

(Ansible Integration)

Functional Spec – ASPEN II

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| 2.2 | 02/07/2017 | Harshal Wadaskar | Updated comments |
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Reviewers

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Table of Contents

| | |
|--|----|
| Introduction | 3 |
| Objectives | 3 |
| Scope | 3 |
| Out of Scope | 5 |
| Assumptions and Constraints | 5 |
| Assumptions | 5 |
| Constraints | 5 |
| References | 5 |
| Architecture | 6 |
| Architecture Overview | 6 |
| Component Structure | 6 |
| Prerequisites | 7 |
| System Description | 7 |
| Software | 7 |
| Code | 8 |
| File Names and Structure | 8 |
| Footmark Project File Structure | 8 |
| Ansible Project File Structure | 9 |
| Executable File Names and Structure | 9 |
| Interfaces Definition | 10 |
| Elastic Compute Service | 10 |
| Server Load Balancer | 15 |
| Virtual Private Cloud | 32 |
| Object Storage Service | 43 |
| Relational Database Service | 48 |
| Disclaimer | 65 |
| Appendix A: Glossary | 66 |
| Appendix B: Document Change History and Sign-off | 66 |
| Point of Contact | 66 |

Introduction

Objectives

The objective of this document is to describe technical and functional specification on ASPEN-II deliverable modules and interface. The ASPEN-II will covers the implementation of modules for Elastic Compute Service (ECS), Server Load Balancer (SLB), Virtual Private Cloud (VPC), Object Storage Service (OSS) and Relational Database Service (RDS).

Scope

Ansible is an easy configuration management system that can be used to automate and organize system configuration tasks for a large network of computers. So the scope of this project is to automate the instance related task through Ansible playbooks. The table below defines the list of task that are covered in this project.

| # | Interfaces |
|--|---|
| Elastic Compute Service | |
| Security Group Related Interfaces | |
| 1 | Creating a Security Group |
| 2 | Querying the Security Group List |
| 3 | Deleting a Security Group |
| Server Load Balancer | |
| Load Balancer | |
| 4 | Create Load Balancer |
| 5 | Modify Load balancer Internet Spec |
| 6 | Delete Load Balancer |
| 7 | Set Load Balancer Status (Enable/Disable) |
| 8 | Set Load Balancer Name (Alias) |
| Backend Server | |
| 9 | Add backend Server |
| 10 | Remove backend Server |
| 11 | Set Backend server |
| 12 | Describe Health status of backend server |
| VServer Group | |
| 13 | Create VServer Group |
| 14 | Set VServer Group Attribute |
| 15 | Add VServer Group Backend Servers |
| 16 | Remove VServer Group Backend Servers |
| 17 | Modify VServer Group Backend Servers |
| 18 | Delete VServer Group |
| Virtual Private Cloud | |
| VPC | |
| 19 | Creating a VPC |
| 20 | Deleting a VPC |
| VSwitch | |
| 21 | Creating a VSwitch |
| 22 | Deleting a VSwitch |

| | |
|------------------------------------|--|
| 23 | Querying the VSwitch list |
| VRouter | |
| 24 | Querying the VRouter list |
| Route Entry | |
| 25 | Creating a custom route |
| 26 | Deleting a custom route |
| Network related interfaces | |
| 27 | Requesting EIPs |
| 28 | Binding EIPs |
| 29 | Modifying EIP attributes |
| 30 | Unbinding EIPs |
| 31 | Releasing EIPs |
| Object Storage Service | |
| Bucket Operations | |
| 32 | Create Buckets |
| 33 | Delete Bucket |
| Object Operations | |
| 34 | Simple Upload |
| 35 | Create Folders |
| 36 | List Bucket Objects |
| 37 | Deleting Objects |
| Relational Database Service | |
| RDS instance management | |
| 38 | Creating an RDS instance |
| 39 | Releasing an RDS instance |
| 40 | Restarting an RDS instance |
| 41 | Changing the RDS instance type |
| 42 | Modifying the IP address white list of an RDS instance |
| 43 | Switching between the primary and standby databases of an RDS instance |
| 44 | Creating an RDS read-only instance |
| Database management | |
| 45 | Creating a database |
| 46 | Deleting a database |
| Account management | |
| 47 | Creating an account |
| 48 | Deleting an account |
| 49 | Granting account permissions |
| 50 | Revoking account permissions |
| 51 | Resetting the instance password |
| 52 | Resetting an account |

Out of Scope

1. Other than interfaces mentioned in [Scope](#) section, all new items will be treated as out of scope.
2. In ASPEN-II, modules are targeted for Linux systems only. The efforts are not considered for Windows or Mac Operating System.
3. All modules will be tested using Ansible command line utility. Scope does not covers testing modules on Ansible Tower.
4. ASPEN-II, targets running modules for English language only. Other languages such as Chinese is not considered.
5. Scope do not cover development of external inventory script for Ansible. Only static inventory is supported.

Assumptions and Constraints

Assumptions

1. The technical platform such as Aliyun AK, Ansible server and Python SDK is available.
2. Change in any functional requirement documented below shall be treated as CR (Change Request).
3. This document to be freeze and sign-off before implementation start.
4. Addition of new parameter specified in [Interface Definition](#) for each Interfaces will be treated as CR after FSD sign-off.
5. The merge request shall be shared on GitHub for dropping code by Click2Cloud Team. The review and merging source code should be done by Aliyun Team.
6. All interfaces which need to integrate, are finalized by Aliyun Team under SOW.
7. In ASPEN-2, modules are targeted for Linux systems only.
8. All modules will be tested using Ansible command line utility. Scope does not covers testing modules on Ansible Tower.
9. ASPEN-2, targets running modules for English language only. Other languages such as Chinese is not considered.
10. Any update within REST API or Aliyun SDK for Python should be informed to Click2Cloud Team. Click2Cloud will do required analysis and will identify the impact. If the impact is significant, then it will be communicated to stakeholders for further decision.
11. All the supporting document will be provided in English language only.

Constraints

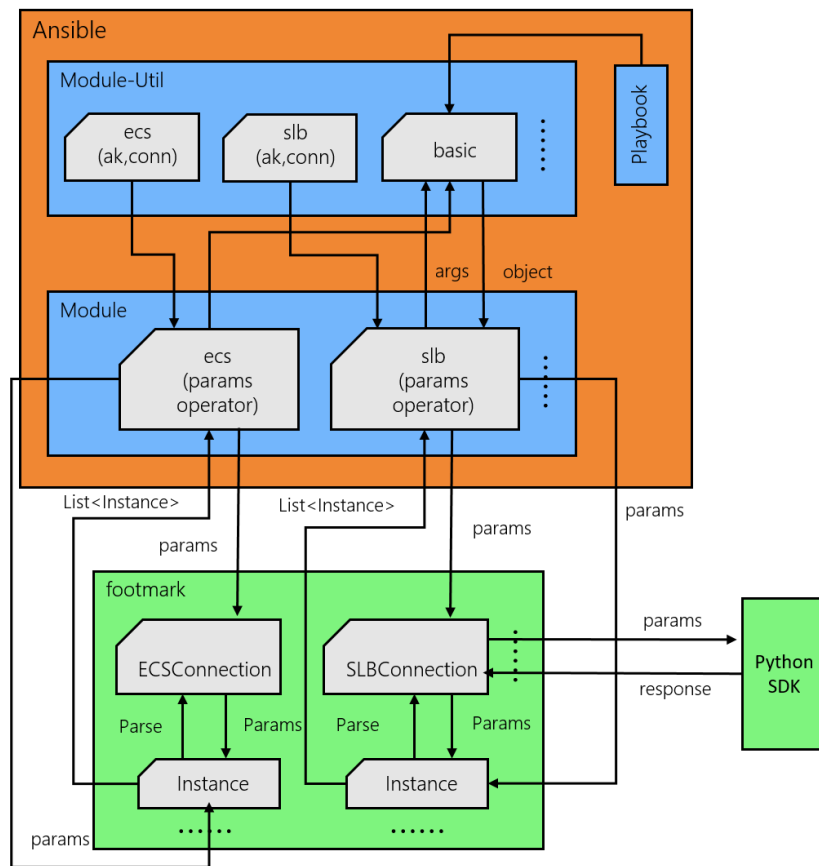
1. As currently Aliyun Web API is not working with Click2Cloud AK, team is going to use Aliyun Team AK for development and testing.

References

- <https://intl.aliyun.com/help/en/doc-detail/30003.htm>
- <https://intl.aliyun.com/help/doc-detail/25484.htm>
- <https://intl.aliyun.com/help/doc-detail/27565.htm?spm=a3c0i.l27537en.b99.53.977A4U>
- <https://intl.aliyun.com/help/doc-detail/27772.htm?spm=a3c0i.l27706en.b99.63.xRdtsB>
- <https://intl.aliyun.com/help/doc-detail/31948.htm?spm=a3c0i.l31815en.b99.144.Q3ghQy>
- <https://intl.aliyun.com/help/doc-detail/26223.htm?spm=a3c0i.l26090en.a3.61.dego5c>
- <https://github.com/aliyun/aliyun-oss-python-sdk>

Architecture

Architecture Overview



As the image above:

1. The **Python SDK** is AliCloud python SDK, it's available on <https://intl.aliyun.com/help/en/doc-detail/30003.htm>
2. The **footmark** is the **middle layer** between AliCloud SDK and Ansible Module.
3. The **Ansible Modules** (parameter operate) is module of Ansible, that it's invoked by **Ansible Module Util**, this include ECS, SLB, VPC, OSS, RDS operates and this include business logic and condition.
4. The **Module Util** include the connection and access key and security.
5. The **Playbook** is Ansible's playbook.

Component Structure

Structure of our ansible Project in such a way that it contains three directory

- module
- roles
- utils

module directory contains all the python modules such as ecs.py, ecs_disk.py, ecs_group.py, ecs_slb.py, oss.py, rds.py etc. The module files contain information about methods written in module file like method description, parameter list, required parameters and datatype of each parameters which is helpful to understand purpose of that method.

roles directory is used to run our python code using Ansible playbooks. As Ansible playbook requires specific file structure to run our python code, we have to place our python code files in **library** directory inside the **roles** directory and place our **playbooks** (.yml files) outside the **library** directory.

In **utils** directory contains definition of commonly used methods, which includes establish a connection, set region value to perform operation, set access_key value, set access_secret_key value etc.

Prerequisites

System Description

- Supported Operating Systems:
 - Red Hat Enterprise Linux 6 64-bit
 - Red Hat Enterprise Linux 7 64-bit
 - CentOS 6 64-bit
 - CentOS 7 64-bit
 - Ubuntu 12.04 LTS 64-bit
 - Ubuntu 14.04 LTS 64-bit
- 2 GB RAM minimum (4+ GB RAM recommended)
- 20 GB hard disk
- 64-bit support required (kernel and runtime)

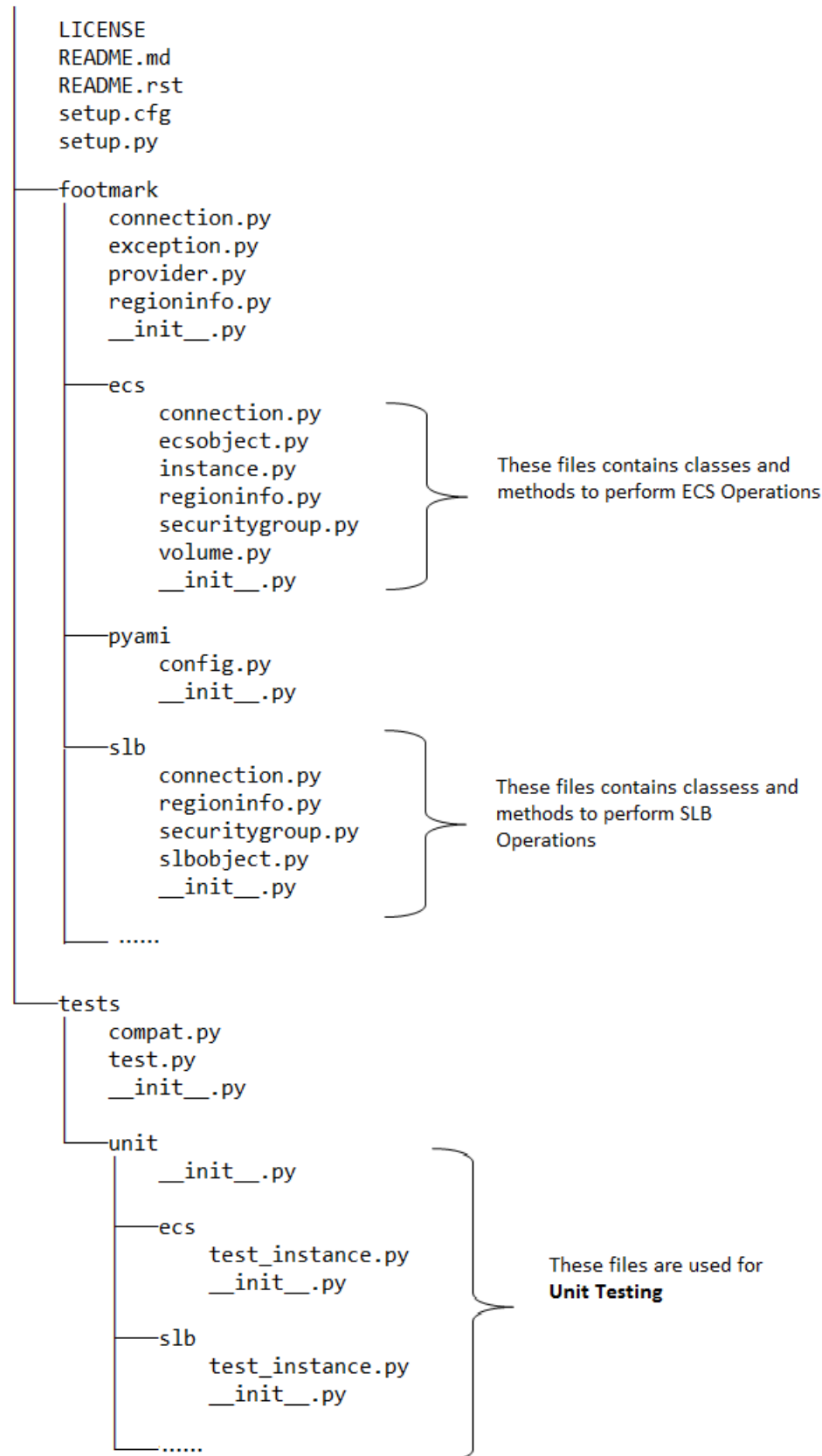
Software

- Python 2.7.X
- The latest stable release of Ansible
- aliyun-python-sdk-core, aliyun-python-sdk-ecs, oss2, aliyun-python-sdk-slb, ecsutils and footmark Python Packages

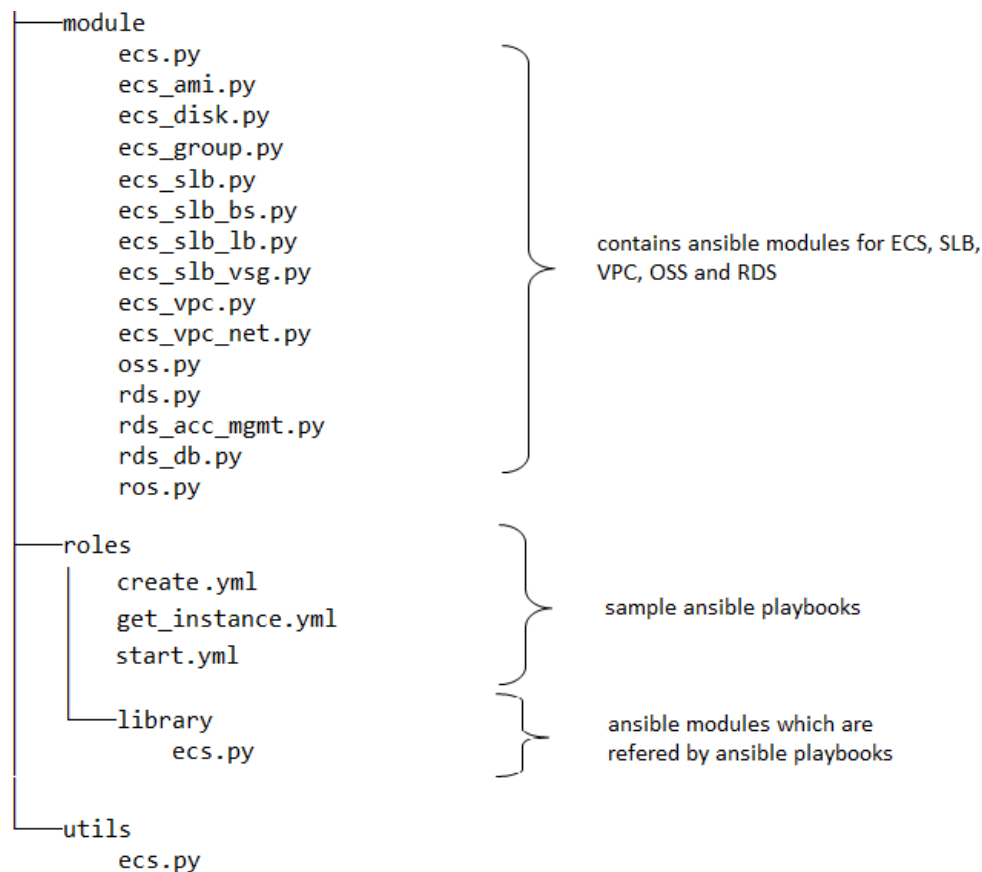
Code

File Names and Structure

Footmark Project File Structure



Ansible Project File Structure



Executable File Names and Structure

Ansible Playbooks are used to automate the tasks such as Create Instance, Start Instance, Stop Instance, Reboot Instance etc. so to automate any new task we need to create ansible playbooks.

Here some sample Playbooks are available in **roles** directory in Ansible Project

- start.yml: This playbook is used to start Instance
- get_instance.yml: This playbook is used to get list of all Instances
- create.yml: This playbook is used to create a new instance

To run ansible playbook, use below command –

```
ansible-playbook -i host create.yml
```

In above example **ansible-playbook** command is used to run **start.yml** playbook and **-i** option specifies **host** inventory file.

Interfaces Definition

Following are the list of interfaces will be integrated with Ansible.

Elastic Compute Service

The Phase II includes only Security Group Releases interface implementation.

Security Group Related Interfaces

Module Name: ecs_group.py

Creating Security Group

Create an elastic compute instance according to below input parameters.

NOTE: Same module can be used to perform authorization by passing group_id parameter.

| Name | Alias | Type | Required | Description |
|------------------------------|-------------------------------|--------|----------|--|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| region | acs_region, ecs_region | String | No | The Aliyun Cloud region to use. If not specified then the value of the `ACS_REGION`, `ACS_DEFAULT_REGION` or `ECS_REGION` environment variable, if any, is used. |
| status | state | String | No | For creating new security group and/or authorizing, provide state as 'present' Default: present |
| security_group_name | name | String | No | The security group name. [2, 128] English or Chinese characters, must begin with an uppercase/lowercase letter or Chinese character. Can contain numbers, ".", "_" or "-". It cannot begin with http:// or https://. |
| description | | String | No | The description of the security group, which is a string of 2 to 256 characters. It cannot begin with http:// or https://. |
| vpc_id | | String | No | The ID of the VPC to which the security group belongs. If this parameter is not passed, the security group will be created using classic network type. |

| | | | | |
|---------------------|-------------------|--------|----|--|
| group_tags | | List | No | A list of hash/dictionaries of instance tags, '[{tag_key: "value", tag_value: "value"}]', tag_key must be not null when tag_value isn't null |
| group_id | security_group_id | String | No | Provide the security group id to perform rules authorization. This parameter is not required for creating new security group. |
| rules | | List | No | List of firewall inbound rules to enforce in this group. If none are supplied, a default all-out rule is assumed. If an empty list is supplied, no inbound rules will be enabled. Each rule contains four attributes as specified in Inbound Security Group Rules |
| rules_egress | | List | No | List of firewall outbound rules to enforce in this group. If none are supplied, a default all-out rule is assumed. If an empty list is supplied, no outbound rules will be enabled. Each rule contains four attributes as specified in Outbound Security Group Rules |

Inbound Security Group Rules

| Name | Alias | Type | Required | Description |
|--------------------|-------|--------|----------|---|
| ip_protocol | proto | String | Yes | IP protocol, with a values: tcp udp icmp gre all; all indicates support for all the four protocols |
| port_range | | String | Yes | The range of port numbers relevant to the IP protocol - When the protocol is "tcp" or "udp", the default port number range is 1-65535. For example, "1/200" means that the range of the port numbers is 1-200. If the input value is: "200/1", the interface call reports an error. - When the protocol is "icmp", the port number range is -1/-1. - When the protocol is "gre", the port number range is -1/-1. - When the protocol is all the port number range is -1/-1. |

| | | | | |
|------------------------------|----------------|---------|----|---|
| source_group_id | group_id | String | No | The security group ID. Either the source_group_id or cidr_ip parameter must be set. If both are set, then source_cidr_ip is authorized by default. If source_group_id is specified and source_cidr_ip is not specified, nic_type must be set to intranet |
| source_group_owner_id | group_owner_id | String | No | When the cross-user security group authorization, the source security group belongs to the user's Ali cloud account Id. The parameter is optional, if not set, the default is the same account between the security group authorization. source_cidr_ip This parameter has no effect if it has been set. |
| source_cidr_ip | cidr_ip | String | No | The source IP address range (CIDR format is used to specify the 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. |
| policy | | String | No | Authorization policy, with parameter values: 'accept' and 'drop' Default value: accept |
| priority | | Integer | No | Authorization policy priority, with parameter values: 1-100 Default value: 1 |
| nic_type | | String | No | Network type, with a value internet intranet; The default value is internet In mutual security group authorization (namely, source_group_id is specified, while source_cidr_ip is not specified), you must specify the nic_type as intranet |

Outbound Security Group Rules

| Name | Alias | Type | Required | Description |
|----------------------------|----------------|--------|----------|---|
| ip_protocol | proto | String | Yes | IP protocol, with a values: tcp udp icmp gre all; all indicates support for all the four protocols |
| port_range | | String | Yes | The range of port numbers relevant to the IP protocol - When the protocol is “tcp” or “udp”, the default port number range is 1-65535. For example, “1/200” means that the range of the port numbers is 1-200. If the input value is: “200/1”, the interface call reports an error. - When the protocol is “icmp”, the port number range is -1/-1. - When the protocol is “gre”, the port number range is -1/-1. - When the protocol is all the port number range is -1/-1. |
| dest_group_id | group_id | String | No | The target security group ID within the same region. Either the dest_group_id or dest_cidr_ip must be set. If both are set, then dest_cidr_ip is authorized by default. If this field is specified, but no dest_cidr_ip is specified, the nic_type can only select intranet |
| dest_group_owner_id | group_owner_id | String | No | The Alibaba Cloud user account Id of the target security group when security groups are authorized across accounts. This parameter is optional. If it is not set, then authorization is performed for security groups of the same account. This parameter is invalid if DestCidrIp has already been set. |
| dest_cidr_ip | cidr_ip | String | No | The target IP address range (CIDR format is used to specify the 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. |
| policy | | String | No | Authorization policy, with parameter values: ‘accept’ and ‘drop’ |

| | | | | |
|-----------------|--|---------|----|--|
| | | | | Default value: accept |
| priority | | Integer | No | Authorization policy priority, with parameter values: 1-100 Default value: 1 |
| nic_type | | String | No | Network type, with a value: internet intranet. The default value is internet In mutual security group authorization, you must specify the nic_type as intranet (namely, dest_group_id is specified, while dest_cidr_ip is not) |

Querying the Security Group List

| Name | Alias | Type | Required | Description |
|------------------------------|---|--------|----------|--|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| region | acs_region, ecs_region | String | No | The Aliyun Cloud region to use. If not specified then the value of the `ACS_REGION`, `ACS_DEFAULT_REGION` or `ECS_REGION` environment variable, if any, is used. |
| status | state | String | Yes | For getting list of security group, provide value as 'getinfo' |
| group_id | security_group_id, group_ids security_group_ids | List | Yes | A list of security groups ids. |
| vpc_id | | String | No | The ID of the VPC to which the security group belongs |

Deleting a Security Group

| Name | Alias | Type | Required | Description |
|------------------------------|---|--------|----------|--|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| region | acs_region, ecs_region | String | No | The Aliyun Cloud region to use. If not specified then the value of the `ACS_REGION`, `ACS_DEFAULT_REGION` or `ECS_REGION` environment variable, if any, is used. |
| status | state | String | Yes | For deleting security group, provide state as 'absent' |
| group_id | security_group_id, group_ids security_group_ids | List | Yes | A list of security groups ids. |

Server Load Balancer

Server Load Balancer is a service that distributes traffic among multiple ECS instances. It can extend the service capability of an application system by distributing traffic and enhancing availability by eliminating any Single Point of Failure (SPOF).

Load Balancer Related Interfaces

Create Load Balancer

Create Load Balancer; generate Server Load Balancer instances, and allocate service addresses and LoadBalancerIds according to parameters.

Module Name: ecs_slb_lb.py

| Name | Alias | Type | Required | Description |
|------------------------------|-------------------------------|--------|----------|---|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, |

| | | | | |
|-----------------------------|---------------------------|---------|-----|---|
| | | | | `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| region | acs_region, ecs_region | String | No | The Aliyun Cloud region to use. If not specified then the value of the `ACS_REGION`, `ACS_DEFAULT_REGION` or `ECS_REGION` environment variable, if any, is used. |
| status | state | String | No | For creating new Server Load Balancer, provide state as 'present' Default: present |
| load_balancer_name | name | String | Yes | Displayed name of an instance Value : Displayed name of an instance Default : None. When the parameter is not specified, an instance name is allocated by the system by default. |
| load_balancer_id | ecs_slb | String | No | This parameter is required when user wants to perform edit operation in Load Balancer. |
| address_type | scheme | String | No | The address type of the SLB. It allows 'internet' or 'intranet' Default : internet |
| vswitch_id | subnet_id subnet | String | No | The vswitch id of the VPC instance. This option is invalid if address_type parameter is provided as internet. |
| internet_charge_type | | String | No | Charging mode for the public network instance Value : paybybandwidth paybytraffic Default : paybytraffic |
| master_zone_id | | String | No | The main usable area ID of the created instance can be found by the DescribeZone interface. |
| slave_zone_id | | String | No | The ID of the standby zone of the created instance can be found on the DescribeZone interface. |
| bandwidth | | Integer | No | Bandwidth peak of the public network instance charged per fixed bandwidth Value : 1-1000 (in Mbps) Default : 1 |

| | | | | |
|---------------------------|--|---------|----|--|
| listeners | | List | No | List of ports/protocols for this SLB to listen on (see table Listeners) |
| purge_listeners | | Boolean | No | Purge/remove existing listeners on SLB that are not found in listeners. Value: no/yes Default: yes |
| instance_ids | | List | No | List of instance ids to attach to this SLB |
| purge_instance_ids | | Boolean | No | Purge/remove existing instance ids on SLB that are not found in instance_ids Value: no/yes Default: yes |
| validate_certs | | String | No | When set to "no", SSL certificates will not be validated. default: "yes" choices: ["yes", "no"] |
| tags | | List | No | A list of hash/dictionaries of instance tags, '[{tag_key: "value", tag_value: "value"}]', tag_key must be not null when tag_value isn't null |
| wait | | String | No | Wait for the SLB instance to be 'running' before returning. Choices: [yes, no, true, false] Default: no |
| wait_timeout | | Integer | No | how long before wait gives up, in seconds Default: 300 |

Listeners

| Name | Alias | Type | Required | Description |
|----------------------------|--------------------|---------|----------|--|
| protocol | | String | Yes | options are http, https, udp, tcp |
| listener_port | load_balancer_port | Integer | Yes | Port used by the Server Load Balancer instance frontend Value : 1-65535 |
| backend_server_port | instance_port | Integer | Yes | Server Load Balancer instance's backend port. Value:1-65535 |
| bandwidth | | Integer | Yes | Peak bandwidth of the monitor. Value: -1 / 1-1000Mbps |

| | | | | |
|---------------------------|--|--------|----|---|
| | | | | for use by the public network traffic accounting mode type instance, you can select the Bandwidth Listener on the set to -1, which means no limit bandwidth peak. |
| scheduler | | String | No | Scheduling algorithm. Value: wrr / wlc Default: wrr |
| stickiness | | Dict | No | Configure sticky or non-stick session (see table Stickiness) |
| health_check | | Dict | No | Configure the health check (see table Health Check) |
| ssl_certificate_id | | String | No | Security certificate ID. This Parameter is required when protocol is https. |
| gzip | | String | No | Gzip compression is turned on, will open a specific file type compression; will not close any file type compression values: on / off Default: on |
| vserver_group_id | | | | |

Health Check

| Name | Alias | Type | Required | Description |
|---------------------|-----------|---------|----------|--|
| domain | | String | No | The domain name used for the health check. Value: \$ _ ip user-defined string empty custom string Rules: - " length limit 1-80, only letters, numbers, " these characters. When the user sets this parameter to '\$ _ ip' or empty, load balancing uses the private IP of each backend server as the Domain used for health check. |
| uri | ping_path | String | Yes | URI used for health check. Value : Its length is limited to 1-80 and it must start with /. Only characters such as letters, digits, '-', '/', ':', '%', '?', '#' and '&' are allowed. not required for tcp or https |
| connect_port | ping_port | Integer | Yes | Port used for health checks. |

| | | | | |
|----------------------------|------------------|---------|-----|--|
| | | | | <p>When HealthCheck is On, this parameter is required. When HealthCheck is Off, this parameter is ignored.</p> <p>Value: 1-65535, or '-520'.</p> <p>When users set this parameter to '-520', this indicates BackendServerPort is used.</p> |
| healthy_threshold | | Integer | Yes | <p>Threshold determining the result of the health check is success. Namely, after how many successive successful health checks, the health check result of the backend server is changed from fail to success.</p> <p>Value : 1-10</p> |
| unhealthy_threshold | | Integer | Yes | <p>Threshold determining the result of the health check is fail. Namely, after how many successive failed health checks, the health check result of the backend server is changed from success to fail.</p> <p>Value : 1-10</p> |
| timeout | response_timeout | Integer | Yes | <p>Maximum timeout of each health check response.</p> <p>Value : 1-50 (in seconds)</p> <p>Note: If response_timeout < interval, response_timeout is invalid, and the timeout is interval.</p> |
| interval | | Integer | Yes | <p>Time interval of health checks.</p> <p>Value : 1-5 (in seconds)</p> |
| http_code | | String | No | <p>Normal health check HTTP status codes. Separate multiple status codes with ",".</p> <p>When HealthCheck is On, this parameter is optional. When HealthCheck is Off, this parameter is ignored.</p> <p>Value: http_2xx / http_3xx / http_4xx / http_5xx</p> <p>Default value: http_2xx</p> |

Stickness

| Name | Alias | Type | Required | Description |
|-------------------|----------------|---------|----------|---|
| enabled | | String | Yes | Whether to enable session hold. Value: on / off |
| type | session_type | String | Depends | How cookies are handled. This parameter is mandatory when enabled is on; when enabled is off, this parameter setting will be ignored. Value: insert / server to insert represented by the load balancing insert, set server for load balancing to learn from the back-end server. |
| expiration | cookie_timeout | Integer | Depends | The cookie timeout period. This parameter is mandatory when enabled is on and enabled is insert, otherwise it will be ignored. Values: 1-86400 (in seconds) |
| cookie | | String | Depends | The cookie that is configured on the server. Required only if enabled is on and type is server; otherwise this parameter will be ignored. Value: A string that complies with RFC 2965 and has a length of 1-200. Can only contain ASCII alphanumeric characters, cannot contain commas, semicolons, or spaces, and cannot start with a \$ character. |

Modify Load balancer Internet Spec

Modify the LoadBalancer specification; modify the charging mode or specification of the Server Load Balancer instance according to parameters.

Module Name: ecs_slb_lb.py

| Name | Alias | Type | Required | Description |
|------------------------------|-------------------------------|--------|----------|---|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| region | acs_region, ecs_region | String | No | The Aliyun Cloud region to use. If not specified then the value of the |

| | | | | |
|-----------------------------|---------|---------|-----|--|
| | | | | `ACS_REGION`, `ACS_DEFAULT_REGION` or `ECS_REGION` environment variable, if any, is used. |
| status | state | String | No | For modifying Server Load Balancer Internet Spec, provide state as 'present' Default: present |
| load_balancer_id | ecs_slb | String | Yes | The List of unique ID of a Server Load Balancer instance. |
| internet_charge_type | | String | No | Charging mode for the public network instance Value : paybybandwidth paybytraffic Default : paybytraffic |
| bandwidth | | Integer | No | Bandwidth peak of the public network instance charged per fixed bandwidth Value : 1-1000 (in Mbps) Default : 1 |

Delete Load Balancer

Delete LoadBalancer; delete the Server Load Balancer instances and clear the configurations related to the Server Load Balancer instances according to parameters. If there is a Listener on the Server Load Balancer instance, it will also be deleted.

Module Name: ecs_slb_lb.py

| Name | Alias | Type | Required | Description |
|------------------------------|----------------------------|--------|----------|--|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| region | acs_region, ecs_region | String | No | The Aliyun Cloud region to use. If not specified then the value of the `ACS_REGION`, `ACS_DEFAULT_REGION` or `ECS_REGION` environment variable, if any, is used. |
| status | state | String | Yes | For deleting Server Load Balancer Internet Spec, provide state as 'absent' |
| load_balancer_id | ecs_slb | String | Yes | The List of unique ID of a Server Load Balancer instance. |

Set Load Balancer Status (Enable/Disable)

Configure the LoadBalancer status.

- For the Server Load Balancer instance just created, its status is active by default.
- LoadBalancerStatus is active, indicating to distribute all configurations of Listeners in the Server Load Balancer instance to the system to make it work; ;
- LoadBalancerStatus is inactive, indicating to inactive all configurations of Listeners in the Server Load Balancer instance to make it work;

Module Name: ecs_slb_lb.py

| Name | Alias | Type | Required | Description |
|------------------------------|-------------------------------|--------|----------|--|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| region | acs_region, ecs_region | String | No | The Aliyun Cloud region to use. If not specified then the value of the `ACS_REGION`, `ACS_DEFAULT_REGION` or `ECS_REGION` environment variable, if any, is used. |
| status | state | String | Yes | For modifying Server Load Balancer Status, provide state as 'inactive' or 'active' |
| load_balancer_id | ecs_slb | String | Yes | The List of unique ID of a Server Load Balancer instance. |

Set Load Balancer Name (Alias)

Configure the LoadBalancer status.

- For the Server Load Balancer instance just created, its status is active by default.
- LoadBalancerStatus is active, indicating to distribute all configurations of Listeners in the Server Load Balancer instance to the system to make it work;
- LoadBalancerStatus is inactive, indicating to inactive all configurations of Listeners in the Server Load Balancer instance to make it work;

Module Name: ecs_slb_lb.py

| Name | Alias | Type | Required | Description |
|-----------------------|-------------------------------|--------|----------|--|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, |

| | | | | |
|------------------------------|-------------------------------|--------|-----|---|
| | | | | `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| region | acs_region, ecs_region | String | No | The Aliyun Cloud region to use. If not specified then the value of the `ACS_REGION`, `ACS_DEFAULT_REGION` or `ECS_REGION` environment variable, if any, is used. |
| status | state | String | No | For modifying Server Load Balancer Internet Spec, provide state as 'present' Default: present |
| load_balancer_id | ecs_slb | String | Yes | The List of unique ID of a Server Load Balancer instance. |
| load_balancer_name | name | String | Yes | Displayed name of an instance Value : Displayed name of an instance Default : None. When the parameter is not specified, an instance name is allocated by the system by default. |

Backend Server Related Interfaces

Add backend Server

Add the backend server; add a group of backend servers to the Server Load Balancer instance (ECS instance) to return the backend server list of the Server Load Balancer instance.

Note: If BackendServers contains ECS instance already added, the ECS instance will be ignored, without any error being reported. If multiple identical ECS instances are to be added in one request, only the first instance will be taken while other identical instances will be ignored.

Module Name: ecs_slb.py

| Name | Alias | Type | Required | Description |
|------------------------------|-------------------------------|--------|----------|--|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |

| | | | | |
|-------------------------|---------------------------|------------|-----|--|
| region | acs_region, ecs_region | String | No | The Aliyun Cloud region to use. If not specified then the value of the `ACS_REGION`, `ACS_DEFAULT_REGION` or `ECS_REGION` environment variable, if any, is used. |
| status | state | String | No | To add backend servers to Server Load Balancer, provide state as 'present' Default: present |
| load_balancer_id | ecs_slb | String | Yes | The List of unique ID of a Server Load Balancer instance. |
| backend_servers | | Dictionary | Yes | Backend server list to be added. See Backend Servers below |

Backend Servers

| Name | Type | Required | Description |
|------------------|---------|----------|---|
| server_id | String | Yes | Unique id of Instance to add |
| weight | Integer | No | Weight of the backend server, in the range of 1-100 default: 100 |

Remove backend Server

Delete the backend server; delete a group of backend servers from the Server Load Balancer instance to return the backend server list in the Server Load Balancer instance.

Note: If some backend servers in BackendServers do not exist in the Server Load Balancer instance, they will be ignored directly without any error being reported.

Module Name: ecs_slb.py

| Name | Alias | Type | Required | Description |
|------------------------------|-------------------------------|--------|----------|--|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| region | acs_region, ecs_region | String | No | The Aliyun Cloud region to use. If not specified then the value of the `ACS_REGION`, `ACS_DEFAULT_REGION` or `ECS_REGION` environment variable, if any, is used. |

| | | | | |
|-------------------------|---------|--------|-----|--|
| status | state | String | Yes | To remove backend servers from SLB, provide state as ' absent ' |
| load_balancer_id | ecs_slb | String | Yes | The List of unique ID of a Server Load Balancer instance. |
| backend_servers | | List | Yes | Backend server list to be removed. The List can only contain 20 elements at most in one request. |

Set backend Server

Set Backend Servers; set weight for the backend ECSs; return to the backend servers list for the Server Load Balancer instance.

Module Name: ecs_slb.py

| Name | Alias | Type | Required | Description |
|------------------------------|-------------------------------|------------|----------|--|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| region | acs_region, ecs_region | String | No | The Aliyun Cloud region to use. If not specified then the value of the `ACS_REGION`, `ACS_DEFAULT_REGION` or `ECS_REGION` environment variable, if any, is used. |
| status | state | String | No | To set backend servers to Server Load Balancer, provide state as ' present ' Default: present |
| load_balancer_id | ecs_slb | String | Yes | The List of unique ID of a Server Load Balancer instance. |
| backend_servers | | Dictionary | Yes | Backend server list to be added. See Backend Servers below |

Backend Servers

| Name | Type | Required | Description |
|------------------|--------|----------|------------------------------|
| server_id | String | Yes | Unique id of Instance to add |

| | | | |
|---------------|---------|-----|---|
| weight | Integer | Yes | Weight of the backend server, in the range of 1-100 default: 100 |
|---------------|---------|-----|---|

Describe Health status of backend server

Health checks on backend servers; perform health checks on backend servers of the Server Load Balancer instance to return the health status of backend servers.

The health status of the backend server consists of normal, abnormal and unavailable. Unavailable indicates the Server Load Balancer instance is not configured with the health check, and the health status of the backend server cannot be obtained.

Module Name: ecs_slb.py

| Name | | Type | Required | Description |
|------------------------------|-------------------------------|--------|----------|--|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| region | acs_region, ecs_region | String | No | The Aliyun Cloud region to use. If not specified then the value of the `ACS_REGION`, `ACS_DEFAULT_REGION` or `ECS_REGION` environment variable, if any, is used. |
| status | state | String | Yes | To describe health status, provide value as 'check' |
| load_balancer_id | ecs_slb | String | Yes | The List of unique ID of a Server Load Balancer instance. |
| ports | | List | No | Ports used by the Server Load Balancer instance frontend Value : 1-65535. Default: None. If the parameter is not set, it means to obtain the health status of every port. |

VServer Group Related Interfaces

Create VServer Group

Create a virtual server group and add a back-end server.

Module Name: ecs_slb_vsg.py

| Name | Alias | Type | Required | Description |
|------------------------------|-------------------------------|------------|----------|---|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| region | acs_region, ecs_region | String | No | The Aliyun Cloud region to use. If not specified then the value of the `ACS_REGION`, `ACS_DEFAULT_REGION` or `ECS_REGION` environment variable, if any, is used. |
| status | state | String | No | To create VServer Group, provide state as 'present' Default: present |
| load_balancer_id | ecs_slb | String | Yes | The unique ID of a Server Load Balancer instance |
| vserver_group_name | | String | Yes | Virtual server group name |
| backend_servers | | Dictionary | Yes | The list of back-end servers that need to be added. The maximum number of elements in a List in a single request is 20. See Backend Servers below |

Backend Servers

| Name | Alias | Type | Required | Description |
|------------------|-------|---------|----------|---|
| server_id | | String | Yes | Unique id of Instance to add |
| port | | Integer | Yes | The back-end server using the port Range: 1-65535 |
| weight | | Integer | Yes | Weight of the backend server, in the range of 1-100 default: 100 |

Set VServer Group Attribute

Set a virtual server group, change the name for an existing virtual server group, or change the port + weight of an existing back-end server.

Module Name: ecs_slb_vsg.py

| Name | Alias | Type | Required | Description |
|------------------------------|-------------------------------|------------|----------|---|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| region | acs_region, ecs_region | String | No | The Aliyun Cloud region to use. If not specified then the value of the `ACS_REGION`, `ACS_DEFAULT_REGION` or `ECS_REGION` environment variable, if any, is used. |
| status | state | String | No | To set VServer Group attributes, provide state as 'present' Default: present |
| vserver_group_id | | String | Yes | The unique identifier for the virtual server group |
| vserver_group_name | | String | Yes | Virtual server group name |
| backend_servers | | Dictionary | No | The list of back-end servers within that VServerGroup whose weight needs to be modified. If not set to not set or not change the original settings. A single request contains up to 20 back-end server instances. See Backend Servers below |

Backend Servers

| Name | Alias | Type | Required | Description |
|------------------|-------|---------|----------|--|
| server_id | | String | Yes | Unique id of Instance to add |
| port | | Integer | Yes | The back-end server using the port Range: 1-65535 |
| weight | | Integer | Yes | Weight of the backend server, in the range of 1-100 |

| | | | | |
|--|--|--|--|--------------|
| | | | | default: 100 |
|--|--|--|--|--------------|

Add VServer Group Backend Servers

Add a back-end server in a virtual server group, add a set of back-end servers to a specific virtual server group in the SLB, and return a list of back-end servers in that virtual server group.

Module Name: ecs_slb_vsg.py

| Name | Alias | Type | Required | Description |
|------------------------------|-------------------------------|------------|----------|---|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| region | acs_region, ecs_region | String | No | The Aliyun Cloud region to use. If not specified then the value of the `ACS_REGION`, `ACS_DEFAULT_REGION` or `ECS_REGION` environment variable, if any, is used. |
| status | state | String | No | To add Backend Server in VServer Group, provide state as 'present' Default: present |
| vserver_group_id | | String | Yes | The unique identifier for the virtual server group |
| backend_servers | | Dictionary | No | The list of back-end servers that need to be added. If not set to not set or not change the original settings. A single request contains up to 20 back-end server instances. See Backend Servers below |

Backend Servers

| Name | Alias | Type | Required | Description |
|------------------|-------|---------|----------|---|
| server_id | | String | Yes | Unique id of Instance to add |
| port | | Integer | Yes | The back-end server using the port Range: 1-65535 |
| weight | | Integer | Yes | Weight of the backend server, in the range of 1-100 default: 100 |

Remove VServer Group Backend Servers

Remove VServer Group Backend Servers from SLB.

Module Name: ecs_slb_vsg.py

| Name | Alias | Type | Required | Description |
|------------------------------|-------------------------------|------------|----------|--|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| region | acs_region, ecs_region | String | No | The Aliyun Cloud region to use. If not specified then the value of the `ACS_REGION`, `ACS_DEFAULT_REGION` or `ECS_REGION` environment variable, if any, is used. |
| status | state | String | No | To remove Backend Server from VServer Group, provide state as 'present' Default: present |
| vserver_group_id | | String | Yes | The unique identifier for the virtual server group |
| purge_backend_servers | | Dictionary | Yes | The list of back-end servers that need to be remove. The maximum number of elements in a List in a single request is 20. See Backend Servers below |

Backend Servers

| Name | Alias | Type | Required | Description |
|------------------|-------|---------|----------|--|
| server_id | | String | Yes | Unique id of Instance to add |
| port | | Integer | Yes | The back-end server using the port Range: 1-65535 |

Modify VServer Group Backend Servers

Modify VServer Group Backend Servers from SLB.

Module Name: ecs_slb_vsg.py

| Name | Alias | Type | Required | Description |
|------------------------------|-------------------------------|------------|----------|--|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| region | acs_region, ecs_region | String | No | The Aliyun Cloud region to use. If not specified then the value of the `ACS_REGION`, `ACS_DEFAULT_REGION` or `ECS_REGION` environment variable, if any, is used. |
| status | state | String | No | To modify Backend Server in VServer Group, provide state as 'present' Default: present |
| vserver_group_id | | String | Yes | The unique identifier for the virtual server group |
| purge_backend_servers | | Dictionary | No | The list of back-end servers to remove from that VServerGroup. If not set to not set or not change the original settings. A single request contains up to 20 back-end server instances. See Old Backend Servers below |
| backend_servers | | Dictionary | No | The list of back-end servers to add to the VServerGroup. If not set to not set or not change the original settings. A single request contains up to 20 back-end server instances. See New Backend Servers below |

Old Backend Servers

| Name | Type | Required | Description |
|--------------------|---------|----------|--|
| instance_id | String | Yes | Unique id of Instance to add |
| port | Integer | Yes | The back-end server using the port Range: 1-65535 |

New Backend Servers

| Name | Type | Required | Description |
|--------------------|---------|----------|---|
| instance_id | String | Yes | Unique id of Instance to add |
| port | Integer | Yes | The back-end server using the port Range: 1-65535 |
| weight | Integer | Yes | Weight of the backend server, in the range of 1-100 default: 100 |

Delete VServer Group

Delete VServer Group from SLB

Module Name: ecs_slb_vsg.py

| Name | Alias | Type | Required? | Description |
|------------------------------|-------------------------------|--------|-----------|--|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| region | acs_region, ecs_region | String | No | The Aliyun Cloud region to use. If not specified then the value of the `ACS_REGION`, `ACS_DEFAULT_REGION` or `ECS_REGION` environment variable, if any, is used. |
| status | state | String | Yes | To delete VServer Group, provide state as 'absent' |
| vserver_group_id | | String | Yes | The unique identifier for the virtual server group |

Virtual Private Cloud

An Alibaba Cloud Virtual Private Cloud (VPC) is a virtual private cloud built and customized based on Alibaba Cloud. Full logical isolation is achieved between different VPCs. You can create and manage cloud product instances, such as ECS, Server Load Balancer and RDS, in your own VPC.

VPC Interfaces

Create a VPC

Create a VPC in a specified region

Module Name: ecs_vpc.py

| Name | Alias | Type | Required | Description |
|------------------------------|-------------------------------|--------|----------|--|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| region | acs_region, ecs_region | String | No | The Aliyun Cloud region to use. If not specified then the value of the `ACS_REGION`, `ACS_DEFAULT_REGION` or `ECS_REGION` environment variable, if any, is used. |
| status | state | String | No | For creating new Virtual Private Cloud, provide state as 'present' Default: present |
| cidr_block | | String | Yes | The CIDR block representing the VPC, e.g. 10.0.0.0/8. Value options: 10.0.0.0/8, 172.16.0.0/12, 192.168.0.0/16. Default: 172.16.0.0/16 |
| user_cidr | | String | No | User custom cidr in the VPC. |
| vpc_name | name | String | No | The VPC name. The default value is blank. [2, 128] English or Chinese characters, must begin with an uppercase/lowercase letter or Chinese character. Can contain numbers, "_" and "-". The disk description will appear on the console. Cannot begin with http:// or https:// |
| description | | String | No | The description. The default value is blank. [2, 256] English or Chinese characters. Cannot begin with http:// or https:// |
| vswitches | subnets | List | No | A dictionary array of vswitches to add in VPC. (See vswitches) |
| route_tables | | List | No | A dictionary array of route tables to add in VPC (See Route Tables) |
| wait | | String | No | Wait for the VPC instance to be 'running' before returning. Choices: [yes, no, true, false] |

| | | | | |
|---------------------|--|---------|----|---|
| | | | | Default: no |
| wait_timeout | | Integer | No | how long before wait gives up, in seconds Default: 300 |

Vswitches

| Name | Alias | Type | Required | Description |
|---------------------|---------|--------|----------|---|
| cidr_block | cidr | String | Yes | It must be equal to or belong to the VPC CIDR. The subnet mask must be between 16 and 29. E.g., 192.168.1.0/24 |
| zone_id | zone,az | String | Yes | zone_id is the desired availability zone of the subnet. |
| vswitch_name | name | String | No | The name should be 2-128 characters. It should start with a letter in either the upper or lower case, or a Chinese character. It can contain digits, "_" or "-" |
| description | | String | Yes | The description can be empty, or contain 2-256 characters. Cannot start with http:// or https:// |

Route Table

| Name | Alias | Type | Required | Description |
|------------------------------|-------|--------|----------|--|
| destination_cidrblock | dest | String | Yes | It must be a legal CIDR or IP address, such as: 192.168.0.0/24 or 192.168.0.1 |
| next_hop_type | | String | No | The next hop type. Available value options: Instance Tunnel. The default value is Instance |
| next_hop_id | | String | Yes | The route entry's next hop |

Delete a VPC

Delete the specified VPC

Before deleting a VPC, you must first release or remove all resources in the VPC (including VSwitches, ECS Instances, Connections, etc.)

Only VPCs in the Available status can be deleted

Module Name: ecs_vpc.py

| Name | Alias | Type | Required | Description |
|------------------------------|----------------------------|--------|----------|---|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, |

| | | | | |
|---------------|---------------------------|--------|-----|--|
| | | | | `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| region | acs_region, ecs_region | String | No | The Aliyun Cloud region to use. If not specified then the value of the `ACS_REGION`, `ACS_DEFAULT_REGION` or `ECS_REGION` environment variable, if any, is used. |
| status | state | String | Yes | For deleting VPC, provide state as 'absent' |
| vpc_id | | String | Yes | The unique ID of a VPC to delete. |

VSwitch Interface

Creating a VSwitch

Creates a new VSwitch in the specified VPC.

Module Name: ecs_vpc.py

| Name | Alias | Type | Required | Description |
|------------------------------|-------------------------------|--------|----------|--|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| region | acs_region, ecs_region | String | No | The Aliyun Cloud region to use. If not specified then the value of the `ACS_REGION`, `ACS_DEFAULT_REGION` or `ECS_REGION` environment variable, if any, is used. |
| status | state | String | No | For creating new VSwitch in VPC, provide state as 'present' Default: present |
| vpc_id | | String | Yes | The unique ID of a VPC. |
| vswitches | subnets | List | No | A dictionary array of vswitches to add in VPC. (See vswitches) |

Vswitches

| Name | Alias | Type | Required | Description |
|---------------------|---------|--------|----------|---|
| cidr_block | cidr | String | Yes | It must be equal to or belong to the VPC CIDR. The subnet mask must be between 16 and 29. E.g., 192.168.1.0/24 |
| zone_id | zone,az | String | Yes | zone_id is the desired availability zone of the subnet. |
| vswitch_name | name | String | No | The name should be 2-128 characters. It should start with a letter in either the upper or lower case, or a Chinese character. It can contain digits, "_" or "-" |
| description | | String | Yes | The description can be empty, or contain 2-256 characters. Cannot start with http:// or https:// |

Deleting a VSwitch

Deletes the specified VSwitch

- Only VSwitches in the Available status can be deleted
- Before deleting a VSwitch, you must release or remove all resources under the VSwitch, e.g. ECS instances
- If the VPC of the specified RouteTable is creating/deleting a VSwitch or creating/deleting a RouteEntry, you cannot perform the delete VSwitch operation

Module Name: ecs_vpc.py

| Name | Alias | Type | Required? | Description |
|------------------------------|----------------------------|--------|-----------|--|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| region | acs_region, ecs_region | String | No | The Aliyun Cloud region to use. If not specified then the value of the `ACS_REGION`, `ACS_DEFAULT_REGION` or `ECS_REGION` environment variable, if any, is used. |
| status | state | String | No | For deleting VSwitchs from VPC, provide state as 'present' Default: present |
| vpc_id | | String | Yes | The unique ID of a VPC. |
| purge_vswitches | | List | No | The List of unique ID of a VSwitch to delete from VPC |

Querying the VSwitch list

Queries the user's VSwitch list. This interface supports querying by page, with 10 lines per page by default.

This interface can only verify the legitimacy of the parameters and cannot verify the dependency between parameters. The returned results are the "intersection" of all criteria.

Module Name: ecs_vpc.py

| Name | Alias | Type | Required | Description |
|------------------------------|-------------------------------|---------|----------|--|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| region | acs_region, ecs_region | String | No | The Aliyun Cloud region to use. If not specified then the value of the `ACS_REGION`, `ACS_DEFAULT_REGION` or `ECS_REGION` environment variable, if any, is used. |
| status | state | String | Yes | For getting list of VSwitch, provide state as 'getinfo_vswitch' |
| vpc_id | | String | Yes | The VPC of the new VSwitch. |
| vswitch_id | subnet | String | No | The ID of the VSwitch to be queried |
| zone_id | zone | String | No | ID of the zone |
| pagenumber | | Integer | No | Page number of the instance status list. The start value is 1. The default value is 1 |
| pagesize | | Integer | No | The number of lines per page set for paging query. The maximum value is 50 and default value is 10 |

VRouter interfaces*Querying the VRouter list*

Query the list of virtual routers in the specified region. This interface supports querying by page, with 10 lines per page by default.

Module Name: ecs_vpc.py

| Name | Alias | Type | Required | Description |
|------------------------------|-------------------------------|---------|----------|--|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| region | acs_region, ecs_region | String | No | The Aliyun Cloud region to use. If not specified then the value of the `ACS_REGION`, `ACS_DEFAULT_REGION` or `ECS_REGION` environment variable, if any, is used. |
| status | state | String | Yes | For getting list of VSwitch, provide state as 'getinfo_vroute' |
| vpc_id | | String | Yes | The unique ID of a VPC. |
| vrouter_id | | List | No | The ID of the VRouter to be queried |
| pagenumber | | Integer | No | Page number of the instance status list. The start value is 1. The default value is 1 |
| pagesize | | Integer | No | The number of lines per page set for paging query. The maximum value is 50 and default value is 10 |

RouteEntry interfaces

Creating a custom route

Creates a RouteEntry

Module Name: ecs_vpc.py

| Name | Alias | Type | Required | Description |
|------------------------------|-------------------------------|--------|----------|--|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |

| | | | | |
|---------------------|---------------------------|--------|-----|--|
| region | acs_region, ecs_region | String | No | The Aliyun Cloud region to use. If not specified then the value of the `ACS_REGION`, `ACS_DEFAULT_REGION` or `ECS_REGION` environment variable, if any, is used. |
| status | state | String | No | For creating new route in VPC, provide state as 'present' Default: present |
| vpc_id | | String | Yes | The unique ID of a VPC. |
| route_tables | | List | No | A dictionary array of route tables to add in VPC (See Route Tables) |

Route Table

| Name | Alias | Type | Required | Description |
|------------------------------|-------|--------|----------|--|
| destination_cidrblock | dest | String | Yes | It must be a legal CIDR or IP address, such as: 192.168.0.0/24 or 192.168.0.1 |
| next_hop_type | | String | No | The next hop type. Available value options: Instance Tunnel. The default value is Instance |
| next_hop_id | | String | Yes | The route entry's next hop |

Deleting a custom route

Deletes the specified RouteEntry

You can only delete a RouteEntry in the 'Available' state

If the VPC of the RouteTable is creating/deleting a VSwitch or creating/deleting a RouteEntry, you cannot perform the delete RouteEntry operation.

Module Name: ecs_vpc.py

| Name | Alias | Type | Required | Description |
|------------------------------|-------------------------------|--------|----------|--|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| region | acs_region, ecs_region | String | No | The Aliyun Cloud region to use. If not specified then the value of the `ACS_REGION`, `ACS_DEFAULT_REGION` or `ECS_REGION` environment variable, if any, is used. |

| | | | | |
|---------------------|-------|--------|-----|---|
| status | state | String | No | For deleting route in VPC, provide state as 'present' |
| vpc_id | | String | Yes | The unique ID of a VPC. |
| purge_routes | | Dict | Yes | A dictionary array of route tables to remove from VPC (See Route Tables) |

Route Table

| Name | Alias | Type | Required | Description |
|------------------------------|-------|--------|----------|---|
| route_table_id | | String | Yes | The RouteEntry's RouteTableId |
| destination_cidrblock | dest | String | Yes | It must be a legal CIDR or IP address, such as: 192.168.0.0/24 or 192.168.0.1 |
| next_hop_id | | String | Yes | The route entry's next hop |

Network related interfaces

Requesting EIPs

Request an EIP, which is in Available status.

At present, an EIP can be bound only to a VPC ECS instance in the same region.

Upon each request, an EIP is randomly allocated in the specified region.

At present, only ICMP, TCP, and UDP EIPs are supported. Transport layer EIPs, such as IGMP EIP and SCTP EIP, are not supported.

Module Name: ecs_vpc_net.py

| Name | Alias | Type | Required | Description |
|------------------------------|-------------------------------|--------|----------|--|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| region | acs_region, ecs_region | String | No | The Aliyun Cloud region to use. If not specified then the value of the `ACS_REGION`, `ACS_DEFAULT_REGION` or `ECS_REGION` environment variable, if any, is used. |
| status | state | String | No | For creating IP, provide state as 'present' |

| | | | | |
|-----------------------------|--|--------|----|---|
| bandwidth | | String | No | The rate limit of the EIP. If not specified, it is 5Mbps by default. |
| internet_charge_type | | String | No | PayByBandwidth and PayByTraffic. The default value is PayByBandwidth. |

Modifying EIP attributes

Modify the attribute of a specified EIP. At present, this interface is mainly used to modify the bandwidth of the EIP.

The bandwidth limit of an EIP can be modified infinitely, and the new setting takes effect immediately.

Module Name: ecs_vpc_net.py

| Name | Alias | Type | Required | Description |
|------------------------------|-------------------------------|--------|----------|--|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| region | acs_region, ecs_region | String | No | The Aliyun Cloud region to use. If not specified then the value of the `ACS_REGION`, `ACS_DEFAULT_REGION` or `ECS_REGION` environment variable, if any, is used. |
| status | state | String | No | For modifying IP attributes, provide state as 'present' |
| allocation_id | | String | Yes | The allocation ID of the EIP to be bound. The allocation ID uniquely identifies the EIP. |
| bandwidth | | String | No | The rate limit of the EIP. If not specified, it is 5Mbps by default. |

Binding EIPs

Bind an EIP to an ECS instance in the same region

Module Name: ecs_vpc_net.py

| Name | Alias | Type | Required | Description |
|-----------------------|-------------------------------|--------|----------|--|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, |

| | | | | |
|------------------------------|----------------------------|--------|-----|--|
| | | | | `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| region | acs_region, ecs_region | String | No | The Aliyun Cloud region to use. If not specified then the value of the `ACS_REGION`, `ACS_DEFAULT_REGION` or `ECS_REGION` environment variable, if any, is used. |
| status | state | String | No | For binding IP, provide state as join |
| allocation_id | | String | Yes | The allocation ID of the EIP to be bound. The allocation ID uniquely identifies the EIP. |
| instance_id | | String | Yes | The ID of the ECS instance to be bound |

Unbinding EIPs

Unbind an EIP.

The EIP can be unbound only when the ECS instance is in Running or Stopped status.

Module Name: ecs_vpc_net.py

| Name | Alias | Type | Required | Description |
|------------------------------|----------------------------|--------|----------|--|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| region | acs_region, ecs_region | String | No | The Aliyun Cloud region to use. If not specified then the value of the `ACS_REGION`, `ACS_DEFAULT_REGION` or `ECS_REGION` environment variable, if any, is used. |
| status | state | String | No | For unbinding IP, provide state as leave |
| allocation_id | | String | Yes | The allocation ID of the EIP to be unbound. The allocation ID uniquely identifies the EIP. |
| instance_id | | String | Yes | The ID of the ECS instance to be unbound |

Releasing EIPs

Release an EIP. The user no longer possesses the released EIP.

Only an EIP in Available status can be released.

Module Name: ecs_vpc_net.py

| Name | Alias | Type | Required | Description |
|------------------------------|-------------------------------|--------|----------|--|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| region | acs_region, ecs_region | String | No | The Aliyun Cloud region to use. If not specified then the value of the `ACS_REGION`, `ACS_DEFAULT_REGION` or `ECS_REGION` environment variable, if any, is used. |
| status | state | String | No | For releasing EIP, provide state as 'absent' |
| allocation_id | | String | Yes | The allocation ID of the EIP to be remove. The allocation ID uniquely identifies the EIP. |

Object Storage Service

Alibaba Cloud Object Storage Service (OSS) is network-based data access service. OSS enables you to store and invoke structured and unstructured data including text files, images, audios, and videos via a network connection.

Module Name: oss.py

Bucket Operations*Create Buckets*

| Name | Alias | Type | Required | Description |
|------------------------------|-------------------------------|--------|----------|--|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |

| | | | | |
|-------------------|----------------------|-------------|-----|---|
| mode | | String | Yes | For creating Bucket, provide value as create |
| bucket | bucket_name, name | String | Yes | <p>Bucket name.</p> <p>Rules for Bucket Naming :</p> <ul style="list-style-type: none"> » Only contain lowercase letter, number or hyphen » Must begin and end with lowercase letter(s) and number(s) » Bucket name length should be in [3-63] |
| permission | | String/List | Yes | <p>This option lets the user set the canned permissions on the bucket that are created. The permissions that can be set are 'private', 'public-read', 'public-read-write'. Multiple permissions can be specified as a list.</p> <ul style="list-style-type: none"> » Private: all accesses to the object require authentication. » Public Read: authentication is required for writing objects; anonymous read to objects is allowed. » Public Read/Write: everyone is allowed to read/write the object. <p>default: private</p> |
| region | | String | No | <p>ACS region to create the bucket in. If not set, then the value of the ACS_REGION and ECS_REGION environment variables are checked. If none of those are set the region defaults to the OSS Location: oss-cn-hangzhou</p> <p>default: oss-cn-hangzhou</p> <p>choices: ['oss-cn-hangzhou', 'oss-cn-qingdao', 'oss-cn-beijing', 'oss-cn-hongkong', 'oss-cn-shenzhen', 'oss-cn-shanghai', 'oss-us-west-1', 'oss-ap-southeast-1']</p> |

Deleting Buckets

| Name | Alias | Type | Required | Description |
|------------------------------|-------------------------------|--------|----------|--|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| mode | | String | Yes | For deleting Bucket, provide value as delete |
| bucket | bucket_name, name | String | Yes | Bucket name |

Please note that if the bucket is not empty (i.e., bucket contains objects or multipart upload fragments), it cannot be deleted. You must delete all objects and fragments in a bucket before deleting the bucket.

Object Operations*Simple Upload*

| Name | Alias | Type | Required | Description |
|------------------------------|-------------------------------|---------|----------|--|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| mode | | String | Yes | For uploading object in Bucket, provide value as put |
| bucket | bucket_name, name | String | Yes | Bucket name |
| expiration | | Integer | No | Time limit (in seconds) for the URL generated and returned by OSS/Walrus when performing a mode=put or mode=geturl operation. Default: 600 |

| | | | | |
|------------------|--|------------|----|---|
| headers | | Dictionary | No | Custom headers for PUT operation, as a dictionary of 'key=value' and 'key=value,key=value'. |
| encrypt | | String | No | When set for PUT mode, asks for server-side encryption Default: no |
| metadata | | Dictionary | No | Metadata for PUT operation, as a dictionary of 'key=value' and 'key=value,key=value'. |
| overwrite | | String | No | Force overwrite either locally on the filesystem or remotely with the object/key. Used with PUT and GET operations. Boolean or one of [always, never, different], true is equal to 'always' and false is equal to 'never'. default: 'always' |
| src | | String | No | The source file path when performing a PUT operation. |

Create Folders

| Name | Alias | Type | Required | Description |
|------------------------------|----------------------------|--------|----------|--|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| mode | | String | Yes | For creating folder in Bucket, provide value as put_folder |
| bucket | | String | Yes | Bucket name |
| folder_name | | String | Yes | Folder name |

List Bucket Objects

| Name | Alias | Type | Required | Description |
|-----------------------|----------------------------|--------|----------|--|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, |

| | | | | |
|------------------------------|-------------------------------|---------|-----|--|
| | | | | `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| mode | | String | Yes | For getting list of objects from Bucket, provide value as list |
| expiration | | Integer | No | Time limit (in seconds) for the URL generated and returned by OSS/Walrus when performing a mode=put or mode=geturl operation. Default: 600 |
| marker | | String | No | Specifies the key to start with when using list mode. Object keys are returned in alphabetical order, starting with key after the marker in order. |
| max_keys | | Integer | No | Max number of results to return in list mode, set this if you want to retrieve fewer than the default 1000 keys. default: 1000 |

Deleting Objects

| Name | Alias | Type | Required? | Description |
|------------------------------|-------------------------------|--------|-----------|--|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| mode | | String | Yes | For deleting objects from Bucket, provide value as delobj |
| bucket | | String | Yes | Bucket name |
| object_list | | List | No | Specify list of objects to delete from a bucket |

Relational Database Service

ApsaraDB Relational Database Service (RDS) is a stable, reliable, and auto-scaling online database service. Based on the Apsara distributed system and high-performance storage, the RDS supports MySQL, SQL Server, and PostgreSQL engines. It provides a complete set of solutions for disaster recovery, backup, recovery, monitoring, migration, and other functions to eliminate troubles of database operation and maintenance.

Module Name: rds.py

RDS instance management

Creating RDS instance

| Name | Alias | Type | Required | Description |
|------------------------------|-------------------------------|--------|----------|--|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the <code>`ACS_ACCESS_KEY_ID`</code> , <code>`ACS_ACCESS_KEY`</code> or <code>`ECS_ACCESS_KEY`</code> environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the <code>`ACS_SECRET_ACCESS_KEY`</code> , <code>`ACS_SECRET_KEY`</code> , or <code>`ECS_SECRET_KEY`</code> environment variable is used. |
| command | | String | Yes | Specifies the action to take. For creating RDS instance, provide value as create |
| region | acs_region, ecs_region | String | No | The Aliyun Cloud region to use. If not specified then the value of the <code>`ACS_REGION`</code> , <code>`ACS_DEFAULT_REGION`</code> or <code>`ECS_REGION`</code> environment variable, if any, is used. |
| zone | acs_zone, ecs_zone | String | No | availability zone in which to launch the instance. |

| | | | | |
|-----------------------------|---------------|---------|-----|---|
| db_engine | | String | Yes | The type of database. choices: ['MySQL','SQLServer', 'PostgreSQL', 'PPAS'] |
| engine_version | | String | No | Version number of the database engine to use. If not specified, then the current Aliyun RDS default engine version is used. |
| db_instance_class | instance_type | String | No | The instance type of the database. If not specified, then the replica inherits the same instance type as the source instance. |
| db_instance_storage | size | Integer | Yes | Size in gigabytes of the initial storage for the DB instance. |
| instance_net_type | | String | Yes | The net type of the DB instance choices: ['Internet', 'Intranet'] |
| instance_description | | String | No | Instance description or remarks, no more than 256 bytes. NOTE: It cannot begin with http:// , https:// . It must start with a Chinese character or an English letter. It may contain Chinese and English characters/letters, “_”, “-”, and numbers. The length may be 2-256 characters. |
| security_ip_list | | List | Yes | List of IP addresses allowed to access all databases of an instance. The IP addresses are separated by commas and cannot be repeated. The list contains up to 1,000 IP addresses. 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].) 0.0.0.0/0 indicates unrestricted. |
| pay_type | | String | Yes | The pay type of the DB instance. choices: ['Postpaid', 'Prepaid'] |
| period | | String | Depends | This input parameter is required if pay_type is set to Prepaid. The prepayment consists of two types: Year (yearly) and Month (monthly). choices: ['Year', 'Month'] |
| used_time | | Integer | Depends | This input parameter is required if PayType is set to Prepaid. This parameter specifies the duration for purchase. You can set this parameter to 1, 2, 3, or other numeric values as required. |
| instance_network_type | network_type | String | No | The network type of the instance. default: Classic choices: ['VPC', 'Classic'] |
| connection_mode | | String | No | Performance: standard access mode; Safety: high security access mode. The RDS system assigns an access mode by default. |

| | | | | |
|--|--|---------|---------|--|
| vpc_id | | String | Depends | The ID of the VPC. Value depends on network_type. |
| vswitch_id | | String | Depend | ID of VSwitch |
| private_ip_address | | String | No | IP address of an VPC under VSwitchId. If no value is specified, the system will automatically assign a VPC IP address. |
| allocate_public_ip | | Boolean | No | Whether to allocate public IP |
| public_connection_string_prefix | | String | No | Prefix of an Internet connection string |
| public_port | | Integer | No | The public connection port. |
| db_name | | String | No | Name of a database to create within the instance. If not specified, then no database is created. |
| db_description | | String | No | Description of a database to create within the instance. If not specified, then no database is created. |
| character_set_name | | String | No | Associate the DB instance with a specified character set. |
| maint_window | | String | No | Maintenance window in format of ddd:hh24:mi-ddd:hh24:mi. (Example: Mon:22:00-Mon:23:15) If not specified then a random maintenance window is assigned. |
| preferred_backup_time | | String | Depends | Backup time, in the format of HH:mmZ- HH:mm Z. This parameter is required if preferred_backup_period and |

| | | | | |
|--------------------------------|------------------|---------|---------|--|
| | | | | backup_retention_period is passed. |
| preferred_backup_period | backup_window | String | Depends | Backup period. Values: Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, and Sunday. This parameter is required if preferred_backup_time and backup_retention_period is passed. |
| backup_retention_period | backup_retention | Integer | No | Retention days of the backup (7 to 730 days). The default value is 7 days |
| db_tags | tags | List | No | A list of hash/dictionaries of db tags, '[{tag_key: "value", tag_value: "value"}]', tag_key must be not null when tag_value isn't null |
| wait | | String | No | Wait for the RDS instance to be 'running' before returning. Choices: [yes, no, true, false] Default: no |
| wait_timeout | | Integer | No | how long before wait gives up, in seconds Default: 300 |

Releasing RDS instance

NOTE: Releases an RDS instance. The following conditions must be met:

- The instance is running
- The instance is not manually locked
- The instance is a primary instance (Pay-As-You-Go type), read-only instance, disaster recovery instance, or temporary instance.

| Name | Alias | Type | Required | Description |
|------------------------------|-------------------------------|--------|----------|--|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| region | acs_region, ecs_region | String | No | The Aliyun Cloud region to use. If not specified then the value of the `ACS_REGION`, `ACS_DEFAULT_REGION` or `ECS_REGION` environment variable, if any, is used. |
| command | | String | Yes | For releasing RDS instance, provide value as delete |
| instance_id | | String | Yes | Id of instances to remove |

Restarting an RDS instance

Generally, an RDS instance can be restarted within 10s. If a large number of transactions must be submitted or rolled back, the restart may be extended by about one minute. The operation must meet the following conditions or may fail:

- The instance is running.
- The instance is not currently performing a backup task.

| Name | Alias | Type | Required | Description |
|------------------------------|-------------------------------|--------|----------|--|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| region | acs_region, ecs_region | String | No | The Aliyun Cloud region to use. If not specified then the value of the `ACS_REGION`, `ACS_DEFAULT_REGION` or `ECS_REGION` environment variable, if any, is used. |
| command | | String | Yes | For restarting RDS instance, provide value as reboot |
| instance_id | | String | Yes | Id of instances to reboot |

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|-----------------------|--|--------|----|---|
| force_failover | | String | No | If enabled, the reboot is done using a MultiAZ failover. default: "no" choices: ["yes", "no"] |
|-----------------------|--|--------|----|---|

Changing the RDS instance type

Changes the instance type or storage space configuration. The following conditions must be met:

- The instance is running.
- The instance is not currently performing a backup task.
- Either the instance type or storage space must be specified.
- When downgrading the disk space configuration, ensure that the input disk space is no less than 1.1 times the actually used space.
- Currently, only regular and read-only instances allow for configuration changes. Configurations cannot be changed for disaster recovery and temporary instances.

| Name | Alias | Type | Required | Description |
|------------------------------|-------------------------------|---------|----------|--|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| region | acs_region, ecs_region | String | No | The Aliyun Cloud region to use. If not specified then the value of the `ACS_REGION`, `ACS_DEFAULT_REGION` or `ECS_REGION` environment variable, if any, is used. |
| command | | String | Yes | For changing RDS instance type, provide value as modify |
| instance_id | | String | Yes | Id of instances to reboot |
| db_instance_class | instance_type | String | No | The instance type of the database. If not specified, then the replica inherits the same instance type as the source instance. |
| db_instance_storage | size | Integer | Yes | Size in gigabytes of the initial storage for the DB instance. |

Modifying RDS instance

| Name | Alias | Type | Required | Description |
|----------------------------------|-------------------------------|---------|----------|--|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| region | acs_region, ecs_region | String | No | The Aliyun Cloud region to use. If not specified then the value of the `ACS_REGION`, `ACS_DEFAULT_REGION` or `ECS_REGION` environment variable, if any, is used. |
| command | | String | Yes | For modifying RDS instance attribute, provide value as modify |
| instance_id | | String | Yes | Id of instances to modify |
| current_connection_string | | String | depends | Current connection string of an instance. If connection_string_prefix and port is passed, this parameter is required. |
| connection_string_prefix | | String | No | Target connection string |
| port | | String | No | Target port |
| connection_mode | | String | No | Performance: standard access mode; Safety: high security access mode. The RDS system assigns an access mode by default. |
| db_instance_class | instance_type | String | No | The instance type of the database. If not specified, then the replica inherits the same instance type as the source instance. |
| db_instance_storage | size | Integer | Yes | Size in gigabytes of the initial storage for the DB instance. |
| instance_description | | String | No | Instance description or remarks, no more than 256 bytes. NOTE: It cannot |

| | | | | |
|--------------------------------|---------------|--------|---------|---|
| | | | | begin with http:// , https:// . It must start with a Chinese character or an English letter. It may contain Chinese and English characters/letters, “_”, “-”, and numbers. The length may be 2-256 characters. |
| security_ip_list | | List | Yes | List of IP addresses allowed to access all databases of an instance. The IP addresses are separated by commas and cannot be repeated. The list contains up to 1,000 IP addresses. 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].) 0.0.0.0/0 indicates unrestricted. |
| instance_network_type | network_type | String | No | The network type of the instance. default: Classic choices: ['VPC', 'Classic'] |
| vpc_id | | String | Depends | The ID of the VPC. Value depends on network_type. |
| vswitch_id | | String | Depend | ID of VSwitch |
| maint_window | | String | No | Maintenance window in format of ddd:hh24:mi-ddd:hh24:mi. (Example: Mon:22:00-Mon:23:15) If not specified then a random maintenance window is assigned. |
| preferred_backup_time | | String | Depends | Backup time, in the format of HH:mmZ-HH:mm Z. This parameter is required if preferred_backup_period and backup_retention_period is passed. |
| preferred_backup_period | backup_window | String | Depends | Backup period. Values: Monday, Tuesday, Wednesday, Thursday, Friday, Saturday, and Sunday. This parameter is required if preferred_backup_time and backup_retention_period is passed. |

| | | | | |
|--------------------------------|------------------|---------|----|---|
| backup_retention_period | backup_retention | Integer | No | Retention days of the backup (7 to 730 days). The default value is 7 days |
|--------------------------------|------------------|---------|----|---|

Switching between the primary and standby databases of an RDS instance

| Name | Alias | Type | Required | Description |
|------------------------------|-------------------------------|--------|----------|--|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| command | | String | Yes | For switching RDS instances, provide value as switch |
| region | acs_region, ecs_region | String | No | The Aliyun Cloud region to use. If not specified then the value of the `ACS_REGION`, `ACS_DEFAULT_REGION` or `ECS_REGION` environment variable, if any, is used. |
| instance_id | | String | Yes | Id of instances to modify |
| node_id | | String | Yes | Unique ID of a node. |
| force | | String | Yes | Yes: forced; No: unforced; default value: unforced |

Creating an RDS read-only instance

NOTE: Creates a read-only instance for an instance. The following conditions must be met, or the creation will fail:

- The primary instance is running and not in switchover status.
- The read-only instance and primary instance must be in the same region.
- The database version of the read-only instance must be the same as or later than that of the primary instance. The primary instance must have a version of at least MySQL 5.6.
- The read-only instance must have a version of at least MySQL 5.6.
- A single RDS instance can have up to five read-only instances.

| Name | Alias | Type | Required | Description |
|-----------------------|-------------------------------|--------|----------|---|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |

| | | | | |
|------------------------------|-------------------------------|---------|---------|---|
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| command | | String | Yes | For creating read-only replica of RDS instance, provide value as replicate |
| region | acs_region, ecs_region | String | No | The Aliyun Cloud region to use. If not specified then the value of the `ACS_REGION`, `ACS_DEFAULT_REGION` or `ECS_REGION` environment variable, if any, is used. |
| source_instance | instance_id | String | Yes | ID of the database to replicate. |
| zone | acs_zone, ecs_zone | String | No | availability zone in which to launch the instance. |
| engine_version | | String | No | Version number of the database engine to use. If not specified, then the current Aliyun RDS default engine version is used. |
| db_instance_class | instance_type | String | No | The instance type of the database. If not specified, then the replica inherits the same instance type as the source instance. |
| db_instance_storage | size | Integer | Yes | Size in gigabytes of the initial storage for the DB instance. |
| instance_description | | String | No | Instance description or remarks, no more than 256 bytes. NOTE: It cannot begin with http:// , https:// . It must start with a Chinese character or an English letter. It may contain Chinese and English characters/letters, “_”, “-”, and numbers. The length may be 2-256 characters. |
| instance_network_type | network_type | String | No | The network type of the instance. default: Classic choices: ['VPC', 'Classic'] |
| vpc_id | | String | Depends | The ID of the VPC. Value depends on network_type. |
| vswitch_id | | String | Depend | ID of VSwitch |
| private_ip_address | | | | |

Database management

Module Name: rds.py

Creating a database

Creates a new database in an instance. The interface must meet the following conditions, or the call will fail:

- The instance status is Running
- The instance is not locked
- The maximum number of databases in the instance is not exceeded
- The instance type is primary instance

NOTE: Users of PostgreSQL and PPAS instances are permitted to perform the CREATE DATABASE operation through SQL. Therefore, this interface does not support PostgreSQL and PPAS.

| Name | Alias | Type | Required | Description |
|------------------------------|-------------------------------|--------|----------|--|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| command | | String | Yes | For creating RDS Database instances, provide value as create |
| instance_id | | String | Yes | Id of instances |
| db_name | | String | No | Name of a database to create within the instance. If not specified, then no database is created. |
| db_description | | String | No | Description of a database to create within the instance. If not specified, then no database is created. |
| character_set_name | | String | No | Associate the DB instance with a specified character set. |

Deleting a database

Users can delete databases from instances to do this, the interface must meet the following conditions, or the call will fail:

- The instance status is Running
- The instance type is primary instance

NOTE: Users of PostgreSQL and PPAS instances are permitted to perform the DROP DATABASE operation through SQL. Therefore, this interface does not support PostgreSQL and PPAS.

| Name | Alias | Type | Required | Description |
|------------------------------|-------------------------------|--------|----------|--|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| command | | String | Yes | For deleting RDS Database instances, provide value as delete |
| instance_id | | String | Yes | Id of instances |
| db_name | | String | No | Name of a database to create within the instance. If not specified, then no database is created. |

Account management

Module Name: rds_acc_mgmt.py

Creating an account

Creates an account for a database. For instances of the same user, a single account can be used to operate multiple databases. A single account can have different permissions on different databases. The following conditions must be met, or account creation will fail:

- The instance status is Running
- The current database status is Running
- The current instance is not locked
- The maximum number of accounts for a single instance is not exceeded

| Name | Alias | Type | Required | Description |
|------------------------------|-------------------------------|--------|----------|--|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| command | | String | Yes | For creating new account, provide value as create |
| db_instance_id | | String | Yes | Id of instance |

| | | | | |
|-------------------------|----------|--------|-----|--|
| account_name | name | String | Yes | 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 | password | String | Yes | Operation password. It may consist of letters, digits, or underlines, with a length of 6 to 32 characters |
| description | | String | No | Account remarks, which cannot exceed 256 characters. NOTE: It cannot begin with http:// , https:// . It must start with a Chinese character or English letter. It can include Chinese and English characters/letters, underlines (_), hyphens (-), and numbers. The length may be 2-256 characters |
| account_type | | String | No | Privilege type of account. Normal: Common privilege; Super: High privilege; Default value is Normal. This parameter is valid for MySQL 5.5/5.6 only. |

Deleting an account

Directly deletes database accounts. The instance status is Running.

| Name | Alias | Type | Required | Description |
|------------------------------|----------------------------|--------|----------|--|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| command | | String | Yes | For deleting account, provide value as delete |
| db_instance_id | | String | Yes | Id of instance |
| account_name | name | String | Yes | Name of an account |

Granting account permissions

Grants database access permissions to accounts. A single account can be associated with one or more databases. If the specified account already has the access permission on the specified database, the operation will directly return a successful result. Instance status require in Running.

| Name | Alias | Type | Required | Description |
|------------------------------|-------------------------------|--------|----------|--|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| command | | String | Yes | For granting account permission, provide value as grant |
| db_instance_id | | String | Yes | Id of instance |
| account_name | name | String | Yes | Name of an account |
| db_name | | String | Yes | Name of the database associated with this account |
| account_privilege | privilege | String | Yes | Account permission. Values: ReadOnly and ReadWrite |

Revoking account permissions

Deletes an account's access permission on a database. The following conditions must be met, or deletion will fail:

- The current database instance status is Running
- The current database status is Running

| Name | Alias | Type | Required | Description |
|------------------------------|-------------------------------|--------|----------|--|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| command | | String | Yes | For revoking account permission, provide value as revoke |
| db_instance_id | | String | Yes | Id of instance |
| account_name | name | String | Yes | Name of an account |
| db_name | | String | Yes | Name of the database associated with this account |

Resetting the instance password

Resets the account password. The following conditions must be met, or the operation will fail:

- The instance status is Running
- The instance is not locked

| Name | Alias | Type | Required | Description |
|------------------------------|-------------------------------|--------|----------|--|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| command | | String | Yes | For resetting account password, provide value as reset_password |
| db_instance_id | | String | Yes | Id of instance |
| account_name | name | String | Yes | Name of an account |
| account_password | password | String | Yes | A new password. It may consist of letters, numbers, or underlines, with a length of 6 to 32 characters |

Resetting an account

Resets an instance's initial account. It is only effective for RDS for PostgreSQL and RDS for PPAS instances

| Name | Alias | Type | Required? | Description |
|------------------------------|-------------------------------|--------|-----------|--|
| acs_access_key | ecs_access_key, access_key | String | No | Aliyun Cloud access key. If not set then the value of the `ACS_ACCESS_KEY_ID`, `ACS_ACCESS_KEY` or `ECS_ACCESS_KEY` environment variable is used. |
| acs_secret_access_key | ecs_secret_key, secret_key | String | No | Aliyun Cloud secret key. If not set then the value of the `ACS_SECRET_ACCESS_KEY`, `ACS_SECRET_KEY`, or `ECS_SECRET_KEY` environment variable is used. |
| command | | String | Yes | For resetting account, provide value as reset |
| db_instance_id | | String | Yes | Id of instance |
| account_name | name | String | Yes | Name of an account |

| | | | | |
|-------------------------|----------|--------|-----|--|
| account_password | password | String | Yes | A new password. It may consist of letters, numbers, or underlines, with a length of 6 to 32 characters |
|-------------------------|----------|--------|-----|--|

NOTE: Above table includes all the parameters which are in the scope of Project and the remaining parameters which not in the scope of project are not mentioned.

Disclaimer

This **DRAFT** Specification is being forwarded to you strictly for informational purposes and sign-off requirement before development starts. This document covers functional and technical requirement of modules and interfaces implementation with Ansible for Aliyun (Alibaba) Cloud. The specification is "AS IS," "WITH ALL FAULTS" and Click2Cloud makes no warranties, and disclaims all warranties, express, implied, or statutory related to the specifications. THE CORPORATIONS ARE NOT LIABLE FOR ANY INCOMPLETENESS OR INACCURACIES. THE CORPORATIONS ARE NOT LIABLE FOR ANY CONSEQUENTIAL, INCIDENTAL, OR INDIRECT DAMAGES RELATING TO THE SPECIFICATIONS OR THEIR USE.

Appendix A: Glossary

| No. | Initial Name | Description |
|-----|--------------|-----------------------------------|
| 1 | CR | Change Request |
| 2 | FSD | Functional Specification Document |
| 3 | ECS | Elastic Computing Service |
| 4 | SLB | Server Load Balancer |
| 5 | VPC | Virtual Private Cloud |
| 6 | OSS | Object Storage Service |
| 7 | RDS | Relational Database Service |

Appendix B: Document Change History and Sign-off

| Version No. | Date | Name | Sign-Off by |
|-------------|------------|---------|------------------|
| V2.2 | 02/07/2017 | YueWang | YueWang sign off |
| | | | |
| | | | |
| | | | |

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| | | |
| | | |