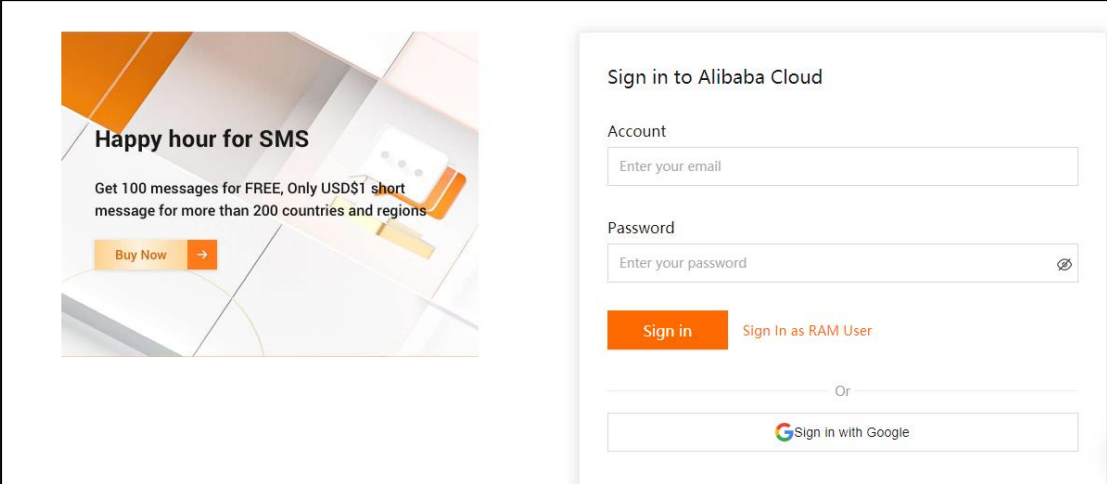


### S1: Create new account.

Website:

<https://account.alibabacloud.com/>



**Happy hour for SMS**

Get 100 messages for FREE, Only USD\$1 short message for more than 200 countries and regions

[Buy Now](#)


**Sign in to Alibaba Cloud**

Account

Password

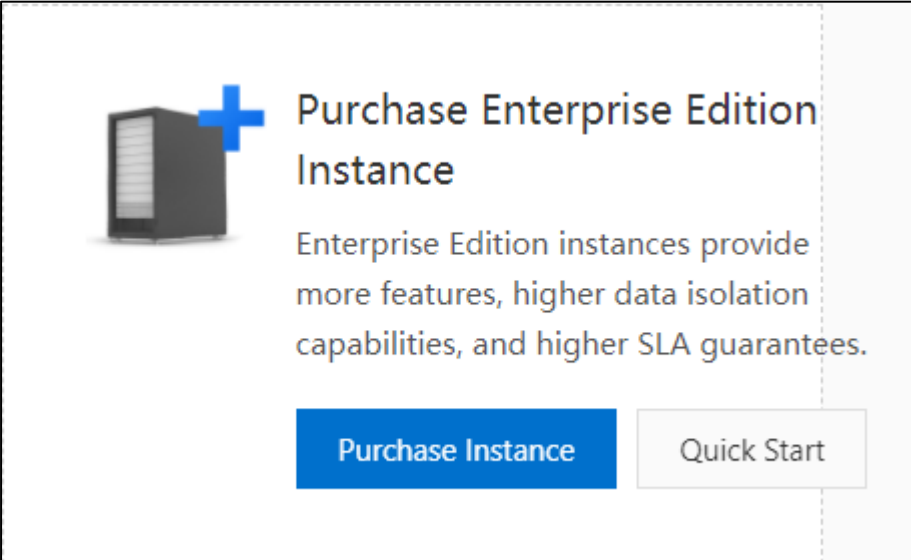
[Sign in](#) [Sign In as RAM User](#)


Or

 [Sign in with Google](#)

### S2: Enter IoT Platform & Enter Public instance

Note: Enterprise Edition Instance is good choice, but it's not free.



 **Purchase Enterprise Edition Instance**

Enterprise Edition instances provide more features, higher data isolation capabilities, and higher SLA guarantees.

[Purchase Instance](#) [Quick Start](#)

### S3: Create new products

The screenshot shows the 'Create Product(Device TSL)' page. On the left is a sidebar with navigation options: Public Instance, Devices, Products (selected), Groups, Jobs, CA Certificate, Rules Engine, Maintenance, Resource Allocation, Link Analytics, Link Visual, and Documentation and Tools. The main content area has a title 'Create Product(Device TSL)' and two tabs: 'Create Product' (active) and 'Create Product from Device Center'. Below the tabs are three required fields: 'Product Name' (text input with 'VirtualUAV'), 'Category' (radio buttons for 'Standard Category' and 'Custom Category', with 'Custom Category' selected), and 'Node Type' (three icons: 'Directly Connected Device' (selected), 'Gateway sub-device', and 'Gateway device'). Below these is a section titled 'Networking and Data Format' with two required fields: 'Network Connection Method' (dropdown menu showing 'Cellular (2G / 3G / 4G / 5G)') and 'Data Type' (dropdown menu showing 'ICA Standard Data Format (Alink JSON)'). There is also a 'Checksum Type' section with a dropdown arrow. At the bottom are 'OK' and 'Cancel' buttons.

### S4: Create new devices

The screenshot shows the 'Add Device' dialog box overlaid on the 'Devices' page. The dialog has a title 'Add Device' and a close button. A note states: 'Note: You do not need to specify DeviceName. If DeviceName is not specified, Alibaba Cloud will issue a unique identifier under the product as DeviceName.' Below the note are three fields: 'Products' (dropdown menu showing 'VirtualUav'), 'DeviceName' (text input with 'VirtualUav\_1'), and 'Alias' (text input with placeholder 'Enter an alias.'). At the bottom are 'OK' and 'Cancel' buttons. The background shows the 'Devices' page with a sidebar and a table of devices.

S5: Add new topic (publish and subscribe)

← Public Instance

Devices

Products

Devices

Groups

Jobs

CA Certificate

Rules Engine

Maintenance

Resource Allocation

Link Analytics

Link Visual

Documentation and Tools

Topics for

Edit Topic

Topic Category

/a1ss57X

/a1ss57X

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/a1ss57X

Edit Topic Category

Use slashes (/) to delimit the category hierarchy. The first category is ProductKey. The second category is DeviceName. The third category is used to identify custom topic categories in Pro Editions. For example, the /a15T\*\*\*\*dhK/\${deviceName}/user/update topic category includes topics /a15T\*\*\*\*dhK/mydevice1/user/update and /a15T\*\*\*\*dhK/mydevice2/user/update.

\* Device Operation Authorizations

Publish

\* Topic Category

/a1ss57Xqbet/\${deviceName}/user/VirtualUav\_1\_Pub

VirtualUav\_1\_Pub

Description

Enter a description

0/100

OK

Cancel

← Public Instance

Devices

Products

Devices

Groups

Jobs

CA Certificate

Rules Engine

Maintenance

Resource Allocation

Link Analytics

Link Visual

Documentation and Tools

Topics for

Edit Topic

Topic Category

/a1ss57X

/a1ss57X

/a1ss57X

/a1ss57X

/a1ss57X

/a1ss57X

/a1ss57X

/a1ss57X

/a1ss57X

/a1ss57X

Edit Topic Category

Use slashes (/) to delimit the category hierarchy. The first category is ProductKey. The second category is DeviceName. The third category is used to identify custom topic categories in Pro Editions. For example, the /a15T\*\*\*\*dhK/\${deviceName}/user/update topic category includes topics /a15T\*\*\*\*dhK/mydevice1/user/update and /a15T\*\*\*\*dhK/mydevice2/user/update.

\* Device Operation Authorizations

Subscribe

\* Topic Category

/a1ss57Xqbet/\${deviceName}/user/VirtualUav\_1\_Sub

VirtualUav\_1\_Sub

Description

Enter a description

0/100

OK

Cancel

## S6 : Add new data forwarding in Rules Engine

← VirtualUAV\_0\_To\_PhysicalUAV\_0

Edit

Data TypeJSONRule ID946919Rule Description-

Data Processing

SQL SyntaxSQL DebuggingWrite SQL Statement

Rule Query Statement:  
SELECT TargetID, SourceID, MessageID, MessageData, TimeStamp FROM "/a1ss57Xqbet/VirtualUAV\_0/user/VirtualUAV\_0\_Pub"WHERE TargetID = 1

Forward Data

Add Operation

Data DestinationActions

Operation ID: 852016, This operation publishes data to another topic:/a1drCtNZLT6/PhysicalUAV\_0/user/PhysicalUAV\_0\_SubEdit

Forward Error Data

Add Error Operation

Data DestinationActions

## S7: Connect the cloud devices

The parameters of the red box are the same as those of the newly created device.

- C#

Connector Lcm Node (Script)

ScriptConnectorLcmNode

Configure Cloud Device

The Product Key

Product Keya1ss57Xqbet

The Device Name

Device NameVirtualUAV\_2

The Device Secret

Device Secretbe98fbb45529918200f816b769493287

The Publish Topic

Publish Topic/user/VirtualUAV\_2\_Pub

The Subscribe Topic

Subscribe Topic/user/VirtualUAV\_2\_Sub

Configure LCM Network

The Subscribe Topic of LCM Network

Lcm Message Sub Name/virtual\_uav2/data/to/cloud

The Publish Topic of LCM Network

Lcm Message Pub Name/virtual\_uav2/data/from/cloud

- C++

```
<launch>
<node name="server_0" pkg="dt_global_network_client"
type="dt_global_network_client_node" output="screen">
  <param name="product_key" value="a1GcqS5WFte" />
  <param name="device_name" value="Server_0" />
  <param name="device_secret" value="5b7bc3486a17e3877967f09ce7871b3f"/>
  <param name="iot_pub_topic" value="/a1GcqS5WFte/Server_0/user/Server_0_PUB"/>
  <param name="iot_sub_topic" value="/a1GcqS5WFte/Server_0/user/Server_0_SUB"/>
  <param name="ros_sub_topic" value="/server_0/msg_to_iot"/>
  <param name="ros_pub_topic" value="/server_0/msg_from_iot"/>
  <param name="ros_iot_state_pub_topic" value="/server_0/iot_state"/>
  <param name="object_name" value="Server_0"/>
</node>
</launch>
```