

Y U N I O N

OneCloud 命令行客户端 climc

2020.04
APRIL





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架构和工作原理

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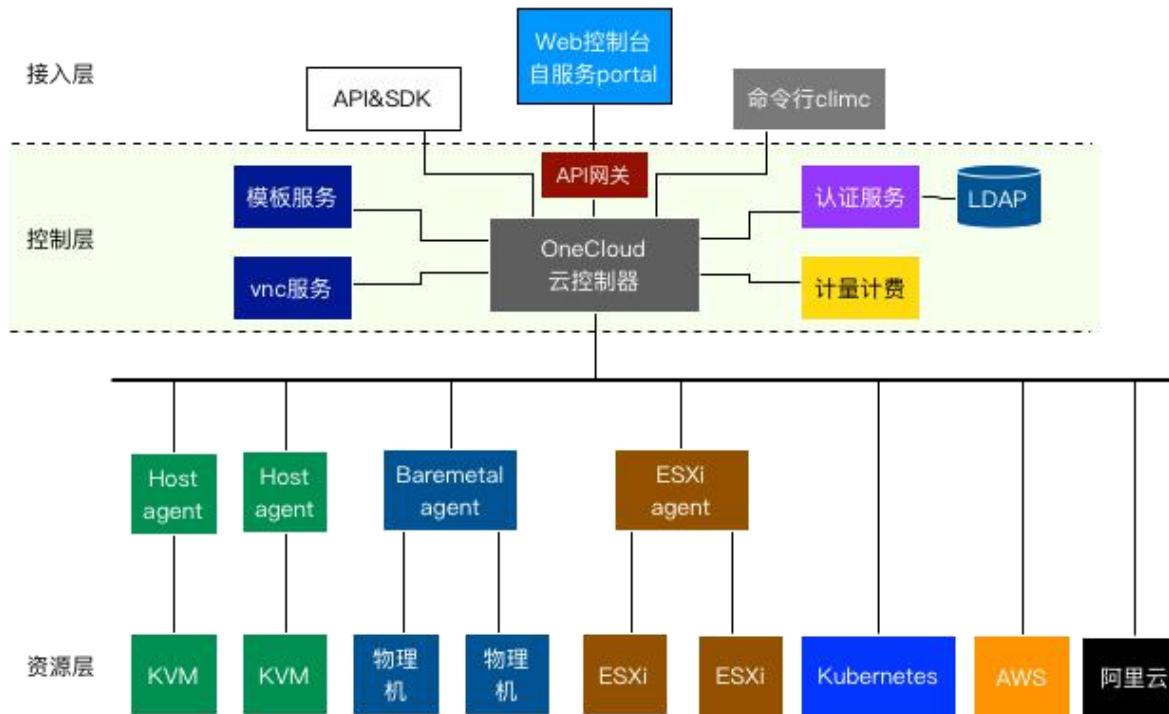
使用技巧

为什么要使用climc

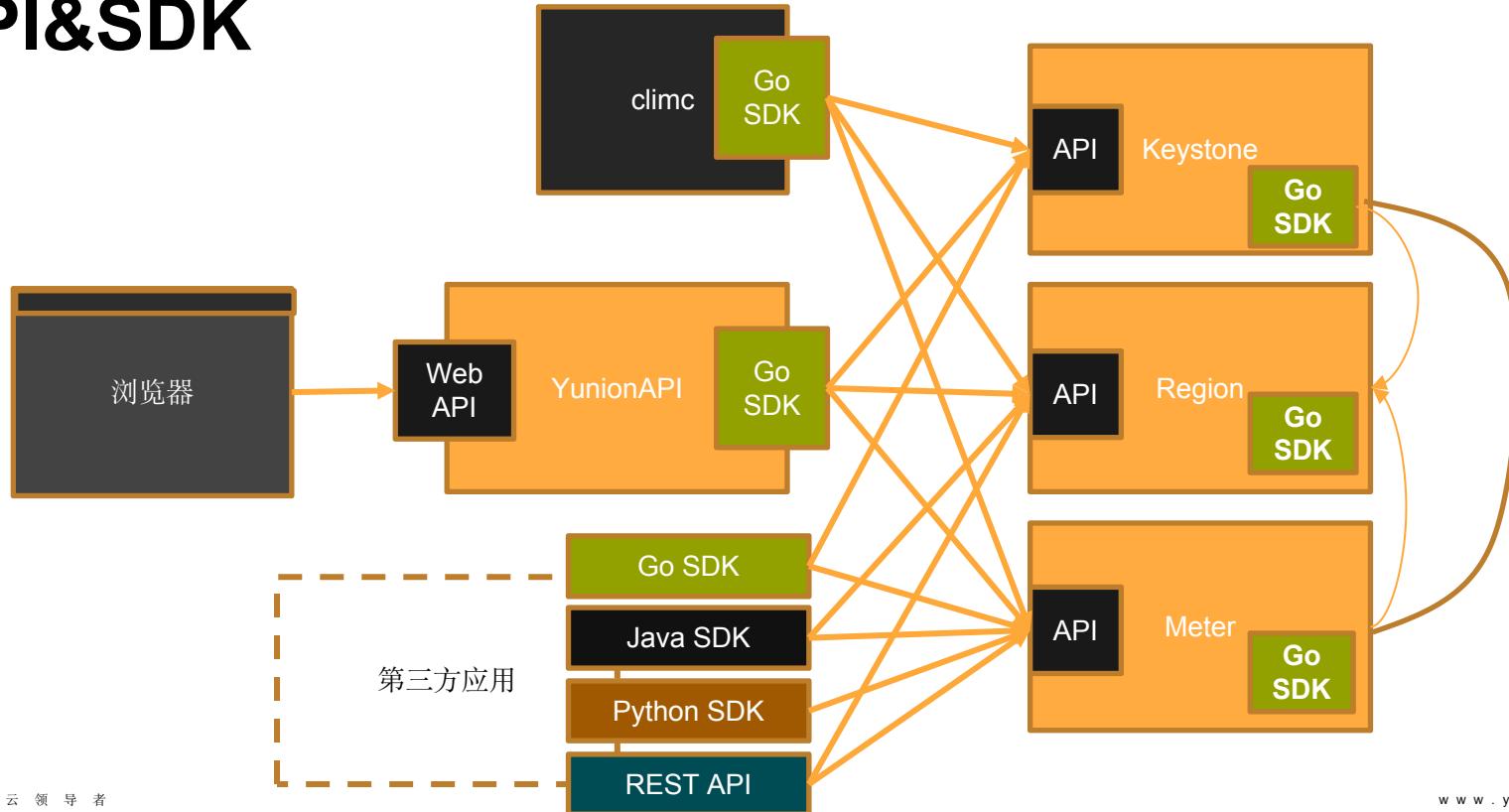
- 效率高
- 功能强

API First Strategy!

OneCloud组件架构



API&SDK





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获取和安装

- 部署了OneCloud组件的节点上默认安装了climc

```
# 默认安装在: /opt/yunion/bin/climc
```

- RPM安装

```
# 添加 yunion onecloud rpm 源  
$ yum-config-manager --add-repo https://iso.yunion.cn/yumrepo-3.1/yunion.repo  
# 安装 climc 云平台命令行工具 和 ocadm 部署工具  
$ yum install -y yunion-climc
```

- OneCloud集群内置climc容器

```
$ kubectl -n onecloud exec -it default-climc-xxxxxxxxx-xxx /bin/bash
```

- 从源代码安装 (for mac&windows)

```
$ git clone https://github.com/yunionio/onecloud.git  
$ cd onecloud  
$ make cmd/climc
```



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climc环境初始化

- 用户名/密码初始化

```
export OS_USERNAME=quijian  
export OS_PASSWORD=<password>  
export OS_DOMAIN_NAME=Yunion  
export OS_PROJECT_NAME=system  
export OS_PROJECT_DOMAIN=Default  
export OS_AUTH_URL=https://10.18.10.17:5000/v3  
export OS_ENDPOINT_TYPE=public  
export YUNION_USE_CACHED_TOKEN=false  
export YUNION_INSECURE=true
```

用户名
密码
用户归属域名称
项目名称
项目归属域名称
认证接口
使用服务的Endpoint类型
是否缓存token
是否不验证TLS证书

climc环境初始化

- ACCESS_KEY/SECRET初始化

```
export OS_ACCESS_KEY=97agfdgfe077325f34dc  
export OS_SECRET_KEY=WmRghhZNE5kU25NWEg3Zg=  
export OS_AUTH_URL=https://10.18.10.17:5000/v3  
export OS_ENDPOINT_TYPE=public  
export YUNION_USE_CACHED_TOKEN=false  
export YUNION_INSECURE=true
```

ACCESS KEY

SECRET

认证接口

使用服务的Endpoint类型

是否缓存token

是否不验证TLS证书

如何获取ACCESS_KEY/SECRET

管理控制台

请输入您要搜索资源的名称或IP

云管平台 qijian 退出

用户信息 AccessKey 管理 退出

默认面板 测试面板

控制面板 主机 容器 网络 存储 数据库 费用 多云管理 系统配置

虚拟机总数 11 台 CPU 使用总量 34 核 内存使用总量 43 GB 公告

存储使用总量 1 TB IP 使用总量 11 个 GPU 卡使用量 0 块 gaoxianqi · 1 个月前 17

弹性公网IP和公网IP总量 0 个 对象存储容量 0 B 对象存储文件数量 0 个 存储桶数量 0 个

虚拟机关机率 9 % 磁盘未挂载率 5 % IP 使用率 0 % EIP 使用率 0 %

已用 未使用 总量 1 台 10 台 11 台 已用 未使用 总量 1 个 18 个 19 个 已用 未使用 总量 11 个 0 个 0 个 已用 未使用 总量 () () ()

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如何获取ACCESS_KEY/SECRET

The screenshot shows the 'AccessKey Management' page in a cloud management interface. On the left is a sidebar with various service icons: Control Panel, Host, Container, Network, Storage, Database, Cost, Multi-cloud Management, and System Configuration. The main area has a title bar with 'AccessKey Management' and a search bar. Below is a table listing three existing AccessKeys, each with columns for ID, Activation Status, Creation Time, and Operations (Enable, Disable, Delete). A red arrow points to the 'Create New' button (新建) at the top left of the table area.

ID	启用状态	创建时间	操作
[REDACTED]	启用	2020-04-21 17:08:48	启用 禁用 删除
[REDACTED]	启用	2019-09-09 23:52:06	启用 禁用 删除
[REDACTED]	启用	2019-09-05 17:40:32	启用 禁用 删除

共 3 条记录

climc环境初始化

- TOKEN初始化

```
export OS_AUTH_TOKEN=MViIEqo7OfIVzVTixLo  
export OS_PROJECT_NAME=system  
export OS_PROJECT_DOMAIN=Default  
export OS_AUTH_URL=https://10.18.10.17:5000/v3  
export OS_ENDPOINT_TYPE=public  
export YUNION_USE_CACHED_TOKEN=false  
export YUNION_INSECURE=true
```

临时TOKEN

项目名称

项目归属域名称

认证接口

使用服务的Endpoint类型

是否缓存token

是否不验证TLS证书



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调用方法

```
climc <climc参数> <子命令> <子命令参数>
```

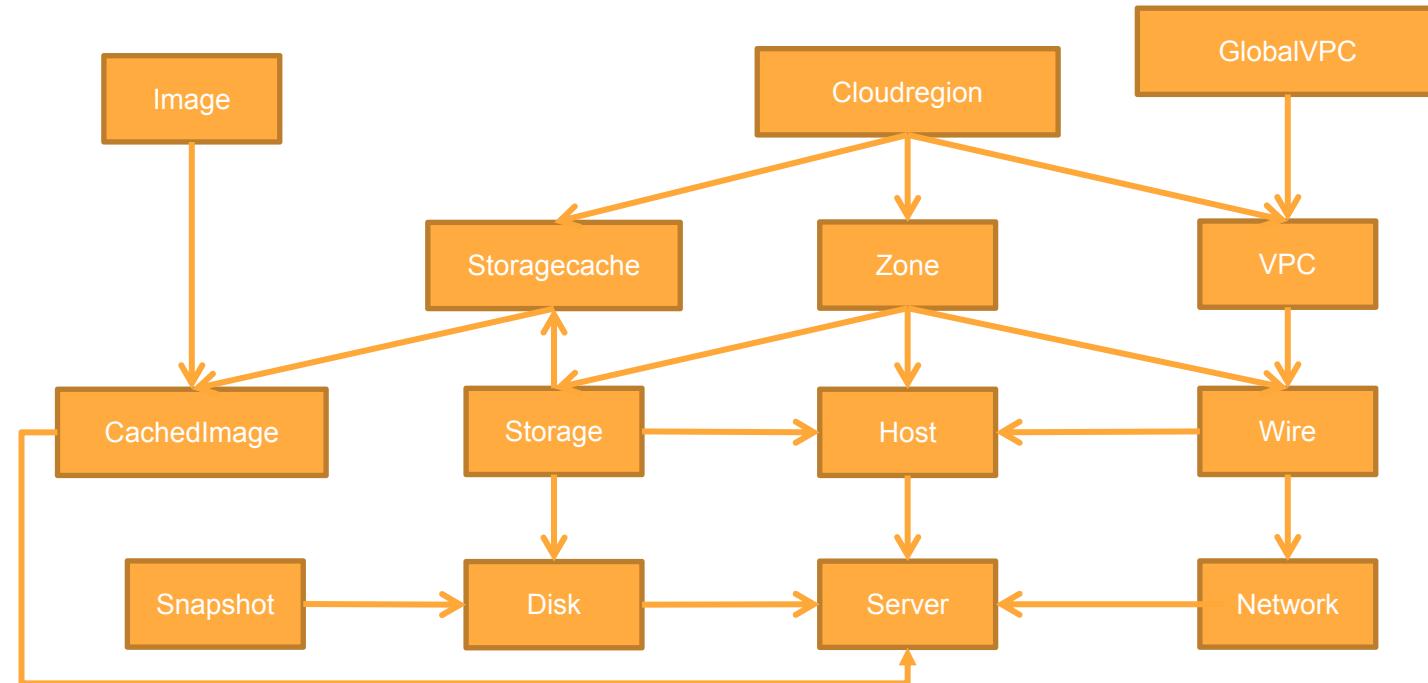
```
climc --debug server-list --provider VMware
```

climc参数

子命令

子命令参数

子命令模式——资源为中心



资源API接口

接口功能	METHOD	PATH	举例
创建	POST	/resources	POST /servers
列表	GET	/resources	GET /servers
获取单个资源	GET	/resources/<res_id>	GET /servers/srv1
获取单个资源的特性属性	GET	/resources/<res_id>/<spec>	GET /servers/srv1/vnc
更新属性	PUT	/resources/<res_id>	PUT /servers/srv1
执行特定操作	POST	/resources/<res_id>/<action>	POST /servers/srv1/start
删除	DELETE	/resources/<res_id>	DELETE /servers/srv1

资源climc子命令

接口功能	PATH	举例
创建	climc <resource>-create	climc server-create ...
列表	climc <resource>-list	climc server-list
获取单个资源	climc <resource>-show	climc server-show
获取单个资源的特性属性	climc <resource>-<spec>	climc server-vnc
更新属性	climc <resource>-update	climc server-update
执行特定操作	climc <resource>-<action>	climc server-start
删除	climc <resource>-<delete>	climc server-delete

获取帮助

```
qiu@LAPTOP-F2JUQEON:~/onecloud(master)*$ climc --help | more
Usage: climc [--debug] [--version] [--timeout TIMEOUT] [--insecure|-k] [--cert-file CERT_FILE] [--key-file KEY_FILE] [--completion {bash}]
[--use-cached-token] [--os-username OS_USERNAME] [--os-password OS_PASSWORD] [--os-project-name OS_PROJECT_NAME] [--os-project-domain OS_
PROJECT_DOMAIN] [--os-domain-name OS_DOMAIN_NAME] [--os-access-key OS_ACCESS_KEY] [--os-secret-key OS_SECRET_KEY] [--os-auth-token OS_AUTH
_TOKEN] [--os-auth-url OS_AUTH_URL] [--os-region-name OS_REGION_NAME] [--os-zone-name OS_ZONE_NAME] [--os-endpoint-type {publicURL,interna
lURL,adminURL}] [--api-version API_VERSION] [--output-format {table,kv,json,flatten-table,flatten-kv}] [--help|-h] <SUBCOMMAND> ...
Command-line interface to the API server.

Positional arguments:
<SUBCOMMAND>
    bucket-create
        Create a bucket
    group-join-project
        Group join projects with roles
    network-split
        Split a network at the specified IP address
    router-rule-delete
        Delete router rule
    k8s-storageclass-ceph-csi-rbd-connection-test
        Test storageclass connection
    cloud-account-list
        List cloud accounts
    cloud-account-create-zstack
        Create a ZStack cloud account
```

获取子命令帮助

```
qiu@LAPTOP-F2JUQEON:~/onecloud(master)*$ climc help network-public
Usage: climc network-public [--shared-projects SHARED_PROJECTS] [--shared-domains SHARED_DOMAINS] [--scope {system, domain, project}] <ID>

Make a network public

Positional arguments:
<ID>
    ID or Name of the zone to show

Optional arguments:
[--shared-projects SHARED_PROJECTS]
    Share to projects
[--shared-domains SHARED_DOMAINS]
    share to domains
[--scope {system, domain, project}]
    sharing scope
```

子命令typo建议

```
cqiu@LAPTOP-F2JUQEON:~/onecloud(master)*$ climc server-lise
Usage: climc [--debug] [--version] [--timeout TIMEOUT] [--insecure|-k] [--cert-file CERT_FILE] [--key-file KEY_FILE] [--completion {bash}]
[--use-cached-token] [--os-username OS_USERNAME] [--os-password OS_PASSWORD] [--os-project-name OS_PROJECT_NAME] [--os-project-domain OS_
PROJECT_DOMAIN] [--os-domain-name OS_DOMAIN_NAME] [--os-access-key OS_ACCESS_KEY] [--os-secret-key OS_SECRET_KEY] [--os-auth-token OS_AUTH
_TOKEN] [--os-auth-url OS_AUTH_URL] [--os-region-name OS_REGION_NAME] [--os-zone-name OS_ZONE_NAME] [--os-endpoint-type {publicURL,interna
lURL,adminURL}] [--api-version API_VERSION] [--output-format {table,kv,json,flatten-table,flatten-kv}] [--help|-h] <SUBCOMMAND> ...
Unknown argument 'server-lise' for subcommand, did you mean "server-list", "server-iso" or "server-clone"?
```

Debug模式

```
qiu@LAPTOP-F2JUQEON:~/onecloud(master)*$ climc --debug server-list
POST /v3/auth/tokens HTTP/1.1
Host: 10.168.222.188:5000
User-Agent: yunioncloud-go/201708
Content-Length: 229
Accept: */*
Accept-Encoding: *
Content-Type: application/json
```

```
CURL: curl -X 'POST' -d '{"auth":{"context":{"source":"cli"},"identity":{"methods":["password"]}, "password":{"user":{"domain":{"name":"Default"}, "name":"sysadmin", "password": "1234567890"}, "scope":{"project":{"domain":{"name":"Default"}, "name":"system"}}}}, -H 'Accept: */*' -H 'Accept-Encoding: *' -H 'Content-Length: 227' -H 'Content-Type: application/json' -H 'User-Agent: yunioncloud-go/201708' 'http://10.168.222.188:5000/v3/auth/tokens'
```

```
HTTP/1.1 200 OK
Content-Length: 4141
Content-Type: application/json
Date: Tue, 21 Apr 2020 10:09:32 GMT
Server: Yunion AppServer/Go/2018.4
Vary: Origin
X-Frame-Options: SAMEORIGIN
X-Request-Host-Id: LywSeilT1aC9qQjdapjSCuuEn-M=
X-Request-Id: f599ce
X-Subject-Token: gAAAAABensZcIX1Dolani1gQmbxgZ1PI8574z8I9vxu-gM9xq0h9guTQXL4fKNG3VRk7Iiiecd0wrem2vUTNXvq89qV2x9rdEr78QM8rpyLL4WGVsNkcybGCU
-4ZkYc50IU9R9m2CyAQSFiqCTjRLEoNKYY0d4QfI00MNBoIgf3HD8Xa0iwvlAKGKmoRWi_ukZfnbDscHUT
X-Yunion-Peer-Service-Name: keystone
```

调用方式之——交互式

cqiu@LAPTOP-F2JUQEON:~/onecloud(master)*\$ climc	
climc> server	
server-action	Show operation action logs of server
server-create-eip	allocate an EIP and associate EIP to server
server-event	Show operation event logs of server
server-template-list	List server template
server-template-create	Create a server template
server-template-update	Update a server template
server-template-show	Show a server template
server-template-delete	Delete a server template
server-template-private	Private server template
server-template-public	Public server template
server-disk-list	List server disk pairs
server-disk-show	Show server disk details
server-disk-update	Update details of a virtual disk of a virtual server
server-create-disk	Create a disk and attach it to a virtual server
server-attach-disk	Attach an existing virtual disks to a virtual server
server-detach-disk	Detach a disk from a virtual server

调用方式之——命令行式

```
qiu@LAPTOP-F2JUQEON:~/onecloud(master)*$ source <(climc --completion bash) ←
qiu@LAPTOP-F2JUQEON:~/onecloud(master)*$ climc server
Display all 110 possibilities? (y or n)
qiu@LAPTOP-F2JUQEON:~/onecloud(master)*$ climc server-li ←
server-list      server-live-migrate
qiu@LAPTOP-F2JUQEON:~/onecloud(master)*$ climc server-li
server-list      server-live-migrate
qiu@LAPTOP-F2JUQEON:~/onecloud(master)*$ climc server-list
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
|     ID      |     Name      | Billing_type | Status | vcpu_count | vmem_size | Created_at | Hypervisor | os_type | is_system |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
| 9bf5d9c9-ef10- | zxc-lb      | postpaid    | running | 2          | 2048       | 2020-04-17T07 | kvm        | Linux     | false     |
| 4ca8-83f0-daea |           |             |         |             | :34:27.000000 |           |           |           |           |
| 1b9cd3a2        |           |             |         |             | Z          |           |           |           |           |
| c21646e9-f37f- | vcenter-lxj  | postpaid    | running | 2          | 2048       | 2020-04-10T09 | kvm        | Linux     | false     |
| 42fd-8adc-9f11 |           |             |         |             | :50:58.000000 |           |           |           |           |
| 63fd58d2        |           |             |         |             | Z          |           |           |           |           |
| 147a7412-f9ca- | esxi-lxj   | postpaid    | running | 8          | 12288      | 2020-04-10T09 | kvm        | VMWare    | false     |
| 471a-8fb8-66f0 |           |             |         |             | :46:19.000000 |           |           |           |           |
| 4a284cfa        |           |             |         |             | Z          |           |           |           |           |
+-----+-----+-----+-----+-----+-----+-----+-----+-----+
```

查看当前用户信息

```
qiu@LAPTOP-F2JUQEON:~/onecloud(master)*$ climc session-show
```

Field	Value
api_version	v1
context	{"ip":"192.168.222.171","source":"cli"}
domain	Yunion
domain_id	a0fc05a5ac5b42818dc8d612c9631a1c
endpoint_type	public
expires	2020-04-22T09:45:47.542679Z
project_domain	Default
project_domain_id	default
roles	admin
tenant	system
tenant_id	a7f2e2a81a1e4850a41eae5f140ceb14
token	gAAAAABensDL6Nc4ldo9JKIc1nyz8r0pQc0QyiGMa-f6wCHUT1X_uFCMG8BGDKP0yg_S85Qoz-Aos00e-3daWlzX-Qg_GZZZeWf9fi-Glttby58cu0j2bDTF7pE1A7mSaptFoZXJx0d5nGuJm3_P7fSqclMNpUD-1wudyqPeiGSDTS4Jl2008QCTI9GwU61tLT0vcIQTzpX_S-2Gu8LLThm2AiY0Y7zGZf6PKsovPayMedhncyr39QWWcbDNd0QDo7fKuU21DjN9
user	qiujian
user_id	0d48cd5032970fe039c9dcec5e802df3a449dd2e49e39797c0d9022f9c2346fd

表格宽度自适应

ID	Name	Acces s_mac	Acces s_ip	Ipmi _Ip	Mana ger_ URI	Stat us	enab led	host _sta tus	mem_ size	cpu_ coun t	node _cou nt	sn	stor age_ type	host _typ e	vers ion	stor age_ size	doma in_i	publ ic_s cope
46eae	dell7	e4:43	192.1	192.		unkn	fals	offl	1310	0	0	GD4L	rota	bare		0	defa	none
c65-d	40	:4b:7	68.22	168.		own	e	ine	72			NX2	te	meta			ult	
88f-4		6:61:	2.235	222.										l				
a55-8		9c		230														
37e-d																		
5d7b1																		
9d940																		
a																		
16f49	gobui	00:22	10.16		http	runn	true	onli	1183	8	1	Not	rota	hype	mast	2013	defa	doma
f8a-8	ld	:ac:b	8.222		://1	ing		ne	7			Spec	te	rvis	er(3	30	ult	in
8cc-4		6:a4:	.188		0.16							ifie		or	860e			
715-8		f7		8.22								d			6320			
870-f				2.18											0408			
78130				8:88											13)			
196fa				85														
9																		

*** Total: 2 Pages: 1 Limit: 20 Offset: 0 Page: 1 ***

避免表格宽度自适应折行

```
qiu@LAPTOP-F2JUQEON:~/onecloud(master)*$ clcmc host-list | cat
+-----+-----+-----+-----+-----+-----+-----+-----+
| ID          | Name      | Access_mac    | Access_ip     | Ipmi_Ip      | Manager_URI   | St
atus | enabled | host_status | mem_size | cpu_count | node_count | sn           | storage_type | host_type | version
| storage_size | domain_id | public_scope |
+-----+-----+-----+-----+-----+-----+-----+-----+
| 46eaec65-d88f-4a55-837e-d5d7b19d940a | dell740 | e4:43:4b:76:61:9c | 192.168.222.235 | 192.168.222.230 | known | false | offline | 131072 | 0 | 0 | GD4LNX2 | rotate | baremetal | un
known | default | none |
| 16f49f8a-88cc-4715-8870-f78130196fa9 | gobuild | 00:22:ac:b6:a4:f7 | 10.168.222.188 | Not Specified | rotate | hypervisor | http://10.168.222.188:8885 | ru
nning | true | online | 11837 | 8 | 1 | Not Specified | rotate | master(3860e6320040813) | 201330 | default | domain |
+-----+-----+-----+-----+-----+-----+-----+-----+
*** Total: 2 Pages: 1 Limit: 20 Offset: 0 Page: 1 ***
```

配合bash执行复杂任务

其他

```
clqiu@LAPTOP-F2JUQEON:~/onecloud(master)*$ climc service-config-edit region2
{
  "config": {
    "default": {
      "auth_token_cache_size": 2048,
      "auto_snapshot_day": 1,
      "auto_snapshot_hour": 2,
      "baremetal_server_reuse_host_ip": true,
```

编辑配置

```
qiuj@LAPTOP-F2JUQEON:/mnt/c/Users/sword$ climc server-ssh casserv53x
[I 200421 18:12:24 shell.init.153.func76(servers.go:1302)] ssh 10.168.222.220:22
Last login: Thu Apr 16 22:09:27 2020
[root@casserv53x ~]#
```

ssh主机



欢迎参与调查问卷



加入OneCloud技术交流群



sales@yunion.cn



400-8180-186



<https://www.yunion.cn>

List接口常用参数-权限范围

参数	说明	举例
scope	指定可见资源的范围，可能值:project, domain, system scope=project时，list出当前用户当前项目的资源 scope=domain时，list出当前用户当前域的资源，要求用户有域管理或者系统管理权限 scope=system时，list出所有的资源，要求用户有系统管理员权限，和admin=true等价	scope=system
project	当为域管理权限或者系统管理权限时，可以通过该参数list指定项目的资源，等价于tenant, tenant_id, project_id	project=system
project_domain	当为系统管理员权限时，可以通过该参数list指定域的资源，等价于project_domain_id, domain_id	project_domain=default

List接口常用参数-平台范围

参数	说明	举例
provider	指定资源归属的平台，例如Aliyun等	provider=Aliyun
brand	指定资源归属的平台品牌，一般来说和provider相同，目前只有私有云存在brand和provider不一样的情况	brand=Dstack
cloud_env	指定资源归属的云环境，三个值：public（公有云），private（私有云）和onpremise（本地IDC）。其中： cloud_env=public和public_cloud=true等价 cloud_env=private和private_cloud=true等价 cloud_env=onprem sie和is_on_premise=true等价	cloud_env=public
cloudregion	指定资源归属的云区域，例如阿里云北京区域等。Cloudregion, cloudregion_id, region, region_id等价	
zone	指定资源归属的可用区，例如阿里云北京一区等。Zone, zone_id等价	

List接口常用参数-sql过滤条件

操作符	参数个数	举例	说明
in	> 0	name.in("test", "good")	在给定数组中
notin	> 0	name.notin('test')	不在给定数组中
between	2	created_at.between('2019-12-10', '2020-01-02')	在两个值之间
ge	1	created_at.ge('2020-01-01')	大于或等于给定值
gt	1	created_at.gt('2020-01-01')	严格大于给定值
le	1	created_at.le('2020-01-01')	小于或等于给定值
lt	1	sync_seconds.lt(900)	严格大于给定值
like	> 0	name.like('%test%')	sql字符串匹配任意一个字符串
contains	> 0	name.contains('test')	包含任意一个给定字符串
startswith	> 0	name.startswith('test')	以任意一个给定字符串开头
endswith	> 0	name.endswith('test')	以任意一个给定字符串结尾
equals	> 0	name.equals('test')	等于任意一个给定值
notequals	1	name.notequals('test')	不等于给定值
isnull	0	name.isnull()	值为SQL的NULL
isnotnull	0	name.isnotnull()	值不为SQL的NULL
isempty	0	nameisempty('test')	值为空字符串
isnotempty	0	name.isnotempty('test')	值不是空字符串
isnullorempty	0	name.isnullorempty('test')	值为SQL的NULL或者空字符串