bucket of the IA storage class can be converted into Archive but cannot be converted into Standard. Values: `IA`, `Archive`, `Standard`.

NOTE: One and only one of "created_before_date" and "days" can be specified in one transition configuration.

» Block server-side encryption rule

The server-side encryption rule supports the following:

- `sse_algorithm` - (Required) The server-side encryption algorithm to use. Possible values: `AES256` and `KMS`.

» Block versioning

The versioning supports the following:

- `status` - (Required) Specifies the versioning state of a bucket. Valid values: `Enabled` and `Suspended`.

NOTE: Currently, the `versioning` feature is only available in ap-south-1 and with white list. If you want to use it, please contact us.

» Attributes Reference

The following attributes are exported:

- `id` - The name of the bucket.
- `acl` - The acl of the bucket.
- `creation_date` - The creation date of the bucket.
- `extranet_endpoint` - The extranet access endpoint of the bucket.
- `intranet_endpoint` - The intranet access endpoint of the bucket.
- `location` - The location of the bucket.
- `owner` - The bucket owner.

» Import

OSS bucket can be imported using the bucket name, e.g.

```
$ terraform import alicloud_oss_bucket.bucket bucket-12345678
```

» alicloud_oss_bucket_object

Provides a resource to put a object(content or file) to a oss bucket.

» Example Usage

» Uploading a file to a bucket

```
resource "alicloud_oss_bucket_object" "object-source" {
  bucket = "your_bucket_name"
  key    = "new_object_key"
  source = "path/to/file"
}
```

» Uploading a content to a bucket

```
resource "alicloud_oss_bucket" "example" {
  bucket = "your_bucket_name"
  acl    = "public-read"
}

resource "alicloud_oss_bucket_object" "object-content" {
  bucket  = "${alicloud_oss_bucket.example.bucket}"
  key     = "new_object_key"
  content = "the content that you want to upload."
}
```

» Argument Reference

Note: If you specify `content_encoding` you are responsible for encoding the body appropriately (i.e. `source` and `content` both expect already encoded/compressed bytes)

The following arguments are supported:

- `bucket` - (Required) The name of the bucket to put the file in.
- `key` - (Required) The name of the object once it is in the bucket.

- **source** - (Optional) The path to the source file being uploaded to the bucket.
- **content** - (Optional unless **source** given) The literal content being uploaded to the bucket.
- **acl** - (Optional) The canned ACL to apply. Defaults to "private".
- **content_type** - (Optional) A standard MIME type describing the format of the object data, e.g. application/octet-stream. All Valid MIME Types are valid for this input.
- **cache_control** - (Optional) Specifies caching behavior along the request/reply chain. Read RFC2616 Cache-Control for further details.
- **content_disposition** - (Optional) Specifies presentational information for the object. Read RFC2616 Content-Disposition for further details.
- **content_encoding** - (Optional) Specifies what content encodings have been applied to the object and thus what decoding mechanisms must be applied to obtain the media-type referenced by the Content-Type header field. Read RFC2616 Content-Encoding for further details.
- **content_md5** - (Optional) The MD5 value of the content. Read MD5 for computing method.
- **expires** - (Optional) Specifies expire date for the the request/response. Read RFC2616 Expires for further details.
- **server_side_encryption** - (Optional) Specifies server-side encryption of the object in OSS. Valid values are **AES256**, **KMS**. Default value is **AES256**.
- **kms_key_id** - (Optional, Available in 1.62.1+) Specifies the primary key managed by KMS. This parameter is valid when the value of **server_side_encryption** is set to KMS.

Either **source** or **content** must be provided to specify the bucket content. These two arguments are mutually-exclusive.

» Attributes Reference

The following attributes are exported

- **id** - the **key** of the resource supplied above.
- **content_length** - the content length of request.
- **etag** - the ETag generated for the object (an MD5 sum of the object content).
- **version_id** - A unique version ID value for the object, if bucket versioning is enabled.

» alicloud_ots_instance_attachments

This data source provides the ots instance attachments of the current Alibaba Cloud user.

» Example Usage

```
data "alicloud_ots_instance_attachments" "attachments_ds" {
  instance_name = "sample-instance"
  name_regex    = "testvpc"
  output_file   = "attachments.txt"
}

output "first_ots_attachment_id" {
  value = "${data.alicloud_ots_instance_attachments.attachments_ds.attachments.0.id}"
}
```

» Argument Reference

The following arguments are supported:

- `instance_name` - (Required) The name of OTS instance.
- `name_regex` - (Optional) A regex string to filter results by vpc name.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `names` - A list of vpc names.
- `vpc_ids` - A list of vpc ids.
- `attachments` - A list of instance attachments. Each element contains the following attributes:
    - `id` - The resource ID, the value is same as "instance_name".
    - `domain` - The domain of the instance attachment.
    - `endpoint` - The access endpoint of the instance attachment.
    - `region` - The region of the instance attachment.
    - `instance_name` - The instance name.
    - `vpc_name` - The name of attaching VPC to instance.
    - `vpc_id` - The ID of attaching VPC to instance.

» alicloud_ots_instances

This data source provides the ots instances of the current Alibaba Cloud user.

» Example Usage

```
data "alicloud_ots_instances" "instances_ds" {
  name_regex  = "sample-instance"
  output_file = "instances.txt"
}

output "first_instance_id" {
  value = "${data.alicloud_ots_instances.instances_ds.instances.0.id}"
}
```

» Argument Reference

The following arguments are supported:

- `ids` - (Optional) A list of instance IDs.
- `name_regex` - (Optional) A regex string to filter results by instance name.
- `tags` - (Optional) A map of tags assigned to the instance. It must be in the format: `data "alicloud_ots_instances" "instances_ds" { tags = {  tagKey1 = "tagValue1",   tagKey2 = "tagValue2" } }`
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of instance IDs.
- `names` - A list of instance names.
- `instances` - A list of instances. Each element contains the following attributes:
  - `id` - ID of the instance.
  - `name` - Instance name.
  - `status` - Instance status. Possible values: `Running`, `Disabled`, `Deleting`.
  - `write_capacity` - The maximum adjustable write capacity unit of the instance.
  - `read_capacity` - The maximum adjustable read capacity unit of the instance.
  - `cluster_type` - The cluster type of the instance. Possible values: `SSD`, `HYBRID`.
  - `create_time` - The create time of the instance.
  - `user_id` - The user id of the instance.
  - `network` - The network type of the instance. Possible values: `NORMAL`, `VPC`, `VPC_CONSOLE`.

- **description** - The description of the instance.
- **entity_quota** - The instance quota which indicating the maximum number of tables.
- **tags** - The tags of the instance.

» alicloud_ots_tables

This data source provides the ots tables of the current Alibaba Cloud user.

NOTE: Available in v1.40.0+.

» Example Usage

```
data "alicloud_ots_tables" "tables_ds" {
  instance_name = "sample-instance"
  name_regex    = "sample-table"
  output_file   = "tables.txt"
}

output "first_table_id" {
  value = "${data.alicloud_ots_tables.tables_ds.tables.0.id}"
}
```

» Argument Reference

The following arguments are supported:

- **instance_name** - The name of OTS instance.
- **ids** - (Optional) A list of table IDs.
- **name_regex** - (Optional) A regex string to filter results by table name.
- **output_file** - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- **ids** - A list of table IDs.
- **names** - A list of table names.
- **tables** - A list of tables. Each element contains the following attributes:
  - **id** - ID of the table. The value is <instance_name>:<table_name>.
  - **instance_name** - The OTS instance name.

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- **table_name** - The table name of the OTS which could not be changed.
- **primary_key** - The property of **TableMeta** which indicates the structure information of a table.
- **time_to_live** - The retention time of data stored in this table.
- **max_version** - The maximum number of versions stored in this table.

» alicloud_ots_instance

This resource will help you to manager a Table Store Instance. It is foundation of creating data table.

» Example Usage

```
# Create an OTS instance
resource "alicloud_ots_instance" "foo" {
  name        = "my-ots-instance"
  description = "for table"
  accessed_by = "Vpc"
  tags = {
    Created = "TF"
    For     = "Building table"
  }
}
```

» Argument Reference

The following arguments are supported:

- **name** - (Required, ForceNew) The name of the instance.

- **accessed_by** - The network limitation of accessing instance. Valid values:

  - **Any** - Allow all network to access the instance.
  - **Vpc** - Only can the attached VPC allow to access the instance.
  - **ConsoleOrVpc** - Allow web console or the attached VPC to access the instance.

  Default to "Any".

- **instance_type** - (ForceNew) The type of instance. Valid values are "Capacity" and "HighPerformance". Default to "HighPerformance".

- **description** - (Optional, ForceNew) The description of the instance. Currently, it does not support modifying.

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- `tags` - A mapping of tags to assign to the instance.

» Attributes Reference

The following attributes are exported:

- `id` - The resource ID. The value is same as the "name".
- `name` - The instance name.
- `description` - The instance description.
- `accessed_by` - TThe network limitation of accessing instance.
- `instance_type` - The instance type.
- `tags` - The instance tags.

» Import

OTS instance can be imported using instance id or name, e.g.

```
$ terraform import alicloud_ots_instance.foo "my-ots-instance"
```

» alicloud_ots_instance_attachment

This resource will help you to bind a VPC to an OTS instance.

» Example Usage

```
# Create an OTS instance
resource "alicloud_ots_instance" "foo" {
  name        = "my-ots-instance"
  description = "for table"
  accessed_by = "Vpc"
  tags = {
    Created = "TF"
    For     = "Building table"
  }
}

data "alicloud_zones" "foo" {
  available_resource_creation = "VSwitch"
}
resource "alicloud_vpc" "foo" {
  cidr_block = "172.16.0.0/16"
  name        = "for-ots-instance"
```

```
}

resource "alicloud_vswitch" "foo" {
  vpc_id            = "${alicloud_vpc.foo.id}"
  name              = "for-ots-instance"
  cidr_block        = "172.16.1.0/24"
  availability_zone = "${data.alicloud_zones.foo.zones.0.id}"
}
resource "alicloud_ots_instance_attachment" "foo" {
  instance_name = "${alicloud_ots_instance.foo.name}"
  vpc_name      = "attachment1"
  vswitch_id    = "${alicloud_vswitch.foo.id}"
}
```

» Argument Reference

The following arguments are supported:

- `instance_name` - (Required, ForceNew) The name of the OTS instance.
- `vpc_name` - (Required, ForceNew) The name of attaching VPC to instance.
- `vswitch_id` - (Required, ForceNew) The ID of attaching VSwitch to instance.

» Attributes Reference

The following attributes are exported:

- `id` - The resource ID. The value is same as "instance_name".
- `instance_name` - The instance name.
- `vpc_name` - The name of attaching VPC to instance.
- `vswitch_id` - The ID of attaching VSwitch to instance.
- `vpc_id` - The ID of attaching VPC to instance.

» alicloud_ots_table

Provides an OTS table resource.

NOTE: From Provider version 1.10.0, the provider field 'ots_instance_name' has been deprecated and you should use resource alicloud_ots_table's new field 'instance_name' and 'table_name' to re-import this resource.

» Example Usage

```
variable "name" {
  default = "terraformtest"
}
resource "alicloud_ots_instance" "foo" {
  name        = "${var.name}"
  description = "${var.name}"
  accessed_by = "Any"
  tags = {
    Created = "TF"
    For     = "acceptance test"
  }
}

resource "alicloud_ots_table" "basic" {
  instance_name = "${alicloud_ots_instance.foo.name}"
  table_name    = "${var.name}"
  primary_key {
      name = "pk1"
      type = "Integer"
    }
  primary_key {
      name = "pk2"
      type = "String"
    }
  primary_key {
      name = "pk3"
      type = "Binary"
    }

  time_to_live                 = -1
  max_version                  = 1
  deviation_cell_version_in_sec = 1
}
```

» Argument Reference

The following arguments are supported:

- `instance_name` - (Required, ForceNew) The name of the OTS instance in which table will located.
- `table_name` - (Required, ForceNew) The table name of the OTS instance. If changed, a new table would be created.
- `primary_key` - (Required, ForceNew) The property of `TableMeta` which

indicates the structure information of a table. It describes the attribute value of primary key. The number of `primary_key` should not be less than one and not be more than four.

  - `name` - (Required, ForceNew) Name for primary key.
  - `type` - (Required, ForceNew) Type for primary key. Only `Integer`, `String` or `Binary` is allowed.
- `time_to_live` - (Required) The retention time of data stored in this table (unit: second). The value maximum is 2147483647 and -1 means never expired.
- `max_version` - (Required) The maximum number of versions stored in this table. The valid value is 1-2147483647.
- `deviation_cell_version_in_sec` - (Optional, Available in 1.42.0+) The max version offset of the table. The valid value is 1-9223372036854775807. Defaults to 86400.

» Attributes Reference

The following attributes are exported:

- `id` - The resource ID. The value is `<instance_name>:<table_name>`.
- `instance_name` - The OTS instance name.
- `table_name` - The table name of the OTS which could not be changed.
- `primary_key` - The property of `TableMeta` which indicates the structure information of a table.
- `time_to_live` - The retention time of data stored in this table.
- `max_version` - The maximum number of versions stored in this table.
- `deviation_cell_version_in_sec` - The max version offset of the table.

» Import

OTS table can be imported using id, e.g.

```
$ terraform import alicloud_ots_table.table "my-ots:ots_table"
```

» alicloud_pvtz_zone_records

This data source provides Private Zone Records resource information owned by an Alibaba Cloud account.

» Example Usage

```
data "alicloud_pvtz_zone_records" "records_ds" {
```

```
  zone_id = "${alicloud_pvtz_zone.basic.id}"
  keyword = "${alicloud_pvtz_zone_record.foo.value}"
}

output "first_record_id" {
  value = "${data.alicloud_pvtz_zone_records.records_ds.records.0.id}"
}
```

» Argument Reference

The following arguments are supported:

- `keyword` - (Optional) Keyword for record rr and value.
- `zone_id` - (Required) ID of the Private Zone.
- `ids` - (Optional, Available in 1.53.0+) A list of Private Zone Record IDs.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of Private Zone Record IDs.
- `records` - A list of zone records. Each element contains the following attributes:
    - `id` - ID of the Private Zone Record.
    - `resource_record` - Resource record of the Private Zone Record.
    - `type` - Type of the Private Zone Record.
    - `value` - Value of the Private Zone Record.
    - `ttl` - Ttl of the Private Zone Record.
    - `priority` - Priority of the Private Zone Record.

» alicloud_pvtz_zones

This data source lists a number of Private Zones resource information owned by an Alibaba Cloud account.

» Example Usage

```
data "alicloud_pvtz_zones" "pvtz_zones_ds" {
  keyword = "${alicloud_pvtz_zone.basic.zone_name}"
}
```

```
output "first_zone_id" {
  value = "${data.alicloud_pvtz_zones.pvtz_zones_ds.zones.0.id}"
}
```

» Argument Reference

The following arguments are supported:

- `keyword` - (Optional) keyword for zone name.
- `ids` - (Optional, Available 1.53.0+) A list of zone IDs.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of zone IDs.
- `names` - A list of zone names.
- `zones` - A list of zones. Each element contains the following attributes:
  - `id` - ID of the Private Zone.
  - `remark` - Remark of the Private Zone.
  - `record_count` - Count of the Private Zone Record.
  - `name` - Name of the Private Zone.
  - `is_ptr` - Whether the Private Zone is ptr
  - `creation_time` - Time of creation of the Private Zone.
  - `update_time` - Time of update of the Private Zone.
  - `bind_vpcs` - List of the VPCs is bound to the Private Zone.

» alicloud_pvtz_zone

Provides a Private Zone resource.

NOTE: Terraform will auto Create a Private Zone while it uses `alicloud_pvtz_zone` to build a Private Zone resource.

» Example Usage

Basic Usage

```
resource "alicloud_pvtz_zone" "foo" {
  name = "foo.test.com"
}
```

» Argument Reference

The following arguments are supported:

- `name` - (Optional, ForceNew) The name of the Private Zone.

- `remark` - (Optional) The remark of the Private Zone.

- `proxy_pattern` - (Optional, Available in 1.69.0+) The recursive DNS proxy. Valid values:

    - ZONE: indicates that the recursive DNS proxy is disabled.
    - RECORD: indicates that the recursive DNS proxy is enabled.

    Default to "ZONE"

- `user_client_ip` - (Optional, Available in 1.69.0+) The IP address of the client.

- `lang` - (Optional, Available in 1.69.0+) The language. Valid values: "zh", "en", "jp".

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the Private Zone.
- `record_count` - The count of the Private Zone Record.

» Import

Private Zone can be imported using the id, e.g.

```
$ terraform import alicloud_pvtz_zone.example abc123456
```

» alicloud_pvtz_zone_attachment

Provides vpcs bound to Alicloud Private Zone resource.

NOTE: Terraform will auto bind vpc to a Private Zone while it uses `alicloud_pvtz_zone_attachment` to build a Private Zone and VPC binding resource.

» Example Usage

Using `vpc_ids` to attach being in same region several vpc instances to a private zone

```
resource "alicloud_pvtz_zone" "zone" {
  name = "foo.test.com"
}

resource "alicloud_vpc" "first" {
  name       = "the-first-vpc"
  cidr_block = "172.16.0.0/12"
}
resource "alicloud_vpc" "second" {
  name       = "the-second-vpc"
  cidr_block = "172.16.0.0/16"
}

resource "alicloud_pvtz_zone_attachment" "zone-attachment" {
  zone_id = alicloud_pvtz_zone.zone.id
  vpc_ids = [alicloud_vpc.first.id, alicloud_vpc.second.id]
}
```

Using `vpcs` to attach being in same region several vpc instances to a private zone

```
resource "alicloud_pvtz_zone" "zone" {
  name = "foo.test.com"
}

resource "alicloud_vpc" "first" {
  name       = "the-first-vpc"
  cidr_block = "172.16.0.0/12"
}
resource "alicloud_vpc" "second" {
  name       = "the-second-vpc"
  cidr_block = "172.16.0.0/16"
}

resource "alicloud_pvtz_zone_attachment" "zone-attachment" {
  zone_id = "${alicloud_pvtz_zone.zone.id}"
  vpcs {
    vpc_id = alicloud_vpc.first.id
  }
  vpcs {
    vpc_id = alicloud_vpc.second.id
  }
```

```
}
```

Using vpcs to attach being in different regions several vpc instances to a private
zone

```
resource "alicloud_pvtz_zone" "zone" {
  name = "foo.test.com"
}

resource "alicloud_vpc" "first" {
  name       = "the-first-vpc"
  cidr_block = "172.16.0.0/12"
}
resource "alicloud_vpc" "second" {
  name       = "the-second-vpc"
  cidr_block = "172.16.0.0/16"
}

provider "alicloud" {
  alias  = "eu"
  region = "eu-central-1"
}

resource "alicloud_vpc" "third" {
  provider   = alicloud.eu
  name       = "the-thrid-vpc"
  cidr_block = "172.16.0.0/16"
}

resource "alicloud_pvtz_zone_attachment" "zone-attachment" {
  zone_id = "${alicloud_pvtz_zone.zone.id}"
  vpcs {
    vpc_id = alicloud_vpc.first.id
  }
  vpcs {
    vpc_id = alicloud_vpc.second.id
  }
  vpcs {
    region_id = "eu-central-1"
    vpc_id    = alicloud_vpc.third.id
  }
}
```

» Argument Reference

The following arguments are supported:

- `zone_id` - (Required, ForceNew) The name of the Private Zone Record.
- `vpc_ids` - (Optional, Conflict with `vpcs`) The id List of the VPC with the same region, for example:["vpc-1","vpc-2"].
- `vpcs` - (Optional, Conflict with `vpc_ids`, Available in 1.62.1+) The List of the VPC:
    - `vpc_id` - (Required) The Id of the vpc.
    - `region_id` - (Option) The region of the vpc. If not set, the current region will instead of.

  Recommend to use `vpcs`.
- `lang` - (Optional, Available in 1.62.1+) The language of code.
- `user_client_ip` - (Optional, Available in 1.62.1+) The user custom IP address.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the Private Zone VPC Attachment. It sames with `zone_id`.

» Import

Private Zone attachment can be imported using the id(same with `zone_id`), e.g.

```
$ terraform import alicloud_pvtz_zone_attachment.example abc123456
```

» alicloud_pvtz_zone_record

Provides a Private Zone Record resource.

NOTE: Terraform will auto Create a Private Zone Record while it uses `alicloud_pvtz_zone_record` to build a Private Zone Record resource.

» Example Usage

Basic Usage

```
resource "alicloud_pvtz_zone" "zone" {
  name = "foo.test.com"
}
```

```
resource "alicloud_pvtz_zone_record" "foo" {
  zone_id         = "${alicloud_pvtz_zone.zone.id}"
  resource_record = "www"
  type            = "CNAME"
  value           = "bbb.test.com"
  ttl             = 60
}
```

» Argument Reference

The following arguments are supported:

- `zone_id` - (Required, ForceNew) The name of the Private Zone Record.
- `resource_record` - (Required, ForceNew) The resource record of the Private Zone Record.
- `type` - (Required) The type of the Private Zone Record. Valid values: A, CNAME, TXT, MX, PTR.
- `value` - (Required) The value of the Private Zone Record.
- `ttl` - (Optional) The ttl of the Private Zone Record.
- `priority` - (Optional) The priority of the Private Zone Record. At present, only can "MX" record support it. Valid values: [1-50]. Default to 1.

» Attributes Reference

The following attributes are exported:

- `id` - This ID of this resource. The value is formate as `<record_id>:<zone_id>`.
- `record_id` - The Private Zone Record ID.

» Import

Private Zone Record can be imported using the id, e.g.

```
$ terraform import alicloud_pvtz_zone_record.example abc123456
```

» alicloud_ram_account_alias

NOTE: This datasource has been deprecated from v1.3.2. Please use `alicloud_ram_account_aliases` instead.

» alicloud_ram_account_aliases

This data source provides an alias for the Alibaba Cloud account.

» Example Usage

```
data "alicloud_ram_account_aliases" "alias_ds" {
  output_file = "alias.txt"
}

output "account_alias" {
  value = "${data.alicloud_ram_account_aliases.alias_ds.account_alias}"
}
```

» Argument Reference

The following arguments are supported:

- `output_file` - (Optional) File name where to save data source results
  (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `account_alias` - Alias of the account.

» alicloud_ram_groups

This data source provides a list of RAM Groups in an Alibaba Cloud account
according to the specified filters.

» Example Usage

```
data "alicloud_ram_groups" "groups_ds" {
  output_file = "groups.txt"
  user_name   = "user1"
  name_regex  = "^group[0-9]*"
}

output "first_group_name" {
```

```
  value = "${data.alicloud_ram_groups.groups_ds.groups.0.name}"
}
```

» Argument Reference

The following arguments are supported:

- `name_regex` - (Optional) A regex string to filter the returned groups by their names.
- `user_name` - (Optional) Filter the results by a specific the user name.
- `policy_type` - (Optional) Filter the results by a specific policy type. Valid items are `Custom` and `System`. If you set this parameter, you must set `policy_name` as well.
- `policy_name` - (Optional) Filter the results by a specific policy name. If you set this parameter without setting `policy_type`, it will be automatically set to `System`.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `names` - A list of ram group names.
- `groups` - A list of groups. Each element contains the following attributes:
  - `name` - Name of the group.
  - `comments` - Comments of the group.

» alicloud_ram_policies

This data source provides a list of RAM policies in an Alibaba Cloud account according to the specified filters.

» Example Usage

```
data "alicloud_ram_policies" "policies_ds" {
  output_file = "policies.txt"
  user_name   = "user1"
  group_name  = "group1"
  type        = "System"
}
```

```
output "first_policy_name" {
  value = "${data.alicloud_ram_policies.policies_ds.policies.0.name}"
}
```

» Argument Reference

The following arguments are supported:

- `name_regex` - (Optional) A regex string to filter resulting policies by name.
- `type` - (Optional) Filter results by a specific policy type. Valid values are `Custom` and `System`.
- `user_name` - (Optional) Filter results by a specific user name. Returned policies are attached to the specified user.
- `group_name` - (Optional) Filter results by a specific group name. Returned policies are attached to the specified group.
- `role_name` - (Optional) Filter results by a specific role name. Returned policies are attached to the specified role.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `names` - A list of ram group names.
- `policies` - A list of policies. Each element contains the following attributes:
    - `name` - Name of the policy.
    - `type` - Type of the policy.
    - `description` - Description of the policy.
    - `default_version` - Default version of the policy.
    - `create_date` - Creation date of the policy.
    - `update_date` - Update date of the policy.
    - `attachment_count` - Attachment count of the policy.
    - `document` - Policy document of the policy.

» alicloud_ram_roles

This data source provides a list of RAM Roles in an Alibaba Cloud account according to the specified filters.

» Example Usage

```
data "alicloud_ram_roles" "roles_ds" {
  output_file = "roles.txt"
  name_regex  = ".*test.*"
  policy_name = "AliyunACSDefaultAccess"
  policy_type = "Custom"
}

output "first_role_id" {
  value = "${data.alicloud_ram_roles.roles_ds.roles.0.id}"
}
```

» Argument Reference

The following arguments are supported:

- `name_regex` - (Optional) A regex string to filter results by the role name.
- `ids` (Optional, Available 1.53.0+) - A list of ram role IDs.
- `policy_type` - (Optional) Filter results by a specific policy type. Valid values are `Custom` and `System`. If you set this parameter, you must set `policy_name` as well.
- `policy_name` - (Optional) Filter results by a specific policy name. If you set this parameter without setting `policy_type`, the later will be automatically set to `System`. The resulting roles will be attached to the specified policy.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of ram role IDs.
- `names` - A list of ram role names.
- `roles` - A list of roles. Each element contains the following attributes:
  - `id` - Id of the role.
  - `name` - Name of the role.
  - `arn` - Resource descriptor of the role.
  - `description` - Description of the role.
  - `assume_role_policy_document` - Authorization strategy of the role. This parameter is deprecated and replaced by `document`.
  - `document` - Authorization strategy of the role.
  - `create_date` - Creation date of the role.
  - `update_date` - Update date of the role.

» alicloud_ram_users

This data source provides a list of RAM users in an Alibaba Cloud account according to the specified filters.

» Example Usage

```
data "alicloud_ram_users" "users_ds" {
  output_file = "users.txt"
  group_name  = "group1"
  policy_name = "AliyunACSDefaultAccess"
  policy_type = "Custom"
  name_regex  = "^user"
}

output "first_user_id" {
  value = "${data.alicloud_ram_users.users_ds.users.0.id}"
}
```

» Argument Reference

The following arguments are supported:

- `name_regex` - (Optional) A regex string to filter resulting users by their names.
- `ids` (Optional, Available 1.53.0+) - A list of ram user IDs.
- `group_name` - (Optional) Filter results by a specific group name. Returned users are in the specified group.
- `policy_type` - (Optional) Filter results by a specific policy type. Valid values are `Custom` and `System`. If you set this parameter, you must set `policy_name` as well.
- `policy_name` - (Optional) Filter results by a specific policy name. If you set this parameter without setting `policy_type`, the later will be automatically set to `System`. Returned users are attached to the specified policy.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of ram user IDs.
- `names` - A list of ram user names.

- `users` - A list of users. Each element contains the following attributes:
  - `id` - The original id is user name, but it is user id in 1.37.0+.
  - `name` - Name of the user.
  - `create_date` - Creation date of the user.
  - `last_login_date` - Last login date of the user.

» alicloud_ram_access_key

Provides a RAM User access key resource.

NOTE: You should set the `secret_file` if you want to get the access key.

» Example Usage

```
# Create a new RAM access key for user.
resource "alicloud_ram_user" "user" {
  name         = "user_test"
  display_name = "user_display_name"
  mobile       = "86-18688888888"
  email        = "hello.uuu@aaa.com"
  comments     = "yoyoyo"
  force        = true
}

resource "alicloud_ram_access_key" "ak" {
  user_name   = "${alicloud_ram_user.user.name}"
  secret_file = "/xxx/xxx/xxx.txt"
}
```

» Argument Reference

The following arguments are supported:

- `user_name` - (Optional, ForceNew) Name of the RAM user. This name can have a string of 1 to 64 characters, must contain only alphanumeric characters or hyphens, such as "-",".","_", and must not begin with a hyphen.
- `secret_file` - (Optional, ForceNew) The name of file that can save access key id and access key secret. Strongly suggest you to specified it when you creating access key, otherwise, you wouldn't get its secret ever.
- `status` - (Optional) Status of access key. It must be `Active` or `Inactive`. Default value is `Active`.

- `pgp_key` - (Optional, Available in 1.47.0+) Either a base-64 encoded PGP public key, or a keybase username in the form `keybase:some_person_that_exists`

» Attributes Reference

The following attributes are exported:

- `id` - The access key ID.
- `status` - The access key status.
- `key_fingerprint` - The fingerprint of the PGP key used to encrypt the secret
- `encrypted_secret` - The encrypted secret, base64 encoded. ~> NOTE: The encrypted secret may be decrypted using the command line, for example: `terraform output encrypted_secret | base64 --decode | keybase pgp decrypt`.

» alicloud_ram_account_alias

Provides a RAM cloud account alias.

» Example Usage

```
# Create a alias for cloud account.
resource "alicloud_ram_account_alias" "alias" {
  account_alias = "hallo"
}
```

» Argument Reference

The following arguments are supported:

- `account_alias` - (Required, ForceNew) Alias of cloud account. This name can have a string of 3 to 32 characters, must contain only alphanumeric characters or hyphens, such as "-", and must not begin with a hyphen.

» Attributes Reference

The following attributes are exported:

- `id` - The account alias ID, it's set to `account_alias`.
- `account_alias` - The account alias.

» Import

RAM account alias can be imported using the id, e.g. `$ terraform import alicloud_ram_account_alias.example my-alias`

» alicloud__ram__account__password__policy

Provides a RAM password policy configuration for entire account. Only one resource per account.

NOTE: This resource overwrites an existing configuration. During action `terraform destroy` it sets values the same as defaults for this resource (it does not preserve any preexisted configuration).

NOTE: Available in 1.46.0+

» Example Usage

Empty resource sets defaults values for every property.

```
resource "alicloud_ram_account_password_policy" "default" {

}
```

```
resource "alicloud_ram_account_password_policy" "corporate" {
  minimum_password_length     = 9
  require_lowercase_characters = false
  require_uppercase_characters = false
  require_numbers             = false
  require_symbols             = false
  hard_expiry                 = true
  max_password_age            = 12
  password_reuse_prevention   = 5
  max_login_attempts          = 3
}
```

For not specified values sets defaults.

» Argument Reference

The following arguments are supported:

- `minimum_password_length` - (Optional) Minimal required length of password for a user. Valid value range: [8-32]. Default to 12.

- `require_lowercase_characters` - (Optional) Specifies if the occurrence of a lowercase character in the password is mandatory. Default to true.
- `require_uppercase_characters` - (Optional) Specifies if the occurrence of an uppercase character in the password is mandatory. Default to true.
- `require_numbers` - (Optional) Specifies if the occurrence of a number in the password is mandatory. Default to true.
- `require_symbols` - (Optional Specifies if the occurrence of a special character in the password is mandatory. Default to true.
- `hard_expiry` - (Optional) Specifies if a password can expire in a hard way. Default to false.
- `max_password_age` - (Optional) The number of days after which password expires. A value of 0 indicates that the password never expires. Valid value range: [0-1095]. Default to 0.
- `password_reuse_prevention` - (Optional) User is not allowed to use the latest number of passwords specified in this parameter. A value of 0 indicates the password history check policy is disabled. Valid value range: [0-24]. Default to 0.
- `max_login_attempts` - (Optional, Type: int) Maximum logon attempts with an incorrect password within an hour. Valid value range: [0-32]. Default to 5.

» Import

RAM account password policy can be imported using the `id`, e.g.

```
$ terraform import alicloud_ram_account_password_policy.example ram-account-password-policy
```

» alicloud_ram_alias

NOTE: This resource has been deprecated from v1.3.2. New resource `alicloud_ram_account_alias` will replace.

» alicloud_ram_group

Provides a RAM Group resource.

NOTE: When you want to destroy this resource forcefully(means remove all the relationships associated with it automatically and then destroy it) without set `force` with `true` at beginning, you need add `force = true` to configuration file and run `terraform plan`, then you can delete resource forcefully.

» Example Usage

```
# Create a new RAM Group.
resource "alicloud_ram_group" "group" {
  name     = "groupName"
  comments = "this is a group comments."
  force    = true
}
```

» Argument Reference

The following arguments are supported:

- `name` - (Required, ForceNew) Name of the RAM group. This name can have a string of 1 to 128 characters, must contain only alphanumeric characters or hyphen "-", and must not begin with a hyphen.
- `comments` - (Optional) Comment of the RAM group. This parameter can have a string of 1 to 128 characters.
- `force` - (Optional) This parameter is used for resource destroy. Default value is `false`.

» Attributes Reference

The following attributes are exported:

- `id` - The group ID.
- `name` - The group name.
- `comments` - The group comments.

» Import

RAM group can be imported using the id or name, e.g.

```
$ terraform import alicloud_ram_group.example my-group
```

» alicloud_ram_group_membership

Provides a RAM Group membership resource.

» Example Usage

```
# Create a RAM Group membership.
resource "alicloud_ram_group" "group" {
  name     = "groupName"
  comments = "this is a group comments."
  force    = true
}

resource "alicloud_ram_user" "user" {
  name         = "user_test"
  display_name = "user_display_name"
  mobile       = "86-18688888888"
  email        = "hello.uuu@aaa.com"
  comments     = "yoyoyo"
  force        = true
}

resource "alicloud_ram_user" "user1" {
  name         = "user_test1"
  display_name = "user_display_name1"
  mobile       = "86-18688888889"
  email        = "hello.uuu@aaa.com"
  comments     = "yoyoyo"
  force        = true
}

resource "alicloud_ram_group_membership" "membership" {
  group_name = "${alicloud_ram_group.group.name}"
  user_names = ["${alicloud_ram_user.user.name}", "${alicloud_ram_user.user1.name}"]
}
```

» Argument Reference

The following arguments are supported:

- `group_name` - (Required, ForceNew) Name of the RAM group. This name can have a string of 1 to 64 characters, must contain only alphanumeric characters or hyphen "-", and must not begin with a hyphen.
- `user_names` - (Required) Set of user name which will be added to group. Each name can have a string of 1 to 64 characters, must contain only alphanumeric characters or hyphens, such as "-",".","_", and must not begin with a hyphen.

» Attributes Reference

The following attributes are exported:

- `id` - The membership ID, it's set to `group_name`
- `group_name` - The group name.
- `user_names` - The list of names of users which in the group.

» Import

RAM Group membership can be imported using the id, e.g.

```
$ terraform import alicloud_ram_group_membership.example my-group
```

» alicloud_ram_group_policy_attachment

Provides a RAM Group Policy attachment resource.

» Example Usage

```
# Create a RAM Group Policy attachment.
resource "alicloud_ram_group" "group" {
  name     = "groupName"
  comments = "this is a group comments."
  force    = true
}

resource "alicloud_ram_policy" "policy" {
  name     = "policyName"
  document = <<EOF
    {
      "Statement": [
        {
          "Action": [
            "oss:ListObjects",
            "oss:GetObject"
          ],
          "Effect": "Allow",
          "Resource": [
            "acs:oss:*:*:mybucket",
            "acs:oss:*:*:mybucket/*"
          ]
        }
```

```
        ],
          "Version": "1"
      }
    EOF
    description = "this is a policy test"
    force = true
}

resource "alicloud_ram_group_policy_attachment" "attach" {
    policy_name = "${alicloud_ram_policy.policy.name}"
    policy_type = "${alicloud_ram_policy.policy.type}"
    group_name = "${alicloud_ram_group.group.name}"
}
```

» Argument Reference

The following arguments are supported:

- `group_name` - (Required, ForceNew) Name of the RAM group. This name
  can have a string of 1 to 64 characters, must contain only alphanumeric
  characters or hyphen "-", and must not begin with a hyphen.
- `policy_name` - (Required, ForceNew) Name of the RAM policy. This
  name can have a string of 1 to 128 characters, must contain only alphanu-
  meric characters or hyphen "-", and must not begin with a hyphen.
- `policy_type` - (Required, ForceNew) Type of the RAM policy. It must
  be `Custom` or `System`.

» Attributes Reference

The following attributes are exported:

- `id` - The attachment ID. Composed of policy name, policy type and group
  name with format `group:<policy_name>:<policy_type>:<group_name>`.

» Import

RAM Group Policy attachment can be imported using the id, e.g.

`$ terraform import alicloud_ram_group_policy_attachment.example group:my-policy:Custom:my-g`

» alicloud_ram_login_profile

Provides a RAM User Login Profile resource.

» Example Usage

```
# Create a RAM login profile.
resource "alicloud_ram_user" "user" {
  name         = "user_test"
  display_name = "user_display_name"
  mobile       = "86-18688888888"
  email        = "hello.uuu@aaa.com"
  comments     = "yoyoyo"
  force        = true
}

resource "alicloud_ram_login_profile" "profile" {
  user_name = "${alicloud_ram_user.user.name}"
  password  = "Yourpassword1234"
}
```

» Argument Reference

The following arguments are supported:

- `user_name` - (Required, ForceNew) Name of the RAM user. This name can have a string of 1 to 64 characters, must contain only alphanumeric characters or hyphens, such as "-",".","_", and must not begin with a hyphen.
- `password` - (Required, Sensitive) Password of the RAM user.
- `mfa_bind_required` - (Optional) This parameter indicates whether the MFA needs to be bind when the user first logs in. Default value is `false`.
- `password_reset_required` - (Optional) This parameter indicates whether the password needs to be reset when the user first logs in. Default value is `false`.

» Attributes Reference

The following attributes are exported:

- `id` - The login profile ID.
- `user_name` - The user name.
- `mfa_bind_required` - The parameter which indicates whether the MFA needs to be bind when the user first logs in.
- `password_reset_required` - The parameter which indicates whether the password needs to be reset when the user first logs in.

» Import

RAM login profile can be imported using the id or user name, e.g.

```
$ terraform import alicloud_ram_login_profile.example my-login
```

» alicloud_ram_policy

Provides a RAM Policy resource.

NOTE: When you want to destroy this resource forcefully(means remove all the relationships associated with it automatically and then destroy it) without set `force` with `true` at beginning, you need add `force = true` to configuration file and run `terraform plan`, then you can delete resource forcefully. **NOTE:** Each policy can own at most 5 versions and the oldest version will be removed after its version achieves 5.

» Example Usage

```
# Create a new RAM Policy.
resource "alicloud_ram_policy" "policy" {
  name     = "policyName"
  document = <<EOF
  {
    "Statement": [
      {
        "Action": [
          "oss:ListObjects",
          "oss:GetObject"
        ],
        "Effect": "Allow",
        "Resource": [
          "acs:oss:*:*:mybucket",
          "acs:oss:*:*:mybucket/*"
        ]
      }
    ],
      "Version": "1"
  }
  EOF
  description = "this is a policy test"
  force = true
}
```

» Argument Reference

The following arguments are supported:

- `name` - (Required, ForceNew) Name of the RAM policy. This name can have a string of 1 to 128 characters, must contain only alphanumeric characters or hyphen "-", and must not begin with a hyphen.
- `statement` - (Deprecated, Optional, Type: list, Conflicts with `document`) (It has been deprecated from version 1.49.0, and use field 'document' to replace.) Statements of the RAM policy document. It is required when the `document` is not specified.
  - `resource` - (Deprecated, Required, Type: list) (It has been deprecated from version 1.49.0, and use field 'document' to replace.) List of specific objects which will be authorized. The format of each item in this list is `acs:${service}:${region}:${account_id}:${relative_id}`, such as `acs:ecs:*:*:instance/inst-002` and `acs:oss:*:1234567890000:mybucket`. The `${service}` can be `ecs`, `oss`, `ots` and so on, the `${region}` is the region info which can use `*` replace when it is not supplied, the `${account_id}` refers to someone's Alicloud account id or you can use `*` to replace, the `${relative_id}` is the resource description section which related to the `${service}`.
  - `action` - (Deprecated, Required, Type: list) (It has been deprecated from version 1.49.0, and use field 'document' to replace.) List of operations for the `resource`. The format of each item in this list is `${service}:${action_name}`, such as `oss:ListBuckets` and `ecs:Describe*`. The `${service}` can be `ecs`, `oss`, `ots` and so on, the `${action_name}` refers to the name of an api interface which related to the `${service}`.
  - `effect` - (Deprecated, Required) (It has been deprecated from version 1.49.0, and use field 'document' to replace.) This parameter indicates whether or not the `action` is allowed. Valid values are `Allow` and `Deny`.
- `version` - (Deprecated, Optional, Conflicts with `document`) (It has been deprecated from version 1.49.0, and use field 'document' to replace.) Version of the RAM policy document. Valid value is `1`. Default value is `1`.
- `document` - (Optional, Conflicts with `statement` and `version`) Document of the RAM policy. It is required when the `statement` is not specified.
- `description` - (Optional, ForceNew) Description of the RAM policy. This name can have a string of 1 to 1024 characters.
- `force` - (Optional) This parameter is used for resource destroy. Default value is `false`.

» Attributes Reference

The following attributes are exported:

- `id` - The policy ID.
- `name` - The policy name.
- `type` - The policy type.
- `description` - The policy description.
- `statement` - List of statement of the policy document.
- `document` - The policy document.
- `version` - The policy document version.
- `attachment_count` - The policy attachment count.

» Import

RAM policy can be imported using the id or name, e.g.

```
$ terraform import alicloud_ram_policy.example my-policy
```

» alicloud_ram_role

Provides a RAM Role resource.

NOTE: When you want to destroy this resource forcefully(means remove all the relationships associated with it automatically and then destroy it) without set `force` with `true` at beginning, you need add `force = true` to configuration file and run `terraform plan`, then you can delete resource forcefully.

» Example Usage

```
# Create a new RAM Role.
resource "alicloud_ram_role" "role" {
  name     = "testrole"
  document = <<EOF
  {
    "Statement": [
      {
        "Action": "sts:AssumeRole",
        "Effect": "Allow",
        "Principal": {
          "Service": [
            "apigateway.aliyuncs.com",
            "ecs.aliyuncs.com"
          ]
```

```
        }
      }
    ],
    "Version": "1"
  }
  EOF
  description = "this is a role test."
  force = true
}
```

» Argument Reference

The following arguments are supported:

- `name` - (Required, ForceNew) Name of the RAM role. This name can have a string of 1 to 64 characters, must contain only alphanumeric characters or hyphens, such as ”-”, ”_”, and must not begin with a hyphen.
- `services` - (Deprecated, Optional, Type: list, Conflicts with `document`) (It has been deprecated from version 1.49.0, and use field 'document' to replace.) List of services which can assume the RAM role. The format of each item in this list is `${service}.aliyuncs.com` or `${account_id}@${service}.aliyuncs.com`, such as `ecs.aliyuncs.com` and `1234567890000@ots.aliyuncs.com`. The `${service}` can be `ecs`, `log`, `apigateway` and so on, the `${account_id}` refers to someone's Alicloud account id.
- `ram_users` - (Deprecated, Optional, Type: list, Conflicts with `document`) (It has been deprecated from version 1.49.0, and use field 'document' to replace.) List of ram users who can assume the RAM role. The format of each item in this list is `acs:ram::${account_id}:root` or `acs:ram::${account_id}:user/${user_name}`, such as `acs:ram::1234567890000:root` and `acs:ram::1234567890001:user/Mary`. The `${user_name}` is the name of a RAM user which must exists in the Alicloud account indicated by the `${account_id}`.
- `version` - (Deprecated, Optional, Conflicts with `document`) (It has been deprecated from version 1.49.0, and use field 'document' to replace.) Version of the RAM role policy document. Valid value is `1`. Default value is `1`.
- `document` - (Optional, Conflicts with `services`, `ram_users` and `version`) Authorization strategy of the RAM role. It is required when the `services` and `ram_users` are not specified.
- `description` - (Optional, Forces new resource) Description of the RAM role. This name can have a string of 1 to 1024 characters.
- `force` - (Optional) This parameter is used for resource destroy. Default value is `false`.

» Attributes Reference

The following attributes are exported:

- `id` - This ID of this resource. The value is set to `role_name`.
- `role_id` - The role ID.
- `name` - The role name.
- `arn` - The role arn.
- `description` - The role description.
- `version` - The role policy document version.
- `document` - Authorization strategy of the role.
- `ram_users` - List of services which can assume the RAM role.
- `services` - List of services which can assume the RAM role.

» Import

RAM role can be imported using the id or name, e.g.

```
$ terraform import alicloud_ram_role.example my-role
```

» alicloud_ram_role_attachment

Provides a RAM role attachment resource to bind role for several ECS instances.

» Example Usage

```
data "alicloud_zones" "default" {
  available_disk_category     = "cloud_efficiency"
  available_resource_creation = "VSwitch"
}

data "alicloud_instance_types" "default" {
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  cpu_core_count    = 2
  memory_size       = 4
}

data "alicloud_images" "default" {
  name_regex  = "^ubuntu_18.*64"
  most_recent = true
  owners      = "system"
}
```

```
resource "alicloud_vpc" "default" {
  name       = "${var.name}"
  cidr_block = "172.16.0.0/16"
}

resource "alicloud_vswitch" "default" {
  vpc_id            = "${alicloud_vpc.default.id}"
  cidr_block        = "172.16.0.0/24"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  name              = "${var.name}"
}

resource "alicloud_security_group" "default" {
  name   = "${var.name}"
  vpc_id = "${alicloud_vpc.default.id}"
}

resource "alicloud_security_group_rule" "default" {
  type              = "ingress"
  ip_protocol       = "tcp"
  nic_type          = "intranet"
  policy            = "accept"
  port_range        = "22/22"
  priority          = 1
  security_group_id = "${alicloud_security_group.default.id}"
  cidr_ip           = "172.16.0.0/24"
}
variable "name" {
  default = "ecsInstanceVPCExample"
}
resource "alicloud_instance" "foo" {
  vswitch_id = "${alicloud_vswitch.default.id}"
  image_id   = "${data.alicloud_images.default.images.0.id}"

  instance_type        = "${data.alicloud_instance_types.default.instance_types.0.id}"
  system_disk_category = "cloud_efficiency"

  internet_charge_type      = "PayByTraffic"
  internet_max_bandwidth_out = 5
  security_groups           = ["${alicloud_security_group.default.id}"]
  instance_name             = "${var.name}"
}
resource "alicloud_ram_role" "role" {
  name     = "testrole"
  document = <<EOF
  {
```

```
      "Statement": [
        {
          "Action": "sts:AssumeRole",
          "Effect": "Allow",
          "Principal": {
            "Service": [
              "ecs.aliyuncs.com"
            ]
          }
        }
      ],
      "Version": "1"
    }
  EOF
  description = "this is a test"
  force = true
}

resource "alicloud_ram_role_attachment" "attach" {
  role_name = "${alicloud_ram_role.role.name}"
  instance_ids = ["${alicloud_instance.foo.*.id}"]
}
```

» Argument Reference

The following arguments are supported:

- **role_name** - (Required, ForceNew) The name of role used to bind. This name can have a string of 1 to 64 characters, must contain only alphanumeric characters or hyphens, such as "-", "_", and must not begin with a hyphen.
- **instance_ids** - (Required, ForceNew) The list of ECS instance's IDs.

» Attributes Reference

The following attributes are exported:

- **role_name** - The name of the role.
- **instance_ids** The list of ECS instance's IDs.

» alicloud_ram_role_policy_attachment

Provides a RAM Role attachment resource.

» Example Usage

```
# Create a RAM Role Policy attachment.
resource "alicloud_ram_role" "role" {
  name     = "roleName"
  document = <<EOF
    {
      "Statement": [
        {
          "Action": "sts:AssumeRole",
          "Effect": "Allow",
          "Principal": {
            "Service": [
              "apigateway.aliyuncs.com",
              "ecs.aliyuncs.com"
            ]
          }
        }
      ],
      "Version": "1"
    }
    EOF
  description = "this is a role test."
  force = true
}

resource "alicloud_ram_policy" "policy" {
  name = "policyName"
  document = <<EOF
  {
    "Statement": [
      {
        "Action": [
          "oss:ListObjects",
          "oss:GetObject"
        ],
        "Effect": "Allow",
        "Resource": [
          "acs:oss:*:*:mybucket",
          "acs:oss:*:*:mybucket/*"
        ]
      }
    ],
      "Version": "1"
  }
```

```
  EOF
  description = "this is a policy test"
  force        = true
}

resource "alicloud_ram_role_policy_attachment" "attach" {
  policy_name = "${alicloud_ram_policy.policy.name}"
  policy_type = "${alicloud_ram_policy.policy.type}"
  role_name   = "${alicloud_ram_role.role.name}"
}
```

» Argument Reference

The following arguments are supported:

- `role_name` - (Required, ForceNew) Name of the RAM Role. This name
  can have a string of 1 to 64 characters, must contain only alphanumeric
  characters or hyphens, such as "-", "_", and must not begin with a hyphen.
- `policy_name` - (Required, ForceNew) Name of the RAM policy. This
  name can have a string of 1 to 128 characters, must contain only alphanu-
  meric characters or hyphen "-", and must not begin with a hyphen.
- `policy_type` - (Required, ForceNew) Type of the RAM policy. It must
  be `Custom` or `System`.

» Attributes Reference

The following attributes are exported:

- `id` - The attachment ID. Composed of policy name, policy type and role
  name with format `role:<policy_name>:<policy_type>:<role_name>`.

» Import

RAM Role Policy attachment can be imported using the id, e.g.

```
$ terraform import alicloud_ram_role_policy_attachment.example role:my-policy:Custom:my-role
```

» alicloud_ram_user

Provides a RAM User resource.

NOTE: When you want to destroy this resource forcefully(means release all
the relationships associated with it automatically and then destroy it) without

set `force` with `true` at beginning, you need add `force = true` to configuration file and run `terraform plan`, then you can delete resource forcefully.

» Example Usage

```
# Create a new RAM user.
resource "alicloud_ram_user" "user" {
  name         = "user_test"
  display_name = "user_display_name"
  mobile       = "86-18688888888"
  email        = "hello.uuu@aaa.com"
  comments     = "yoyoyo"
  force        = true
}
```

» Argument Reference

The following arguments are supported:

- `name` - (Required) Name of the RAM user. This name can have a string of 1 to 64 characters, must contain only alphanumeric characters or hyphens, such as "-",".","_", and must not begin with a hyphen.
- `display_name` - (Optional) Name of the RAM user which for display. This name can have a string of 1 to 128 characters or Chinese characters, must contain only alphanumeric characters or Chinese characters or hyphens, such as "-",".", and must not end with a hyphen.
- `mobile` - (Optional) Phone number of the RAM user. This number must contain an international area code prefix, just look like this: 86-18600008888.
- `email` - (Optional) Email of the RAM user.
- `comments` - (Optional) Comment of the RAM user. This parameter can have a string of 1 to 128 characters.
- `force` - (Optional) This parameter is used for resource destroy. Default value is `false`.

» Attributes Reference

The following attributes are exported:

- `id` - The original id is user name, but it is user id in 1.37.0+.
- `name` - The user name.
- `display_name` - The user display name.
- `mobile` - The user phone number.
- `email` - The user email.

- comments - The user comments.

» Import

RAM user can be imported using the id or name, e.g.

```
$ terraform import alicloud_ram_user.example user
```

» alicloud_ram_user_policy_attachment

Provides a RAM User Policy attachment resource.

» Example Usage

```
# Create a RAM User Policy attachment.
resource "alicloud_ram_user" "user" {
  name         = "userName"
  display_name = "user_display_name"
  mobile       = "86-18688888888"
  email        = "hello.uuu@aaa.com"
  comments     = "yoyoyo"
  force        = true
}

resource "alicloud_ram_policy" "policy" {
  name     = "policyName"
  document = <<EOF
  {
    "Statement": [
      {
        "Action": [
          "oss:ListObjects",
          "oss:GetObject"
        ],
        "Effect": "Allow",
        "Resource": [
          "acs:oss:*:*:mybucket",
          "acs:oss:*:*:mybucket/*"
        ]
      }
    ],
      "Version": "1"
  }
```

```
  EOF
  description = "this is a policy test"
  force = true
}

resource "alicloud_ram_user_policy_attachment" "attach" {
  policy_name = "${alicloud_ram_policy.policy.name}"
  policy_type = "${alicloud_ram_policy.policy.type}"
  user_name = "${alicloud_ram_user.user.name}"
}
```

» Argument Reference

The following arguments are supported:

- `user_name` - (Required, ForceNew) Name of the RAM user. This name can have a string of 1 to 64 characters, must contain only alphanumeric characters or hyphens, such as "-",".","_", and must not begin with a hyphen.
- `policy_name` - (Required, ForceNew) Name of the RAM policy. This name can have a string of 1 to 128 characters, must contain only alphanumeric characters or hyphen "-", and must not begin with a hyphen.
- `policy_type` - (Required, ForceNew) Type of the RAM policy. It must be `Custom` or `System`.

» Attributes Reference

The following attributes are exported:

- `id` - The attachment ID. Composed of policy name, policy type and user name with format `user:<policy_name>:<policy_type>:<user_name>`.

» Import

RAM User Policy attachment can be imported using the id, e.g.

```
$ terraform import alicloud_ram_user_policy_attachment.example user:my-policy:Custom:my-user
```

» alicloud_db_instances_classes

This data source provides the RDS instance classes resource available info of Alibaba Cloud.

NOTE: Available in v1.46.0+

» Example Usage

```
data "alicloud_db_instance_classes" "resources" {
  instance_charge_type = "PostPaid"
  engine               = "MySQL"
  engine_version       = "5.6"
  output_file          = "./classes.txt"
}

output "first_db_instance_class" {
  value = "${data.alicloud_db_instance_classes.resources.instance_classes.0.instance_class}'
}
```

» Argument Reference

The following arguments are supported:

- `zone_id` - (Optional) The Zone to launch the DB instance.
- `instance_charge_type` - (Optional) Filter the results by charge type. Valid values: `PrePaid` and `PostPaid`. Default to `PostPaid`.
- `engine` - (Optional) Database type. Options are `MySQL`, `SQLServer`, `PostgreSQL` and `PPAS`. If no value is specified, all types are returned.
- `category` - (Optional) DB Instance category. the value like [`Basic`, `HighAvailability`, `Finance`], detail info.
- `engine_version` - (Optional) Database version required by the user. Value options can refer to the latest docs detail info `EngineVersion`.
- `db_instance_class` - (Optional, Available in 1.51.0+) The DB instance class type by the user.
- `storage_type` - (Optional) The DB instance storage space required by the user. Valid values: `cloud_ssd` and `local_ssd`.
- `multi_zone` - (Optional, Available in v1.48.0+) Whether to show multi available zone. Default false to not show multi availability zone.
- `output_file` - (Optional) File name where to save data source results (after running `terraform apply`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - (Available in 1.60.0+) A list of Rds instance class codes.
- `instance_classes` - A list of Rds available resource. Each element contains the following attributes:
    - `zone_ids` - A list of Zone to launch the DB instance.
    - `id` - The Zone to launch the DB instance

- **sub_zone_ids** - A list of sub zone ids which in the id - e.g If **id** is `cn-beijing-MAZ5(a,b)`, **sub_zone_ids** will be `["cn-beijing-a", "cn-beijing-b"]`.
- **instance_class** - DB Instance available class.
- **storage_range** - DB Instance available storage range.
- **min** - DB Instance available storage min value.
- **max** - DB Instance available storage max value.
- **step** - DB Instance available storage increase step.

» alicloud_db_instances_engines

This data source provides the RDS instance engines resource available info of Alibaba Cloud.

NOTE: Available in v1.46.0+

» Example Usage

```
data "alicloud_db_instance_engines" "resources" {
  instance_charge_type = "PostPaid"
  engine               = "MySQL"
  engine_version       = "5.6"
  output_file          = "./engines.txt"
}

output "first_db_category" {
  value = "${data.alicloud_db_instance_engines.resources.instance_engines.0.category}"
}
```

» Argument Reference

The following arguments are supported:

- **zone_id** - (Optional) The Zone to launch the DB instance.
- **instance_charge_type** - (Optional) Filter the results by charge type. Valid values: `PrePaid` and `PostPaid`. Default to `PostPaid`.
- **engine** - (Optional) Database type. Options are `MySQL`, `SQLServer`, `PostgreSQL` and `PPAS`. If no value is specified, all types are returned.
- **engine_version** - (Optional) Database version required by the user. Value options can refer to the latest docs detail info `EngineVersion`.
- **multi_zone** - (Optional, Available in v1.48.0+) Whether to show multi available zone. Default false to not show multi availability zone.

- `output_file` - (Optional) File name where to save data source results (after running `terraform apply`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `instance_engines` - A list of Rds available resource. Each element contains the following attributes:
  - `zone_ids` - A list of Zone to launch the DB instance.
  - `id` - The Zone to launch the DB instance
  - `sub_zone_ids` - A list of sub zone ids which in the id - e.g If `id` is `cn-beijing-MAZ5(a,b)`, `sub_zone_ids` will be `["cn-beijing-a", "cn-beijing-b"]`.
  - `engine` - Database type.
  - `engine_version` - DB Instance version.
  - `category` - DB Instance category.

» alicloud_db_instances

The `alicloud_db_instances` data source provides a collection of RDS instances available in Alibaba Cloud account. Filters support regular expression for the instance name, searches by tags, and other filters which are listed below.

» Example Usage

```
data "alicloud_db_instances" "db_instances_ds" {
  name_regex = "data-\\d+"
  status     = "Running"
  tags       = {
    "type" = "database",
    "size" = "tiny"
  }

}

output "first_db_instance_id" {
  value = "${data.alicloud_db_instances.db_instances_ds.instances.0.id}"
}
```

» Argument Reference

The following arguments are supported:

- `name_regex` - (Optional) A regex string to filter results by instance name.
- `ids` - (Optional, Available 1.52.0+) A list of RDS instance IDs.
- `engine` - (Optional) Database type. Options are `MySQL`, `SQLServer`, `PostgreSQL` and `PPAS`. If no value is specified, all types are returned.
- `status` - (Optional) Status of the instance.
- `db_type` - (Optional) `Primary` for primary instance, `Readonly` for read-only instance, `Guard` for disaster recovery instance, and `Temp` for temporary instance.
- `vpc_id` - (Optional) Used to retrieve instances belong to specified VPC.
- `vswitch_id` - (Optional) Used to retrieve instances belong to specified `vswitch` resources.
- `connection_mode` - (Optional) `Standard` for standard access mode and `Safe` for high security access mode.
- `tags` - (Optional) A map of tags assigned to the DB instances. Note: Before 1.60.0, the value's format is a `json` string which including `TagKey` and `TagValue`. `TagKey` cannot be null, and `TagValue` can be empty. Format example `"{\"key1\":\"value1\"}"`
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of RDS instance IDs.
- `names` - A list of RDS instance names.
- `instances` - A list of RDS instances. Each element contains the following attributes:
  - `id` - The ID of the RDS instance.
  - `name` - The name of the RDS instance.
  - `charge_type` - Billing method. Value options: `Postpaid` for Pay-As-You-Go and `Prepaid` for subscription.
  - `db_type` - `Primary` for primary instance, `Readonly` for read-only instance, `Guard` for disaster recovery instance, and `Temp` for temporary instance.
  - `region_id` - Region ID the instance belongs to.
  - `create_time` - Creation time of the instance.
  - `expire_time` - Expiration time. Pay-As-You-Go instances never expire.
  - `status` - Status of the instance.
  - `engine` - Database type. Options are `MySQL`, `SQLServer`, `PostgreSQL` and `PPAS`. If no value is specified, all types are returned.

- – **engine_version** - Database version.
- – **net_type** - **Internet** for public network or **Intranet** for private network.
- – **connection_mode** - **Standard** for standard access mode and **Safe** for high security access mode.
- – **instance_type** - Sizing of the RDS instance.
- – **availability_zone** - Availability zone.
- – **master_instance_id** - ID of the primary instance. If this parameter is not returned, the current instance is a primary instance.
- – **guard_instance_id** - If a disaster recovery instance is attached to the current instance, the ID of the disaster recovery instance applies.
- – **temp_instance_id** - If a temporary instance is attached to the current instance, the ID of the temporary instance applies.
- – **readonly_instance_ids** - A list of IDs of read-only instances attached to the primary instance.
- – **vpc_id** - ID of the VPC the instance belongs to.
- – **vswitch_id** - ID of the VSwitch the instance belongs to.

» alicloud_db_account

Provides an RDS account resource and used to manage databases.

» Example Usage

```
variable "creation" {
  default = "Rds"
}

variable "name" {
  default = "dbaccountmysql"
}

data "alicloud_zones" "default" {
  available_resource_creation = "${var.creation}"
}

resource "alicloud_vpc" "default" {
  name       = "${var.name}"
  cidr_block = "172.16.0.0/16"
}

resource "alicloud_vswitch" "default" {
  vpc_id            = "${alicloud_vpc.default.id}"
```

```
    cidr_block        = "172.16.0.0/24"
    availability_zone = "${data.alicloud_zones.default.zones.0.id}"
    name              = "${var.name}"
}

resource "alicloud_db_instance" "instance" {
    engine           = "MySQL"
    engine_version   = "5.6"
    instance_type    = "rds.mysql.s1.small"
    instance_storage = "10"
    vswitch_id       = "${alicloud_vswitch.default.id}"
    instance_name    = "${var.name}"
}

resource "alicloud_db_account" "account" {
    instance_id = "${alicloud_db_instance.instance.id}"
    name        = "tftestnormal"
    password    = "Test12345"
}
```

» Argument Reference

The following arguments are supported:

- `instance_id` - (Required, ForceNew) The Id of instance in which account belongs.

- `name` - (Required, ForceNew) Operation account requiring a uniqueness check. It may consist of lower case letters, numbers, and underlines, and must start with a letter and have no more than 16 characters.

- `password` - (Optional, Sensitive) Operation password. It may consist of letters, digits, or underlines, with a length of 6 to 32 characters. You have to specify one of `password` and `kms_encrypted_password` fields.

- `kms_encrypted_password` - (Optional, Available in 1.57.1+) An KMS encrypts password used to a db account. If the `password` is filled in, this field will be ignored.

- `kms_encryption_context` - (Optional, MapString, Available in 1.57.1+) An KMS encryption context used to decrypt `kms_encrypted_password` before creating or updating a db account with `kms_encrypted_password`. See Encryption Context. It is valid when `kms_encrypted_password` is set.

- `description` - (Optional) Database description. It cannot begin with https://. It must start with a Chinese character or English letter. It can

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include Chinese and English characters, underlines (_), hyphens (-), and numbers. The length may be 2-256 characters.

- `type` - (Optional, ForceNew)Privilege type of account.

  - Normal: Common privilege.
  - Super: High privilege.

  Default to Normal.

» Attributes Reference

The following attributes are exported:

- `id` - The current account resource ID. Composed of instance ID and account name with format `<instance_id>:<name>`.

» Import

RDS account can be imported using the id, e.g.

```
$ terraform import alicloud_db_account.example "rm-12345:tf_account"
```

» alicloud_db_account_privilege

Provides an RDS account privilege resource and used to grant several database some access privilege. A database can be granted by multiple account.

» Example Usage

```
variable "creation" {
  default = "Rds"
}

variable "name" {
  default = "dbaccountprivilegebasic"
}

data "alicloud_zones" "default" {
  available_resource_creation = "${var.creation}"
}

resource "alicloud_vpc" "default" {
  name        = "${var.name}"
```

```
  cidr_block = "172.16.0.0/16"
}

resource "alicloud_vswitch" "default" {
  vpc_id            = "${alicloud_vpc.default.id}"
  cidr_block        = "172.16.0.0/24"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  name              = "${var.name}"
}

resource "alicloud_db_instance" "instance" {
  engine           = "MySQL"
  engine_version   = "5.6"
  instance_type    = "rds.mysql.s1.small"
  instance_storage = "10"
  vswitch_id       = "${alicloud_vswitch.default.id}"
  instance_name    = "${var.name}"
}

resource "alicloud_db_database" "db" {
  count       = 2
  instance_id = "${alicloud_db_instance.instance.id}"
  name        = "tfaccountpri_${count.index}"
  description = "from terraform"
}

resource "alicloud_db_account" "account" {
  instance_id = "${alicloud_db_instance.instance.id}"
  name        = "tftestprivilege"
  password    = "Test12345"
  description = "from terraform"
}

resource "alicloud_db_account_privilege" "privilege" {
  instance_id  = "${alicloud_db_instance.instance.id}"
  account_name = "${alicloud_db_account.account.name}"
  privilege    = "ReadOnly"
  db_names     = "${alicloud_db_database.db.*.name}"
}
```

» Argument Reference

The following arguments are supported:

- `instance_id` - (Required, ForceNew) The Id of instance in which account

belongs.
- `account_name` - (Required, ForceNew) A specified account name.
- `privilege` - The privilege of one account access database. Valid values:
    - ReadOnly: This value is only for MySQL, MariaDB and SQL Server
    - ReadWrite: This value is only for MySQL, MariaDB and SQL Server
    - DDLOnly: (Available in 1.64.0+) This value is only for MySQL and MariaDB
    - DMLOnly: (Available in 1.64.0+) This value is only for MySQL and MariaDB
    - DBOwner: (Available in 1.64.0+) This value is only for SQL Server and PostgreSQL.

Default to "ReadOnly". * `db_names` - (Required) List of specified database name.

» Attributes Reference

The following attributes are exported:

- `id` - The current account resource ID. Composed of instance ID, account name and privilege with format `<instance_id>:<name>:<privilege>`.

» Import

RDS account privilege can be imported using the id, e.g.

```
$ terraform import alicloud_db_account_privilege.example "rm-12345:tf_account:ReadOnly"
```

» alicloud_db_backup_policy

Provides an RDS instance backup policy resource and used to configure instance backup policy.

NOTE: Each DB instance has a backup policy and it will be set default values when destroying the resource.

» Example Usage

```
variable "creation" {
  default = "Rds"
}

variable "name" {
```

```
  default = "dbbackuppolicybasic"
}

data "alicloud_zones" "default" {
  available_resource_creation = "${var.creation}"
}

resource "alicloud_vpc" "default" {
  name       = "${var.name}"
  cidr_block = "172.16.0.0/16"
}

resource "alicloud_vswitch" "default" {
  vpc_id            = "${alicloud_vpc.default.id}"
  cidr_block        = "172.16.0.0/24"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  name              = "${var.name}"
}

resource "alicloud_db_instance" "instance" {
  engine           = "MySQL"
  engine_version   = "5.6"
  instance_type    = "rds.mysql.s1.small"
  instance_storage = "10"
  vswitch_id       = "${alicloud_vswitch.default.id}"
  instance_name    = "${var.name}"
}

resource "alicloud_db_backup_policy" "policy" {
  instance_id = "${alicloud_db_instance.instance.id}"
}
```

» Argument Reference

The following arguments are supported:

- `instance_id` - (Required, ForceNew) The Id of instance that can run database.
- `backup_period` - (Deprecated) It has been deprecated from version 1.69.0, and use field 'preferred_backup_period' instead.
- `preferred_backup_period` - (Optional, available in 1.69.0+) DB Instance backup period. Please set at least two days to ensure backing up at least twice a week. Valid values: [Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, Sunday]. Default to ["Monday", "Tuesday", "Wednesday", "Thursday", "Friday", "Saturday", "Sunday"].

- `backup_time` - (Deprecated) It has been deprecated from version 1.69.0, and use field 'preferred_backup_time' instead.
- `preferred_backup_time` - (Optional, available in 1.69.0+) DB instance backup time, in the format of HH:mmZ- HH:mmZ. Time setting interval is one hour. Default to "02:00Z-03:00Z". China time is 8 hours behind it.
- `retention_period` - (Deprecated) It has been deprecated from version 1.69.0, and use field 'backup_retention_period' instead.
- `backup_retention_period` - (Optional, available in 1.69.0+) Instance backup retention days. Valid values: [7-730]. Default to 7. But mysql local disk is unlimited.
- `log_backup` - (Deprecated) It has been deprecated from version 1.68.0, and use field 'enable_backup_log' instead.
- `enable_backup_log` - (Optional, available in 1.68.0+) Whether to backup instance log. Valid values are `true`, `false`, Default to `true`. Note: The 'Basic Edition' category Rds instance does not support setting log backup. What is Basic Edition.
- `log_retention_period` - (Deprecated) It has been deprecated from version 1.69.0, and use field 'log_backup_retention_period' instead.
- `log_backup_retention_period` - (Optional, available in 1.69.0+) Instance log backup retention days. Valid when the `enable_backup_log` is `1`. Valid values: [7-730]. Default to 7. It cannot be larger than `backup_retention_period`.
- `local_log_retention_hours` - (Optional, available in 1.69.0+) Instance log backup local retention hours. Valid when the `enable_backup_log` is `true`. Valid values: [0-7*24].
- `local_log_retention_space` - (Optional, available in 1.69.0+) Instance log backup local retention space. Valid when the `enable_backup_log` is `true`. Valid values: [5-50].
- `high_space_usage_protection` - (Optional, available in 1.69.0+) Instance high space usage protection policy. Valid when the `enable_backup_log` is `true`. Valid values are `Enable`, `Disable`.
- `log_backup_frequency` - (Optional, available in 1.69.0+) Instance log backup frequency. Valid when the instance engine is `SQLServer`. Valid values are `LogInterval`.
- `compress_type` - (Optional, available in 1.69.0+) The compress type of instance policy. Valid values are `1`, `4`, `8`.
- `archive_backup_retention_period` - (Optional, available in 1.69.0+) Instance archive backup retention days. Valid when the `enable_backup_log` is `true` and instance is mysql local disk. Valid values: [30-1095], and `archive_backup_retention_period` must larger than `backup_retention_period` 730.
- `archive_backup_keep_count` - (Optional, available in 1.69.0+) Instance archive backup keep count. Valid when the `enable_backup_log` is `true` and instance is mysql local disk. When `archive_backup_keep_policy` is `ByMonth` Valid values: [1-31]. When `archive_backup_keep_policy` is `ByWeek` Valid values: [1-7].

- `archive_backup_keep_policy` - (Optional, available in 1.69.0+) Instance archive backup keep policy. Valid when the `enable_backup_log` is `true` and instance is mysql local disk. Valid values are `ByMonth`, `Disable`, `KeepAll`.

NOTE: Currently, the SQLServer instance does not support to modify `log_backup_retention_period`.

» Attributes Reference

The following attributes are exported:

- `id` - The current backup policy resource ID. It is same as 'instance_id'.

» Import

RDS backup policy can be imported using the id or instance id, e.g.

```
$ terraform import alicloud_db_backup_policy.example "rm-12345678"
```

» alicloud_db_connection

Provides an RDS connection resource to allocate an Internet connection string for RDS instance.

NOTE: Each RDS instance will allocate a intranet connnection string automatically and its prifix is RDS instance ID. To avoid unnecessary conflict, please specified a internet connection prefix before applying the resource.

» Example Usage

```
variable "creation" {
  default = "Rds"
}

variable "name" {
  default = "dbconnectionbasic"
}

data "alicloud_zones" "default" {
  available_resource_creation = "${var.creation}"
}
```

```
resource "alicloud_vpc" "default" {
  name       = "${var.name}"
  cidr_block = "172.16.0.0/16"
}

resource "alicloud_vswitch" "default" {
  vpc_id            = "${alicloud_vpc.default.id}"
  cidr_block        = "172.16.0.0/24"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  name              = "${var.name}"
}

resource "alicloud_db_instance" "instance" {
  engine           = "MySQL"
  engine_version   = "5.6"
  instance_type    = "rds.mysql.t1.small"
  instance_storage = "10"
  vswitch_id       = "${alicloud_vswitch.default.id}"
  instance_name    = "${var.name}"
}

resource "alicloud_db_connection" "foo" {
  instance_id       = "${alicloud_db_instance.instance.id}"
  connection_prefix = "testabc"
}
```

» Argument Reference

The following arguments are supported:

- `instance_id` - (Required, ForceNew) The Id of instance that can run database.
- `connection_prefix` - (ForceNew) Prefix of an Internet connection string. It must be checked for uniqueness. It may consist of lowercase letters, numbers, and underlines, and must start with a letter and have no more than 30 characters. Default to + 'tf'.
- `port` - (Optional) Internet connection port. Valid value: [3001-3999]. Default to 3306.

» Attributes Reference

The following attributes are exported:

- `id` - The current instance connection resource ID. Composed of instance ID and connection string with format `<instance_id>:<connection_prefix>`.

- `connection_prefix` - Prefix of a connection string.
- `port` - Connection instance port.
- `connection_string` - Connection instance string.
- `ip_address` - The ip address of connection string.

» Import

RDS connection can be imported using the id, e.g.

```
$ terraform import alicloud_db_connection.example abc12345678
```

» alicloud_db_database

Provides an RDS database resource. A DB database deployed in a DB instance. A DB instance can own multiple databases.

NOTE: This resource does not support creating 'PPAS' database. You have to login RDS instance to create manually.

» Example Usage

```
variable "creation" {
  default = "Rds"
}

variable "name" {
  default = "dbdatabasebasic"
}

data "alicloud_zones" "default" {
  available_resource_creation = "${var.creation}"
}

resource "alicloud_vpc" "default" {
  name       = "${var.name}"
  cidr_block = "172.16.0.0/16"
}

resource "alicloud_vswitch" "default" {
  vpc_id            = "${alicloud_vpc.default.id}"
  cidr_block        = "172.16.0.0/24"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  name              = "${var.name}"
```

```
}

resource "alicloud_db_instance" "instance" {
  engine           = "MySQL"
  engine_version   = "5.6"
  instance_type    = "rds.mysql.s1.small"
  instance_storage = "10"
  vswitch_id       = "${alicloud_vswitch.default.id}"
  instance_name    = "${var.name}"
}

resource "alicloud_db_database" "default" {
  instance_id = "${alicloud_db_instance.instance.id}"
  name        = "tftestdatabase"
}
```

» Argument Reference

The following arguments are supported:

- `instance_id` - (Required, ForceNew) The Id of instance that can run database.
- `name` - (Required, ForceNew) Name of the database requiring a uniqueness check. It may consist of lower case letters, numbers, and underlines, and must start with a letter and have no more than 64 characters.
- `character_set` - (Required) Character set. The value range is limited to the following:
    - MySQL: [utf8, gbk, latin1, utf8mb4] (`utf8mb4` only supports versions 5.5 and 5.6).
    - SQLServer: [Chinese_PRC_CI_AS, Chinese_PRC_CS_AS, SQL_Latin1_General_CP1_CI_AS, SQL_Latin1_General_CP1_CS_AS, Chinese_PRC_BIN]
    - PostgreSQL: [KOI8U UTF8 WIN866 WIN874 WIN1250 WIN1251 WIN1252 WIN1253 WIN1254 W]

More details refer to API Docs

- `description` - (ForceNew) Database description. It cannot begin with https://. It must start with a Chinese character or English letter. It can include Chinese and English characters, underlines (_), hyphens (-), and numbers. The length may be 2-256 characters.

NOTE: The value of "name" or "character_set" does not support modification.

» Attributes Reference

The following attributes are exported:

- `id` - The current database resource ID. Composed of instance ID and database name with format `<instance_id>:<name>`.

» Import

RDS database can be imported using the id, e.g.

```
$ terraform import alicloud_db_database.example "rm-12345:tf_database"
```

» alicloud__db__instance

Provides an RDS instance resource. A DB instance is an isolated database environment in the cloud. A DB instance can contain multiple user-created databases.

» Example Usage

» Create a RDS MySQL instance

```
variable "name" {
  default = "dbInstanceconfig"
}
variable "creation" {
  default = "Rds"
}
data "alicloud_zones" "default" {
  available_resource_creation = "${var.creation}"
}
resource "alicloud_vpc" "default" {
  name       = "${var.name}"
  cidr_block = "172.16.0.0/16"
}
resource "alicloud_vswitch" "default" {
  vpc_id            = "${alicloud_vpc.default.id}"
  cidr_block        = "172.16.0.0/24"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  name              = "${var.name}"
}
resource "alicloud_db_instance" "default" {
```

```
  engine              = "MySQL"
  engine_version      = "5.6"
  instance_type       = "rds.mysql.s2.large"
  instance_storage    = "30"
  instance_charge_type = "Postpaid"
  instance_name       = "${var.name}"
  vswitch_id          = "${alicloud_vswitch.default.id}"
  monitoring_period   = "60"
}
```

» Create a RDS MySQL instance with specific parameters

```
resource "alicloud_vpc" "default" {
  name       = "vpc-123456"
  cidr_block = "172.16.0.0/16"
}

resource "alicloud_vswitch" "default" {
  vpc_id            = "${alicloud_vpc.default.id}"
  cidr_block        = "172.16.0.0/24"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  name              = "vpc-123456"
}

resource "alicloud_db_instance" "default" {
  engine            = "MySQL"
  engine_version    = "5.6"
  db_instance_class = "rds.mysql.t1.small"
  db_instance_storage = "10"
  vswitch_id        = "${alicloud_vswitch.default.id}"
}

resource "alicloud_db_instance" "default" {
  engine            = "MySQL"
  engine_version    = "5.6"
  db_instance_class = "rds.mysql.t1.small"
  db_instance_storage = "10"
  parameters {
    name  = "innodb_large_prefix"
    value = "ON"
  }
  parameters {
    name  = "connect_timeout"
    value = "50"
  }
```

```
}
```

» Argument Reference

The following arguments are supported:

- `engine` - (Required,ForceNew) Database type. Value options: MySQL, SQLServer, PostgreSQL, and PPAS.

- `engine_version` - (Required,ForceNew) Database version. Value options can refer to the latest docs CreateDBInstance `EngineVersion`.

- `instance_type` - (Required) DB Instance type. For details, see Instance type table.

- `instance_storage` - (Required) User-defined DB instance storage space. Value range:

  - [5, 2000] for MySQL/PostgreSQL/PPAS HA dual node edition;
  - [20,1000] for MySQL 5.7 basic single node edition;
  - [10, 2000] for SQL Server 2008R2;
  - [20,2000] for SQL Server 2012 basic single node edition Increase progressively at a rate of 5 GB. For details, see Instance type table. Note: There is extra 5 GB storage for SQL Server Instance and it is not in specified `instance_storage`.

- `db_instance_storage_type` - (Optional, Available in 1.68.0+) The storage type of the instance. Valid values:

  - local_ssd: specifies to use local SSDs. This value is recommended.
  - cloud_ssd: specifies to use standard SSDs.
  - cloud_essd: specifies to use enhanced SSDs (ESSDs).
  - cloud_essd2: specifies to use enhanced SSDs (ESSDs).
  - cloud_essd3: specifies to use enhanced SSDs (ESSDs).

- `sql_collector_status` - (Optional, Available in 1.70.0+) The sql collector status of the instance. Valid values are `Enabled`, `Disabled`, Default to `Disabled`.

- `sql_collector_config_value` - (Optional, Available in 1.70.0+) The sql collector keep time of the instance. Valid values are 1, 30, 180, 365, 1095, 1825, 1 is the initial value, and can't change it to 1.

- `instance_name` - (Optional) The name of DB instance. It a string of 2 to 256 characters.

- `instance_charge_type` - (Optional) Valid values are `Prepaid`, `Postpaid`, Default to `Postpaid`. Currently, the resource only supports PostPaid to PrePaid.

- **period** - (Optional) The duration that you will buy DB instance (in month). It is valid when instance_charge_type is `PrePaid`. Valid values: [1~9], 12, 24, 36. Default to 1.

- **monitoring_period** - (Optional) The monitoring frequency in seconds. Valid values are 5, 60, 300. Defaults to 300.

- **auto_renew** - (Optional, Available in 1.34.0+) Whether to renewal a DB instance automatically or not. It is valid when instance_charge_type is `PrePaid`. Default to `false`.

- **auto_renew_period** - (Optional, Available in 1.34.0+) Auto-renewal period of an instance, in the unit of the month. It is valid when instance_charge_type is `PrePaid`. Valid value:[1~12], Default to 1.

- **zone_id** - (ForceNew) The Zone to launch the DB instance. From version 1.8.1, it supports multiple zone. If it is a multi-zone and `vswitch_id` is specified, the vswitch must in the one of them. The multiple zone ID can be retrieved by setting `multi` to "true" in the data source `alicloud_zones`.

- **vswitch_id** - (ForceNew) The virtual switch ID to launch DB instances in one VPC.

- **security_ips** - (Optional) List of IP addresses allowed to access all databases of an instance. The list contains up to 1,000 IP addresses, separated by commas. Supported formats include 0.0.0.0/0, 10.23.12.24 (IP), and 10.23.12.24/24 (Classless Inter-Domain Routing (CIDR) mode. /24 represents the length of the prefix in an IP address. The range of the prefix length is [1,32]).

- **security_ip_mode** - (Optional, Available in 1.62.1+) Valid values are `normal`, `safety`, Default to `normal`. support `safety` switch to high security access mode

- **parameters** - (Optional) Set of parameters needs to be set after DB instance was launched. Available parameters can refer to the latest docs View database parameter templates .

- **tags** - (Optional) A mapping of tags to assign to the resource.

  - Key: It can be up to 64 characters in length. It cannot begin with "aliyun", "acs:", "http://", or "https://". It cannot be a null string.
  - Value: It can be up to 128 characters in length. It cannot begin with "aliyun", "acs:", "http://", or "https://". It can be a null string.

Note: From 1.63.0, the tag key and value are case sensitive. Before that, they are not case sensitive.

- **security_group_id** - (Deprecated) It has been deprecated from 1.69.0 and use `security_group_ids` instead.

- `security_group_ids` - (Optional, List(string), Available in 1.69.0+) The list IDs to join ECS Security Group. At most supports three security groups.
- `maintain_time` - (Optional, Available in 1.56.0+) Maintainable time period format of the instance: HH:MMZ-HH:MMZ (UTC time)
- `auto_upgrade_minor_version` - (Optional, Available in 1.62.1+) The upgrade method to use. Valid values:
  - Auto: Instances are automatically upgraded to a higher minor version.
  - Manual: Instances are forcibly upgraded to a higher minor version when the current version is unpublished.

Default to "Manual". See more details and limitation.

NOTE: Because of data backup and migration, change DB instance type and storage would cost 15~20 minutes. Please make full preparation before changing them.

» Attributes Reference

The following attributes are exported:

- `id` - The RDS instance ID.
- `port` - RDS database connection port.
- `connection_string` - RDS database connection string.

» Timeouts

NOTE: Available in 1.52.1+.

The `timeouts` block allows you to specify timeouts for certain actions:

- `create` - (Defaults to 20 mins) Used when creating the db instance (until it reaches the initial `Running` status).
- `update` - (Defaults to 30 mins) Used when updating the db instance (until it reaches the initial `Running` status).
- `delete` - (Defaults to 20 mins) Used when terminating the db instance.

» Import

RDS instance can be imported using the id, e.g.

```
$ terraform import alicloud_db_instance.example rm-abc12345678
```

» alicloud_db_read_write_splitting_connection

Provides an RDS read write splitting connection resource to allocate an Intranet connection string for RDS instance.

» Example Usage

```
variable "creation" {
  default = "Rds"
}

variable "name" {
  default = "dbInstancevpc"
}

data "alicloud_zones" "default" {
  available_resource_creation = "${var.creation}"
}

resource "alicloud_vpc" "default" {
  name       = "${var.name}"
  cidr_block = "172.16.0.0/16"
}

resource "alicloud_vswitch" "default" {
  vpc_id            = "${alicloud_vpc.default.id}"
  cidr_block        = "172.16.0.0/24"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  name              = "${var.name}"
}

resource "alicloud_db_instance" "default" {
  engine              = "MySQL"
  engine_version      = "5.6"
  instance_type       = "rds.mysql.t1.small"
  instance_storage    = "20"
  instance_charge_type = "Postpaid"
  instance_name       = "${var.name}"
  vswitch_id          = "${alicloud_vswitch.default.id}"
  security_ips        = ["10.168.1.12", "100.69.7.112"]
}

resource "alicloud_db_readonly_instance" "default" {
  master_db_instance_id = "${alicloud_db_instance.default.id}"
```

```
  zone_id                = "${alicloud_db_instance.default.zone_id}"
  engine_version         = "${alicloud_db_instance.default.engine_version}"
  instance_type          = "${alicloud_db_instance.default.instance_type}"
  instance_storage       = "30"
  instance_name          = "${var.name}ro"
  vswitch_id             = "${alicloud_vswitch.default.id}"
}

resource "alicloud_db_read_write_splitting_connection" "default" {
  instance_id       = "${alicloud_db_instance.default.id}"
  connection_prefix = "t-con-123"
  distribution_type = "Standard"

  depends_on = ["alicloud_db_readonly_instance.default"]
}
```

NOTE: Resource `alicloud_db_read_write_splitting_connection` should be created after `alicloud_db_readonly_instance`, so the `depends_on` statement is necessary.

» Argument Reference

The following arguments are supported:

- `instance_id` - (Required, ForceNew) The Id of instance that can run database.
- `distribution_type` - (Required) Read weight distribution mode. Values are as follows: `Standard` indicates automatic weight distribution based on types, `Custom` indicates custom weight distribution.
- `connection_prefix` - (Optional, ForceNew) Prefix of an Internet connection string. It must be checked for uniqueness. It may consist of lowercase letters, numbers, and underlines, and must start with a letter and have no more than 30 characters. Default to + 'rw'.
- `port` - (Optional) Intranet connection port. Valid value: [3001-3999]. Default to 3306.
- `max_delay_time` - (Optional) Delay threshold, in seconds. The value range is 0 to 7200. Default to 30. Read requests are not routed to the read-only instances with a delay greater than the threshold.

- `weight` - (Optional) Read weight distribution. Read weights increase at a step of 100 up to 10,000. Enter weights in the following format: {"Instanceid":"Weight","Instanceid":"Weight"}. This parameter must be set when distribution_type is set to Custom.

» Attributes Reference

The following attributes are exported:

- `id` - The Id of DB instance.
- `connection_string` - Connection instance string.

» Import

RDS read write splitting connection can be imported using the id, e.g.

```
$ terraform import alicloud_db_read_write_splitting_connection.example abc12345678
```

» alicloud_db_readonly_instance

Provides an RDS readonly instance resource.

» Example Usage

```
variable "creation" {
  default = "Rds"
}

variable "name" {
  default = "dbInstancevpc"
}

data "alicloud_zones" "default" {
  available_resource_creation = "${var.creation}"
}

resource "alicloud_vpc" "default" {
  name       = "${var.name}"
  cidr_block = "172.16.0.0/16"
}

resource "alicloud_vswitch" "default" {
  vpc_id            = "${alicloud_vpc.default.id}"
  cidr_block        = "172.16.0.0/24"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  name              = "${var.name}"
}
```

```
resource "alicloud_db_instance" "default" {
  engine              = "MySQL"
  engine_version      = "5.6"
  instance_type       = "rds.mysql.t1.small"
  instance_storage    = "20"
  instance_charge_type = "Postpaid"
  instance_name       = "${var.name}"
  vswitch_id          = "${alicloud_vswitch.default.id}"
  security_ips        = ["10.168.1.12", "100.69.7.112"]
}

resource "alicloud_db_readonly_instance" "default" {
  master_db_instance_id = "${alicloud_db_instance.default.id}"
  zone_id               = "${alicloud_db_instance.default.zone_id}"
  engine_version        = "${alicloud_db_instance.default.engine_version}"
  instance_type         = "${alicloud_db_instance.default.instance_type}"
  instance_storage      = "30"
  instance_name         = "${var.name}ro"
  vswitch_id            = "${alicloud_vswitch.default.id}"
}
```

» Argument Reference

The following arguments are supported:

- `engine_version` - (Required, ForceNew) Database version. Value options can refer to the latest docs CreateDBInstance `EngineVersion`.
- `master_db_instance_id` - (Required) ID of the master instance.
- `instance_type` - (Required) DB Instance type. For details, see Instance type table.
- `instance_storage` - (Required) User-defined DB instance storage space. Value range: [5, 2000] for MySQL/SQL Server HA dual node edition. Increase progressively at a rate of 5 GB. For details, see Instance type table.
- `instance_name` - (Optional) The name of DB instance. It a string of 2 to 256 characters.
- `parameters` - (Optional) Set of parameters needs to be set after DB instance was launched. Available parameters can refer to the latest docs View database parameter templates.
- `zone_id` - (Optional, ForceNew) The Zone to launch the DB instance.
- `vswitch_id` - (Optional, ForceNew) The virtual switch ID to launch DB instances in one VPC.
- `tags` - (Optional, Available in 1.68.0+) A mapping of tags to assign to the resource.
  - Key: It can be up to 64 characters in length. It cannot begin with

"aliyun", "acs:", "http://", or "https://". It cannot be a null string.

– Value: It can be up to 128 characters in length. It cannot begin with "aliyun", "acs:", "http://", or "https://". It can be a null string.

NOTE: Because of data backup and migration, change DB instance type and storage would cost 15~20 minutes. Please make full preparation before changing them.

» Attributes Reference

The following attributes are exported:

- `id` - The RDS instance ID.
- `engine` - Database type.
- `port` - RDS database connection port.
- `connection_string` - RDS database connection string.

» Timeouts

NOTE: Available in 1.52.1+.

The `timeouts` block allows you to specify timeouts for certain actions:

- `create` - (Defaults to 20 mins) Used when creating the db instance (until it reaches the initial `Running` status).
- `update` - (Defaults to 30 mins) Used when updating the db instance (until it reaches the initial `Running` status).
- `delete` - (Defaults to 20 mins) Used when terminating the db instance.

» Import

RDS readonly instance can be imported using the id, e.g.

```
$ terraform import alicloud_db_readonly_instance.example rm-abc12345678
```

» alicloud_slb_acls

This data source provides the acls in the region.

» Example Usage

```
data "alicloud_slb_acls" "sample_ds" {
}
```

```
output "first_slb_acl_id" {
  value = "${data.alicloud_slb_acls.sample_ds.acls.0.id}"
}
```

» Argument Reference

The following arguments are supported:

- `ids` - (Optional) A list of acls IDs to filter results.
- `name_regex` - (Optional) A regex string to filter results by acl name.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).
- `resource_group_id` - (Optional, ForceNew, Available in 1.60.0+) The Id of resource group which acl belongs.
- `tags` - (Optional, Available in v1.66.0+) A mapping of tags to assign to the resource.

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of SLB acls IDs.
- `names` - A list of SLB acls names.
- `acls` - A list of SLB acls. Each element contains the following attributes:
  - `id` - Acl ID.
  - `name` - Acl name.
  - `entry_list` - A list of entry (IP addresses or CIDR blocks). Each entry contains two sub-fields as `Entry Block` follows.
  - `related_listeners` - A list of listener are attached by the acl. Each listener contains four sub-fields as `Listener Block` follows.
  - `tags` - A mapping of tags to assign to the resource.
  - `resource_group_id` - Resource group ID. ## Entry Block

The entry mapping supports the following:

- `entry` - An IP addresses or CIDR blocks.
- `comment` - the comment of the entry.

» Listener Block

The Listener mapping supports the following:

- `load_balancer_id` - the id of load balancer instance, the listener belongs to.

- `frontend_port` - the listener port.
- `protocol` - the listener protocol (such as tcp/udp/http/https, etc).
- `acl_type` - the type of acl (such as white/black).

» alicloud_slb_attachments

This data source provides the server load balancer attachments of the current Alibaba Cloud user.

» Example Usage

```
data "alicloud_slb_attachments" "sample_ds" {
  load_balancer_id = "${alicloud_slb.sample_slb.id}"
}

output "first_slb_attachment_instance_id" {
  value = "${data.alicloud_slb_attachments.sample_ds.slb_attachments.0.instance_id}"
}
```

» Argument Reference

The following arguments are supported:

- `load_balancer_id` - ID of the SLB with attachments.
- `instance_ids` - (Optional) List of attached ECS instance IDs.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `slb_attachments` - A list of SLB attachments. Each element contains the following attributes:
  - `instance_id` - ID of the attached ECS instance.
  - `weight` - Weight associated to the ECS instance.

» alicloud_slb_backend_servers

This data source provides the server load balancer backend servers related to a server load balancer..

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NOTE: Available in 1.53.0+

» Example Usage

```
data "alicloud_slb_beckend_servers" "sample_ds" {
  load_balancer_id = "${alicloud_slb.sample_slb.id}"
}

output "first_slb_backend_server_id" {
  value = "${data.alicloud_slb_beckend_servers.sample_ds.backend_servers.0.id}"
}
```

» Argument Reference

The following arguments are supported:

- `load_balancer_id` - ID of the SLB with attachments.
- `ids` - (Optional) List of attached ECS instance IDs.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `backend_servers` -
    - `id` - backend server ID.
    - `weight` - Weight associated to the ECS instance.
    - `server_type` - Type of the backend server.

» alicloud_slb_ca_certificates

This data source provides the CA certificate list.

» Example Usage

```
data "alicloud_slb_ca_certificates" "sample_ds" {
}

output "first_slb_ca_certificate_id" {
  value = "${data.alicloud_slb_ca_certificates.sample_ds.certificates.0.id}"
}
```

» Argument Reference

The following arguments are supported:

- `ids` - (Optional) A list of ca certificates IDs to filter results.
- `name_regex` - (Optional) A regex string to filter results by ca certificate name.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).
- `resource_group_id` - (Optional, ForceNew, Available in 1.60.0+) The Id of resource group which ca certificates belongs.
- `tags` - (Optional, Available in v1.66.0+) A mapping of tags to assign to the resource. ## Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of SLB ca certificates IDs.
- `names` - A list of SLB ca certificates names.
- `certificates` - A list of SLB ca certificates. Each element contains the following attributes:
    - `id` - CA certificate ID.
    - `name` - CA certificate name.
    - `fingerprint` - CA certificate fingerprint.
    - `common_name` - CA certificate common name.
    - `expired_time` - CA certificate expired time.
    - `expired_timestamp` - CA certificate expired timestamp.
    - `created_time` - CA certificate created time.
    - `created_timestamp` - CA certificate created timestamp.
    - `resource_group_id` - The resource group Id of CA certificate.
    - `region_id` - The region Id of CA certificate.
    - `tags` - (Available in v1.66.0+) A mapping of tags to assign to the resource.

» alicloud_slb_listeners

This data source provides the listeners related to a server load balancer of the current Alibaba Cloud user.

» Example Usage

```
data "alicloud_slb_listeners" "sample_ds" {
  load_balancer_id = "${alicloud_slb.sample_slb.id}"
}

output "first_slb_listener_protocol" {
```

```
  value = "${data.alicloud_slb_listeners.sample_ds.slb_listeners.0.protocol}"
}
```

» Argument Reference

The following arguments are supported:

- `load_balancer_id` - (Required) ID of the SLB with listeners.
- `protocol` - (Optional) Filter listeners by the specified protocol. Valid values: `http`, `https`, `tcp` and `udp`.
- `frontend_port` - (Optional) Filter listeners by the specified frontend port.
- `description_regex` - (Optional, Available in 1.69.0+) A regex string to filter results by SLB listener description.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `slb_listeners` - A list of SLB listeners. Each element contains the following attributes:
    - `frontend_port` - Frontend port used to receive incoming traffic and distribute it to the backend servers.
    - `backend_port` - Port opened on the backend server to receive requests.
    - `protocol` - Listener protocol. Possible values: `http`, `https`, `tcp` and `udp`.
    - `status` - Listener status.
    - `security_status` - Security status. Only available when the protocol is `https`.
    - `bandwidth` - Peak bandwidth. If the value is set to -1, the listener is not limited by bandwidth.
    - `scheduler` - Algorithm used to distribute traffic. Possible values: `wrr` (weighted round robin), `wlc` (weighted least connection) and `rr` (round robin).
    - `server_group_id` - ID of the linked VServer group.
    - `master_slave_server_group_id` - ID of the active/standby server group.
    - `persistence_timeout` - Timeout value of the TCP connection in seconds. If the value is 0, the session persistence function is disabled. Only available when the protocol is `tcp`.
    - `established_timeout` - Connection timeout in seconds for the Layer 4 TCP listener. Only available when the protocol is `tcp`.

- **sticky_session** - Indicate whether session persistence is enabled or not. If enabled, all session requests from the same client are sent to the same backend server. Possible values are `on` and `off`. Only available when the protocol is `http` or `https`.
- **sticky_session_type** - Method used to handle the cookie. Possible values are `insert` (cookie added to the response) and `server` (cookie set by the backend server). Only available when the protocol is `http` or `https` and sticky_session is `on`.
- **cookie_timeout** - Cookie timeout in seconds. Only available when the sticky_session_type is `insert`.
- **cookie** - Cookie configured by the backend server. Only available when the sticky_session_type is `server`.
- **health_check** - Indicate whether health check is enabled of not. Possible values are `on` and `off`.
- **health_check_type** - Health check method. Possible values are `tcp` and `http`. Only available when the protocol is `tcp`.
- **health_check_domain** - Domain name used for health check. The SLB sends HTTP head requests to the backend server, the domain is useful when the backend server verifies the host field in the requests. Only available when the protocol is `http`, `https` or `tcp` (in this case health_check_type must be `http`).
- **health_check_uri** - URI used for health check. Only available when the protocol is `http`, `https` or `tcp` (in this case health_check_type must be `http`).
- **health_check_connect_port** - Port used for health check.
- **health_check_connect_timeout** - Amount of time in seconds to wait for the response for a health check.
- **healthy_threshold** - Number of consecutive successes of health check performed on the same ECS instance (from failure to success).
- **unhealthy_threshold** - Number of consecutive failures of health check performed on the same ECS instance (from success to failure).
- **health_check_timeout** - Amount of time in seconds to wait for the response from a health check. If an ECS instance sends no response within the specified timeout period, the health check fails. Only available when the protocol is `http` or `https`.
- **health_check_interval** - Time interval between two consecutive health checks.
- **health_check_http_code** - HTTP status codes indicating that the health check is normal. It can contain several comma-separated values such as "http_2xx,http_3xx". Only available when the protocol is `http`, `https` or `tcp` (in this case health_check_type must be `http`).
- **gzip** - Indicate whether Gzip compression is enabled or not. Possible values are `on` and `off`. Only available when the protocol is `http` or `https`.
- **ssl_certificate_id** - ID of the server certificate. Only available when the protocol is `https`.

- **ca_certificate_id** - ID of the CA certificate (only required when two-way authentication is used). Only available when the protocol is **https**.
- **x_forwarded_for** - Indicate whether the HTTP header field "X-Forwarded-For" is added or not; it allows the backend server to know about the user's IP address. Possible values are **on** and **off**. Only available when the protocol is **http** or **https**.
- **x_forwarded_for_slb_ip** - Indicate whether the HTTP header field "X-Forwarded-For_SLBIP" is added or not; it allows the backend server to know about the SLB IP address. Possible values are **on** and **off**. Only available when the protocol is **http** or **https**.
- **x_forwarded_for_slb_id** - Indicate whether the HTTP header field "X-Forwarded-For_SLBID" is added or not; it allows the backend server to know about the SLB ID. Possible values are **on** and **off**. Only available when the protocol is **http** or **https**.
- **x_forwarded_for_slb_proto** - Indicate whether the HTTP header field "X-Forwarded-For_proto" is added or not; it allows the backend server to know about the user's protocol. Possible values are **on** and **off**. Only available when the protocol is **http** or **https**.
- **idle_timeout** - Timeout of http or https listener established connection idle timeout. Valid value range: [1-60] in seconds. Default to 15.
- **request_timeout** - Timeout of http or https listener request (which does not get response from backend) timeout. Valid value range: [1-180] in seconds. Default to 60.
- **enable_http2** - Whether to enable https listener support http2 or not. Valid values are **on** and **off**. Default to **on**.
- **tls_cipher_policy** - Https listener TLS cipher policy. Valid values are **tls_cipher_policy_1_0**, **tls_cipher_policy_1_1**, **tls_cipher_policy_1_2**, **tls_cipher_policy_1_2_strict**. Default to **tls_cipher_policy_1_0**.
- **description** - The description of slb listener.

» alicloud_slb_master_slave_server_groups

This data source provides the master slave server groups related to a server load balancer.

NOTE: Available in 1.54.0+

» Example Usage

```
data "alicloud_slb_master_slave_server_groups" "sample_ds" {
  load_balancer_id = "${alicloud_slb.sample_slb.id}"
```

```
}

output "first_slb_server_group_id" {
  value = "${data.alicloud_slb_master_slave_server_groups.sample_ds.groups.0.id}"
}
```

» Argument Reference

The following arguments are supported:

- `load_balancer_id` - ID of the SLB.
- `ids` - (Optional) A list of master slave server group IDs to filter results.
- `name_regex` - (Optional) A regex string to filter results by master slave server group name.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of SLB master slave server groups IDs.
- `names` - A list of SLB master slave server groups names.
- `groups` - A list of SLB master slave server groups. Each element contains the following attributes:
    - `id` - master slave server group ID.
    - `name` - master slave server group name.
    - `servers` - ECS instances associated to the group. Each element contains the following attributes:
    - `instance_id` - ID of the attached ECS instance.
    - `weight` - Weight associated to the ECS instance.
    - `port` - The port used by the master slave server group.
    - `server_type` - The server type of the attached ECS instance.
    - `is_backup` - (Removed from v1.63.0) Determine if the server is executing.

» alicloud_slb_rules

This data source provides the rules associated with a server load balancer listener.

» Example Usage

```
data "alicloud_slb_rules" "sample_ds" {
  load_balancer_id = "${alicloud_slb.sample_slb.id}"
  frontend_port    = 80
}

output "first_slb_rule_id" {
  value = "${data.alicloud_slb_rules.sample_ds.slb_rules.0.id}"
}
```

» Argument Reference

The following arguments are supported:

- `load_balancer_id` - ID of the SLB with listener rules.
- `frontend_port` - SLB listener port.
- `ids` - (Optional) A list of rules IDs to filter results.
- `name_regex` - (Optional) A regex string to filter results by rule name.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of SLB listener rules IDs.
- `names` - A list of SLB listener rules names.
- `slb_rules` - A list of SLB listener rules. Each element contains the following attributes:
  - `id` - Rule ID.
  - `name` - Rule name.
  - `domain` - Domain name in the HTTP request where the rule applies (e.g. "*.aliyun.com").
  - `url` - Path in the HTTP request where the rule applies (e.g. "/image").
  - `server_group_id` - ID of the linked VServer group.

» alicloud_slb_server_certificates

This data source provides the server certificate list.

» Example Usage

```
data "alicloud_slb_server_certificates" "sample_ds" {
}

output "first_slb_server_certificate_id" {
  value = "${data.alicloud_slb_server_certificates.sample_ds.certificates.0.id}"
}
```

» Argument Reference

The following arguments are supported:

- `ids` - (Optional) A list of server certificates IDs to filter results.
- `name_regex` - (Optional) A regex string to filter results by server certificate name.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).
- `resource_group_id` - (Optional, ForceNew, Available in 1.58.0+) The Id of resource group which the slb server certificates belongs.
- `tags` - (Optional, Available in v1.66.0+) A mapping of tags to assign to the resource. ## Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of SLB server certificates IDs.
- `names` - A list of SLB server certificates names.
- `certificates` - A list of SLB server certificates. Each element contains the following attributes:
    - `id` - Server certificate ID.
    - `name` - Server certificate name.
    - `fingerprint` - Server certificate fingerprint.
    - `common_name` - Server certificate common name.
    - `subject_alternative_names` - Server certificate subject alternative name list.
    - `expired_time` - Server certificate expired time.
    - `expired_timestamp` - Server certificate expired timestamp.
    - `created_time` - Server certificate created time.
    - `created_timestamp` - Server certificate created timestamp.
    - `alicloud_certificate_id` - Id of server certificate issued by alibaba cloud.
    - `alicloud_certificate_name`- Name of server certificate issued by alibaba cloud.
    - `is_alicloud_certificate`- Is server certificate issued by alibaba cloud or not.

- **resource_group_id** - The Id of resource group which the slb server certificates belongs.
- **tags** - (Available in v1.66.0+) A mapping of tags to assign to the resource.

» alicloud_slb_server_groups

This data source provides the VServer groups related to a server load balancer.

» Example Usage

```
data "alicloud_slb_server_groups" "sample_ds" {
  load_balancer_id = "${alicloud_slb.sample_slb.id}"
}

output "first_slb_server_group_id" {
  value = "${data.alicloud_slb_server_groups.sample_ds.slb_server_groups.0.id}"
}
```

» Argument Reference

The following arguments are supported:

- **load_balancer_id** - ID of the SLB.
- **ids** - (Optional) A list of VServer group IDs to filter results.
- **name_regex** - (Optional) A regex string to filter results by VServer group name.
- **output_file** - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- **ids** - A list of SLB VServer groups IDs.
- **names** - A list of SLB VServer groups names.
- **slb_server_groups** - A list of SLB VServer groups. Each element contains the following attributes:
  - **id** - VServer group ID.
  - **name** - VServer group name.
  - **servers** - ECS instances associated to the group. Each element contains the following attributes:

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– `instance_id` - ID of the attached ECS instance.
– `weight` - Weight associated to the ECS instance.

» alicloud_slbs

This data source provides the server load balancers of the current Alibaba Cloud user.

» Example Usage

```
data "alicloud_slbs" "slbs_ds" {
  name_regex = "sample_slb"
}

output "first_slb_id" {
  value = "${data.alicloud_slbs.slbs_ds.slbs.0.id}"
}
```

» Argument Reference

The following arguments are supported:

- `ids` - (Optional) A list of SLBs IDs.
- `name_regex` - (Optional) A regex string to filter results by SLB name.
- `master_availability_zone` - (Optional) Master availability zone of the SLBs.
- `slave_availability_zone` - (Optional) Slave availability zone of the SLBs.
- `network_type` - (Optional) Network type of the SLBs. Valid values: `vpc` and `classic`.
- `vpc_id` - (Optional) ID of the VPC linked to the SLBs.
- `vswitch_id` - (Optional) ID of the VSwitch linked to the SLBs.
- `address` - (Optional) Service address of the SLBs.
- `tags` - (Optional) A map of tags assigned to the SLB instances. The `tags` can have a maximum of 5 tag. It must be in the format: `data "alicloud_slbs" "taggedInstances" { tags = { tagKey1 = "tagValue1", tagKey2 = "tagValue2" } }`
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).
- `resource_group_id` - (Optional, ForceNew, Available in 1.60.0+) The Id of resource group which SLB belongs.

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of slb IDs.
- `names` - A list of slb names.
- `slbs` - A list of SLBs. Each element contains the following attributes:
  - `id` - ID of the SLB.
  - `region_id` - Region ID the SLB belongs to.
  - `master_availability_zone` - Master availability zone of the SLBs.
  - `slave_availability_zone` - Slave availability zone of the SLBs.
  - `status` - SLB current status. Possible values: `inactive`, `active` and `locked`.
  - `name` - SLB name.
  - `network_type` - Network type of the SLB. Possible values: `vpc` and `classic`.
  - `vpc_id` - ID of the VPC the SLB belongs to.
  - `vswitch_id` - ID of the VSwitch the SLB belongs to.
  - `address` - Service address of the SLB.
  - `internet` - SLB addressType: internet if `true`, intranet if `false`. Must be `false` when `network_type` is `vpc`.
  - `creation_time` - SLB creation time.
  - `tags` - A map of tags assigned to the SLB instance.

» alicloud_slb_domain_extensions

This data source provides the domain extensions associated with a server load balancer listener.

NOTE: Available in 1.60.0+

» Example Usage

```
data "alicloud_slb_domain_extensions" "foo" {
  ids               = ["fake-de-id"]
  load_balancer_id  = "fake-lb-id"
  frontend_port     = "fake-port"
}
```

» Argument Reference

The following arguments are supported:

- `ids` - (Optional) IDs of the SLB domain extensions.

- `load_balancer_id` - (Required) The ID of the SLB instance.
- `frontend_port` - (Required) The frontend port used by the HTTPS listener of the SLB instance. Valid values: 1–65535.

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `extensions` - A list of SLB domain extension. Each element contains the following attributes:
    - `id` - The ID of the domain extension.
    - `domain` - The domain name.
    - `server_certificate_id` - The ID of the certificate used by the domain name.

» alicloud_slb

Provides an Application Load Balancer resource.

NOTE: At present, to avoid some unnecessary regulation confusion, SLB can not support alicloud international account to create "paybybandwidth" instance.

NOTE: The supported specifications vary by region. Currently not all regions support guaranteed-performance instances. For more details about guaranteed-performance instance, see Guaranteed-performance instances.

» Example Usage

```
variable "name" {
  default = "terraformtestslbconfig"
}
data "alicloud_zones" "default" {
  available_resource_creation = "VSwitch"
}

resource "alicloud_vpc" "default" {
  name       = "${var.name}"
  cidr_block = "172.16.0.0/12"
}

resource "alicloud_vswitch" "default" {
  vpc_id            = "${alicloud_vpc.default.id}"
  cidr_block        = "172.16.0.0/21"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
```

```
  name                = "${var.name}"
}

resource "alicloud_slb" "default" {
  name          = "${var.name}"
  specification = "slb.s2.small"
  vswitch_id    = "${alicloud_vswitch.default.id}"
  tags = {
    tag_a = 1
    tag_b = 2
    tag_c = 3
    tag_d = 4
    tag_e = 5
    tag_f = 6
    tag_g = 7
    tag_h = 8
    tag_i = 9
    tag_j = 10
  }
}
```

» Argument Reference

The following arguments are supported:

- `name` - (Optional) The name of the SLB. This name must be unique within your AliCloud account, can have a maximum of 80 characters, must contain only alphanumeric characters or hyphens, such as "-","/",".","_", and must not begin or end with a hyphen. If not specified, Terraform will autogenerate a name beginning with `tf-lb`.
- `internet` - (Deprecated) Field 'internet' has been deprecated from provider version 1.55.3. Use 'address_type' replaces it.
- `address_type` - (Optional, ForceNew, Available in 1.55.3+) The network type of the SLB instance. Valid values: ["internet", "intranet"]. If load balancer launched in VPC, this value must be "intranet".
  - internet: After an Internet SLB instance is created, the system allocates a public IP address so that the instance can forward requests from the Internet.
  - intranet: After an intranet SLB instance is created, the system allocates an intranet IP address so that the instance can only forward intranet requests.
- `internet_charge_type` - (Optional, ForceNew) Valid values are `PayByBandwidth`, `PayByTraffic`. If this value is "PayByBandwidth", then argument "internet" must be "true". Default is "PayByTraffic". If load balancer launched in VPC, this value must be "PayByTraffic". Before

version 1.10.1, the valid values are "paybybandwidth" and "paybytraffic".

- **bandwidth** - (Optional) Valid value is between 1 and 1000, If argument "internet_charge_type" is "paybytraffic", then this value will be ignore.
- **vswitch_id** - (Required for a VPC SLB, Forces New Resource) The VSwitch ID to launch in. If `address_type` is internet, it will be ignore.
- **specification** - (Optional) The specification of the Server Load Balancer instance. Default to empty string indicating it is "Shared-Performance" instance. Launching "Performance-guaranteed" instance, it is must be specified and it valid values are: "slb.s1.small", "slb.s2.small", "slb.s2.medium", "slb.s3.small", "slb.s3.medium", "slb.s3.large" and "slb.s4.large".
- **tags** - (Optional) A mapping of tags to assign to the resource. The `tags` can have a maximum of 10 tag for every load balancer instance.
- **instance_charge_type** - (Optional, Available in v1.34.0+) The billing method of the load balancer. Valid values are "PrePaid" and "PostPaid". Default to "PostPaid".
- **period** - (Optional, Available in v1.34.0+) The duration that you will buy the resource, in month. It is valid when `instance_charge_type` is `PrePaid`. Default to 1. Valid values: [1-9, 12, 24, 36].
- **master_zone_id** - (Optional, ForceNew, Available in v1.36.0+) The primary zone ID of the SLB instance. If not specified, the system will be randomly assigned. You can query the primary and standby zones in a region by calling the DescribeZone API.
- **slave_zone_id** - (Optional, ForceNew, Available in v1.36.0+) The standby zone ID of the SLB instance. If not specified, the system will be randomly assigned. You can query the primary and standby zones in a region by calling the DescribeZone API.
- **delete_protection** - (Optional, Available in v1.51.0+) Whether enable the deletion protection or not. on: Enable deletion protection. off: Disable deletion protection. Default to off. Only postpaid instance support this function.

- **address_ip_version** - (Optional, Available in v1.55.2+) The IP version of the SLB instance to be created, which can be set to ipv4 or ipv6 . Default to "ipv4". Now, only internet instance support ipv6 address.
- **address** - (Optional, Available in v1.55.2+) Specify the IP address of the private network for the SLB instance, which must be in the destination CIDR block of the correspond ing switch.
- **resource_group_id** - (Optional, ForceNew, Available in v1.55.3+) The Id of resource group which the SLB belongs.

NOTE: A "Shared-Performance" instance can be changed to "Performance-guaranteed", but the change is irreversible.

NOTE: To change a "Shared-Performance" instance to a "Performance-guaranteed" instance, the SLB will have a short probability of business interruption (10 seconds-30 seconds). Advise to change it during the business downturn, or migrate business to other SLB Instances by using GSLB before

changing.

NOTE: Currently, the alibaba cloud international account does not support creating a PrePaid SLB instance.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the load balancer.
- `address` - The IP address of the load balancer.

» Import

Load balancer can be imported using the id, e.g.

```
$ terraform import alicloud_slb.example lb-abc123456
```

» alicloud_slb_acl

An access control list contains multiple IP addresses or CIDR blocks. The access control list can help you to define multiple instance listening dimension, and to meet the multiple usage for single access control list.

Server Load Balancer allows you to configure access control for listeners. You can configure different whitelists or blacklists for different listeners.

You can configure access control when you create a listener or change access control configuration after a listener is created.

NOTE: One access control list can be attached to many Listeners in different load balancer as whitelists or blacklists.

NOTE: The maximum number of access control lists per region is 50.

NOTE: The maximum number of IP addresses added each time is 50.

NOTE: The maximum number of entries per access control list is 300.

NOTE: The maximum number of listeners that an access control list can be added to is 50.

For information about slb and how to use it, see What is Server Load Balancer.

For information about acl and how to use it, see Configure an access control list.

» Example Usage

```
variable "name" {
  default = "terraformslbaclconfig"
}
variable "ip_version" {
  default = "ipv4"
}

resource "alicloud_slb_acl" "default" {
  name       = "${var.name}"
  ip_version = "${var.ip_version}"
  entry_list {
    entry   = "10.10.10.0/24"
    comment = "first"
  }
  entry_list {
    entry   = "168.10.10.0/24"
    comment = "second"
  }
}
```

» Argument Reference

The following arguments are supported:

- `name` - (Required) Name of the access control list.
- `ip_version` - (Optional, ForceNew) The IP Version of access control list is the type of its entry (IP addresses or CIDR blocks). It values ipv4/ipv6. Our plugin provides a default ip_version: "ipv4".
- `entry_list` - (Optional) A list of entry (IP addresses or CIDR blocks) to be added. At most 50 etnry can be supported in one resource. It contains two sub-fields as `Entry Block` follows.
- `tags` - (Optional, Available in v1.66.0+) A mapping of tags to assign to the resource.
- `resource_group_id` - (Optional, ForceNew, Available in v1.67.0+) Resource group ID.

» Entry Block

The entry mapping supports the following:

- `entry` - (Required) An IP addresses or CIDR blocks.
- `comment` - (Optional) the comment of the entry.

» Attributes Reference

The following attributes are exported:

- `id` - The Id of the access control list.

» Import

Server Load balancer access control list can be imported using the id, e.g.

```
$ terraform import alicloud_slb_acl.example acl-abc123456
```

» alicloud_slb_attachment

Add a group of backend servers (ECS instance) to the Server Load Balancer or remove them from it.

» Example Usage

```
variable "name" {
  default = "slbattachmenttest"
}
data "alicloud_zones" "default" {
  available_disk_category     = "cloud_efficiency"
  available_resource_creation = "VSwitch"
}
data "alicloud_instance_types" "default" {
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  cpu_core_count    = 1
  memory_size       = 2
}
data "alicloud_images" "default" {
  name_regex  = "^ubuntu_18.*64"
  most_recent = true
  owners      = "system"
}

resource "alicloud_vpc" "default" {
  name       = "${var.name}"
  cidr_block = "172.16.0.0/16"
}

resource "alicloud_vswitch" "default" {
```

```
  vpc_id           = "${alicloud_vpc.default.id}"
  cidr_block       = "172.16.0.0/16"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  name             = "${var.name}"
}

resource "alicloud_security_group" "default" {
  name   = "${var.name}"
  vpc_id = "${alicloud_vpc.default.id}"
}

resource "alicloud_instance" "default" {
  image_id                 = "${data.alicloud_images.default.images.0.id}"
  instance_type            = "${data.alicloud_instance_types.default.instance_types.0.id}'
  internet_charge_type     = "PayByTraffic"
  internet_max_bandwidth_out = "5"
  system_disk_category     = "cloud_efficiency"
  security_groups          = ["${alicloud_security_group.default.id}"]
  instance_name            = "${var.name}"
  vswitch_id               = "${alicloud_vswitch.default.id}"
}

resource "alicloud_slb" "default" {
  name       = "${var.name}"
  vswitch_id = "${alicloud_vswitch.default.id}"
}

resource "alicloud_slb_attachment" "default" {
  load_balancer_id = "${alicloud_slb.default.id}"
  instance_ids     = ["${alicloud_instance.default.id}"]
  weight           = 90
}
```

» Argument Reference

The following arguments are supported:

- `load_balancer_id` - (Required) ID of the load balancer.
- `instance_ids` - (Required) A list of instance ids to added backend server in the SLB.
- `weight` - (Optional) Weight of the instances. Valid value range: [0-100]. Default to 100.
- `server_type` - (Optional, Available in 1.60.0+) Type of the instances. Valid value ecs, eni. Default to ecs.
- `delete_protection_validation` - (Optional, Available in 1.63.0+)

Checking DeleteProtection of SLB instance before deleting. If true, this resource will not be deleted when its SLB instance enabled DeleteProtection. Default to false.

» Attributes Reference

The following attributes are exported:

- `id` - ID of the resource.
- `load_balancer_id` - ID of the load balancer.
- `instance_ids` - A list of instance ids that have been added in the SLB.
- `weight` - Weight of the instances.
- `backend_servers` - The backend servers of the load balancer.
- `server_type` - Type of the instances.

» Import

Load balancer attachment can be imported using the id or load balancer id, e.g.

```
$ terraform import alicloud_slb_attachment.example lb-abc123456
```

» alicloud_slb_backend_server

Add a group of backend servers (ECS instance) to the Server Load Balancer or remove them from it.

NOTE: Available in 1.53.0+

» Example Usage

```
variable "name" {
  default = "slbbackendservertest"
}
data "alicloud_zones" "default" {
  available_disk_category     = "cloud_efficiency"
  available_resource_creation = "VSwitch"
}
data "alicloud_instance_types" "default" {
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  cpu_core_count    = 1
  memory_size       = 2
}
data "alicloud_images" "default" {
```

```
  name_regex  = "^ubuntu_18.*64"
  most_recent = true
  owners      = "system"
}

resource "alicloud_vpc" "default" {
  name       = "${var.name}"
  cidr_block = "172.16.0.0/16"
}

resource "alicloud_vswitch" "default" {
  vpc_id            = "${alicloud_vpc.default.id}"
  cidr_block        = "172.16.0.0/16"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  name              = "${var.name}"
}

resource "alicloud_security_group" "default" {
  name   = "${var.name}"
  vpc_id = "${alicloud_vpc.default.id}"
}

resource "alicloud_instance" "default" {
  image_id = "${data.alicloud_images.default.images.0.id}"
  instance_type = "${data.alicloud_instance_types.default.instance_types.0.id}"
  instance_name = "${var.name}"
  count = "2"
  security_groups = "${alicloud_security_group.default.*.id}"
  internet_charge_type = "PayByTraffic"
  internet_max_bandwidth_out = "10"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  instance_charge_type = "PostPaid"
  system_disk_category = "cloud_efficiency"
  vswitch_id = "${alicloud_vswitch.default.id}"
}

resource "alicloud_slb" "default" {
  name       = "${var.name}"
  vswitch_id = "${alicloud_vswitch.default.id}"
}

resource "alicloud_slb_backend_server" "default" {
    load_balancer_id = "${alicloud_slb.default.id}"

    backend_servers {
      server_id = "${alicloud_instance.default.0.id}"
```

```
    weight    = 100
  }

  backend_servers {
    server_id = "${alicloud_instance.default.1.id}"
    weight    = 100
  }
}
```

» Argument Reference

The following arguments are supported:

- `load_balancer_id` - (Required) ID of the load balancer.
- `backend_servers` - (Required) A list of instances to added backend server in the SLB. It contains three sub-fields as `Block server` follows.
- `delete_protection_validation` - (Optional, Available in 1.63.0+) Checking DeleteProtection of SLB instance before deleting. If true, this resource will not be deleted when its SLB instance enabled DeleteProtection. Default to false.

» Block servers

The servers mapping supports the following:

- `server_id` - (Required) A list backend server ID (ECS instance ID).
- `weight` - (Optional) Weight of the backend server. Valid value range: [0-100].
- `type` - (Optional) Type of the backend server. Valid value ecs, eni. Default to eni.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the resource and the value same as load balancer id.

» Import

Load balancer backend server can be imported using the load balancer id.

```
$ terraform import alicloud_slb_backend_server.example lb-abc123456
```

» alicloud_slb_ca_certificate

A Load Balancer CA Certificate is used by the listener of the protocol https.

For information about slb and how to use it, see What is Server Load Balancer.

For information about CA Certificate and how to use it, see Configure CA Certificate.

» Example Usage

- using CA certificate content

```
# create a CA certificate
resource "alicloud_slb_ca_certificate" "foo" {
  name           = "tf-testAccSlbCACertificate"
  ca_certificate = "-----BEGIN CERTIFICATE-----\nMIIDRjCCAq+gAwIBAgIJAJnI******90EAxEG/bJJy(
}
```

- using CA certificate file

```
resource "alicloud_slb_ca_certificate" "foo-file" {
  name           = "tf-testAccSlbCACertificate"
  ca_certificate = "${file("${path.module}/ca_certificate.pem")}"
}
```

» Argument Reference

The following arguments are supported:

- `name` - (Optional) Name of the CA Certificate.
- `ca_certificate` - (Required, ForceNew) the content of the CA certificate.
- `resource_group_id` - (Optional, ForceNew, Available in 1.58.0+) The Id of resource group which the slb_ca certificate belongs.
- `tags` - (Optional, Available in v1.66.0+) A mapping of tags to assign to the resource. ## Attributes Reference

The following attributes are exported:

- `id` - The Id of CA Certificate .

» Import

Server Load balancer CA Certificate can be imported using the id, e.g.

```
$ terraform import alicloud_slb_ca_certificate.example abc123456
```

» alicloud_slb_listener

Provides an Application Load Balancer Listener resource.

For information about slb and how to use it, see What is Server Load Balancer.

For information about listener and how to use it, to see the following:

- Configure a HTTP Listener.
- Configure a HTTPS Listener.
- Configure a TCP Listener.
- Configure a UDP Listener.

» Example Usage

```
variable "name" {
  default = "testcreatehttplistener"
}
variable "ip_version" {
  default = "ipv4"
}
resource "alicloud_slb" "default" {
  name                = "tf-testAccSlbListenerHttp"
  internet_charge_type = "PayByTraffic"
  internet            = true
}
resource "alicloud_slb_listener" "default" {
  load_balancer_id         = "${alicloud_slb.default.id}"
  backend_port             = 80
  frontend_port            = 80
  protocol                 = "http"
  bandwidth                = 10
  sticky_session           = "on"
  sticky_session_type      = "insert"
  cookie_timeout           = 86400
  cookie                   = "testslblistenercookie"
  health_check             = "on"
  health_check_domain      = "ali.com"
  health_check_uri         = "/cons"
  health_check_connect_port = 20
  healthy_threshold        = 8
  unhealthy_threshold      = 8
  health_check_timeout     = 8
  health_check_interval    = 5
  health_check_http_code   = "http_2xx,http_3xx"
  x_forwarded_for {
```

```
    retrive_slb_ip = true
    retrive_slb_id = true
  }
  acl_status       = "on"
  acl_type         = "white"
  acl_id           = "${alicloud_slb_acl.default.id}"
  request_timeout = 80
  idle_timeout     = 30
}
resource "alicloud_slb_acl" "default" {
  name        = "${var.name}"
  ip_version = "${var.ip_version}"
  entry_list {
    entry    = "10.10.10.0/24"
    comment = "first"
  }
  entry_list {
    entry    = "168.10.10.0/24"
    comment = "second"
  }
}
```

» Argument Reference

The following arguments are supported:

- `load_balancer_id` - (Required, ForceNew) The Load Balancer ID which is used to launch a new listener.
- `frontend_port` - (Required, ForceNew) Port used by the Server Load Balancer instance frontend. Valid value range: [1-65535].
- `backend_port` - (Optional, ForceNew) Port used by the Server Load Balancer instance backend. Valid value range: [1-65535].
- `protocol` - (Required, ForceNew) The protocol to listen on. Valid values are [`http`, `https`, `tcp`, `udp`].
- `bandwidth` - (Optional) Bandwidth peak of Listener. For the public network instance charged per traffic consumed, the Bandwidth on Listener can be set to -1, indicating the bandwidth peak is unlimited. Valid values are [-1, 1-1000] in Mbps.
- `description` - (Optional, Available in 1.69.0+) The description of slb listener. This description can have a string of 1 to 80 characters. Default value: null.
- `scheduler` - (Optional) Scheduling algorithm, Valid values are `wrr`, `rr` and `wlc`. Default to "wrr".
- `sticky_session` - (Optional) Whether to enable session persistence, Valid values are `on` and `off`. Default to `off`.

- `sticky_session_type` - (Optional) Mode for handling the cookie. If `sticky_session` is "on", it is mandatory. Otherwise, it will be ignored. Valid values are `insert` and `server`. `insert` means it is inserted from Server Load Balancer; `server` means the Server Load Balancer learns from the backend server.
- `cookie_timeout` - (Optional) Cookie timeout. It is mandatory when `sticky_session` is "on" and `sticky_session_type` is "insert". Otherwise, it will be ignored. Valid value range: [1-86400] in seconds.
- `cookie` - (Optional) The cookie configured on the server. It is mandatory when `sticky_session` is "on" and `sticky_session_type` is "server". Otherwise, it will be ignored. Valid value String in line with RFC 2965, with length being 1- 200. It only contains characters such as ASCII codes, English letters and digits instead of the comma, semicolon or spacing, and it cannot start with $.
- `persistence_timeout` - (Optional) Timeout of connection persistence. Valid value range: [0-3600] in seconds. Default to 0 and means closing it.
- `health_check` - (Optional) Whether to enable health check. Valid values are `on` and `off`. TCP and UDP listener's HealthCheck is always on, so it will be ignore when launching TCP or UDP listener.
- `health_check_type` - (Optional) Type of health check. Valid values are: `tcp` and `http`. Default to `tcp` . TCP supports TCP and HTTP health check mode, you can select the particular mode depending on your application.
- `health_check_domain` - (Optional) Domain name used for health check. When it used to launch TCP listener, `health_check_type` must be "http". Its length is limited to 1-80 and only characters such as letters, digits, '-' and '.' are allowed. When it is not set or empty, Server Load Balancer uses the private network IP address of each backend server as Domain used for health check.
- `health_check_uri` - (Optional) URI used for health check. When it used to launch TCP listener, `health_check_type` must be "http". Its length is limited to 1-80 and it must start with /. Only characters such as letters, digits, '-', '/', '.', '%', '?', #' and '&' are allowed.
- `health_check_connect_port` - (Optional) Port used for health check. Valid value range: [1-65535]. Default to "None" means the backend server port is used.
- `healthy_threshold` - (Optional) Threshold determining the result of the health check is success. It is required when `health_check` is on. Valid value range: [1-10] in seconds. Default to 3.
- `unhealthy_threshold` - (Optional) Threshold determining the result of the health check is fail. It is required when `health_check` is on. Valid value range: [1-10] in seconds. Default to 3.
- `health_check_timeout` - (Optional) Maximum timeout of each health check response. It is required when `health_check` is on. Valid value range: [1-300] in seconds. Default to 5. Note: If

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`health_check_timeout` < `health_check_interval`, its will be replaced by `health_check_interval`.

- `health_check_interval` - (Optional) Time interval of health checks. It is required when `health_check` is on. Valid value range: [1-50] in seconds. Default to 2.
- `health_check_http_code` - (Optional) Regular health check HTTP status code. Multiple codes are segmented by ",". It is required when `health_check` is on. Default to `http_2xx`. Valid values are: `http_2xx`, `http_3xx`, `http_4xx` and `http_5xx`.
- `health_check_method` - (Optional, Available in 1.70.0+) HealthCheck-Method used for health check.`http` and `https` support regions ap-northeast-1, ap-southeast-1, ap-southeast-2, ap-southeast-3, us-east-1, us-west-1, eu-central-1, ap-south-1, me-east-1, cn-huhehaote, cn-zhangjiakou, ap-southeast-5, cn-shenzhen, cn-hongkong, cn-qingdao, cn-chengdu, eu-west-1, cn-hangzhou", cn-beijing, cn-shanghai.This function does not support the TCP protocol .
- `ssl_certificate_id` - (Deprecated) It has been deprecated from 1.59.0 and using `server_certificate_id` instead.
- `server_certificate_id` - (Optional, Available in 1.59.0+) SLB Server certificate ID. It is required when `protocol` is `https`.
- `gzip` - (Optional) Whether to enable "Gzip Compression". If enabled, files of specific file types will be compressed, otherwise, no files will be compressed. Default to true. Available in v1.13.0+.
- `x_forwarded_for` - (Optional) Whether to set additional HTTP Header field "X-Forwarded-For" (documented below). Available in v1.13.0+.
- `acl_status` - (Optional) Whether to enable "acl(access control list)", the acl is specified by `acl_id`. Valid values are `on` and `off`. Default to `off`.
- `acl_type` - (Optional) Mode for handling the acl specified by acl_id. If `acl_status` is "on", it is mandatory. Otherwise, it will be ignored. Valid values are `white` and `black`. `white` means the Listener can only be accessed by client ip belongs to the acl; `black` means the Listener can not be accessed by client ip belongs to the acl.
- `acl_id` - (Optional) the id of access control list to be apply on the listener, is the id of resource alicloud_slb_acl. If `acl_status` is "on", it is mandatory. Otherwise, it will be ignored.
- `established_timeout` - (Optional) Timeout of tcp listener established connection idle timeout. Valid value range: [10-900] in seconds. Default to 900.
- `idle_timeout` - (Optional) Timeout of http or https listener established connection idle timeout. Valid value range: [1-60] in seconds. Default to 15.
- `request_timeout` - (Optional) Timeout of http or https listener request (which does not get response from backend) timeout. Valid value range: [1-180] in seconds. Default to 60.
- `enable_http2` - (Optional) Whether to enable https listener support http2 or not. Valid values are `on` and `off`. Default to `on`.

- `tls_cipher_policy` - (Optional) Https listener TLS cipher policy. Valid values are `tls_cipher_policy_1_0`, `tls_cipher_policy_1_1`, `tls_cipher_policy_1_2`, `tls_cipher_policy_1_2_strict`. Default to `tls_cipher_policy_1_0`. Currently the `tls_cipher_policy` can not be updated when load balancer instance is "Shared-Performance".
- `server_group_id` - (Optional) the id of server group to be apply on the listener, is the id of resource `alicloud_slb_server_group`.
- `listener_forward` - (Optional, ForceNew, Available in 1.40.0+) Whether to enable http redirect to https, Valid values are `on` and `off`. Default to `off`.
- `forward_port` - (Optional, ForceNew, Available in 1.40.0+) The port that http redirect to https.
- `health_check_method` - (Optional, ForceNew, Available in 1.70.0+) The method of health check. Valid values: ["head", "get"].
- `delete_protection_validation` - (Optional, Available in 1.63.0+) Checking DeleteProtection of SLB instance before deleting. If true, this resource will not be deleted when its SLB instance enabled DeleteProtection. Default to false.

NOTE: Once enable the http redirect to https function, any parameters excepted forward_port,listener_forward,load_balancer_id,frontend_port,protocol will be ignored. More info, please refer to Redirect http to https.

NOTE: Advantanced feature such as `tls_cipher_policy`, can not be updated when load balancer instance is "Shared-Performance". More info, please refer to Configure a HTTPS Listener.

» **Block x_forwarded_for**

The x_forwarded_for mapping supports the following:

- `retrive_slb_ip` - (Optional) Whether to use the XForwardedFor_SLBIP header to obtain the public IP address of the SLB instance. Default to false.
- `retrive_slb_id` - (Optional) Whether to use the XForwardedFor header to obtain the ID of the SLB instance. Default to false.
- `retrive_slb_proto` - (Optional) Whether to use the XForwardedFor_proto header to obtain the protocol used by the listener. Default to false.

» **Listener fields and protocol mapping**

load balance support 4 protocal to listen on, they are `http`,`https`,`tcp`,`udp`, the every listener support which portocal following:

listener parameter	support protocol	value range
backend_port	http & https & tcp & udp	1-65535
frontend_port	http & https & tcp & udp	1-65535
protocol	http & https & tcp & udp	
bandwidth	http & https & tcp & udp	-1 / 1-1000
scheduler	http & https & tcp & udp	wrr rr or wlc
sticky_session	http & https	on or off
sticky_session_type	http & https	insert or server
cookie_timeout	http & https	1-86400
cookie	http & https	
persistence_timeout	tcp & udp	0-3600
health_check	http & https	on or off
health_check_type	tcp	tcp or http
health_check_domain	http & https & tcp	
health_check_method	http & https & tcp	
health_check_uri	http & https & tcp	
health_check_connect_port	http & https & tcp & udp	1-65535 or -520
healthy_threshold	http & https & tcp & udp	1-10
unhealthy_threshold	http & https & tcp & udp	1-10
health_check_timeout	http & https & tcp & udp	1-300
health_check_interval	http & https & tcp & udp	1-50
health_check_http_code	http & https & tcp	http_2xx,http_3xx,http_4xx,http_5xx
server_certificate_id	https	
gzip	http & https	true or false
x_forwarded_for	http & https	
acl_status	http & https & tcp & udp	on or off
acl_type	http & https & tcp & udp	white or black
acl_id	http & https & tcp & udp	the id of resource alicloud_slb_acl
established_timeout	tcp	10-900
idle_timeout	http & https	1-60
request_timeout	http & https	1-180
enable_http2	https	on or off
tls_cipher_policy	https	tls_cipher_policy_1_0, tls_cipher_policy_1_1,
server_group_id	http & https & tcp & udp	the id of resource alicloud_slb_server_group

The listener mapping supports the following:

» **Attributes Reference**

The following attributes are exported:

- `id` - The ID of the load balancer listener. Its format as `<load_balancer_id>:<protocol>:<frontend_por`
  Before verson 1.57.1, the foramt as `<load_balancer_id>:<frontend_port>`.

- `load_balancer_id` - The Load Balancer ID which is used to launch a new listener.
- `frontend_port` - Port used by the Server Load Balancer instance frontend.
- `backend_port` - Port used by the Server Load Balancer instance backend.
- `protocol` - The protocol to listen on.
- `bandwidth` - Bandwidth peak of Listener.
- `scheduler` - Scheduling algorithm.
- `sticky_session` - Whether to enable session persistence.
- `sticky_session_type` - Mode for handling the cookie.
- `cookie_timeout` - Cookie timeout.
- `cookie` - The cookie configured on the server.
- `persistence_timeout` - Timeout of connection persistence.
- `health_check` - Whether to enable health check.
- `health_check_type` - Type of health check.
- `health_check_domain` - Domain name used for health check.
- `health_check_method` - HealthCheckMethod used for health check.
- `health_check_uri` - URI used for health check.
- `health_check_connect_port` - Port used for health check.
- `healthy_threshold` - Threshold determining the result of the health check is success.
- `unhealthy_threshold` - Threshold determining the result of the health check is fail.
- `health_check_timeout` - Maximum timeout of each health check response.
- `health_check_interval` - Time interval of health checks.
- `health_check_http_code` - Regular health check HTTP status code.
- `server_certificate_id` - (Optional) Security certificate ID.

» Import

Load balancer listener can be imported using the id, e.g.

```
$ terraform import alicloud_slb_listener.example "lb-abc123456:22"
```

» alicloud_slb_master_slave_server_group

A master slave server group contains two ECS instances. The master slave server group can help you to define multiple listening dimension.

NOTE: One ECS instance can be added into multiple master slave server groups.

NOTE: One master slave server group can only add two ECS instances, which are master server and slave server.

NOTE: One master slave server group can be attached with tcp/udp listeners in one load balancer.

NOTE: One Classic and Internet load balancer, its master slave server group can add Classic and VPC ECS instances.

NOTE: One Classic and Intranet load balancer, its master slave server group can only add Classic ECS instances.

NOTE: One VPC load balancer, its master slave server group can only add the same VPC ECS instances.

NOTE: Available in 1.54.0+

» Example Usage

```
data "alicloud_zones" "default" {
  available_disk_category     = "cloud_efficiency"
  available_resource_creation = "VSwitch"
}

data "alicloud_instance_types" "default" {
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  eni_amount        = 2
}

data "alicloud_images" "image" {
  name_regex  = "^ubuntu_18.*64"
  most_recent = true
  owners      = "system"
}

variable "name" {
  default = "tf-testAccSlbMasterSlaveServerGroupVpc"
}

variable "number" {
  default = "1"
}

resource "alicloud_vpc" "main" {
  name       = "${var.name}"
  cidr_block = "172.16.0.0/16"
}

resource "alicloud_vswitch" "main" {
  vpc_id            = "${alicloud_vpc.main.id}"
```

```
  cidr_block        = "172.16.0.0/16"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  name              = "${var.name}"
}

resource "alicloud_security_group" "group" {
  name   = "${var.name}"
  vpc_id = "${alicloud_vpc.main.id}"
}

resource "alicloud_instance" "instance" {
  image_id                   = "${data.alicloud_images.image.images.0.id}"
  instance_type              = "${data.alicloud_instance_types.default.instance_types.0.id}"
  instance_name              = "${var.name}"
  count                      = "2"
  security_groups            = ["${alicloud_security_group.group.id}"]
  internet_charge_type       = "PayByTraffic"
  internet_max_bandwidth_out = "10"
  availability_zone          = "${data.alicloud_zones.default.zones.0.id}"
  instance_charge_type       = "PostPaid"
  system_disk_category       = "cloud_efficiency"
  vswitch_id                 = "${alicloud_vswitch.main.id}"
}

resource "alicloud_slb" "instance" {
  name          = "${var.name}"
  vswitch_id    = "${alicloud_vswitch.main.id}"
  specification = "slb.s2.small"
}

resource "alicloud_network_interface" "default" {
  count           = "${var.number}"
  name            = "${var.name}"
  vswitch_id      = "${alicloud_vswitch.main.id}"
  security_groups = ["${alicloud_security_group.group.id}"]
}

resource "alicloud_network_interface_attachment" "default" {
  count                = "${var.number}"
  instance_id          = "${alicloud_instance.instance.0.id}"
  network_interface_id = "${element(alicloud_network_interface.default.*.id, count.index)}"
}

resource "alicloud_slb_master_slave_server_group" "group" {
  load_balancer_id = "${alicloud_slb.instance.id}"
  name             = "${var.name}"
```

```
  servers {
    server_id = "${alicloud_instance.instance.0.id}"
    port       = 100
    weight     = 100
    server_type = "Master"
  }

  servers {
    server_id = "${alicloud_instance.instance.1.id}"
    port       = 100
    weight     = 100
    server_type = "Slave"
  }
}

resource "alicloud_slb_listener" "tcp" {
  load_balancer_id             = "${alicloud_slb.instance.id}"
  master_slave_server_group_id = "${alicloud_slb_master_slave_server_group.group.id}"
  frontend_port                = "22"
  protocol                     = "tcp"
  bandwidth                    = "10"
  health_check_type            = "tcp"
  persistence_timeout          = 3600
  healthy_threshold            = 8
  unhealthy_threshold          = 8
  health_check_timeout         = 8
  health_check_interval        = 5
  health_check_http_code       = "http_2xx"
  health_check_connect_port    = 20
  health_check_uri             = "/console"
  established_timeout          = 600
}
```

» Argument Reference

The following arguments are supported:

- `load_balancer_id` - (Required, ForceNew) The Load Balancer ID which
  is used to launch a new master slave server group.
- `name` - (Required, ForceNew) Name of the master slave server group.
- `servers` - (Optional, ForceNew) A list of ECS instances to be added.
  Only two ECS instances can be supported in one resource. It contains six
  sub-fields as `Block server` follows.
- `delete_protection_validation` - (Optional, Available in 1.63.0+)

Checking DeleteProtection of SLB instance before deleting. If true, this resource will not be deleted when its SLB instance enabled DeleteProtection. Default to false.

» Block servers

The servers mapping supports the following:

- `server_ids` - (Required) A list backend server ID (ECS instance ID).
- `port` - (Required) The port used by the backend server. Valid value range: [1-65535].
- `weight` - (Optional) Weight of the backend server. Valid value range: [0-100]. Default to 100.
- `type` - (Optional, Available in 1.51.0+) Type of the backend server. Valid value ecs, eni. Default to eni.
- `server_type` - (Optional) The server type of the backend server. Valid value Master, Slave.
- `is_backup` - (Removed from v1.63.0) Determine if the server is executing. Valid value 0, 1.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the master slave server group.

» Import

Load balancer master slave server group can be imported using the id, e.g.

```
$ terraform import alicloud_slb_master_slave_server_group.example abc123456
```

» alicloud_slb_rule

A forwarding rule is configured in `HTTP/HTTPS` listener and it used to listen a list of backend servers which in one specified virtual backend server group. You can add forwarding rules to a listener to forward requests based on the domain names or the URL in the request.

NOTE: One virtual backend server group can be attached in multiple forwarding rules.

NOTE: At least one "Domain" or "Url" must be specified when creating a new rule.

NOTE: Having the same 'Domain' and 'Url' rule can not be created repeatedly in the one listener.

NOTE: Rule only be created in the `HTTP` or `HTTPS` listener.

NOTE: Only rule's virtual server group can be modified.

» Example Usage

```
variable "name" {
  default = "slbrulebasicconfig"
}

data "alicloud_zones" "default" {
  available_disk_category     = "cloud_efficiency"
  available_resource_creation = "VSwitch"
}
data "alicloud_instance_types" "default" {
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  cpu_core_count    = 1
  memory_size       = 2
}
data "alicloud_images" "default" {
  name_regex  = "^ubuntu_18.*64"
  most_recent = true
  owners      = "system"
}

resource "alicloud_vpc" "default" {
  name       = "${var.name}"
  cidr_block = "172.16.0.0/16"
}

resource "alicloud_vswitch" "default" {
  vpc_id            = "${alicloud_vpc.default.id}"
  cidr_block        = "172.16.0.0/16"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  name              = "${var.name}"
}
resource "alicloud_security_group" "default" {
  name   = "${var.name}"
  vpc_id = "${alicloud_vpc.default.id}"
}

resource "alicloud_instance" "default" {
  image_id                   = "${data.alicloud_images.default.images.0.id}"
```

```
  instance_type            = "${data.alicloud_instance_types.default.instance_types.0.id}'
  security_groups          = "${alicloud_security_group.default.*.id}"
  internet_charge_type     = "PayByTraffic"
  internet_max_bandwidth_out = "10"
  availability_zone        = "${data.alicloud_zones.default.zones.0.id}"
  instance_charge_type     = "PostPaid"
  system_disk_category     = "cloud_efficiency"
  vswitch_id               = "${alicloud_vswitch.default.id}"
  instance_name            = "${var.name}"
}

resource "alicloud_slb" "default" {
  name      = "${var.name}"
  vswitch_id = "${alicloud_vswitch.default.id}"
}

resource "alicloud_slb_listener" "default" {
  load_balancer_id          = "${alicloud_slb.default.id}"
  backend_port              = 22
  frontend_port             = 22
  protocol                  = "http"
  bandwidth                 = 5
  health_check_connect_port = "20"
}

resource "alicloud_slb_server_group" "default" {
  load_balancer_id = "${alicloud_slb.default.id}"
  servers {
    server_ids = "${alicloud_instance.default.*.id}"
    port       = 80
    weight     = 100
  }
}

resource "alicloud_slb_rule" "default" {
  load_balancer_id        = "${alicloud_slb.default.id}"
  frontend_port           = "${alicloud_slb_listener.default.frontend_port}"
  name                    = "${var.name}"
  domain                  = "*.aliyun.com"
  url                     = "/image"
  server_group_id         = "${alicloud_slb_server_group.default.id}"
  cookie                  = "23ffsa"
  cookie_timeout          = 100
  health_check_http_code  = "http_2xx"
  health_check_interval   = 10
  health_check_uri        = "/test"
```

```
       health_check_connect_port = 80
       health_check_timeout      = 30
       healthy_threshold         = 3
       unhealthy_threshold       = 5
       sticky_session            = "on"
       sticky_session_type       = "server"
       listener_sync             = "off"
       scheduler                 = "rr"
       health_check_domain       = "test"
       health_check              = "on"
}
```

» Argument Reference

The following arguments are supported:

- `load_balancer_id` - (Required, ForceNew) The Load Balancer ID which is used to launch the new forwarding rule.
- `name` - (Optional) Name of the forwarding rule. Our plugin provides a default name: "tf-slb-rule".
- `frontend_port` - (Required, ForceNew) The listener frontend port which is used to launch the new forwarding rule. Valid range: [1-65535].
- `domain` - (Optional, ForceNew) Domain name of the forwarding rule. It can contain letters a-z, numbers 0-9, hyphens (-), and periods (.), and wildcard characters. The following two domain name formats are supported:
  - Standard domain name: www.test.com
  - Wildcard domain name: *.test.com. *wildcard ()* must be the first character in the format of (*.)
- `url` - (Optional, ForceNew) Domain of the forwarding rule. It must be 2-80 characters in length. Only letters a-z, numbers 0-9, and characters '-' '/' '?' '%' '#' and '&' are allowed. URLs must be started with the character '/', but cannot be '/' alone.
- `server_group_id` - (Required) ID of a virtual server group that will be forwarded.
- `scheduler` - (Optional, Available in v1.51.0+) Scheduling algorithm, Valid values are `wrr`, `rr` and `wlc`. Default to "wrr". This parameter is required and takes effect only when ListenerSync is set to off.
- `sticky_session` - (Optional, Available in v1.51.0+) Whether to enable session persistence, Valid values are `on` and `off`. Default to `off`. This parameter is required and takes effect only when ListenerSync is set to off.

- `sticky_session_type` - (Optional, Available in v1.51.0+) Mode for handling the cookie. If `sticky_session` is "on", it is mandatory. Otherwise, it will be ignored. Valid values are `insert` and `server`. `insert` means it is inserted from Server Load Balancer; `server` means the Server Load

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Balancer learns from the backend server.

- `cookie_timeout` - (Optional, Available in v1.51.0+) Cookie timeout. It is mandatory when `sticky_session` is "on" and `sticky_session_type` is "insert". Otherwise, it will be ignored. Valid value range: [1-86400] in seconds.
- `cookie` - (Optional, Available in v1.51.0+) The cookie configured on the server. It is mandatory when `sticky_session` is "on" and `sticky_session_type` is "server". Otherwise, it will be ignored. Valid value String in line with RFC 2965, with length being 1- 200. It only contains characters such as ASCII codes, English letters and digits instead of the comma, semicolon or spacing, and it cannot start with $.
- `health_check` - (Optional, Available in v1.51.0+) Whether to enable health check. Valid values are `on` and `off`. TCP and UDP listener's HealthCheck is always on, so it will be ignore when launching TCP or UDP listener. This parameter is required and takes effect only when ListenerSync is set to off.
- `health_check_domain` - (Optional, Available in v1.51.0+) Domain name used for health check. When it used to launch TCP listener, `health_check_type` must be "http". Its length is limited to 1-80 and only characters such as letters, digits, '-' and '.' are allowed. When it is not set or empty, Server Load Balancer uses the private network IP address of each backend server as Domain used for health check.
- `health_check_uri` - (Optional, Available in v1.51.0+) URI used for health check. When it used to launch TCP listener, `health_check_type` must be "http". Its length is limited to 1-80 and it must start with /. Only characters such as letters, digits, '-', '/', '.', '%', '?', #' and '&' are allowed.
- `health_check_connect_port` - (Optional, Available in v1.51.0+) Port used for health check. Valid value range: [1-65535]. Default to "None" means the backend server port is used.
- `healthy_threshold` - (Optional, Available in v1.51.0+) Threshold determining the result of the health check is success. It is required when `health_check` is on. Valid value range: [1-10] in seconds. Default to 3.
- `unhealthy_threshold` - (Optional, Available in v1.51.0+) Threshold determining the result of the health check is fail. It is required when `health_check` is on. Valid value range: [1-10] in seconds. Default to 3.
- `health_check_timeout` - (Optional, Available in v1.51.0+) Maximum timeout of each health check response. It is required when `health_check` is on. Valid value range: [1-300] in seconds. Default to 5. Note: If `health_check_timeout` < `health_check_interval`, its will be replaced by `health_check_interval`.
- `health_check_interval` - (Optional, Available in v1.51.0+) Time interval of health checks. It is required when `health_check` is on. Valid value range: [1-50] in seconds. Default to 2.
- `health_check_http_code` - (Optional, Available in v1.51.0+) Regular

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health check HTTP status code. Multiple codes are segmented by ",". It is required when `health_check` is on. Default to `http_2xx`. Valid values are: `http_2xx`, `http_3xx`, `http_4xx` and `http_5xx`.

- `listener_sync` - (Optional, Available in v1.51.0+) Indicates whether a forwarding rule inherits the settings of a health check , session persistence, and scheduling algorithm from a listener. Default to on.
- `delete_protection_validation` - (Optional, Available in 1.63.0+) Checking DeleteProtection of SLB instance before deleting. If true, this resource will not be deleted when its SLB instance enabled DeleteProtection. Default to false.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the forwarding rule.

» Import

Load balancer forwarding rule can be imported using the id, e.g.

```
$ terraform import alicloud_slb_rule.example rule-abc123456
```

» alicloud_slb_server_certificate

A Load Balancer Server Certificate is an ssl Certificate used by the listener of the protocol https.

For information about slb and how to use it, see What is Server Load Balancer.

For information about Server Certificate and how to use it, see Configure Server Certificate.

» Example Usage

- using server_certificate/private content as string example

```
# create a server certificate
resource "alicloud_slb_server_certificate" "foo" {
  name               = "slbservercertificate"
  server_certificate = "-----BEGIN CERTIFICATE-----\nMIIDRjCCAq+gAwIBAgI+OuMs******XTtI90EA:
  private_key        = "-----BEGIN RSA PRIVATE KEY-----\nMIICXAIBAAKBgQDOOknDrlNdiys******E:
}
```

- using server_certificate/private file example

```
# create a server certificate
resource "alicloud_slb_server_certificate" "foo" {
  name               = "slbservercertificate"
  server_certificate = "${file("${path.module}/server_certificate.pem")}"
  private_key        = "${file("${path.module}/private_key.pem")}"
}
```

» Argument Reference

The following arguments are supported:

- `name` - (Optional) Name of the Server Certificate.
- `server_certificate` - (Optional, ForceNew) the content of the ssl certificate. where `alicloud_certificate_id` is null, it is required, otherwise it is ignored.
- `private_key` - (Optional, ForceNew) the content of privat key of the ssl certificate specified by `server_certificate`. where `alicloud_certificate_id` is null, it is required, otherwise it is ignored.
- `alicloud_certificate_id` - (Optional, ForceNew) an id of server certificate ssued/proxied by alibaba cloud. but it is not supported on the international site of alibaba cloud now.
- `alicloud_certificate_name` - (Optional, ForceNew) the name of the certificate specified by `alicloud_certificate_id`.but it is not supported on the international site of alibaba cloud now.
- `alicloud_certificate_region_id` - (Optional, ForceNew, Available in 1.69.0+) the region of the certificate specified by `alicloud_certificate_id`. but it is not supported on the international site of alibaba cloud now.
- `resource_group_id` - (Optional, ForceNew, Available in 1.58.0+) The Id of resource group which the slb server certificate belongs.
- `tags` - (Optional, Available in v1.66.0+) A mapping of tags to assign to the resource. ## Attributes Reference

The following attributes are exported:

- `id` - The Id of Server Certificate (SSL Certificate).

» Import

Server Load balancer Server Certificate can be imported using the id, e.g.

```
$ terraform import alicloud_slb_server_certificate.example abc123456
```

» alicloud_slb_server_group

A virtual server group contains several ECS instances. The virtual server group can help you to define multiple listening dimension, and to meet the personalized requirements of domain name and URL forwarding.

NOTE: One ECS instance can be added into multiple virtual server groups.

NOTE: One virtual server group can be attached with multiple listeners in one load balancer.

NOTE: One Classic and Internet load balancer, its virtual server group can add Classic and VPC ECS instances.

NOTE: One Classic and Intranet load balancer, its virtual server group can only add Classic ECS instances.

NOTE: One VPC load balancer, its virtual server group can only add the same VPC ECS instances.

» Example Usage

```
variable "name" {
  default = "slbservergroupvpc"
}
data "alicloud_zones" "default" {
  available_disk_category     = "cloud_efficiency"
  available_resource_creation = "VSwitch"
}
data "alicloud_instance_types" "default" {
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  cpu_core_count    = 1
  memory_size       = 2
}
data "alicloud_images" "default" {
  name_regex  = "^ubuntu_18.*64"
  most_recent = true
  owners      = "system"
}
resource "alicloud_vpc" "default" {
  name       = "${var.name}"
  cidr_block = "172.16.0.0/16"
}
resource "alicloud_vswitch" "default" {
  vpc_id            = "${alicloud_vpc.default.id}"
  cidr_block        = "172.16.0.0/16"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
```

```
  name                = "${var.name}"
}
resource "alicloud_security_group" "default" {
  name  = "${var.name}"
  vpc_id = "${alicloud_vpc.default.id}"
}
resource "alicloud_instance" "instance" {
  image_id                 = "${data.alicloud_images.default.images.0.id}"
  instance_type            = "${data.alicloud_instance_types.default.instance_types.0.id}"
  instance_name            = "${var.name}"
  count                    = "2"
  security_groups          = "${alicloud_security_group.default.*.id}"
  internet_charge_type     = "PayByTraffic"
  internet_max_bandwidth_out = "10"
  availability_zone        = "${data.alicloud_zones.default.zones.0.id}"
  instance_charge_type     = "PostPaid"
  system_disk_category     = "cloud_efficiency"
  vswitch_id               = "${alicloud_vswitch.default.id}"
}
resource "alicloud_slb" "default" {
  name        = "${var.name}"
  vswitch_id = "${alicloud_vswitch.default.id}"
}
resource "alicloud_slb_server_group" "default" {
  load_balancer_id = "${alicloud_slb.default.id}"
  name             = "${var.name}"
  servers {
    server_ids = ["${alicloud_instance.instance.0.id}", "${alicloud_instance.instance.1.id}"
    port       = 100
    weight     = 10
  }
  servers {
    server_ids = ["${alicloud_instance.instance.*.id}"]
    port       = 80
    weight     = 100
  }
}
```

» Argument Reference

The following arguments are supported:

- `load_balancer_id` - (Required, ForceNew) The Load Balancer ID which
  is used to launch a new virtual server group.
- `name` - (Optional) Name of the virtual server group. Our plugin provides

a default name: "tf-server-group".

- `servers` - A list of ECS instances to be added. At most 20 ECS instances can be supported in one resource. It contains three sub-fields as `Block server` follows.
- `delete_protection_validation` - (Optional, Available in 1.63.0+) Checking DeleteProtection of SLB instance before deleting. If true, this resource will not be deleted when its SLB instance enabled DeleteProtection. Default to false.

» Block servers

The servers mapping supports the following:

- `server_ids` - (Required) A list backend server ID (ECS instance ID).
- `port` - (Required) The port used by the backend server. Valid value range: [1-65535].
- `weight` - (Optional) Weight of the backend server. Valid value range: [0-100]. Default to 100.
- `type` - (Optional, Available in 1.51.0+) Type of the backend server. Valid value ecs, eni. Default to eni.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the virtual server group.
- `load_balancer_id` - The Load Balancer ID which is used to launch a new virtual server group.
- `name` - The name of the virtual server group.
- `servers` - A list of ECS instances that have be added.

» Import

Load balancer backend server group can be imported using the id, e.g.

```
$ terraform import alicloud_slb_server_group.example abc123456
```

» alicloud_slb_domain_extension

HTTPS listeners of guaranteed-performance SLB support configuring multiple certificates, allowing you to forward requests with different domain names to different backend servers. Please refer to the documentation for details.

NOTE: Available in 1.60.0+

NOTE: The instance with shared loadBalancerSpec doesn't support domainExtension.

» Example Usage

```
# Create a new load balancer and domain extension

resource "alicloud_slb" "instance" {
  name                 = "tffTestDomainExtension"
  internet_charge_type = "PayByTraffic"
  internet             = "true"
}

resource "alicloud_slb_server_certificate" "foo" {
  name               = "tf-testAccSlbServerCertificate"
  server_certificate = "-----BEGIN CERTIFICATE-----\nMIIDdjCCAl4CCQCcm+erkcKN7DANBgkqhkiG9w0
  private_key        = "-----BEGIN RSA PRIVATE KEY-----\nMIIEowIBAAKCAQEAyjCheapjf7qDI3R9w/0
}

resource "alicloud_slb_listener" "https" {
  load_balancer_id         = "${alicloud_slb.instance.id}"
  backend_port             = 80
  frontend_port            = 443
  protocol                 = "https"
  sticky_session           = "on"
  sticky_session_type      = "insert"
  cookie                   = "testslblistenercookie"
  cookie_timeout           = 86400
  health_check             = "on"
  health_check_uri         = "/cons"
  health_check_connect_port = 20
  healthy_threshold        = 8
  unhealthy_threshold      = 8
  health_check_timeout     = 8
  health_check_interval    = 5
  health_check_http_code   = "http_2xx,http_3xx"
  bandwidth                = 10
  ssl_certificate_id       = "${alicloud_slb_server_certificate.foo.id}"
}

resource "alicloud_slb_domain_extension" "example1" {
  load_balancer_id    = "${alicloud_slb.instance.id}"
  frontend_port       = "${alicloud_slb_listener.https.frontend_port}"
```

```
  domain                = "www.test.com"
  server_certificate_id = "${alicloud_slb_server_certificate.foo.id}"
}
```

» Argument Reference

The following arguments are supported:

- `load_balancer_id` - (Required, ForceNew) The ID of the SLB instance.
- `frontend_port` - (Required, ForceNew) The frontend port used by the HTTPS listener of the SLB instance. Valid values: 1–65535.
- `domain` - (Optional, ForceNew) The domain name,
- `server_certificate_id` - (Required) The ID of the certificate used by the domain name.
- `delete_protection_validation` - (Optional, Available in 1.63.0+) Checking DeleteProtection of SLB instance before deleting. If true, this resource will not be deleted when its SLB instance enabled DeleteProtection. Default to false.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the domain extension.

» Import

Load balancer domain_extension can be imported using the id, e.g.

```
$ terraform import alicloud_slb_domain_extension.example de-abc123456
```

» alicloud_sag_acls

This data source provides Sag Acls available to the user.

NOTE: Available in 1.60.0+

NOTE: Only the following regions support create Cloud Connect Network. [`cn-shanghai`, `cn-shanghai-finance-1`, `cn-hongkong`, `ap-southeast-1`, `ap-southeast-2`, `ap-southeast-3`, `ap-southeast-5`, `ap-northeast-1`, `eu-central-1`]

» Example Usage

Basic Usage

```
data "alicloud_sag_acls" "default" {
  ids        = ["${alicloud_sag_acls.default.id}"]
  name_regex = "^tf-testAcc.*"
}
resource "alicloud_sag_acl" "default" {
  name        = "tf-testAccSagAclName"
}
```

» Argument Reference

The following arguments are supported:

- `ids` - (Optional) A list of Sag Acl IDs.
- `name_regex` - (Optional) A regex string to filter Sag Acl instances by name.

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of Sag Acl IDs.
- `names` - A list of Sag Acls names.
- `acls` - A list of Sag Acls. Each element contains the following attributes:
    - `id` - The ID of the ACL. For example "acl-xxx".
    - `name` - The name of the Acl.

» alicloud_sag_acl

Provides a Sag Acl resource. Smart Access Gateway (SAG) provides the access control list (ACL) function in the form of whitelists and blacklists for different SAG instances.

For information about Sag Acl and how to use it, see What is access control list (ACL).

NOTE: Available in 1.60.0+

NOTE: Only the following regions support create Cloud Connect Network. [`cn-shanghai`, `cn-shanghai-finance-1`, `cn-hongkong`, `ap-southeast-1`, `ap-southeast-2`, `ap-southeast-3`, `ap-southeast-5`, `ap-northeast-1`, `eu-central-1`]

» Example Usage

Basic Usage

```
resource "alicloud_sag_acl" "default" {
  name         = "tf-testAccSagAclName"
}
```

» Argument Reference

The following arguments are supported:

- `name` - (Required) The name of the ACL instance. The name can contain 2 to 128 characters including a-z, A-Z, 0-9, periods, underlines, and hyphens. The name must start with an English letter, but cannot start with http:// or https://.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the ACL. For example "acl-xxx".

» Import

The Sag Acl can be imported using the id, e.g.

```
$ terraform import alicloud_sag_acl.example acl-abc123456
```

» alicloud_sag_acl_rule

Provides a Sag Acl Rule resource. This topic describes how to configure an access control list (ACL) rule for a target Smart Access Gateway instance to permit or deny access to or from specified IP addresses in the ACL rule.

For information about Sag Acl Rule and how to use it, see What is access control list (ACL) rule.

NOTE: Available in 1.60.0+

NOTE: Only the following regions support create Cloud Connect Network. [`cn-shanghai`, `cn-shanghai-finance-1`, `cn-hongkong`, `ap-southeast-1`, `ap-southeast-2`, `ap-southeast-3`, `ap-southeast-5`, `ap-northeast-1`, `eu-central-1`]

» Example Usage

Basic Usage

```
resource "alicloud_sag_acl" "default" {
  name       = "tf-testAccSagAclName"
  sag_count  = "0"
}
resource "alicloud_sag_acl_rule" "default" {
  acl_id            = "${alicloud_sag_acl.default.id}"
  description       = "tf-testSagAclRule"
  policy            = "accept"
  ip_protocol       = "ALL"
  direction         = "in"
  source_cidr       = "10.10.1.0/24"
  source_port_range = "-1/-1"
  dest_cidr         = "192.168.1.0/24"
  dest_port_range   = "-1/-1"
  priority          = "1"
}
```

» Argument Reference

The following arguments are supported:

- `acl_id` - (Required) The ID of the ACL.
- `description` - (Optional) The description of the ACL rule. It must be 1 to 512 characters in length.
- `policy` - (Required) The policy used by the ACL rule. Valid values: accept|drop.
- `ip_protocol` - (Required) The protocol used by the ACL rule. The value is not case sensitive.
- `direction` - (Required) The direction of the ACL rule. Valid values: in|out.
- `source_cidr` - (Required) The source address. It is an IPv4 address range in the CIDR format. Default value: 0.0.0.0/0.
- `source_port_range` - (Required) The range of the source port. Valid value: 80/80.
- `dest_cidr` - (Required) The destination address. It is an IPv4 address range in CIDR format. Default value: 0.0.0.0/0.
- `dest_port_range` - (Required) The range of the destination port. Valid value: 80/80.
- `priority` - (Optional) The priority of the ACL rule. Value range: 1 to 100.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the ACL rule. For example "acr-xxx".

» Import

The Sag Acl Rule can be imported using the id, e.g.

```
$ terraform import alicloud_sag_acl_rule.example acr-abc123456
```

» alicloud_sag_client_user

Provides a Sag ClientUser resource. This topic describes how to manage accounts as an administrator. After you configure the network, you can create multiple accounts and distribute them to end users so that clients can access Alibaba Cloud.

For information about Sag ClientUser and how to use it, see What is Sag ClientUser.

NOTE: Available in 1.65.0+

NOTE: Only the following regions support. [`cn-shanghai`, `cn-shanghai-finance-1`, `cn-hongkong`, `ap-southeast-1`, `ap-southeast-2`, `ap-southeast-3`, `ap-southeast-5`, `ap-northeast-1`, `eu-central-1`]

» Example Usage

Basic Usage

```
resource "alicloud_sag_client_user" "default" {
  sag_id    = "sag-xxxxx"
  bandwidth = "20"
  user_mail = "tftest-xxxxx@test.com"
  user_name = "th-username-xxxxx"
  password  = "xxxxxxx"
  client_ip = "192.1.10.0"
}
```

» Argument Reference

The following arguments are supported:

- `sag_id` - (Required,ForceNew) The ID of the SAG instance created for the SAG APP.
- `bandwidth` - (Required) The SAG APP bandwidth that the user can use. Unit: Kbit/s. Maximum value: 2000 Kbit/s.
- `user_mail` - (Required,ForceNew) The email address of the user. The administrator uses this address to send the account information for logging on to the APP to the user.
- `user_name` - (Optional,ForceNew) The user name. User names in the same SAG APP must be unique.Both the user name and the password must be specified. If you specify the user name, the password must be specified, too.
- `password` - (Optional,ForceNew) The password used to log on to the SAG APP.Both the user name and the password must be specified. If you specify the user name, the password must be specified, too.
- `client_ip` - (Optional,ForceNew) The IP address of the SAG APP. If you specify this parameter, the current account always uses the specified IP address.Note The IP address must be in the private CIDR block of the SAG client.If you do not specify this parameter, the system automatically allocates an IP address from the private CIDR block of the SAG client. In this case, each re-connection uses a different IP address.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the Sag Id and formates as `<sag_id>:<user_name>`.

» Import

The Sag ClientUser can be imported using the name, e.g.

```
$ terraform import alicloud_sag_client_user.example sag-abc123456:tf-username-abc123456
```

» alicloud_sag_dnat_entry

Provides a Sag DnatEntry resource. This topic describes how to add a DNAT entry to a Smart Access Gateway (SAG) instance to enable the DNAT function. By using the DNAT function, you can forward requests received by public IP addresses to Alibaba Cloud instances according to custom mapping rules.

For information about Sag DnatEntry and how to use it, see What is Sag DnatEntry.

NOTE: Available in 1.63.0+

NOTE: Only the following regions suppor. [`cn-shanghai`, `cn-shanghai-finance-1`, `cn-hongkong`, `ap-southeast-1`, `ap-southeast-2`, `ap-southeast-3`, `ap-southeast-5`, `ap-northeast-1`, `eu-central-1`]

» Example Usage

Basic Usage

```
resource "alicloud_sag_dnat_entry" "default" {
  sag_id = "sag-3rb1t3iagy3w0zgwy9"
  type = "Intranet"
  ip_protocol = "tcp"
  external_ip = "1.0.0.2"
  external_port = "1"
  internal_ip = "10.0.0.2"
  internal_port = "20"
}
```

» Argument Reference

The following arguments are supported:

- `sag_id` - (Required) The ID of the SAG instance.
- `type` - (Required) The DNAT type. Valid values: Intranet: DNAT of private IP addresses. Internet: DNAT of public IP addresses
- `ip_protocol` - (Required) The protocol type. Valid values: TCP: Forwards packets of the TCP protocol. UDP: Forwards packets of the UDP protocol. Any: Forwards packets of all protocols.
- `external_ip` - (Optional) The external public IP address.when "type" is "Internet",automatically identify the external ip.
- `external_port` - (Required) The public port.Value range: 1 to 65535 or "any".
- `internal_ip` - (Required) The destination private IP address.
- `internal_port` - (Required) The destination private port.Value range: 1 to 65535 or "any".

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the DNAT entry Id and formates as `<sag_id>:<dnat_id>`.

» Import

The Sag DnatEntry can be imported using the id, e.g.

```
$ terraform import alicloud_sag_dnat_entry.example sag-abc123456:dnat-abc123456
```

» alicloud_sag_qos

Provides a Sag Qos resource. Smart Access Gateway (SAG) supports quintuple-based QoS functions to differentiate traffic of different services and ensure high-priority traffic bandwidth.

For information about Sag Qos and how to use it, see What is Qos.

NOTE: Available in 1.60.0+

NOTE: Only the following regions support. [`cn-shanghai`, `cn-shanghai-finance-1`, `cn-hongkong`, `ap-southeast-1`, `ap-southeast-2`, `ap-southeast-3`, `ap-southeast-5`, `ap-northeast-1`, `eu-central-1`]

» Example Usage

Basic Usage

```
resource "alicloud_sag_qos" "default" {
  name       = "tf-testAccSagQosName"
}
```

» Argument Reference

The following arguments are supported:

- `name` - (Required) The name of the QoS policy to be created. The name can contain 2 to 128 characters including a-z, A-Z, 0-9, periods, underlines, and hyphens. The name must start with an English letter, but cannot start with http:// or https://.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the Qos. For example "qos-xxx".

» Import

The Sag Qos can be imported using the id, e.g.

```
$ terraform import alicloud_sag_qos.example qos-abc123456
```

» alicloud_sag_qos_car

Provides a Sag qos car resource. You need to create a QoS car to set priorities, rate limits, and quintuple rules for different messages.

For information about Sag Qos Car and how to use it, see What is Qos Car.

NOTE: Available in 1.60.0+

NOTE: Only the following regions support. [cn-shanghai, cn-shanghai-finance-1, cn-hongkong, ap-southeast-1, ap-southeast-2, ap-southeast-3, ap-southeast-5, ap-northeast-1, eu-central-1]

» Example Usage

Basic Usage

```
resource "alicloud_sag_qos" "default" {
  name        = "tf-testAccSagQosName"
}
resource "alicloud_sag_qos_car" "default" {
  qos_id =         "${alicloud_sag_qos.default.id}"
  name =         "tf-testSagQosCarName"
  description =      "tf-testSagQosCarDescription"
  priority =          "1"
  limit_type =        "Absolute"
  min_bandwidth_abs =       "10"
  max_bandwidth_abs =       "20"
  min_bandwidth_percent =      "10"
  max_bandwidth_percent =      "20"
  percent_source_type =     "InternetUpBandwidth"
}
```

» Argument Reference

The following arguments are supported:

- `qos_id` - (Required) The instance ID of the QoS.
- `name` - (Optional) The name of the QoS speed limiting rule..

- **description** - (Optional) The description of the QoS speed limiting rule.
- **priority** - (Required) The priority of the specified stream.
- **limit_type** - (Required) The speed limiting method. Valid values: Absolute, Percent.
- **min_bandwidth_abs** - (Optional) The minimum bandwidth allowed for the stream specified in the quintuple rule. This parameter is required when the value of the LimitType parameter is Absolute.
- **max_bandwidth_abs** - (Optional) The maximum bandwidth allowed for the stream specified in the quintuple rule. This parameter is required when the value of the LimitType is Absolute.
- **min_bandwidth_percent** - (Optional) The minimum bandwidth percentage allowed for the stream specified in the quintuple rule. It is based on the maximum upstream bandwidth you set for the associated SAG instance.This parameter is required when the value of the LimitType parameter is Percent.
- **max_bandwidth_percent** - (Optional) The maximum bandwidth percentage allowed for the stream specified in the quintuple rule. It is based on the maximum upstream bandwidth you set for the associated Smart Access Gateway (SAG) instance.This parameter is required when the value of the LimitType parameter is Percent.
- **percent_source_type** - (Optional) The bandwidth type when the speed is limited based on percentage. Valid values: CcnBandwidth, InternetUpBandwidth.The default value is InternetUpBandwidth.

» Attributes Reference

The following attributes are exported:

- **id** - The ID of the Qos Car id and formates as `<qos_id>:<qos_car_id>`.

» Import

The Sag Qos Car can be imported using the id, e.g.

```
$ terraform import alicloud_sag_qos_car.example qos-abc123456:qoscar-abc123456
```

» alicloud_sag_qos_policy

Provides a Sag qos policy resource. You need to create a QoS policy to set priorities, rate limits, and quintuple rules for different messages.

For information about Sag Qos Policy and how to use it, see What is Qos Policy.

NOTE: Available in 1.60.0+

NOTE: Only the following regions support. [`cn-shanghai`, `cn-shanghai-finance-1`, `cn-hongkong`, `ap-southeast-1`, `ap-southeast-2`, `ap-southeast-3`, `ap-southeast-5`, `ap-northeast-1`, `eu-central-1`]

» Example Usage

Basic Usage

```
resource "alicloud_sag_qos" "default" {
  name        = "tf-testAccSagQosName"
}
resource "alicloud_sag_qos_policy" "default" {
  qos_id =        "${alicloud_sag_qos.default.id}"
  name =          "tf-testSagQosPolicyName"
  description =      "tf-testSagQosPolicyDescription"
  priority =          "1"
  ip_protocol =       "ALL"
  source_cidr =        "192.168.0.0/24"
  source_port_range =     "-1/-1"
  dest_cidr =        "10.10.0.0/24"
  dest_port_range = "-1/-1"
  start_time =       "2019-10-25T16:41:33+0800"
  end_time =         "2019-10-26T16:41:33+0800"
}
```

» Argument Reference

The following arguments are supported:

- `qos_id` - (Required) The instance ID of the QoS policy to which the quintuple rule is created.
- `name` - (Optional) The name of the QoS policy.
- `description` - (Optional) The description of the QoS policy.
- `priority` - (Required) The priority of the quintuple rule. A smaller value indicates a higher priority. If the priorities of two quintuple rules are the same, the rule created earlier is applied first.Value range: 1 to 7.
- `ip_protocol` - (Required) The transport layer protocol.
- `source_cidr` - (Required) The source CIDR block.
- `source_port_range` - (Required) The source port range of the transport layer.
- `dest_cidr` - (Required) The destination CIDR block.
- `dest_port_range` - (Required) The destination port range.
- `start_time` - (Optional) The time when the quintuple rule takes effect.
- `end_time` - (Optional) The expiration time of the quintuple rule.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the Qos Policy id and formates as `<qos_id>:<qos_policy_id>`.

» Import

The Sag Qos Policy can be imported using the id, e.g.

```
$ terraform import alicloud_sag_qos_policy.example qos-abc123456:qospy-abc123456
```

» alicloud_sag_snat_entry

Provides a Sag SnatEntry resource. This topic describes how to add a SNAT entry to enable the SNAT function. The SNAT function can hide internal IP addresses and resolve private IP address conflicts. With this function, on-premises sites can access internal IP addresses, but cannot be accessed by internal IP addresses. If you do not add a SNAT entry, on-premises sites can access each other only when all related IP addresses do not conflict.

For information about Sag SnatEntry and how to use it, see What is Sag SnatEntry.

NOTE: Available in 1.61.0+

NOTE: Only the following regions support. [`cn-shanghai`, `cn-shanghai-finance-1`, `cn-hongkong`, `ap-southeast-1`, `ap-southeast-2`, `ap-southeast-3`, `ap-southeast-5`, `ap-northeast-1`, `eu-central-1`]

» Example Usage

Basic Usage

```
resource "alicloud_sag_snat_entry" "default" {
  sag_id = "sag-3rb1t3iagy3w0zgwy9"
  cidr_block = "192.168.7.0/24"
  snat_ip = "192.0.0.2"
}
```

» Argument Reference

The following arguments are supported:

- `sag_id` - (Required) The ID of the SAG instance.

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- `cidr_block` - (Required) The destination CIDR block.
- `snat_ip` - (Required) The public IP address.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the SNAT entry Id and formates as `<sag_id>:<snat_id>`.

» Import

The Sag SnatEntry can be imported using the id, e.g.

```
$ terraform import alicloud_sag_snat_entry.example sag-abc123456:snat-abc123456
```

» alicloud_cas_certificates

This data source provides a list of CAS Certificates in an Alibaba Cloud account according to the specified filters.

» Example Usage

```
data "alicloud_cas_certificates" "certs" {
  name_regex  = "^cas"
  output_file = "${path.module}/cas_certificates.json"
}

output "cert" {
  value = "${data.alicloud_cas_certificates.certs.certificates.0.id}"
}
```

» Argument Reference

The following arguments are supported:

- `name_regex` - (Optional) A regex string to filter results by the certificate name.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).
- `ids` - (Optional, Available in 1.52.0+) A list of cert IDs.

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of cert IDs.
- `names` - A list of cert names.
- `certificates` - A list of apis. Each element contains the following attributes:
    - `id` - The cert's id.
    - `name` - The cert's name.
    - `common` - The cert's common name.
    - `finger_print` - The cert's finger.
    - `issuer` - The cert's .
    - `org_name` - The cert's organization.
    - `province` - The cert's province.
    - `city` - The cert's city.
    - `country` - The cert's country.
    - `start_date` - The cert's not valid before time.
    - `end_date` - The cert's not valid after time.
    - `sans` - The cert's subject alternative name.
    - `expired` - The cert is expired or not.
    - `buy_in_aliyun` - The cert is buy from aliyun or not.

» alicloud_cas_certificate

Provides a CAS Certificate resource.

NOTE: The Certificate name which you want to add must be already registered and had not added by another account. Every Certificate name can only exist in a unique group.

NOTE: The Cas Certificate region only support cn-hangzhou, ap-south-1, me-east-1, eu-central-1, ap-northeast-1, ap-southeast-2.

NOTE: Available in 1.35.0+ .

» Example Usage

```
# Add a new Certificate.
resource "alicloud_cas_certificate" "cert" {
  name = "test"
  cert = "${file("${path.module}/test.crt")}"
  key  = "${file("${path.module}/test.key")}"
}
```

» Argument Reference

The following arguments are supported:

- `name` - (Required, ForcesNew) Name of the Certificate. This name without suffix can have a string of 1 to 63 characters, must contain only alphanumeric characters or ”-”, and must not begin or end with ”-”, and ”-” must not in the 3th and 4th character positions at the same time. Suffix `.sh` and `.tel` are not supported.
- `cert` - (Required, ForcesNew) Cert of the Certificate in which the Certificate will add.
- `key` - (Required, ForcesNew) Key of the Certificate in which the Certificate will add.

» Attributes Reference

The following attributes are exported:

- `id` - The cert id.

» alicloud_common_bandwidth_packages

This data source provides a list of Common Bandwidth Packages owned by an Alibaba Cloud account.

NOTE: Available in 1.36.0+.

» Example Usage

```
data "alicloud_common_bandwidth_packages" "foo" {
  name_regex = "^tf-testAcc.*"
  ids        = ["${alicloud_common_bandwidth_package.foo.id}"]
}

resource "alicloud_common_bandwidth_package" "foo" {
  bandwidth   = "2"
  name        = "tf-testAccCommonBandwidthPackage"
  description = "tf-testAcc-CommonBandwidthPackage"
}
```

» Argument Reference

The following arguments are supported:

- `ids` - (Optional) A list of Common Bandwidth Packages IDs.
- `name_regex` - (Optional) A regex string to filter results by name.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).
- `resource_group_id` - (Optional, ForceNew, Available in 1.58.0+) The Id of resource group which the common bandwidth package belongs.

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - (Optional) A list of Common Bandwidth Packages IDs.
- `names` - A list of Common Bandwidth Packages names.
- `packages` - A list of Common Bandwidth Packages. Each element contains the following attributes:
  - `id` - ID of the Common Bandwidth Package.
  - `bandwidth` - The peak bandwidth of the Internet Shared Bandwidth instance.
  - `status` - Status of the Common Bandwidth Package.
  - `name` - Name of the Common Bandwidth Package.
  - `description` - The description of the Common Bandwidth Package instance.
  - `business_status` - The business status of the Common Bandwidth Package instance.
  - `isp` - ISP of the Common Bandwidth Package.
  - `creation_time` - Time of creation.
  - `public_ip_addresses` - Public ip addresses that in the Common Bandwidth Pakcage.
  - `resource_group_id` - The Id of resource group which the common bandwidth package belongs. ## Public ip addresses Block

The public ip addresses mapping supports the following:

- `ip_address` - The address of the EIP.
- `allocation_id` - The ID of the EIP instance.

» alicloud_eips

This data source provides a list of EIPs (Elastic IP address) owned by an Alibaba Cloud account.

» Example Usage

```
data "alicloud_eips" "eips_ds" {
```

```
}

output "first_eip_id" {
  value = "${data.alicloud_eips.eips_ds.eips.0.id}"
}
```

» Argument Reference

The following arguments are supported:

- `ids` - (Optional) A list of EIP IDs.
- `ip_addresses` - (Optional) A list of EIP public IP addresses.
- `tags` - (Optional, Available in v1.55.3+) A mapping of tags to assign to the resource.
- `in_use` - (Deprecated) Deprecated since the version 1.8.0 of this provider.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).
- `resource_group_id` - (Optional, ForceNew, Available in 1.58.0+) The Id of resource group which the eips belongs.

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - (Optional) A list of EIP IDs.
- `names` - (Optional) A list of EIP names.
- `eips` - A list of EIPs. Each element contains the following attributes:
  - `id` - ID of the EIP.
  - `status` - EIP status. Possible values are: `Associating`, `Unassociating`, `InUse` and `Available`.
  - `ip_address` - Public IP Address of the the EIP.
  - `bandwidth` - EIP internet max bandwidth in Mbps.
  - `internet_charge_type` - EIP internet charge type.
  - `instance_id` - The ID of the instance that is being bound.
  - `instance_type` - The instance type of that the EIP is bound.
  - `creation_time` - Time of creation.
  - `resource_group_id` - The Id of resource group which the eips belongs.

» alicloud_nat_gateways

This data source provides a list of Nat Gateways owned by an Alibaba Cloud account.

NOTE: Available in 1.37.0+.

» Example Usage

```
variable "name" {
  default = "natGatewaysDatasource"
}

data "alicloud_zones" "default" {
  available_resource_creation = "VSwitch"
}

resource "alicloud_vpc" "foo" {
  name       = "${var.name}"
  cidr_block = "172.16.0.0/12"
}

resource "alicloud_nat_gateway" "foo" {
  vpc_id        = "${alicloud_vpc.foo.id}"
  specification = "Small"
  name          = "${var.name}"
}

data "alicloud_nat_gateways" "foo" {
  vpc_id     = "${alicloud_vpc.foo.id}"
  name_regex = "${alicloud_nat_gateway.foo.name}"
  ids        = ["${alicloud_nat_gateway.foo.id}"]
}
```

» Argument Reference

The following arguments are supported:

- `ids` - (Optional) A list of NAT gateways IDs.
- `name_regex` - (Optional) A regex string to filter nat gateways by name.
- `vpc_id` - (Optional) The ID of the VPC.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - (Optional) A list of Nat gateways IDs.

- **names** - A list of Nat gateways names.
- **gateways** - A list of Nat gateways. Each element contains the following attributes:
  - **id** - The ID of the NAT gateway.
  - **name** - Name of the NAT gateway.
  - **description** - The description of the NAT gateway.
  - **creation_time** - Time of creation.
  - **spec** - The specification of the NAT gateway.
  - **status** - The status of the NAT gateway.
  - **snat_table_id** - The snat table id.
  - **forward_table_id** - The forward table id.

» alicloud_route_entries

This data source provides a list of Route Entries owned by an Alibaba Cloud account.

NOTE: Available in 1.37.0+.

» Example Usage

```
data "alicloud_zones" "default" {
  available_resource_creation = "VSwitch"
}
data "alicloud_instance_types" "default" {
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  cpu_core_count    = 1
  memory_size       = 2
}
data "alicloud_images" "default" {
  name_regex  = "^ubuntu_18.*64"
  most_recent = true
  owners      = "system"
}

variable "name" {
  default = "tf-testAccRouteEntryConfig"
}
resource "alicloud_vpc" "foo" {
  name       = "${var.name}"
  cidr_block = "10.1.0.0/21"
}

resource "alicloud_vswitch" "foo" {
```

```
  vpc_id            = "${alicloud_vpc.foo.id}"
  cidr_block        = "10.1.1.0/24"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  name              = "${var.name}"
}

resource "alicloud_route_entry" "foo" {
  route_table_id       = "${alicloud_vpc.foo.route_table_id}"
  destination_cidrblock = "172.11.1.1/32"
  nexthop_type         = "Instance"
  nexthop_id           = "${alicloud_instance.foo.id}"
}

resource "alicloud_security_group" "tf_test_foo" {
  name        = "${var.name}"
  description = "foo"
  vpc_id      = "${alicloud_vpc.foo.id}"
}

resource "alicloud_security_group_rule" "ingress" {
  type             = "ingress"
  ip_protocol      = "tcp"
  nic_type         = "intranet"
  policy           = "accept"
  port_range       = "22/22"
  priority         = 1
  security_group_id = "${alicloud_security_group.tf_test_foo.id}"
  cidr_ip          = "0.0.0.0/0"
}

resource "alicloud_instance" "foo" {
  # cn-beijing
  security_groups = ["${alicloud_security_group.tf_test_foo.id}"]

  vswitch_id         = "${alicloud_vswitch.foo.id}"
  allocate_public_ip = true

  # series III
  instance_charge_type     = "PostPaid"
  instance_type            = "${data.alicloud_instance_types.default.instance_types.0.id}'
  internet_charge_type     = "PayByTraffic"
  internet_max_bandwidth_out = 5

  system_disk_category = "cloud_efficiency"
  image_id             = "${data.alicloud_images.default.images.0.id}"
  instance_name        = "${var.name}"
```

```
}

data "alicloud_route_entries" "foo" {
  route_table_id = "${alicloud_route_entry.foo.route_table_id}"
}
```

» Argument Reference

The following arguments are supported:

- `route_table_id` - (Required, ForceNew) The ID of the router table to which the route entry belongs.
- `instance_id` - (Optional) The instance ID of the next hop.
- `type` - (Optional) The type of the route entry.
- `cidr_block` - (Optional) The destination CIDR block of the route entry.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `entries` - A list of Route Entries. Each element contains the following attributes:
  - `type` - The type of the route entry.
  - `next_hop_type` - The type of the next hop.
  - `status` - The status of the route entry.
  - `instance_id` - The instance ID of the next hop.
  - `route_table_id` - The ID of the router table to which the route entry belongs.
  - `cidr_block` - The destination CIDR block of the route entry.

» alicloud_route_tables

This data source provides a list of Route Tables owned by an Alibaba Cloud account.

NOTE: Available in 1.36.0+.

» Example Usage

```
variable "name" {
  default = "route-tables-datasource-example-name"
```

```
}

resource "alicloud_vpc" "foo" {
  cidr_block = "172.16.0.0/12"
  name       = "${var.name}"
}

resource "alicloud_route_table" "foo" {
  vpc_id      = "${alicloud_vpc.foo.id}"
  name        = "${var.name}"
  description = "${var.name}"
}

data "alicloud_route_tables" "foo" {
  ids = ["${alicloud_route_table.foo.id}"]
}

output "route_table_ids" {
  value = "${data.alicloud_route_tables.foo.ids}"
}
```

» Argument Reference

The following arguments are supported:

- `ids` - (Optional) A list of Route Tables IDs.
- `name_regex` - (Optional) A regex string to filter route tables by name.
- `vpc_id` - (Optional) Vpc id of the route table.
- `tags` - (Optional, Available in v1.55.3+) A mapping of tags to assign to the resource.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).
- `resource_group_id` - (Optional, ForceNew, Available in 1.60.0+) The Id of resource group which route tables belongs.

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - (Optional) A list of Route Tables IDs.
- `names` - A list of Route Tables names.
- `tables` - A list of Route Tables. Each element contains the following attributes:
    - `id` - ID of the Route Table.
    - `router_id` - Router Id of the route table.

- route_table_type - The type of route table.
- name - Name of the route table.
- description - The description of the route table instance.
- creation_time - Time of creation.
- resource_group_id - The Id of resource group which route tables belongs.

» alicloud_router_interfaces

This data source provides information about router interfaces that connect VPCs together.

» Example Usage

```
data "alicloud_router_interfaces" "router_interfaces_ds" {
  name_regex = "^testenv"
  status     = "Active"
}

output "first_router_interface_id" {
  value = "${data.alicloud_router_interfaces.router_interfaces_ds.interfaces.0.id}"
}
```

» Argument Reference

The following arguments are supported:

- name_regex - (Optional) A regex string used to filter by router interface name.
- status - (Optional) Expected status. Valid values are Active, Inactive and Idle.
- specification - (Optional) Specification of the link, such as Small.1 (10Mb), Middle.1 (100Mb), Large.2 (2Gb), ...etc.
- router_id - (Optional) ID of the VRouter located in the local region.
- router_type - (Optional) Router type in the local region. Valid values are VRouter and VBR (physical connection).
- role - (Optional) Role of the router interface. Valid values are InitiatingSide (connection initiator) and AcceptingSide (connection receiver). The value of this parameter must be InitiatingSide if the router_type is set to VBR.
- opposite_interface_id - (Optional) ID of the peer router interface.
- opposite_interface_owner_id - (Optional) Account ID of the owner of the peer router interface.

- `ids` - (Optional, Available in 1.44.0+) A list of router interface IDs.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of router interface IDs.
- `names` - A list of router interface names.
- `interfaces` - A list of router interfaces. Each element contains the following attributes:
    - `id` - Router interface ID.
    - `status` - Router interface status. Possible values: `Active`, `Inactive` and `Idle`.
    - `name` - Router interface name.
    - `description` - Router interface description.
    - `role` - Router interface role. Possible values: `InitiatingSide` and `AcceptingSide`.
    - `specification` - Router interface specification. Possible values: `Small.1`, `Middle.1`, `Large.2`, ...etc.
    - `router_id` - ID of the VRouter located in the local region.
    - `router_type` - Router type in the local region. Possible values: `VRouter` and `VBR`.
    - `vpc_id` - ID of the VPC that owns the router in the local region.
    - `access_point_id` - ID of the access point used by the VBR.
    - `creation_time` - Router interface creation time.
    - `opposite_region_id` - Peer router region ID.
    - `opposite_interface_id` - Peer router interface ID.
    - `opposite_router_id` - Peer router ID.
    - `opposite_router_type` - Router type in the peer region. Possible values: `VRouter` and `VBR`.
    - `opposite_interface_owner_id` - Account ID of the owner of the peer router interface.
    - `health_check_source_ip` - Source IP address used to perform health check on the physical connection.
    - `health_check_target_ip` - Destination IP address used to perform health check on the physical connection.

» alicloud_snat_entries

This data source provides a list of Snat Entries owned by an Alibaba Cloud account.

NOTE: Available in 1.37.0+.

» Example Usage

```
variable "name" {
  default = "snat-entry-example-name"
}
data "alicloud_zones" "default" {
  available_resource_creation = "VSwitch"
}

resource "alicloud_vpc" "foo" {
  name      = "${var.name}"
  cidr_block = "172.16.0.0/12"
}

resource "alicloud_vswitch" "foo" {
  vpc_id            = "${alicloud_vpc.foo.id}"
  cidr_block        = "172.16.0.0/21"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  name              = "${var.name}"
}

resource "alicloud_nat_gateway" "foo" {
  vpc_id        = "${alicloud_vpc.foo.id}"
  specification = "Small"
  name          = "${var.name}"
}

resource "alicloud_eip" "foo" {
  name = "${var.name}"
}

resource "alicloud_eip_association" "foo" {
  allocation_id = "${alicloud_eip.foo.id}"
  instance_id   = "${alicloud_nat_gateway.foo.id}"
}

resource "alicloud_snat_entry" "foo" {
  snat_table_id     = "${alicloud_nat_gateway.foo.snat_table_ids}"
  source_vswitch_id = "${alicloud_vswitch.foo.id}"
  snat_ip           = "${alicloud_eip.foo.ip_address}"
}

data "alicloud_snat_entries" "foo" {
```

```
  snat_table_id = "${alicloud_snat_entry.foo.snat_table_id}"
}
```

» Argument Reference

The following arguments are supported:

- `ids` - (Optional) A list of Snat Entries IDs.
- `snat_ip` - (Optional) The public IP of the Snat Entry.
- `source_cidr` - (Optional) The source CIDR block of the Snat Entry.
- `snat_table_id` - (Required) The ID of the Snat table.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - (Optional) A list of Snat Entries IDs.
- `entries` - A list of Snat Entries. Each element contains the following attributes:
  - `id` - The ID of the Snat Entry.
  - `snat_ip` - The public IP of the Snat Entry.
  - `source_cidr` - The source CIDR block of the Snat Entry.
  - `status` - The status of the Snat Entry.

» alicloud_vpcs

This data source provides VPCs available to the user.

» Example Usage

```
data "alicloud_vpcs" "vpcs_ds" {
  cidr_block = "172.16.0.0/12"
  status     = "Available"
  name_regex = "^foo"
}

output "first_vpc_id" {
  value = "${data.alicloud_vpcs.vpcs_ds.vpcs.0.id}"
}
```

» Argument Reference

The following arguments are supported:

- `cidr_block` - (Optional) Filter results by a specific CIDR block. For example: "172.16.0.0/12".
- `status` - (Optional) Filter results by a specific status. Valid value are `Pending` and `Available`.
- `name_regex` - (Optional) A regex string to filter VPCs by name.
- `is_default` - (Optional, type: bool) Indicate whether the VPC is the default one in the specified region.
- `vswitch_id` - (Optional) Filter results by the specified VSwitch.
- `tags` - (Optional, Available in v1.55.3+) A mapping of tags to assign to the resource.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).
- `ids` - (Optional, Available in 1.52.0+) A list of VPC IDs.
- `resource_group_id` - (Optional, ForceNew, Available in 1.60.0+) The Id of resource group which VPC belongs.

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of VPC IDs.
- `names` - A list of VPC names.
- `vpcs` - A list of VPCs. Each element contains the following attributes:
    - `id` - ID of the VPC.
    - `region_id` - ID of the region where the VPC is located.
    - `status` - Status of the VPC.
    - `vpc_name` - Name of the VPC.
    - `vswitch_ids` - List of VSwitch IDs in the specified VPC
    - `cidr_block` - CIDR block of the VPC.
    - `vrouter_id` - ID of the VRouter.
    - `route_table_id` - Route table ID of the VRouter.
    - `description` - Description of the VPC
    - `is_default` - Whether the VPC is the default VPC in the region.
    - `creation_time` - Time of creation.

» alicloud_vswitches

This data source provides a list of VSwitches owned by an Alibaba Cloud account.

» Example Usage

```
variable "name" {
  default = "vswitchDatasourceName"
}
data "alicloud_zones" "default" {}

resource "alicloud_vpc" "vpc" {
  cidr_block = "172.16.0.0/16"
  name       = "${var.name}"
}

resource "alicloud_vswitch" "vswitch" {
  name              = "${var.name}"
  cidr_block        = "172.16.0.0/24"
  vpc_id            = "${alicloud_vpc.vpc.id}"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
}

data "alicloud_vswitches" "default" {
  name_regex = "${alicloud_vswitch.vswitch.name}"
}
```

» Argument Reference

The following arguments are supported:

- `cidr_block` - (Optional) Filter results by a specific CIDR block. For example: "172.16.0.0/12".
- `zone_id` - (Optional) The availability zone of the VSwitch.
- `name_regex` - (Optional) A regex string to filter results by name.
- `is_default` - (Optional, type: bool) Indicate whether the VSwitch is created by the system.
- `vpc_id` - (Optional) ID of the VPC that owns the VSwitch.
- `tags` - (Optional, Available in v1.55.3+) A mapping of tags to assign to the resource.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).
- `ids` - (Optional, Available in 1.52.0+) A list of VSwitch IDs.
- `resource_group_id` - (Optional, ForceNew, Available in 1.60.0+) The Id of resource group which VSWitch belongs.

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of VSwitch IDs.
- `names` - A list of VSwitch names.
- `vswitches` - A list of VSwitches. Each element contains the following attributes:
    - `id` - ID of the VSwitch.
    - `zone_id` - ID of the availability zone where the VSwitch is located.
    - `vpc_id` - ID of the VPC that owns the VSwitch.
    - `name` - Name of the VSwitch.
    - `instance_ids` - List of ECS instance IDs in the specified VSwitch.
    - `cidr_block` - CIDR block of the VSwitch.
    - `description` - Description of the VSwitch.
    - `is_default` - Whether the VSwitch is the default one in the region.
    - `creation_time` - Time of creation.

» alicloud_forward_entries

This data source provides a list of Forward Entries owned by an Alibaba Cloud account.

NOTE: Available in 1.37.0+.

» Example Usage

```
variable "name" {
  default = "forward-entry-config-example-name"
}

data "alicloud_zones" "default" {
  available_resource_creation = "VSwitch"
}

resource "alicloud_vpc" "default" {
  name       = "${var.name}"
  cidr_block = "172.16.0.0/12"
}

resource "alicloud_vswitch" "default" {
  vpc_id            = "${alicloud_vpc.default.id}"
  cidr_block        = "172.16.0.0/21"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
```

```
  name             = "${var.name}"
}

resource "alicloud_nat_gateway" "default" {
  vpc_id        = "${alicloud_vpc.default.id}"
  specification = "Small"
  name          = "${var.name}"
}

resource "alicloud_eip" "default" {
  name = "${var.name}"
}

resource "alicloud_eip_association" "default" {
  allocation_id = "${alicloud_eip.default.id}"
  instance_id   = "${alicloud_nat_gateway.default.id}"
}

resource "alicloud_forward_entry" "default" {
  forward_table_id = "${alicloud_nat_gateway.default.forward_table_ids}"
  external_ip      = "${alicloud_eip.default.ip_address}"
  external_port    = "80"
  ip_protocol      = "tcp"
  internal_ip      = "172.16.0.3"
  internal_port    = "8080"
}

data "alicloud_forward_entries" "default" {
  forward_table_id = "${alicloud_forward_entry.default.forward_table_id}"
}
```

» Argument Reference

The following arguments are supported:

- `ids` - (Optional) A list of Forward Entries IDs.
- `name_regex` - (Optional, Available in 1.44.0+) A regex string to filter results by forward entry name.
- `external_ip` - (Optional) The public IP address.
- `internal_ip` - (Optional) The private IP address.
- `forward_table_id` - (Required) The ID of the Forward table.
- `output_file` - (Optional) File name where to save data source results (after running `terraform plan`).

» Attributes Reference

The following attributes are exported in addition to the arguments listed above:

- `ids` - A list of Forward Entries IDs.
- `names` - A list of Forward Entries names.
- `entries` - A list of Forward Entries. Each element contains the following attributes:
    - `id` - The ID of the Forward Entry.
    - `external_ip` - The public IP address.
    - `external_port` - The public port.
    - `ip_protocol` - The protocol type.
    - `internal_ip` - The private IP address.
    - `internal_port` - The private port.
    - `name` - The forward entry name.
    - `status` - The status of the Forward Entry.

» alicloud_common_bandwidth_package

Provides a common bandwidth package resource.

NOTE: Terraform will auto build common bandwidth package instance while it uses `alicloud_common_bandwidth_package` to build a common bandwidth package resource.

For information about common bandwidth package and how to use it, see What is Common Bandwidth Package.

For information about common bandwidth package billing methods, see Common Bandwidth Package Billing Methods.

» Example Usage

Basic Usage

```
resource "alicloud_common_bandwidth_package" "foo" {
  bandwidth            = "200"
  internet_charge_type = "PayByBandwidth"
  name                 = "test-common-bandwidth-package"
  description          = "test-common-bandwidth-package"
}
```

» Argument Reference

The following arguments are supported:

- `bandwidth` - (Required) The bandwidth of the common bandwidth package, in Mbps.
- `internet_charge_type` - (Optional, ForceNew) The billing method of the common bandwidth package. Valid values are "PayByBandwidth" and "PayBy95" and "PayByTraffic". "PayBy95" is pay by classic 95th percentile pricing. International Account doesn't supports "PayByBandwidth" and "PayBy95". Default to "PayByTraffic".
- `ratio` - (Optional, ForceNew Available in 1.55.3+) Ratio of the common bandwidth package. It is valid when `internet_charge_type` is `PayBy95`. Default to 100. Valid values: [10-100].
- `name` - (Optional) The name of the common bandwidth package.
- `description` - (Optional) The description of the common bandwidth package instance.
- `resource_group_id` - (ForceNew, Available in 1.58.0+) The Id of resource group which the common bandwidth package belongs.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the common bandwidth package instance id.

» Import

The common bandwidth package can be imported using the id, e.g.

```
$ terraform import alicloud_common_bandwidth_package.foo cbwp-abc123456
```

» alicloud_common_bandwidth_package_attachment

Provides an Alicloud Common Bandwidth Package Attachment resource for associating Common Bandwidth Package to EIP Instance.

NOTE: Terraform will auto build common bandwidth package attachment while it uses `alicloud_common_bandwidth_package_attachment` to build a common bandwidth package attachment resource.

For information about common bandwidth package and how to use it, see What is Common Bandwidth Package.

» Example Usage

Basic Usage

```
resource "alicloud_common_bandwidth_package" "foo" {
  bandwidth   = "2"
  name        = "test_common_bandwidth_package"
  description = "test_common_bandwidth_package"
}

resource "alicloud_eip" "foo" {
  bandwidth            = "2"
  internet_charge_type = "PayByBandwidth"
}

resource "alicloud_common_bandwidth_package_attachment" "foo" {
  bandwidth_package_id = "${alicloud_common_bandwidth_package.foo.id}"
  instance_id          = "${alicloud_eip.foo.id}"
}
```

» Argument Reference

The following arguments are supported:

- `bandwidth_package_id` - (Required, ForceNew) The bandwidth_package_id of the common bandwidth package attachment, the field can't be changed.
- `instance_id` - (Required, ForceNew) The instance_id of the common bandwidth package attachment, the field can't be changed.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the common bandwidth package attachment id and formates as `<bandwidth_package_id>:<instance_id>`.

» Import

The common bandwidth package attachemnt can be imported using the id, e.g.

```
$ terraform import alicloud_common_bandwidth_package_attachment.foo cbwp-abc123456:eip-abc12
```

» alicloud_eip

Provides an elastic IP resource.

NOTE: The resource only supports to create `PostPaid PayByTraffic` or `PrePaid PayByBandwidth` elastic IP for international account. Otherwise, you will happened error `COMMODITY.INVALID_COMPONENT`. Your account is international if you can use it to login in International Web Console.

NOTE: From version 1.10.1, this resource supports creating "PrePaid" EIP. In addition, it supports setting EIP name and description.

» Example Usage

```
# Create a new EIP.
resource "alicloud_eip" "example" {
  bandwidth            = "10"
  internet_charge_type = "PayByBandwidth"
}
```

» Module Support

You can use the existing eip module to create several EIP instances and associate them with other resources one-click, like ECS instances, SLB, Nat Gateway and so on.

» Argument Reference

The following arguments are supported:

- `name` - (Optional) The name of the EIP instance. This name can have a string of 2 to 128 characters, must contain only alphanumeric characters or hyphens, such as "-","."," _ ", and must not begin or end with a hyphen, and must not begin with http:// or https://.
- `description` - (Optional) Description of the EIP instance, This description can have a string of 2 to 256 characters, It cannot begin with http:// or https://. Default value is null.
- `bandwidth` - (Optional) Maximum bandwidth to the elastic public network, measured in Mbps (Mega bit per second). If this value is not specified, then automatically sets it to 5 Mbps.
- `internet_charge_type` - (Optional, ForceNew) Internet charge type of the EIP, Valid values are `PayByBandwidth`, `PayByTraffic`. Default to `PayByBandwidth`. From version `1.7.1`, default to `PayByTraffic`. It is only PayByBandwidth when `instance_charge_type` is PrePaid.
- `instance_charge_type` - (Optional, ForceNew) Elastic IP instance charge type. Valid values are "PrePaid" and "PostPaid". Default to "PostPaid".
- `period` - (Optional, ForceNew) The duration that you will buy the resource, in month. It is valid when `instance_charge_type` is `PrePaid`.

Default to 1. Valid values: [1-9, 12, 24, 36]. At present, the provider does not support modify "period" and you can do that via web console.

- `isp` - (Optional, ForceNew, Available in 1.47.0+) The line type of the Elastic IP instance. Default to `BGP`. Other type of the isp need to open a whitelist.
- `tags` - (Optional, Available in v1.55.3+) A mapping of tags to assign to the resource.
- `resource_group_id` - (Optional, ForceNew, Available in 1.58.0+) The Id of resource group which the eip belongs.

» Attributes Reference

The following attributes are exported:

- `id` - The EIP ID.
- `bandwidth` - The elastic public network bandwidth.
- `internet_charge_type` - The EIP internet charge type.
- `status` - The EIP current status.
- `ip_address` - The elastic ip address

» Import

Elastic IP address can be imported using the id, e.g.

```
$ terraform import alicloud_eip.example eip-abc12345678
```

» alicloud_eip_association

Provides an Alicloud EIP Association resource for associating Elastic IP to ECS Instance, SLB Instance or Nat Gateway.

NOTE: `alicloud_eip_association` is useful in scenarios where EIPs are either pre-existing or distributed to customers or users and therefore cannot be changed.

NOTE: From version 1.7.1, the resource support to associate EIP to SLB Instance or Nat Gateway.

NOTE: One EIP can only be associated with ECS or SLB instance which in the VPC.

» Example Usage

```
# Create a new EIP association and use it to associate a EIP form a instance.
```

```
data "alicloud_zones" "default" {
}

resource "alicloud_vpc" "vpc" {
  cidr_block = "10.1.0.0/21"
}

resource "alicloud_vswitch" "vsw" {
  vpc_id            = "${alicloud_vpc.vpc.id}"
  cidr_block        = "10.1.1.0/24"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"

  depends_on = [
    "alicloud_vpc.vpc",
  ]
}

data "alicloud_instance_types" "default" {
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
}

data "alicloud_images" "default" {
  name_regex  = "^ubuntu_18.*64"
  most_recent = true
  owners      = "system"
}

resource "alicloud_instance" "ecs_instance" {
  image_id          = "${data.alicloud_images.default.images.0.id}"
  instance_type     = "${data.alicloud_instance_types.default.instance_types.0.id}"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  security_groups   = ["${alicloud_security_group.group.id}"]
  vswitch_id        = "${alicloud_vswitch.vsw.id}"
  instance_name     = "hello"
  tags = {
    Name = "TerraformTest-instance"
  }
}

resource "alicloud_eip" "eip" {}

resource "alicloud_eip_association" "eip_asso" {
  allocation_id = "${alicloud_eip.eip.id}"
  instance_id   = "${alicloud_instance.ecs_instance.id}"
}
```

```
resource "alicloud_security_group" "group" {
  name        = "terraform-test-group"
  description = "New security group"
  vpc_id      = "${alicloud_vpc.vpc.id}"
}
```

» Module Support

You can use the existing eip module to create several EIP instances and associate them with other resources one-click, like ECS instances, SLB, Nat Gateway and so on.

» Argument Reference

The following arguments are supported:

- `allocation_id` - (Required, ForcesNew) The allocation EIP ID.
- `instance_id` - (Required, ForcesNew) The ID of the ECS or SLB instance or Nat Gateway.
- `instance_type` - (Optional, ForceNew, Available in 1.46.0+) The type of cloud product that the eip instance to bind.
- `private_ip_address` - (Optional, ForceNew, Available in 1.52.2+) The private IP address in the network segment of the vswitch which has been assigned.

» Attributes Reference

The following attributes are exported:

- `allocation_id` - As above.
- `instance_id` - As above.

» alicloud_forward_entry

Provides a forward resource.

» Example Usage

Basic Usage

```
variable "name" {
  default = "forward-entry-example-name"
}

data "alicloud_zones" "default" {
  available_resource_creation = "VSwitch"
}

resource "alicloud_vpc" "default" {
  name       = "${var.name}"
  cidr_block = "172.16.0.0/12"
}

resource "alicloud_vswitch" "default" {
  vpc_id            = "${alicloud_vpc.default.id}"
  cidr_block        = "172.16.0.0/21"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  name              = "${var.name}"
}

resource "alicloud_nat_gateway" "default" {
  vpc_id        = "${alicloud_vpc.default.id}"
  specification = "Small"
  name          = "${var.name}"
}

resource "alicloud_eip" "default" {
  name = "${var.name}"
}

resource "alicloud_eip_association" "default" {
  allocation_id = "${alicloud_eip.default.id}"
  instance_id   = "${alicloud_nat_gateway.default.id}"
}

resource "alicloud_forward_entry" "default" {
  forward_table_id = "${alicloud_nat_gateway.default.forward_table_ids}"
  external_ip      = "${alicloud_eip.default.ip_address}"
  external_port    = "80"
  ip_protocol      = "tcp"
  internal_ip      = "172.16.0.3"
  internal_port    = "8080"
}
```

» Argument Reference

The following arguments are supported:

- `forward_table_id` - (Required, ForceNew) The value can get from `alicloud_nat_gateway` Attributes "forward_table_ids".
- `name` - (Optional, Available in 1.44.0+) The name of forward entry.
- `external_ip` - (Required, ForceNew) The external ip address, the ip must along bandwidth package public ip which `alicloud_nat_gateway` argument `bandwidth_packages`.
- `external_port` - (Required) The external port, valid value is 1~65535|any.
- `ip_protocol` - (Required) The ip protocal, valid value is tcp|udp|any.
- `internal_ip` - (Required) The internal ip, must a private ip.
- `internal_port` - (Required) The internal port, valid value is 1~65535|any.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the forward entry. The value formats as `<forward_table_id>:<forward_entry_id>`
- `forward_entry_id` - The id of the forward entry on the server.

» alicloud_nat_gateway

Provides a resource to create a VPC NAT Gateway.

NOTE: Resource bandwidth packages will not be supported since 00:00 on November 4, 2017, and public IP can be replaced be elastic IPs. If a Nat Gateway has already bought some bandwidth packages, it can not bind elastic IP and you have to submit the work order to solve. If you want to add public IP, you can use resource 'alicloud_eip_association' to bind several elastic IPs for one Nat Gateway.

NOTE: From version 1.7.1, this resource has deprecated bandwidth packages. But, in order to manage stock bandwidth packages, version 1.13.0 re-support configuring 'bandwidth_packages'.

» Example Usage

Basic usage

```
variable "name" {
  default = "natGatewayExampleName"
}
```

```
data "alicloud_zones" "default" {
  available_resource_creation = "VSwitch"
}

resource "alicloud_vpc" "default" {
  name       = "${var.name}"
  cidr_block = "172.16.0.0/12"
}

resource "alicloud_vswitch" "default" {
  vpc_id            = "${alicloud_vpc.default.id}"
  cidr_block        = "172.16.0.0/21"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  name              = "${var.name}"
}

resource "alicloud_nat_gateway" "default" {
  vpc_id = "${alicloud_vswitch.default.vpc_id}"
  name   = "${var.name}"
}
```

» Argument Reference

The following arguments are supported:

- `vpc_id` - (Required, ForceNew) The VPC ID.
- `spec` - (Deprecated) It has been deprecated from provider version 1.7.1, and new field 'specification' can replace it.
- `specification` - (Optional) The specification of the nat gateway. Valid values are `Small`, `Middle` and `Large`. Default to `Small`. Details refer to Nat Gateway Specification.
- `name` - (Optional) Name of the nat gateway. The value can have a string of 2 to 128 characters, must contain only alphanumeric characters or hyphens, such as "-",".","_", and must not begin or end with a hyphen, and must not begin with http:// or https://. Defaults to null.
- `description` - (Optional) Description of the nat gateway, This description can have a string of 2 to 256 characters, It cannot begin with http:// or https://. Defaults to null.
- `bandwidth_packages` - (Optional) A list of bandwidth packages for the nat gatway. Only support nat gateway created before 00:00 on November 4, 2017. Available in v1.13.0+ and v1.7.1-.
- `instance_charge_type` - (Optional, ForceNew, Available in 1.45.0+) The billing method of the nat gateway. Valid values are "PrePaid" and "PostPaid". Default to "PostPaid".
- `period` - (Optional, ForceNew, Available in 1.45.0+) The dura-

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tion that you will buy the resource, in month. It is valid when `instance_charge_type` is `PrePaid`. Default to 1. Valid values: [1-9, 12, 24, 36]. At present, the provider does not support modify "period" and you can do that via web console.

» Block bandwidth packages

The bandwidth package mapping supports the following:

- `ip_count` - (Required) The IP number of the current bandwidth package. Its value range from 1 to 50.
- `bandwidth` - (Required) The bandwidth value of the current bandwidth package. Its value range from 5 to 5000.
- `zone` - (Optional) The AZ for the current bandwidth. If this value is not specified, Terraform will set a random AZ.
- `public_ip_addresses` - (Computer) The public ip for bandwidth package. the public ip count equal `ip_count`, multi ip would complex with ",", such as "10.0.0.1,10.0.0.2".

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the nat gateway.
- `name` - The name of the nat gateway.
- `description` - The description of the nat gateway.
- `spec` - It has been deprecated from provider version 1.7.1.
- `specification` - The specification of the nat gateway.
- `vpc_id` - The VPC ID for the nat gateway.
- `bandwidth_package_ids` - A list ID of the bandwidth packages, and split them with commas.
- `snat_table_ids` - The nat gateway will auto create a snap and forward item, the `snat_table_ids` is the created one.
- `forward_table_ids` - The nat gateway will auto create a snap and forward item, the `forward_table_ids` is the created one.

» Import

Nat gateway can be imported using the id, e.g.

```
$ terraform import alicloud_nat_gateway.example ngw-abc123456
```

» alicloud_network_acl

Provides a network acl resource to add network acls.

NOTE: Available in 1.43.0+. Currently, the resource are only available in Hongkong(cn-hongkong), India(ap-south-1), and Indonesia(ap-southeast-1) regions.

» Example Usage

Basic Usage

```
resource "alicloud_vpc" "default" {
  cidr_block = "172.16.0.0/12"
  name       = "VpcConfig"
}

resource "alicloud_network_acl" "default" {
  vpc_id      = "${alicloud_vpc.default.id}"
  name        = "network_acl"
  description = "network_acl"
}
```

» Argument Reference

The following arguments are supported:

- `vpc_id` - (Required, ForceNew) The vpc_id of the network acl, the field can't be changed.
- `name` - (Optional) The name of the network acl.
- `description` - (Optional) The description of the network acl instance.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the network acl instance id.

» Import

The network acl can be imported using the id, e.g.

```
$ terraform import alicloud_network_acl.default nacl-abc123456
```

» alicloud_network_acl_attachment

Provides a network acl attachment resource to associate network acls to vswitches.

NOTE: Available in 1.44.0+. Currently, the resource are only available in Hongkong(cn-hongkong), India(ap-south-1), and Indonesia(ap-southeast-1) regions.

» Example Usage

Basic Usage

```
variable "name" {
  default = "NatGatewayConfigSpec"
}

data "alicloud_zones" "default" {
  available_resource_creation = "VSwitch"
}

resource "alicloud_vpc" "default" {
  name       = "${var.name}"
  cidr_block = "172.16.0.0/12"
}

resource "alicloud_network_acl" "default" {
  vpc_id = "${alicloud_vpc.default.id}"
  name   = "${var.name}"
}


resource "alicloud_vswitch" "default" {
  vpc_id            = "${alicloud_vpc.default.id}"
  cidr_block        = "172.16.0.0/21"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  name              = "${var.name}"
}

resource "alicloud_network_acl_attachment" "default" {
  network_acl_id = "${alicloud_network_acl.default.id}"
  resources {
      resource_id   = "${alicloud_vswitch.default.id}"
      resource_type = "VSwitch"
    }
```

```
}
```

» Argument Reference

The following arguments are supported:

- `network_acl_id` - (Required, ForceNew) The id of the network acl, the field can't be changed.
- `resources` - (Required) List of the resources associated with the network acl. The details see Block Resources.

» Block Resources

The resources mapping supports the following:

- `resource_id` - (Required) The resource id that the network acl will associate with.
- `resource_type` - (Required) The resource id that the network acl will associate with. Only support `VSwitch` now.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the network acl attachment. It is formatted as `<network_acl_id>:<a unique id>`.

» alicloud_network_acl_entries

Provides a network acl entries resource to create ingress and egress entries.

NOTE: Available in 1.45.0+. Currently, the resource are only available in Hongkong(cn-hongkong), India(ap-south-1), and Indonesia(ap-southeast-1) regions.

NOTE: It doesn't support concurrency and the order of the ingress and egress entries determines the priority.

NOTE: Using this resource need to open a whitelist.

» Example Usage

Basic Usage

```
variable "name" {
  default = "NetworkAclEntries"
}

data "alicloud_zones" "default" {
  available_resource_creation = "VSwitch"
}

resource "alicloud_vpc" "default" {
  name       = "${var.name}"
  cidr_block = "172.16.0.0/12"
}

resource "alicloud_network_acl" "default" {
  vpc_id = "${alicloud_vpc.default.id}"
  name   = "${var.name}"
}


resource "alicloud_vswitch" "default" {
  vpc_id            = "${alicloud_vpc.default.id}"
  cidr_block        = "172.16.0.0/21"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  name              = "${var.name}"
}

resource "alicloud_network_acl_attachment" "default" {
  network_acl_id = "${alicloud_network_acl.default.id}"
  resources = [
    {
      resource_id   = "${alicloud_vswitch.default.id}"
      resource_type = "VSwitch"
    }
  ]
}

resource "alicloud_network_acl_entries" "default" {
  network_acl_id = "${alicloud_network_acl.default.id}"
  ingress = [
    {
      protocol       = "all"
      port           = "-1/-1"
      source_cidr_ip = "0.0.0.0/32"
      name           = "${var.name}"
      entry_type     = "custom"
      policy         = "accept"
```

```
      description     = "${var.name}"
    }
  ]
  egress = [
    {
      protocol              = "all"
      port                  = "-1/-1"
      destination_cidr_ip = "0.0.0.0/32"
      name                  = "${var.name}"
      entry_type            = "custom"
      policy                = "accept"
      description           = "${var.name}"
    }
  ]
}
```

» Argument Reference

The following arguments are supported:

- `network_acl_id` - (Required, ForceNew) The id of the network acl, the field can't be changed.
- `ingress` - (Optional) List of the ingress entries of the network acl. The order of the ingress entries determines the priority. The details see Block Ingress.
- `egress` - (Optional) List of the egress entries of the network acl. The order of the egress entries determines the priority. The details see Block Egress.

» Ingress Resources

The resources mapping supports the following:

- `description` - (Optional) The description of the ingress entry.
- `source_cidr_ip` - (Optional) The source ip of the ingress entry.
- `entry_type` - (Optional) The entry type of the ingress entry. It must be `custom` or `system`. Default value is `custom`.
- `name` - (Optional) The name of the ingress entry.
- `policy` - (Optional) The policy of the ingress entry. It must be `accept` or `drop`.
- `port` - (Optional) The port of the ingress entry.
- `protocol` - (Optional) The protocol of the ingress entry.

The resources mapping supports the following:

- `description` - (Optional) The description of the egress entry.
- `destination_cidr_ip` - (Optional) The destination ip of the egress entry.
- `entry_type` - (Optional) The entry type of the egress entry. It must be `custom` or `system`. Default value is `custom`.
- `name` - (Optional) The name of the egress entry.
- `policy` - (Optional) The policy of the egress entry. It must be `accept` or `drop`.
- `port` - (Optional) The port of the egress entry.
- `protocol` - (Optional) The protocol of the egress entry.

» **Attributes Reference**

The following attributes are exported:

- `id` - The ID of the network acl entries. It is formatted as `<network_acl_id>:<a unique id>`.

» **alicloud_route_entry**

Provides a route entry resource. A route entry represents a route item of one VPC route table.

» **Example Usage**

Basic Usage

```
data "alicloud_zones" "default" {
  available_resource_creation = "VSwitch"
}
data "alicloud_instance_types" "default" {
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  cpu_core_count    = 1
  memory_size       = 2
}
data "alicloud_images" "default" {
  name_regex  = "^ubuntu_18.*64"
  most_recent = true
  owners      = "system"
}
```

```
variable "name" {
  default = "RouteEntryConfig"
}
resource "alicloud_vpc" "foo" {
  name      = "${var.name}"
  cidr_block = "10.1.0.0/21"
}

resource "alicloud_vswitch" "foo" {
  vpc_id            = "${alicloud_vpc.foo.id}"
  cidr_block        = "10.1.1.0/24"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  name              = "${var.name}"
}

resource "alicloud_security_group" "tf_test_foo" {
  name        = "${var.name}"
  description = "foo"
  vpc_id      = "${alicloud_vpc.foo.id}"
}

resource "alicloud_security_group_rule" "ingress" {
  type              = "ingress"
  ip_protocol       = "tcp"
  nic_type          = "intranet"
  policy            = "accept"
  port_range        = "22/22"
  priority          = 1
  security_group_id = "${alicloud_security_group.tf_test_foo.id}"
  cidr_ip           = "0.0.0.0/0"
}

resource "alicloud_instance" "foo" {
  security_groups = ["${alicloud_security_group.tf_test_foo.id}"]

  vswitch_id = "${alicloud_vswitch.foo.id}"

  instance_charge_type      = "PostPaid"
  instance_type             = "${data.alicloud_instance_types.default.instance_types.0.id}'
  internet_charge_type      = "PayByTraffic"
  internet_max_bandwidth_out = 5

  system_disk_category = "cloud_efficiency"
  image_id             = "${data.alicloud_images.default.images.0.id}"
  instance_name        = "${var.name}"
}
```

```
resource "alicloud_route_entry" "foo" {
  route_table_id       = "${alicloud_vpc.foo.route_table_id}"
  destination_cidrblock = "172.11.1.1/32"
  nexthop_type         = "Instance"
  nexthop_id           = "${alicloud_instance.foo.id}"
}
```

» Module Support

You can use to the existing vpc module to create a VPC, several VSwitches and add several route entries one-click.

» Argument Reference

The following arguments are supported:

- `router_id` - (Deprecated) This argument has beeb deprecated. Please use other arguments to launch a custom route entry.

- `route_table_id` - (Required, ForceNew) The ID of the route table.

- `destination_cidrblock` - (ForceNew) The RouteEntry's target network segment.

- `nexthop_type` - (ForceNew) The next hop type. Available values:

  - `Instance` (Default): Route the traffic destined for the destination CIDR block to an ECS instance in the VPC.
  - `RouterInterface`: Route the traffic destined for the destination CIDR block to a router interface.
  - `VpnGateway`: Route the traffic destined for the destination CIDR block to a VPN Gateway.
  - `HaVip`: Route the traffic destined for the destination CIDR block to an HAVIP.
  - `NetworkInterface`: Route the traffic destined for the destination CIDR block to an NetworkInterface.
  - `NatGateway`: Route the traffic destined for the destination CIDR block to an Nat Gateway.

- `nexthop_id` - (ForceNew) The route entry's next hop. ECS instance ID or VPC router interface ID.

- `name` - (Optional, ForceNew, Available in 1.55.1+) The name of the route entry. This name can have a string of 2 to 128 characters, must contain only alphanumeric characters or hyphens, such as "-",".","_", and must not begin or end with a hyphen, and must not begin with http:// or https://.

» Attributes Reference

The following attributes are exported:

- `id` - The route entry id,it formats of `<route_table_id:router_id:destination_cidrblock:nexthop_ty`
- `router_id` - The ID of the virtual router attached to Vpc.
- `route_table_id` - The ID of the route table.
- `destination_cidrblock` - The RouteEntry's target network segment.
- `nexthop_type` - The next hop type.
- `nexthop_id` - The route entry's next hop.

» Import

Router entry can be imported using the id, e.g (formatted as).

```
$ terraform import alicloud_route_entry.example vtb-123456:vrt-123456:0.0.0.0/0:NatGateway:r
```

» alicloud_route_table

Provides a route table resource to add customized route tables.

NOTE: Terraform will auto build route table instance while it uses `alicloud_route_table` to build a route table resource.

Currently, customized route tables are available in most regions apart from China (Beijing), China (Hangzhou), and China (Shenzhen) regions. For information about route table and how to use it, see What is Route Table.

» Example Usage

Basic Usage

```
resource "alicloud_vpc" "foo" {
  cidr_block = "172.16.0.0/12"
  name       = "vpc-example-name"
}

resource "alicloud_route_table" "foo" {
  vpc_id      = "${alicloud_vpc.foo.id}"
  name        = "route-table-example-name"
  description = "route-table-example-description"
}
```

» Argument Reference

The following arguments are supported:

- `vpc_id` - (Required, ForceNew) The vpc_id of the route table, the field can't be changed.
- `name` - (Optional) The name of the route table.
- `description` - (Optional) The description of the route table instance.
- `tags` - (Optional, Available in v1.55.3+) A mapping of tags to assign to the resource.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the route table instance id.

» Import

The route table can be imported using the id, e.g.

```
$ terraform import alicloud_route_table.foo vtb-abc123456
```

» alicloud_route_table_attachment

Provides an Alicloud Route Table Attachment resource for associating Route Table to VSwitch Instance.

NOTE: Terraform will auto build route table attachment while it uses `alicloud_route_table_attachment` to build a route table attachment resource.

For information about route table and how to use it, see What is Route Table.

» Example Usage

Basic Usage

```
variable "name" {
  default = "route-table-attachment-example-name"
}
resource "alicloud_vpc" "foo" {
  cidr_block = "172.16.0.0/12"
  name       = "${var.name}"
```

```
}
data "alicloud_zones" "default" {
  available_resource_creation = "VSwitch"
}
resource "alicloud_vswitch" "foo" {
  vpc_id            = "${alicloud_vpc.foo.id}"
  cidr_block        = "172.16.0.0/21"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  name              = "${var.name}"
}

resource "alicloud_route_table" "foo" {
  vpc_id      = "${alicloud_vpc.foo.id}"
  name        = "${var.name}"
  description = "route_table_attachment"
}

resource "alicloud_route_table_attachment" "foo" {
  vswitch_id     = "${alicloud_vswitch.foo.id}"
  route_table_id = "${alicloud_route_table.foo.id}"
}
```

» Argument Reference

The following arguments are supported:

- `vswitch_id` - (Required, ForceNew) The vswitch_id of the route table attachment, the field can't be changed.
- `route_table_id` - (Required, ForceNew) The route_table_id of the route table attachment, the field can't be changed.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the route table attachment id and formates as `<route_table_id>:<vswitch_id>`.

» Import

The route table attachemnt can be imported using the id, e.g.

```
$ terraform import alicloud_route_table_attachment.foo vtb-abc123456:vsw-abc123456
```

» alicloud_router_interface

Provides a VPC router interface resource aim to build a connection between two VPCs.

NOTE: Only one pair of connected router interfaces can exist between two routers. Up to 5 router interfaces can be created for each router and each account.

NOTE: The router interface is not connected when it is created. It can be connected by means of resource alicloud_router_interface_connection.

» Example Usage

```
resource "alicloud_vpc" "foo" {
  name       = "tf_test_foo12345"
  cidr_block = "172.16.0.0/12"
}

resource "alicloud_router_interface" "interface" {
  opposite_region = "cn-beijing"
  router_type     = "VRouter"
  router_id       = "${alicloud_vpc.foo.router_id}"
  role            = "InitiatingSide"
  specification   = "Large.2"
  name            = "test1"
  description     = "test1"
}
```

» Argument Reference

The following arguments are supported:

- `opposite_region` - (Required, ForceNew) The Region of peer side.
- `router_type` - (Required, ForceNew) Router Type. Optional value: VRouter, VBR. Accepting side router interface type only be VRouter.
- `opposite_router_type` - (Deprecated) It has been deprecated from version 1.11.0. resource alicloud_router_interface_connection's 'opposite_router_type' instead.
- `router_id` - (Required, ForceNew) The Router ID.
- `opposite_router_id` - (Deprecated) It has been deprecated from version 1.11.0. Use resource alicloud_router_interface_connection's 'opposite_router_id' instead.
- `role` - (Required, ForceNew) The role the router interface plays. Optional value: `InitiatingSide`, `AcceptingSide`.

- **specification** - (Optional) Specification of router interfaces. It is valid when **role** is **InitiatingSide**. Accepting side's role is default to set as 'Negative'. For more about the specification, refer to Router interface specification.
- **access_point_id** - (Deprecated) It has been deprecated from version 1.11.0.
- **opposite_access_point_id** - (Deprecated) It has been deprecated from version 1.11.0.
- **opposite_interface_id** - (Deprecated) It has been deprecated from version 1.11.0. Use resource alicloud_router_interface_connection's 'opposite_router_id' instead.
- **opposite_interface_owner_id** - (Deprecated) It has been deprecated from version 1.11.0. Use resource alicloud_router_interface_connection's 'opposite_interface_id' instead.
- **name** - (Optional) Name of the router interface. Length must be 2-80 characters long. Only Chinese characters, English letters, numbers, period (.), underline (_), or dash (-) are permitted. If it is not specified, the default value is interface ID. The name cannot start with http:// and https://.
- **description** - (Optional) Description of the router interface. It can be 2-256 characters long or left blank. It cannot start with http:// and https://.
- **health_check_source_ip** - (Optional) Used as the Packet Source IP of health check for disaster recovery or ECMP. It is only valid when **router_type** is **VBR**. The IP must be an unused IP in the local VPC. It and **health_check_target_ip** must be specified at the same time.
- **health_check_target_ip** - (Optional) Used as the Packet Target IP of health check for disaster recovery or ECMP. It is only valid when **router_type** is **VBR**. The IP must be an unused IP in the local VPC. It and **health_check_source_ip** must be specified at the same time.
- **instance_charge_type** - (Optional, ForceNew) The billing method of the router interface. Valid values are "PrePaid" and "PostPaid". Default to "PostPaid". Router Interface doesn't support "PrePaid" when region and opposite_region are the same.
- **period** - (Optional, ForceNew) The duration that you will buy the resource, in month. It is valid when **instance_charge_type** is **PrePaid**. Default to 1. Valid values: [1-9, 12, 24, 36]. At present, the provider does not support modify "period" and you can do that via web console.

» Attributes Reference

The following attributes are exported:

- **id** - Router interface ID.
- **router_id** - Router ID.
- **router_type** - Router type.

- `role` - Router interface role.
- `name` - Router interface name.
- `description` - Router interface description.
- `specification` - Router nterface specification.
- `access_point_id` - Access point of the router interface.
- `opposite_access_point_id` - (Deprecated) It has been deprecated from version 1.11.0.
- `opposite_router_type` - Peer router type.
- `opposite_router_id` - Peer router ID.
- `opposite_interface_id` - Peer router interface ID.
- `opposite_interface_owner_id` - Peer account ID.
- `health_check_source_ip` - Source IP of Packet of Line HealthCheck.
- `health_check_target_ip` - Target IP of Packet of Line HealthCheck.

» Import

The router interface can be imported using the id, e.g.

```
$ terraform import alicloud_router_interface.interface ri-abc123456
```

» alicloud_router_interface_connection

Provides a VPC router interface connection resource to connect two router interfaces which are in two different VPCs. After that, all of the two router interfaces will be active.

NOTE: At present, Router interface does not support changing opposite router interface, the connection delete action is only deactivating it to inactive, not modifying the connection to empty.

NOTE: If you want to changing opposite router interface, you can delete router interface and re-build them.

NOTE: A integrated router interface connection tunnel requires both InitiatingSide and AcceptingSide configuring opposite router interface.

NOTE: Please remember to add a `depends_on` clause in the router interface connection from the InitiatingSide to the AcceptingSide, because the connection from the AcceptingSide to the InitiatingSide must be done first.

» Example Usage

```
provider "alicloud" {
  region = "${var.region}"
}
```

```
variable "region" {
  default = "cn-hangzhou"
}
variable "name" {
  default = "alicloudRouterInterfaceConnectionBasic"
}
resource "alicloud_vpc" "foo" {
  name      = "${var.name}"
  cidr_block = "172.16.0.0/12"
}
resource "alicloud_vpc" "bar" {
  provider   = "alicloud"
  name      = "${var.name}"
  cidr_block = "192.168.0.0/16"
}
resource "alicloud_router_interface" "initiate" {
  opposite_region     = "${var.region}"
  router_type         = "VRouter"
  router_id           = "${alicloud_vpc.foo.router_id}"
  role                = "InitiatingSide"
  specification       = "Large.2"
  name                = "${var.name}"
  description         = "${var.name}"
  instance_charge_type = "PostPaid"
}
resource "alicloud_router_interface" "opposite" {
  provider        = "alicloud"
  opposite_region = "${var.region}"
  router_type     = "VRouter"
  router_id       = "${alicloud_vpc.bar.router_id}"
  role            = "AcceptingSide"
  specification   = "Large.1"
  name            = "${var.name}-opposite"
  description     = "${var.name}-opposite"
}

// A integrated router interface connection tunnel requires both InitiatingSide and Acceptin
resource "alicloud_router_interface_connection" "foo" {
  interface_id          = "${alicloud_router_interface.initiate.id}"
  opposite_interface_id = "${alicloud_router_interface.opposite.id}"
  depends_on            = ["alicloud_router_interface_connection.bar"] // The connection mus
}
resource "alicloud_router_interface_connection" "bar" {
  provider              = "alicloud"
  interface_id          = "${alicloud_router_interface.opposite.id}"
  opposite_interface_id = "${alicloud_router_interface.initiate.id}"
```

```
}
```

» Argument Reference

The following arguments are supported:

- `interface_id` - (Required, ForceNew) One side router interface ID.
- `opposite_interface_id` - (Required, ForceNew) Another side router interface ID. It must belong the specified "opposite_interface_owner_id" account.
- `opposite_interface_owner_id` - (Optional, ForceNew) Another side router interface account ID. Log on to the Alibaba Cloud console, select User Info > Account Management to check the account ID. Default to Provider account_id.
- `opposite_router_id` - (Optional, ForceNew) Another side router ID. It must belong the specified "opposite_interface_owner_id" account. It is valid when field "opposite_interface_owner_id" is specified.
- `opposite_router_type` - (Optional, ForceNew) Another side router Type. Optional value: VRouter, VBR. It is valid when field "opposite_interface_owner_id" is specified.

NOTE: The value of "opposite_interface_owner_id" or "account_id" must be main account and not be sub account.

» Attributes Reference

The following attributes are exported:

- `id` - Router interface ID. The value is equal to "interface_id".

» Import

The router interface connection can be imported using the id, e.g.

```
$ terraform import alicloud_router_interface_connection.foo ri-abc123456
```

» alicloud_snat

Provides a snat resource.

» Example Usage

Basic Usage

```
variable "name" {
  default = "snat-entry-example-name"
}
data "alicloud_zones" "default" {
  available_resource_creation = "VSwitch"
}

resource "alicloud_vpc" "vpc" {
  name       = "${var.name}"
  cidr_block = "172.16.0.0/12"
}

resource "alicloud_vswitch" "vswitch" {
  vpc_id            = "${alicloud_vpc.vpc.id}"
  cidr_block        = "172.16.0.0/21"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
  name              = "${var.name}"
}

resource "alicloud_nat_gateway" "default" {
  vpc_id        = "${alicloud_vswitch.vswitch.vpc_id}"
  specification = "Small"
  name          = "${var.name}"
}

resource "alicloud_eip" "default" {
  count = 2
  name  = "${var.name}"
}

resource "alicloud_eip_association" "default" {
  count         = 2
  allocation_id = "${element(alicloud_eip.default.*.id, count.index)}"
  instance_id   = "${alicloud_nat_gateway.default.id}"
}

resource "alicloud_common_bandwidth_package" "default" {
  name                 = "tf_cbp"
  bandwidth            = 10
  internet_charge_type = "PayByTraffic"
  ratio                = 100
}
```

```
resource "alicloud_common_bandwidth_package_attachment" "default" {
  count               = 2
  bandwidth_package_id = "${alicloud_common_bandwidth_package.default.id}"
  instance_id         = "${element(alicloud_eip.default.*.id, count.index)}"
}

resource "alicloud_snat_entry" "default" {
  depends_on       = [alicloud_eip_association.default]
  snat_table_id    = "${alicloud_nat_gateway.default.snat_table_ids}"
  source_vswitch_id = "${alicloud_vswitch.vswitch.id}"
  snat_ip          = "${join(",", alicloud_eip.default.*.ip_address)}"
}
```

» Argument Reference

The following arguments are supported:

- `snat_table_id` - (Required, ForceNew) The value can get from `alicloud_nat_gateway` Attributes "snat_table_ids".
- `source_vswitch_id` - (Required, ForceNew) The vswitch ID.
- `snat_ip` - (Required) The SNAT ip address, the ip must along bandwidth package public ip which `alicloud_nat_gateway` argument `bandwidth_packages`.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the snat entry. The value formats as `<snat_table_id>:<snat_entry_id>`
- `snat_entry_id` - The id of the snat entry on the server.

» Import

Snat Entry can be imported using the id, e.g.

```
$ terraform import alicloud_snat_entry.foo stb-1aece3:snat-232ce2
```

» alicloud_vpc

Provides a VPC resource.

NOTE: Terraform will auto build a router and a route table while it uses `alicloud_vpc` to build a vpc resource.

» Example Usage

Basic Usage

```
resource "alicloud_vpc" "vpc" {
  name       = "tf_test_foo"
  cidr_block = "172.16.0.0/12"
}
```

» Module Support

You can use the existing vpc module to create a VPC and several VSwitches one-click.

» Argument Reference

The following arguments are supported:

- `cidr_block` - (Required, ForceNew) The CIDR block for the VPC.
- `name` - (Optional) The name of the VPC. Defaults to null.
- `description` - (Optional) The VPC description. Defaults to null.
- `resource_group_id` - (Optional, ForceNew, Available in 1.40.0+) The Id of resource group which the VPC belongs.
- `tags` - (Optional, Available in v1.55.3+) A mapping of tags to assign to the resource.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the VPC.
- `cidr_block` - The CIDR block for the VPC.
- `name` - The name of the VPC.
- `description` - The description of the VPC.
- `router_id` - The ID of the router created by default on VPC creation.
- `route_table_id` - The route table ID of the router created by default on VPC creation.

» Import

VPC can be imported using the id, e.g.

```
$ terraform import alicloud_vpc.example vpc-abc123456
```

» alicloud_vswitch

Provides a VPC switch resource.

» Example Usage

Basic Usage

```
resource "alicloud_vpc" "vpc" {
  name       = "tf_test_foo"
  cidr_block = "172.16.0.0/12"
}

resource "alicloud_vswitch" "vsw" {
  vpc_id            = "${alicloud_vpc.vpc.id}"
  cidr_block        = "172.16.0.0/21"
  availability_zone = "cn-beijing-b"
}
```

» Module Support

You can use to the existing vpc module to create a VPC and several VSwitches one-click.

» Argument Reference

The following arguments are supported:

- `availability_zone` - (Required, ForceNew) The AZ for the switch.
- `vpc_id` - (Required, ForceNew) The VPC ID.
- `cidr_block` - (Required, ForceNew) The CIDR block for the switch.
- `name` - (Optional) The name of the switch. Defaults to null.
- `description` - (Optional) The switch description. Defaults to null.
- `tags` - (Optional, Available in v1.55.3+) A mapping of tags to assign to the resource.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the switch.
- `availability_zone` The AZ for the switch.
- `cidr_block` - The CIDR block for the switch.

- `vpc_id` - The VPC ID.
- `name` - The name of the switch.
- `description` - The description of the switch.

» Import

Vswitch can be imported using the id, e.g.

```
$ terraform import alicloud_vswitch.example vsw-abc123456
```

» alicloud_ssl_vpn_client_certs

The SSL-VPN client certificates data source lists lots of SSL-VPN client certificates resource information owned by an Alicloud account.

» Example Usage

```
data "alicloud_ssl_vpn_client_certs" "foo" {
  ids               = ["fake-cert-id"]
  ssl_vpn_server_id = "fake-server-id"
  output_file       = "/tmp/clientcert"
  name_regex        = "^foo"
}
```

» Argument Reference

The following arguments are supported:

- `ids` - (Optional) IDs of the SSL-VPN client certificates.
- `ssl_vpn_server_id` - (Optional) Use the SSL-VPN server ID as the search key.
- `name_regex` - (Optional) A regex string of SSL-VPN client certificate name.
- `output_file` - (Optional) Save the result to the file.

» Attributes Reference

The following attributes are exported:

- `ids` - A list of SSL-VPN client cert IDs.
- `names` - A list of SSL-VPN client cert names.

- `ssl_vpn_client_certs` - A list of SSL-VPN client certificates. Each element contains the following attributes:
  - `id` - ID of the SSL-VPN client certificate.
  - `ssl_vpn_server_id` - ID of the SSL-VPN Server.
  - `name` - The name of the SSL-VPN client certificate.
  - `create_time` - The time of creation.
  - `end_time` - The expiration time of the client certificate.
  - `status` - The status of the client certificate. valid value:expiring-soon, normal, expired.

» alicloud__ssl__vpn__servers

The SSL-VPN servers data source lists lots of SSL-VPN servers resource information owned by an Alicloud account.

» Example Usage

```
data "alicloud_ssl_vpn_servers" "foo" {
  ids            = ["fake-server-id"]
  vpn_gateway_id = "fake-vpn-id"
  output_file    = "/tmp/sslserver"
  name_regex     = "^foo"
}
```

» Argument Reference

The following arguments are supported:

- `ids` - (Optional) IDs of the SSL-VPN servers.
- `vpn_gateway_id` - (Optional) Use the VPN gateway ID as the search key.
- `name_regex` - (Optional) A regex string of SSL-VPN server name.
- `output_file` - (Optional) Save the result to the file.

» Attributes Reference

The following attributes are exported:

- `ids` - A list of SSL-VPN server IDs.
- `names` - A list of SSL-VPN server names.
- `servers` - A list of SSL-VPN servers. Each element contains the following attributes:
  - `vpn_gateway_id` - The ID of the VPN gateway instance.

- id - The ID of the SSL-VPN server.
- name - The name of the SSL-VPN server.
- create_time - The time of creation.
- compress - Whether to compress.
- cipher - The encryption algorithm used.
- proto - The protocol used by the SSL-VPN server.
- client_ip_pool - The IP address pool of the client.
- local_subnet - The local subnet of the VPN connection.
- internet_ip - The public IP.
- connections - The number of current connections.
- max_connections - The maximum number of connections.

» alicloud_vpn_connections

The VPN connections data source lists lots of VPN connections resource information owned by an Alicloud account.

» Example Usage

```
data "alicloud_vpn_connections" "foo" {
  ids                 = ["fake-conn-id"]
  vpn_gateway_id      = "fake-vpn-id"
  customer_gateway_id = "fake-cgw-id"
  output_file         = "/tmp/vpnconn"
}
```

» Argument Reference

The following arguments are supported:

- ids - (Optional) IDs of the VPN connections.
- vpn_gateway_id - (Optional) Use the VPN gateway ID as the search key.
- customer_gateway_id - (Optional)Use the VPN customer gateway ID as the search key.
- name_regex - (Optional) A regex string of VPN connection name.
- output_file - (Optional) Save the result to the file.

» Attributes Reference

The following attributes are exported:

- ids - (Optional) IDs of the VPN connections.

- `names` - (Optional) names of the VPN connections.
- `connections` - A list of VPN connections. Each element contains the following attributes:
    - `id` - ID of the VPN connection.
    - `customer_gateway_id` - ID of the VPN customer gateway.
    - `vpn_gateway_id` - ID of the VPN gateway.
    - `name` - The name of the VPN connection.
    - `local_subnet` - The local subnet of the VPN connection.
    - `remote_subnet` - The remote subnet of the VPN connection.
    - `status` - The status of the VPN connection, valid value:ike_sa_not_established, ike_sa_established, ipsec_sa_not_established, ipsec_sa_established.
    - `ike_config` - The configurations of phase-one negotiation.
    - `ipsec_config` - The configurations of phase-two negotiation.

Block ike_config

The ike_config mapping supports the following:

- `psk` - Used for authentication between the IPsec VPN gateway and the customer gateway.
- `ike_version` - The version of the IKE protocol.
- `ike_mode` - The negotiation mode of IKE phase-one.
- `ike_enc_alg` - The encryption algorithm of phase-one negotiation.
- `ike_auth_alg` - The authentication algorithm of phase-one negotiation.
- `ike_pfs` - The Diffie-Hellman key exchange algorithm used by phase-one negotiation.
- `ike_lifetime` - The SA lifecycle as the result of phase-one negotiation.
- `ike_local_id` - The identification of the VPN gateway.
- `ike_remote_id` - The identification of the customer gateway.

Block ipsec_config

The ipsec_config mapping supports the following:

- `ipsec_enc_alg` - The encryption algorithm of phase-two negotiation.
- `ipsec_auth_alg` - The authentication algorithm of phase-two negotiation.
- `ipsec_pfs` - The Diffie-Hellman key exchange algorithm used by phase-two negotiation.
- `ipsec_lifetime` - The SA lifecycle as the result of phase-two negotiation.

» alicloud_vpn_customer_gateways

The VPN customers gateways data source lists a number of VPN customer gateways resource information owned by an Alicloud account.

» Example Usage

```
data "alicloud_vpn_customer_gateways" "foo" {
  name_regex        = "testAcc*"
  customer_gateway_id = "fake-id*"
  output_file       = "/tmp/cgws"
}
```

» Argument Reference

The following arguments are supported:

- `ids` - (Optional) ID of the VPN customer gateways.
- `name_regex` - (Optional) A regex string of VPN customer gateways name.
- `output_file` - (Optional) Save the result to the file.

» Attributes Reference

The following attributes are exported:

- `ids` IDs of VPN customer gateway.
- `names` names of VPN customer gateway.
- `gateways` - A list of VPN customer gateways. Each element contains the following attributes:
    - `id` - ID of the VPN customer gateway .
    - `name` - The name of the VPN customer gateway.
    - `description` - The description of the VPN customer gateway.
    - `ip_address` - The ip address of the VPN customer gateway.
    - `create_time` - The creation time of the VPN customer gateway.

» alicloud_vpn_gateways

The VPNs data source lists a number of VPNs resource information owned by an Alicloud account.

» Example Usage

```
data "alicloud_vpn_gateways" "vpn_gateways" {
  vpc_id          = "fake-vpc-id"
  vpn_gateway_id  = "fake-vpn-id"
  status          = "active"
  business_status = "Normal"
```

```
  name_regex     = "testAcc*"
  output_file    = "/tmp/vpns"
}
```

» Argument Reference

The following arguments are supported:

- `vpc_id` - (Optional) Use the VPC ID as the search key.
- `ids` - (Optional) IDs of the VPN.
- `status` - (Optional) Limit search to specific status - valid value is "Init", "Provisioning", "Active", "Updating", "Deleting".
- `business_status` - (Optional) Limit search to specific business status - valid value is "Normal", "FinancialLocked".
- `name_regex` - (Optional) A regex string of VPN name.
- `output_file` - (Optional) Save the result to the file.

» Attributes Reference

The following attributes are exported:

- `ids` - IDs of the VPN.
- `names` - names of the VPN.
- `gateways` - A list of VPN gateways. Each element contains the following attributes:
    - `id` - ID of the VPN.
    - `vpc_id` - ID of the VPC that the VPN belongs.
    - `internet_ip` - The internet ip of the VPN.
    - `create_time` - The creation time of the VPN gateway.
    - `end_time` - The expiration time of the VPN gateway.
    - `specification` - The Specification of the VPN
    - `name` - The name of the VPN.
    - `description` - The description of the VPN
    - `status` - The status of the VPN
    - `business_status` - The business status of the VPN gateway.
    - `instance_charge_type` - The charge type of the VPN gateway.
    - `enable_ipsec` - Whether the ipsec function is enabled.
    - `enable_ssl` - Whether the ssl function is enabled.
    - `ssl_connections` - Total count of ssl vpn connections.

» alicloud_ssl_vpn_client_cert

Provides a SSL VPN client cert resource.

NOTE: Terraform will auto build SSL VPN client certs while it uses `alicloud_ssl_vpn_client_cert` to build a ssl vpn client certs resource. It depends on VPN instance and SSL VPN Server.

» Example Usage

Basic Usage

```
resource "alicloud_ssl_vpn_client_cert" "foo" {
  ssl_vpn_server_id = "ssl_vpn_server_fake_id"
  name              = "sslVpnClientCertExample"
}
```

» Argument Reference

The following arguments are supported:

- `name` - (Optional) The name of the client certificate.
- `ssl_vpn_server_id` - (Required, ForceNew) The ID of the SSL-VPN server.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the SSL-VPN client certificate.
- `status` - The status of the client certificate.
- `ca_cert` - The client ca cert.
- `client_cert` - The client cert.
- `client_key` - The client key.
- `client_config` - The vpn client config.

» Import

SSL-VPN client certificates can be imported using the id, e.g.

```
$ terraform import alicloud_ssl_vpn_client_cert.example vsc-abc123456
```

» alicloud_ssl_vpn_server

Provides a SSL VPN server resource. Refer to details

NOTE: Terraform will auto build ssl vpn server while it uses `alicloud_ssl_vpn_server`
to build a ssl vpn server resource.

» Example Usage

Basic Usage

```
resource "alicloud_vpn_gateway" "foo" {
  name                 = "testAccVpnConfig_create"
  vpc_id               = "vpc-fake-id"
  bandwidth            = "10"
  enable_ssl           = true
  instance_charge_type = "PostPaid"
  description          = "test_create_description"
}

resource "alicloud_ssl_vpn_server" "foo" {
  name           = "sslVpnServerNameExample"
  vpn_gateway_id = "${alicloud_vpn_gateway.foo.id}"
  client_ip_pool = "192.168.0.0/16"
  local_subnet   = "172.16.0.0/21"
  protocol       = "UDP"
  cipher         = "AES-128-CBC"
  port           = 1194
  compress       = "false"
}
```

» Argument Reference

The following arguments are supported:

- `name` - (Optional) The name of the SSL-VPN server.
- `vpn_gateway_id` - (Required, ForceNew) The ID of the VPN gateway.
- `client_ip_pool` - (Required) The CIDR block from which access addresses are allocated to the virtual network interface card of the client.
- `local_subnet` - (Required) The CIDR block to be accessed by the client through the SSL-VPN connection.
- `protocol` - (Optional) The protocol used by the SSL-VPN server. Valid value: UDP(default) |TCP
- `cipher` - (Optional) The encryption algorithm used by the SSL-VPN server. Valid value: AES-128-CBC (default)| AES-192-CBC | AES-256-CBC | none
- `port` - (Optional) The port used by the SSL-VPN server. The default value is 1194.The following ports cannot be used: [22, 2222, 22222, 9000, 9001, 9002, 7505, 80, 443, 53, 68, 123, 4510, 4560, 500, 4500].

- **compress** - (Optional) Specify whether to compress the communication.
  Valid value: true (default) | false

» **Attributes Reference**

The following attributes are exported:

- **id** - The ID of the SSL-VPN server.
- **internet_ip** - The internet IP of the SSL-VPN server.
- **connections** - The number of current connections.
- **max_connections** - The maximum number of connections.

» **Import**

SSL-VPN server can be imported using the id, e.g.

```
$ terraform import alicloud_ssl_vpn_server.example vss-abc123456
```

» **alicloud_vpn_connection**

Provides a VPN connection resource.

NOTE: Terraform will auto build vpn connection while it uses `alicloud_vpn_connection` to build a vpn connection resource. The vpn connection depends on VPN and VPN customer gateway.

» **Example Usage**

Basic Usage

```
resource "alicloud_vpn_gateway" "foo" {
  name                 = "testAccVpnConfig_create"
  vpc_id               = "vpc-fake-id"
  bandwidth            = "10"
  enable_ssl           = true
  instance_charge_type = "PostPaid"
  description          = "test_create_description"
}

resource "alicloud_vpn_customer_gateway" "foo" {
  name        = "testAccVpnCgwName"
  ip_address  = "42.104.22.228"
  description = "testAccVpnCgwDesc"
```

```
}

resource "alicloud_vpn_connection" "foo" {
  name                = "tf-vco_test1"
  vpn_gateway_id      = "${alicloud_vpn_gateway.foo.id}"
  customer_gateway_id = "${alicloud_vpn_customer_gateway.foo.id}"
  local_subnet        = ["172.16.0.0/24", "172.16.1.0/24"]
  remote_subnet       = ["10.0.0.0/24", "10.0.1.0/24"]
  effect_immediately  = true
  ike_config {
    ike_auth_alg  = "md5"
    ike_enc_alg   = "des"
    ike_version   = "ikev1"
    ike_mode      = "main"
    ike_lifetime  = 86400
    psk           = "tf-testvpn2"
    ike_pfs       = "group1"
    ike_remote_id = "testbob2"
    ike_local_id  = "testalice2"
    }
  ipsec_config {
    ipsec_pfs      = "group5"
    ipsec_enc_alg  = "des"
    ipsec_auth_alg = "md5"
    ipsec_lifetime = 8640
  }
}
```

» Argument Reference

The following arguments are supported:

- `name` - (Optional) The name of the IPsec connection.
- `vpn_gateway_id` - (Required, ForceNew) The ID of the VPN gateway.
- `customer_gateway_id` - (Required, ForceNew) The ID of the customer gateway.
- `local_subnet` - (Required, Type:Set) The CIDR block of the VPC to be connected with the local data center. This parameter is used for phase-two negotiation.
- `remote_subnet` - (Required, Type:Set) The CIDR block of the local data center. This parameter is used for phase-two negotiation.
- `effect_immediately` - (Optional) Whether to delete a successfully negotiated IPsec tunnel and initiate a negotiation again. Valid value:true,false.
- `ike_config` - (Optional) The configurations of phase-one negotiation.
- `ipsec_config` - (Optional) The configurations of phase-two negotiation.

» Block **ike_config**

The ike_config mapping supports the following:

- `psk` - (Optional) Used for authentication between the IPsec VPN gateway and the customer gateway.
- `ike_version` - (Optional) The version of the IKE protocol. Valid value: ikev1 | ikev2. Default value: ikev1
- `ike_mode` - (Optional) The negotiation mode of IKE V1. Valid value: main (main mode) | aggressive (aggressive mode). Default value: main
- `ike_enc_alg` - (Optional) The encryption algorithm of phase-one negotiation. Valid value: aes | aes192 | aes256 | des | 3des. Default Valid value: aes
- `ike_auth_alg` - (Optional) The authentication algorithm of phase-one negotiation. Valid value: md5 | sha1 | sha256 | sha384 | sha512 |. Default value: sha1
- `ike_pfs` - (Optional) The Diffie-Hellman key exchange algorithm used by phase-one negotiation. Valid value: group1 | group2 | group5 | group14 | group24. Default value: group2
- `ike_lifetime` - (Optional) The SA lifecycle as the result of phase-one negotiation. The valid value of n is [0, 86400], the unit is second and the default value is 86400.
- `ike_local_id` - (Optional) The identification of the VPN gateway.
- `ike_remote_id` - (Optional) The identification of the customer gateway.

» Block **ipsec_config**

The ipsec_config mapping supports the following:

- `ipsec_enc_alg` - (Optional) The encryption algorithm of phase-two negotiation. Valid value: aes | aes192 | aes256 | des | 3des. Default value: aes
- `ipsec_auth_alg` - (Optional) The authentication algorithm of phase-two negotiation. Valid value: md5 | sha1 | sha256 | sha384 | sha512 |. Default value: sha1
- `ipsec_pfs` - (Optional) The Diffie-Hellman key exchange algorithm used by phase-two negotiation. Valid value: group1 | group2 | group5 | group14 | group24| disabled. Default value: group2
- `ipsec_lifetime` - (Optional) The SA lifecycle as the result of phase-two negotiation. The valid value is [0, 86400], the unit is second and the default value is 86400.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the VPN connection id.
- `status` - The status of VPN connection.
- `ike_config` - The configurations of phase-one negotiation.
- `ipsec_config` - The configurations of phase-two negotiation.

» Import

VPN connection can be imported using the id, e.g.

```
$ terraform import alicloud_vpn_connection.example vco-abc123456
```

» alicloud_vpn_customer_gateway

Provides a VPN customer gateway resource.

NOTE: Terraform will auto build vpn customer gateway instance while it uses `alicloud_vpn_customer_gateway` to build a vpn customer gateway resource.

» Example Usage

Basic Usage

```
resource "alicloud_vpn_customer_gateway" "foo" {
  name        = "vpnCgwNameExample"
  ip_address  = "43.104.22.228"
  description = "vpnCgwDescriptionExample"
}
```

» Argument Reference

The following arguments are supported:

- `name` - (Optional) The name of the VPN customer gateway. Defaults to null.
- `ip_address` - (Required, ForceNew) The IP address of the customer gateway.
- `description` - (Optional) The description of the VPN customer gateway instance.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the VPN customer gateway instance id.

» Import

VPN customer gateway can be imported using the id, e.g.

```
$ terraform import alicloud_vpn_customer_gateway.example cgw-abc123456
```

» alicloud_vpn_gateway

Provides a VPN gateway resource.

NOTE: Terraform will auto build vpn instance while it uses `alicloud_vpn_gateway` to build a vpn resource.

Currently International-Site account can open `PostPaid` VPN gateway and China-Site account can open `PrePaid` VPN gateway.

» Example Usage

Basic Usage

```
resource "alicloud_vpc" "vpc" {
  name       = "tf_test_foo"
  cidr_block = "172.16.0.0/12"
}

resource "alicloud_vswitch" "vsw" {
  vpc_id            = "${alicloud_vpc.vpc.id}"
  cidr_block        = "172.16.0.0/21"
  availability_zone = "cn-beijing-b"
}

resource "alicloud_vpn_gateway" "foo" {
  name                 = "vpnGatewayConfig"
  vpc_id               = "${alicloud_vpc.vpc.id}"
  bandwidth            = "10"
  enable_ssl           = true
  instance_charge_type = "PostPaid"
  description          = "test_create_description"
  vswitch_id           = "${alicloud_vswitch.vsw.id}"
}
```

» Argument Reference

The following arguments are supported:

- `name` - (Optional) The name of the VPN. Defaults to null.
- `vpc_id` - (Required, ForceNew) The VPN belongs the vpc_id, the field can't be changed.
- `instance_charge_type` - (ForceNew) The charge type for instance. Valid value: PostPaid, PrePaid. Default to PostPaid.
- `period` - (Optional) The filed is only required while the InstanceChargeType is PrePaid. Valid values: [1-9, 12, 24, 36]. Default to 1.
- `bandwidth` - (Required) The value should be 10, 100, 200, 500, 1000 if the user is postpaid, otherwise it can be 5, 10, 20, 50, 100, 200, 500, 1000. It can't be changed by terraform.
- `enable_ipsec` - (Optional) Enable or Disable IPSec VPN. At least one type of VPN should be enabled.
- `enable_ssl` - (Optional) Enable or Disable SSL VPN. At least one type of VPN should be enabled.
- `ssl_connections` - (Optional) The max connections of SSL VPN. Default to 5. This field is ignored when enable_ssl is false.
- `description` - (Optional) The description of the VPN instance.
- `vswitch_id` - (Optional, ForceNew, Available in v1.56.0+) The VPN belongs the vswitch_id, the field can't be changed.

» Attributes Reference

The following attributes are exported:

- `id` - The ID of the VPN instance id.
- `internet_ip` - The internet ip of the VPN.
- `status` - The status of the VPN gateway.
- `business_status` - The business status of the VPN gateway.

» Import

VPN gateway can be imported using the id, e.g.

```
$ terraform import alicloud_vpn_gateway.example vpn-abc123456
```

» alicloud_vpn_route_entry

Provides a VPN Route Entry resource.

NOTE: Terraform will build vpn route entry instance while it uses `alicloud_vpn_route_entry` to build a VPN Route Entry resource.

NOTE: Available in 1.57.0+.

» Example Usage

Basic Usage

```
data "alicloud_zones" "default"{
    available_disk_category = "cloud_efficiency"
    available_resource_creation = "VSwitch"
}

resource "alicloud_vpc" "default" {
  name       = "tf_test"
  cidr_block = "10.1.0.0/21"
}

resource "alicloud_vswitch" "default" {
  name              = "tf_test"
  vpc_id            = "${alicloud_vpc.default.id}"
  cidr_block        = "10.1.0.0/24"
  availability_zone = "${data.alicloud_zones.default.zones.0.id}"
}

resource "alicloud_vpn_gateway" "default" {
  name                = "tf_vpn_gateway_test"
  vpc_id              = "${alicloud_vpc.default.id}"
  bandwidth           = 10
  instance_charge_type = "PayByTraffic"
  enable_ssl          = false
  vswitch_id          = "${alicloud_vswitch.default.id}"
}

resource "alicloud_vpn_connection" "default" {
  name                = "tf_vpn_connection_test"
  customer_gateway_id = "${alicloud_vpn_customer_gateway.default.id}"
  vpn_gateway_id      = "${alicloud_vpn_gateway.default.id}"
  local_subnet        = ["192.168.2.0/24"]
  remote_subnet       = ["192.168.3.0/24"]
}

resource "alicloud_vpn_customer_gateway" "default" {
  name       = "tf_customer_gateway_test"
  ip_address = "192.168.1.1"
```

```
}

resource "alicloud_vpn_route_entry" "default" {
  vpn_gateway_id = "${alicloud_vpn_gateway.default.id}"
  route_dest     = "10.0.0.0/24"
  next_hop       = "${alicloud_vpn_connection.default.id}"
  weight         = 0
  publish_vpc    = false
}
```

» Argument Reference

The following arguments are supported:

- `vpn_gateway_id` - (Required, ForceNew) The id of the vpn gateway.
- `next_hop` - (Required, ForceNew) The next hop of the destination route.
- `publish_vpc` - (Required) Whether to issue the destination route to the VPC.
- `route_dest` - (Required, ForceNew) The destination network segment of the destination route.
- `weight` - (Required) The value should be 0 or 100.

» Attributes Reference

The following attributes are exported:

- `id` - The combination id of the vpn route entry.

» Import

VPN route entry can be imported using the id(VpnGatewayId +":"+ NextHop +":"+ RouteDest), e.g.

```
$ terraform import alicloud_vpn_gateway.example vpn-abc123456:vco-abc123456:10.0.0.10/24
```