OTC REST API Guide

T-Systems International

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By signing, this document is released as a mandatory instruction for employees.  
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Short Description

This documentation contains how you can add new user to the Open Telecom Cloud.

# Introduction

This document describes how should use Huawei REST interface via OTC console applications.

# Preconditions

## Access

* HTTPS access to OTC machines. ( if your DNS not resolving the OTC host then following could be added to “host” file
  + 46.29.103.37 ecs.eu-de.otc.t-systems.com
  + 46.29.103.37 evs.eu-de.otc.t-systems.com
  + 46.29.103.37 vbs.eu-de.otc.t-systems.com
  + 46.29.103.37 ims.eu-de.otc.t-systems.com
  + 46.29.103.37 vpc.eu-de.otc.t-systems.com
  + 46.29.103.37 elb.eu-de.otc.t-systems.com
  + 46.29.103.37 ces.eu-de.otc.t-systems.com
  + 46.29.103.37 as.eu-de.otc.t-systems.com
  + 46.29.103.37 rds.eu-de.otc.t-systems.com
  + 46.29.103.37 antiddos.eu-de.otc.t-systems.com
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  + 46.29.103.37 cae.eu-de.otc.t-systems.com
  + 46.29.103.37 container.eu-de.otc.t-systems.com
  + 46.29.103.37 vdi.eu-de.otc.t-systems.com

## Packages

* At least Java 1.7 version need to run otc client

# Service Overview

This service based on a Huawei Cloud API interfaces. Detailed description available in following documents.

**Huawei API interface documents:**

* Auto Scaling API Reference 20160115 01.pdf
* Cloud Eye Service API Reference 20160115 01.pdf
* Elastic Cloud Server API Reference 20160115 01.pdf
* Elastic Load Balance API Reference 20160115 01.pdf
* Elastic Volume Service API Reference 20160115 01.pdf
* Identity and Access Management API Reference 2016-1-11 01 .pdf
* Image Management Service API Reference 20160115 01.pdf
* Object Storage Service API Reference 2016-01-15 01.pdf
* OpenStack API Reference 20160115 01.pdf
* Virtual Private Cloud API Reference 20160115 01.pdf
* Volume Backup Service API Reference 20160115 01.pdf

# OTC CLI Interface

Purposes of the OTC Tool to manage OTC via command line similar way than AWS with AWS cli tools . OTC Cli provides common interface to operation team and external DEVOPS to manage their cloud services.

# OTC CLI Functionality

## Configuration functions

### User configuration

**Command:**

otc configure

**Output:**

Enter a Project ID:

XXX65e2724ebbb504abXXXXXXXX

Enter a Access Key:

XXXXXVNOMK0UXXXX

Enter a Secret Key:

XXXXlQ7nNvBXXXXXXXXXXXXXXXXXXXXXX

### Proxy Configuration

**Command:**

otc configure-proxy

**Output:**

Enter a proxy host:

qhub03.hu.t-internal.com

Enter a proxy port:

3128

## Output formats

**Command:**

otc main\_command subcommand --output [table, json, text] ( table is default)

**Examples:**

otc ecs describe-instances --output json

otc ecs describe-instances 09bdd206-b48f-482e-b64b-34f376b75c91 --output text

otc ecs describe-flavors --output table

## IAM Features

URL: <https://iam.eu-de.otc.t-systems.com/v3/auth/tokens>

### Generate IAM Token Based on Username and Password

**JSON Request:**

{

"auth": {

"identity": {

"methods": [

"password"

],

"password": {

"user": {

"name": "'"$USERNAME"'",

"password": "'"$PASSWORD"'",

"domain": {

"name": "'"$USERNAME"'"

}

}

}

},

"scope": {

"project": {

"id": "'"$PROJECT\_ID"'"

}

}

}

}

**Command:**

otc iam token

**Output:**

generated token.

## ECS features

### List ECS instances

**Command:**

otc ecs describe-instances

**Output:**

+------------------------------------+-----------------------+

|id |name |

+------------------------------------+-----------------------+

|f1c2d1e0-36fb-443e-ac18-eab70706235c|instancename |

|b6c602b1-06d0-4bdb-b764-5d43b47abc14|ecs-3dce |

|097da903-ab95-44f3-bb5d-5fc08dfb6cc3|ecs-8e83 |

+------------------------------------+-----------------------+

### Get ECS instance details

**Command:**

otc ecs describe-instances [instance-id]

Example:

**Output:**

+----------------------------------------------------+------------------------------------------------------+

|Key |Value |

+----------------------------------------------------+------------------------------------------------------+

|server.status | |

|server.updated | |

|server.hostId |ACTIVE |

|server.OS-EXT-SRV-ATTR:host |2016-03-04T09:13:55Z |

|server.addresses.a86336d6-6.OS-EXT-IPS-MAC:mac\_addr |deb765850ebd5f097bb74fd51cebe1559cda61fbfb374 |

|server.addresses.a86336d6-6.version |pod01.eu-de-01 |

|server.addresses.a86336d6-6.addr |fa:16:3e:18:95:de |

|server.addresses.a86336d6-6.OS-EXT-IPS:type |4 |

|server.addresses.a86336d6-6.OS-EXT-IPS-MAC:mac\_addr |10.0.0.33 |

|server.addresses.a86336d6-6.version |fixed |

|server.addresses.a86336d6-6.addr |fa:16:3e:18:95:de |

|server.addresses.a86336d6-6.OS-EXT-IPS:type |4 |

|server.links.href |100.64.57.224 |

|server.links.rel |floating |

|server.links.href |https://compute.region.eu-de.otc-tsi.de/v2/1c76b75c91 |

|server.links.rel |self

….. |

+----------------------------------------------------+------------------------------------------------------+

### Get ECS quotas information

**Command:**

ecs describe-quotas

**Output:**

+------------------------------------+---------------------------------+

|Key | Value|

+------------------------------------+---------------------------------+

|quota\_set.gigabytes\_SAS.reserved | 0|

|quota\_set.gigabytes\_SAS.limit | -1|

…

|quota\_set.snapshots.in\_use | 0|

|quota\_set.id | 1c95bf65e2724ebbb504abc8a46b0a03|

+------------------------------------+---------------------------------+

### Create ECS instances

**Command:**

otc ecs run-instances --count [number of instances] --admin-pass [amin password of running instance] --instance-type [instance flavour] --instance-name [name of the instance] --image-name [image name] --subnet-name [subnet name] --vpc-name [vpc of instance] --security-group-name [security group] --key-name [SSH key] –file[1-5] [target file=source file]

**Example:**

otc ecs run-instances --count 1 --admin-pass testpass123! --instance-type computev1-1 --instance-name instancename --image-name Community-CentOS-7.0-x86\_64-2015-0 --subnet-name testsubnet --vpc-name testvpc --security-group-name testsecgroup --key-name testsshkeypair --file1 /otc/target=/otc/soruce

#### File Injection

Could inject max 5 file with following parameter:

* -- file[1-5] /targetdir/targetfile =/sourcedir/sourcefile

**JSON Request:**

{

"server": {

"availability\_zone": "eu-de-01",

"name": "'"$INSTANCE\_NAME"'",

"imageRef": "'"$IMAGE\_ID"'",

"root\_volume": {

"volumetype": "SATA"

},

"flavorRef": "'"$INSTANCE\_TYPE"'",

"vpcid": "'"$VPCID"'",

"security\_groups": [

{

"id": "'"$SECUGROUP"'"

}

],

"nics": [

{

"subnet\_id": "'"$SUBNETID"'"

}

],

"adminPass": "'"$ADMINPASS"'",

"count": '"$NUMCOUNT"',

"},": {

"\_\_vnc\_keymap": "de"

}

}

}

### List cloud images

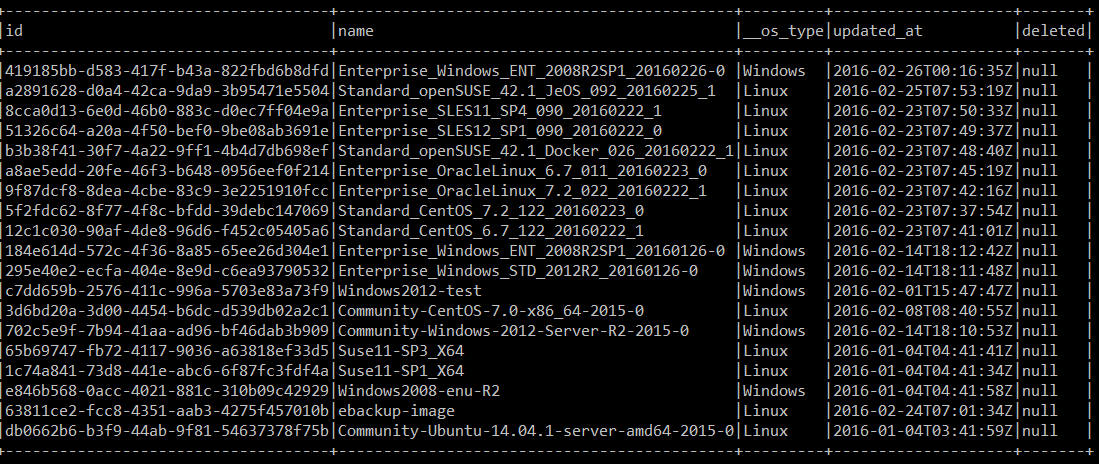
**URL:**

<https://ims.eu-de.otc.t-systems.com/v2/images>

**Command:**

otc ecs describe-images

**Example:**



### Create Volumes

**Command:**

otc ecs create-volume --size [size of the disk] --volume-type [volume type: SATA|SSD, SAS]

**Examples:**

otc ecs create-volume --size 100 --volume-type SATA

### Start-Stop-Restart instances

**URL:**

<https://ecs.eu-de.otc.t-systems.com/v1/$PROJECT_ID/cloudservers/action>

**Command:**

otc ecs reboot-instances [instance-id]

otc ecs stop-instances [instance-id]

otc ecs start-instances [instance-id]

**Example:**

otc ecs stop-instances b6c602b1-06d0-4bdb-b764-5d43b47XXXXX

{"job\_id":"2c9eb2c1532f8bed015332895bXXXX"}

**JSON request:**

{

"'"$ECSACTION"'":

{

"type":"'"$ECSACTIONTYPE"'",

"servers": [ { "id": "'"$ECSACTIONSERVERID"'" }]

}

}'

## Backup functions

### List backups

**Command:**

ecs describe-snapshots

**Example:**

**+-------------------------------------+-----------------------------------------------------------+**

**|Key |Value |**

**+-------------------------------------+-----------------------------------------------------------+**

**|backups.status |available |**

**|backups.description |null |**

**|backups.links.href |https://volume.region.eu-de.otc-tsi.de/v2/xxxxxxxxxxxxxx |**

**|backups.links.rel |self |**

**|backups.links.href |https://volume.region.eu-de.otc-tsi.de/1c95bf65e2xxxxxxx |**

**|backups.links.rel |bookmark |**

**|backups.availability\_zone |eu-de-01 |**

**|backups.volume\_id |b197b8af-fe63-465f-97b6-5e5b89e2xxxx |**

**|backups.fail\_reason |null |**

**|backups.service\_metadata |{\ebk\_T\_S\: 1, \bootable\: true, \backupurl\: \32332a36-\} |**

**|backups.id |0c942ff7-454e-494c-8f19-c40ba15e1da7 |**

**|backups.size |40 |**

**|backups.object\_count |null |**

**|backups.container |1e000941-72a8-4467-a30b-f3250exxxxxx |**

**|backups.name |null |**

**|backups.os-bak-tenant-attr:tenant\_id |1c95bf65e2724ebbb504axxxxxxxxxxx |**

**|backups.created\_at |2016-03-08T23:26:13.395891 |**

**+-------------------------------------+-----------------------------------------------------------+**

### Create backup

**Command:**

otc ecs create-snapshot --volume-id [volumeid]

**Example:**

otc ecs create-snapshot --volume-id b197b8af-fe63-465f-97b6-5e5b89e2818d

### Delete backup

**Command:**

otc ecs delete-snapshot --snapshot-id [snapshot id]

**Example:**

otc ecs delete-snapshot --snapshot-id 0c942ff7-454e-494c-8f19-c40ba15e1da7

## S3 Features

### Create Bucket

**Command:**

otc s3api create-bucket [bucketname]

**Example:**

otc s3 create-bucket mybucket

Bucket created: my-bucket

### List Bucket

otc s3 list

+----------+--------+--------------------------------+

|Bucketname|Owner |Owner Id |

+----------+--------+--------------------------------+

|newbucket |MYUSER |XXXXXXXXXXXXXXXX890c9a1673718c2b|

|otccli |MYUSER |XXXXXXXXXXXXXXXX890c9a1673718c2b|

+----------+--------+--------------------------------+

### List files in Specific Bucket

**Command:**

otc s3 list mybucket/

**Example**

otc s3 list mybucket/

+------------------------+--------+

|File | Size|

+------------------------+--------+

|setup\_2016.02.29.exe |37153967|

|setup\_2016.02.29.zip |37658811|

|setup\_2016.02.29\_new.zip|37658759|

+------------------------+--------+

totalItems: 3 totalSize: 112471537

### Get File Content

s3api get-object --bucket [bucket-name] --key [object-name]

### Upload Content

**Command:**

otc s3 cp [local-filename] s3://[bucket-name]/[objectname]

**Example:**

otc s3 cp c:\tmp\setup\_2016.02.29.zip s3://otccli/setup\_2016.02.29.zip

### Download Content

**Command:**

otc s3 cp s3://[bucket-name]/[objectname] [local-filename]

**Example:**

otc s3 cp s3://mybucket/filename.txt /localdir/filename.txt

## VPC features

### List Virtual Private Clouds

URL: <https://vpc.eu-de.otc.t-systems.com/v1/$PROJECT_ID/vpcs>

**Command:**

otc vpc list

**Example:**

otc vpc list

+------------------------------------+-----------+------+--------------+

|id |name |status|cidr |

+------------------------------------+-----------+------+--------------+

|a86336d6-6467-XXX5-9df1-4bdca1dbXXXX|myvpc |OK |10.0.0.0/8 |

|ec317f48-3719-XXX0-bef8-4f86daaXXXXX|default-vpc|OK |192.168.0.0/16|

+------------------------------------+-----------+------+--------------+

### Create New Virtual Private Clouds

**Command:**

otc ecs create-vpc --vpc-name [vpcname] --cidr [ciddr]

**Example:**

otc ecs create-vpc --vpc-name testvpc --cidr 10.0.0.0/8

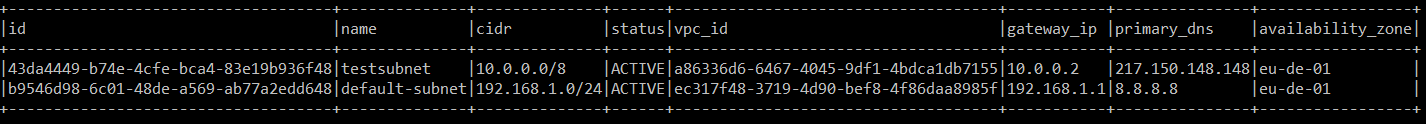
### List Subnets of VPC

**URL:** <https://vpc.eu-de.otc.t-systems.com/v1/$PROJECT_ID/subnets>

**Command:**

otc ecs describe-subnets

**Example:**



### Create Subnet

otc subnet create --subnet-name subnetname --cidr cidr --gateway-ip gateway --primary-dns primary-dns --secondary-dns sec-dns --availability-zone az --vpc-name vpc-name

Example:

otc subnet create --subnet-name testsubnet --cidr 10.0.2.0/8 --gateway-ip 10.0.0.2 --primary-dns 217.150.148.148 --secondary-dns 195.244.235.14 --availability-zone eu-de-01 --vpc-name testvpc

### List Security Groups

**URL:** <https://vpc.eu-de.otc.t-systems.com/v1/$PROJECT_ID/security-groups>

**Command:**

otc ecs describe-security-groups

**Output:**

+-------------------------------+---------------------------+-------------------------+

|id |name |vpc\_id |

+-------------------------------+---------------------------+-------------------------+

|437549af-5350-4edb-b41d8b1d20c9|default |a86336d6-6467-4045-db7155|

|bcb07057-c84f-4c71-d391ed901c04|testsecgroup |a86336d6-6467-4045-db7155|

|d08659b9-a0b7-4276-8cde863cbd85|default |default |

|e4c694e1-f69e-4776-03f3cfe3c663|default |ec317f48-3719-4d90-a8985f|

+-------------------------------+---------------------------+-------------------------+

### Create Security Group

**Command:**

otc ecs securitecs y-group create –group-name [security-group name] --vpc-name [vpcname ]

**Example:**

otc security-group create –group-name testsecgroup --vpc-name testvpc

### Create Security Group Rule

**Command:**

otc ecs authorize-security-group-[ingress|egress] --security-group-name gorupname --protocol protocol --ethertype IPv4-IPv6 --portmin portstart –portmax portend

**Example:**

otc ecs authorize-security-group-ingress --security-group-name testsecgroup --protocol tcp --ethertype IPv4 --portmin 80 --portmax 80

### List flavors

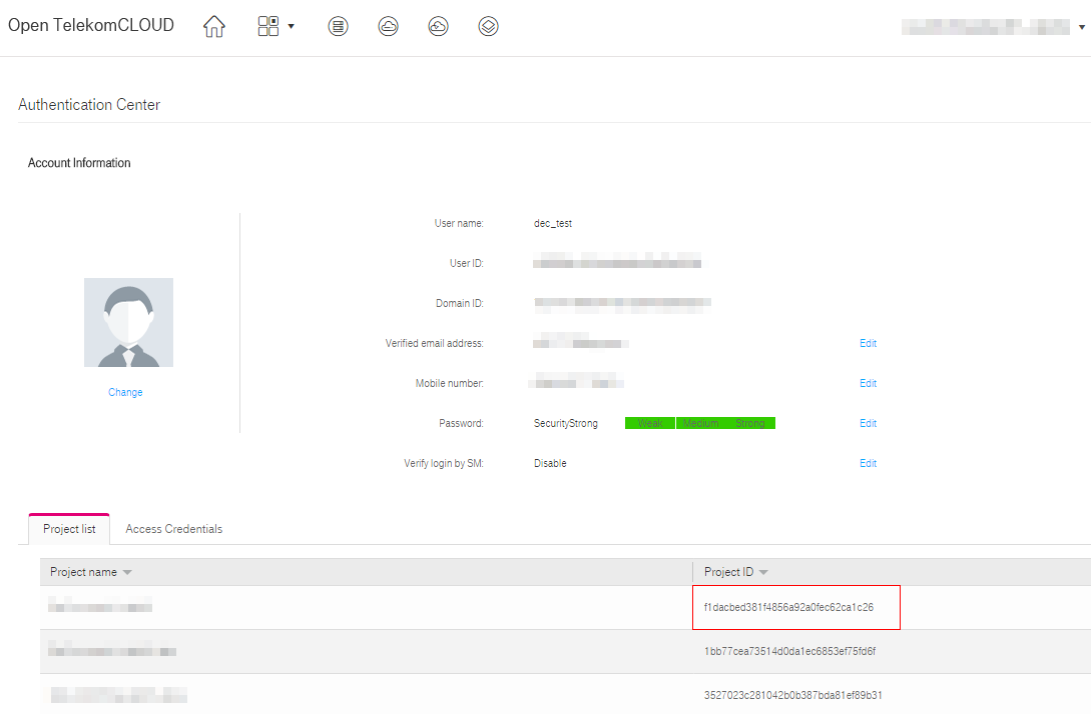
**URL:** <https://ecs.eu-de.otc.t-systems.com/v1/$PROJECT_ID/cloudservers/flavors>

**Command:**

otc ecs describe-flavors

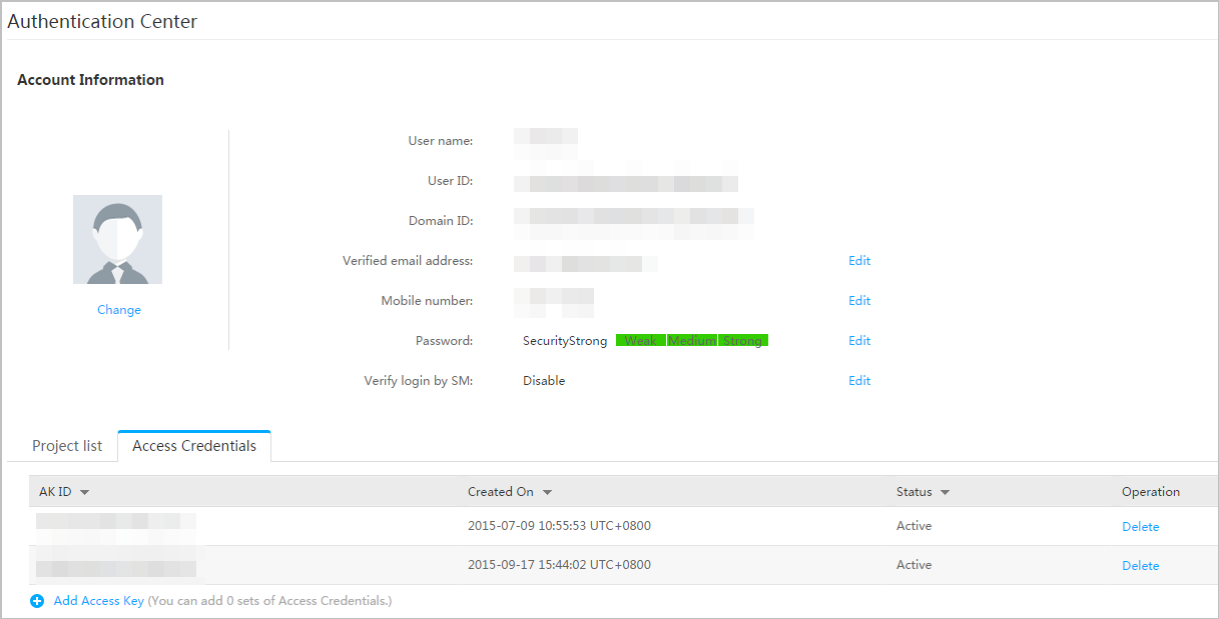
# Obtaining a Project ID

A project ID (the project ID can be project\_id or tenant\_id because project\_id has the same meaning as tenant\_id in this document)

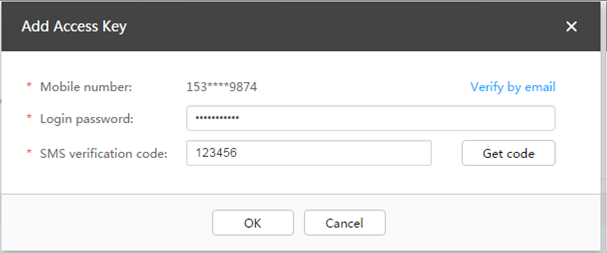


# AK and SK Generation

Sign up and log in to the management console, and click Authentication Center in the upper right corner of the page.



Click Add Access Key, and the Add Access Key page is displayed



Enter the password ( YOUR PASSWORD ) and the short message verification code, and click OK to download the access key (CSV file) and keep the key secure.