

Milesight DeviceHub IoT Device Installation Guide

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Preface

This guide teaches you how to install Milesight on-premises DeviceHub platform.

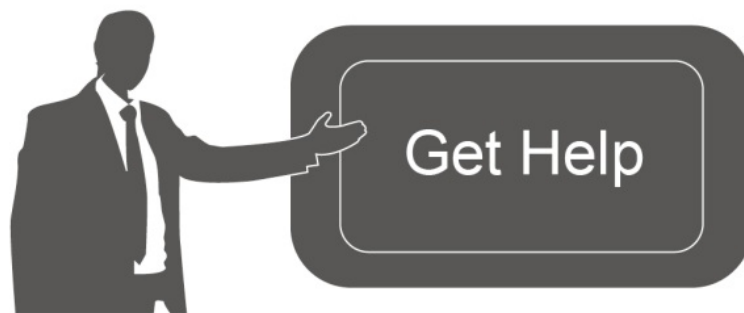
Readers

This guide is intended for the following users:

- Distributors
- Network Planners
- On-site technical support and maintenance personnel
- Network administrators responsible for network configuration and maintenance

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Revision History

Date	Doc Version	Description
Aug. 29, 2018	V 1.0	Initial version
Mar. 18, 2021	V 2.0	Brand Replace and add features

Introduction

Milesight DeviceHub provides a high-efficiency, low maintenance solution to easily deploy Milesight IoT devices across multiple locations, reducing complexity and increasing productivity. Milesight offers cloud and on-premises version according to customer requirements. This guide will describe how to install on-premises DeviceHub. For cloud version please contact Milesight IoT sales or [click here](#) to apply for DeviceHub Cloud platform account.



System Requirements

Hardware

It's suggested to use the server which suit following requirements:

For 500 devices

- CPU: 2 Cores, 2.0 GHz
- RAM: 16 GB
- Disk: 512 GB
- Bandwidth: ≥100MBps

For 1000 devices

- CPU: 8 Cores, 3.2 GHz
- RAM: 32 GB
- Disk: 1 TB
- Bandwidth: ≥100MBps

Software

- Operating System: Ubuntu 16.04
- Browser: Chrome, Firefox

Installation



Requirements

- Ubuntu Server
- DeviceHub Software Package
- WinSCP
- Putty (or other SSH tool)

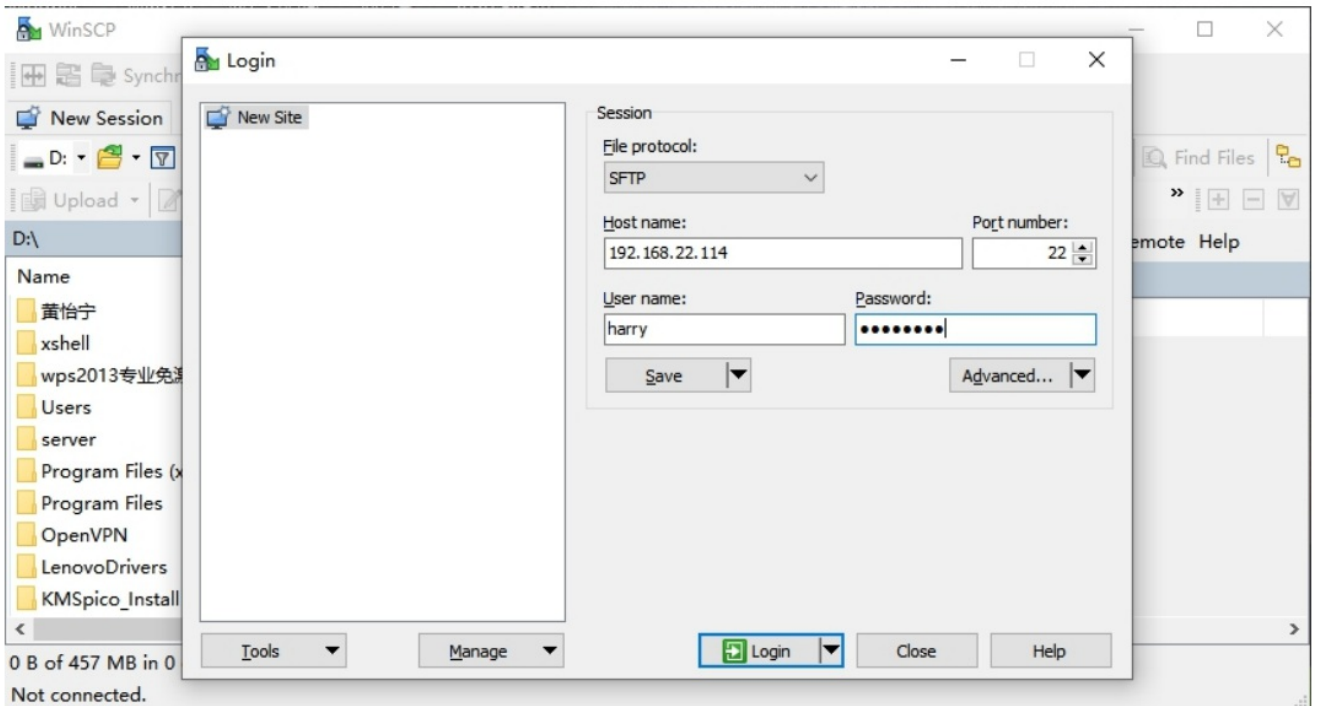
Package Upload

Following steps are based on WinSCP tool. You can also use other tools to upload packages.

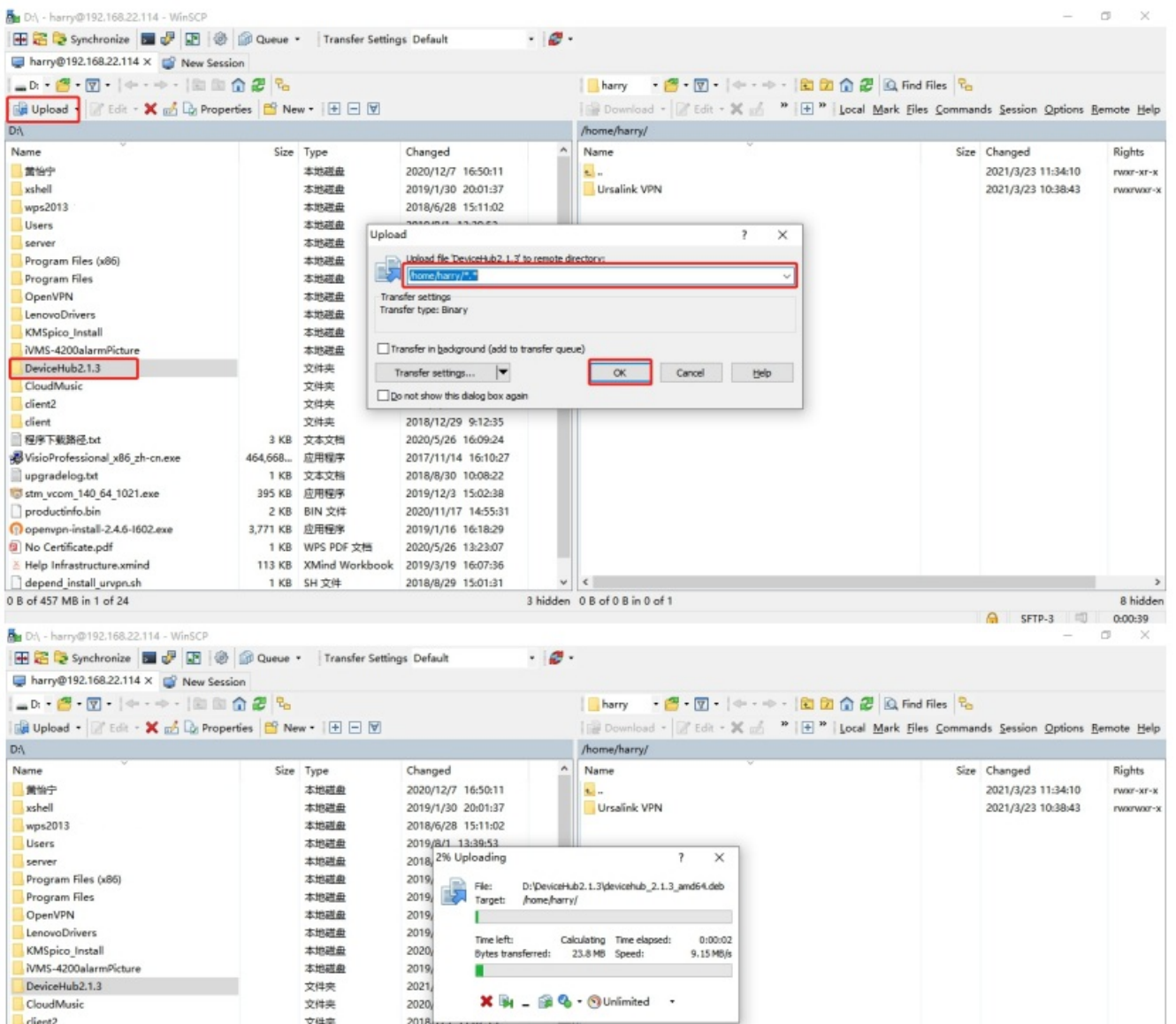
1. Download the DeviceHub package from Milesight IoT website then extract and check files:

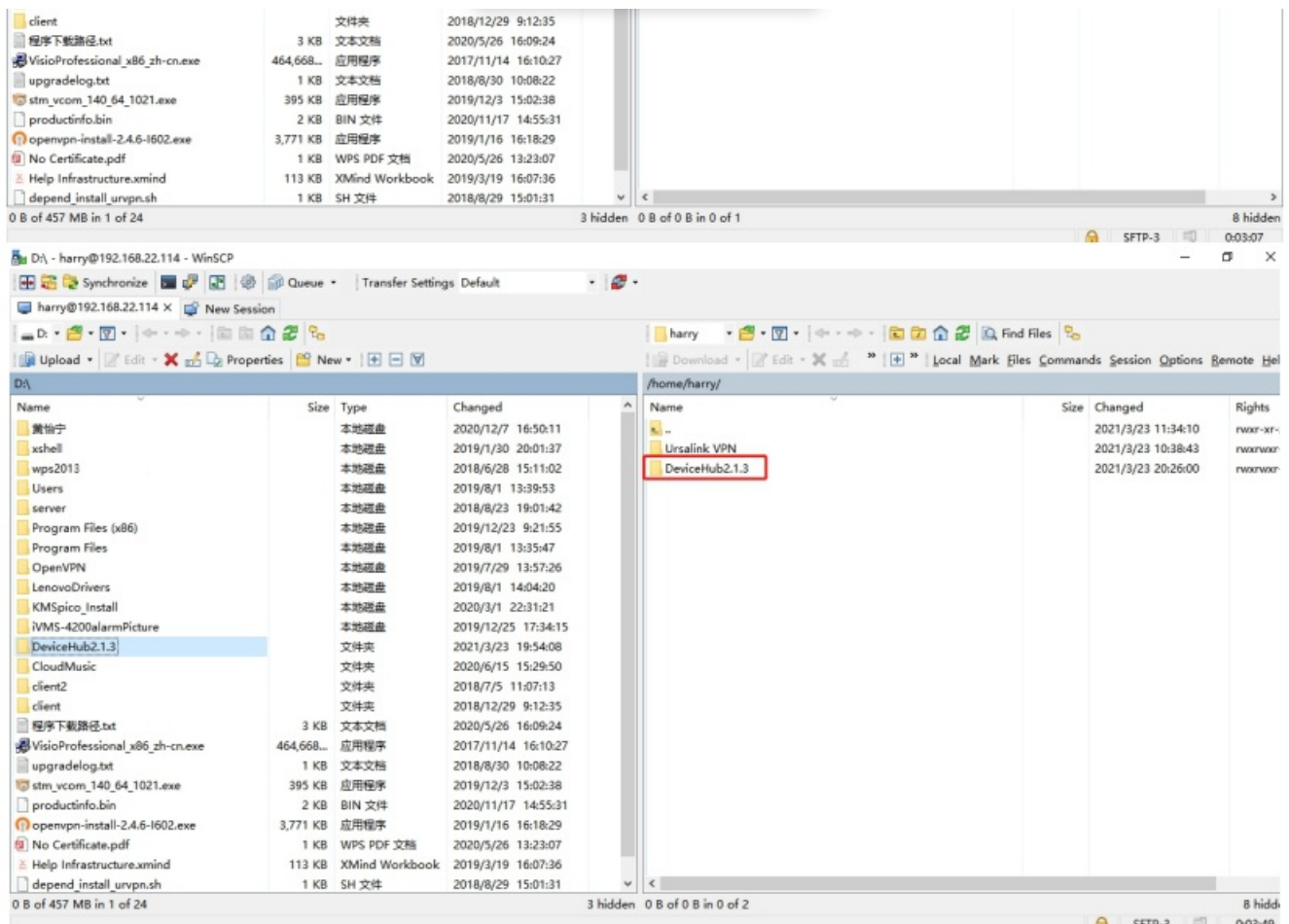
 `depend_install_devicehub.sh` 1 KB
 `devicehub_2.1.3_amd64.deb` 505,047 KB

- Open WinSCP and set up a session between WinSCP and server.



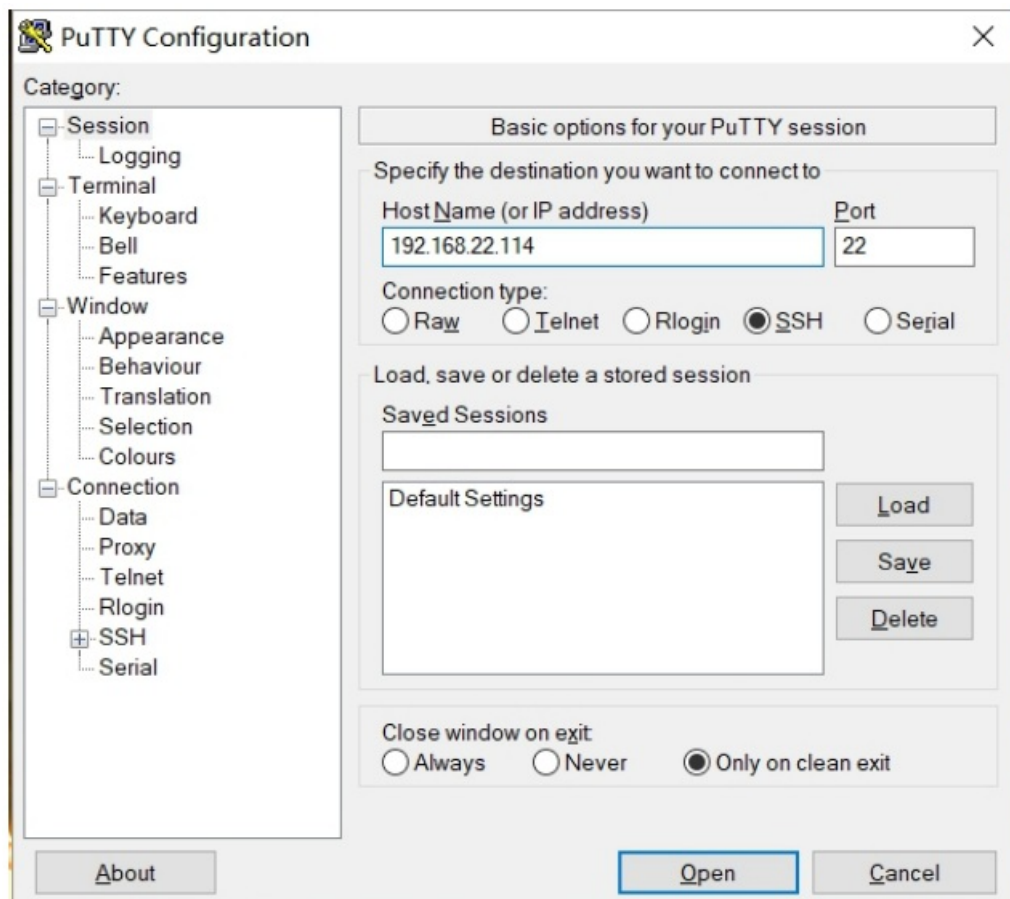
- Select the DeviceHub folder and click "Upload", select the server path and click "OK" to upload.





DeviceHub Installation

1. Log in the server via Putty. You can also use other SSH tools.



2. Run following commands under DeviceHub directory. `chmod+x depend_install_devicehub.sh`.

[/depend_install_devicehub.sh](#)

```
root@ubuntu: /home/harry/DeviceHub2.1.3

* Documentation:  https://help.ubuntu.com
* Management:    https://landscape.canonical.com
* Support:       https://ubuntu.com/advantage

195 packages can be updated.
142 updates are security updates.

New release '18.04.5 LTS' available.
Run 'do-release-upgrade' to upgrade to it.

Last login: Mon Mar 22 04:48:03 2021 from 192.168.23.176
harry@ubuntu:~$ sudo -i
[sudo] password for harry:
root@ubuntu:~# cd /home/harry/DeviceHub2.1.3/
root@ubuntu:/home/harry/DeviceHub2.1.3# chmod +x depend_install_devicehub.sh
root@ubuntu:/home/harry/DeviceHub2.1.3# ./depend_install_devicehub.sh
Hit:1 http://us.archive.ubuntu.com/ubuntu xenial InRelease
Get:2 http://security.ubuntu.com/ubuntu xenial-security InRelease [109 kB]
Get:3 http://us.archive.ubuntu.com/ubuntu xenial-updates InRelease [109 kB]
Get:4 http://us.archive.ubuntu.com/ubuntu xenial-backports InRelease [107 kB]
Fetched 325 kB in 4s (78.6 kB/s)
Reading package lists... 96%
```

3. Install DeviceHub software. Take the 2.1.3 version as example, please type following command: `dpkg -i devicehub 2.1.3 amd64.deb`

The network interface of this server will show. Select and type the main interface name, then click Enter to start the installation.

```
root@ubuntu: /home/harry/DeviceHub2.1.3

Setting up libtinfo-dev:amd64 (6.0+20160213-1ubuntu1) ...
Setting up libncurses5-dev:amd64 (6.0+20160213-1ubuntu1) ...
Processing triggers for libc-bin (2.23-0ubuntu1) ...
root@ubuntu:/home/harry/DeviceHub2.1.3# dpkg -i devicehub 2.1.3 amd64.deb
Selecting previously unselected package device-hub.
(Reading database ... 67938 files and directories currently installed.)
Preparing to unpack devicehub_2.1.3_amd64.deb ...
install devicehub (best in ubuntu)

ens18  Link encap:Ethernet  HWaddr 4e:06:2a:55:fd:ea
      inet addr:192.168.22.114  Bcast:192.168.22.255  Mask:255.255.255.0
      inet6 addr: fe80::4c06:2aff:fe55:fdea/64 Scope:Link
      UP BROADCAST RUNNING MULTICAST  MTU:1500  Metric:1
      RX packets:1954847 errors:0 dropped:12917 overruns:0 frame:0
      TX packets:255602 errors:0 dropped:0 overruns:0 carrier:0
      collisions:1277819 txqueuelen:1000
      RX bytes:2531720373 (2.5 GB)  TX bytes:22931361 (22.9 MB)

lo      Link encap:Local Loopback
      inet addr:127.0.0.1  Mask:255.0.0.0
      inet6 addr: ::1/128 Scope:Host
      UP LOOPBACK RUNNING  MTU:65536  Metric:1
      RX packets:160 errors:0 dropped:0 overruns:0 frame:0
      TX packets:160 errors:0 dropped:0 overruns:0 carrier:0
      collisions:0 txqueuelen:1
      RX bytes:11840 (11.8 KB)  TX bytes:11840 (11.8 KB)

Please input primary interface name: ens18
```

It will take about 30 minutes to complete the installation and there will show following message when the

installation complete.

```
root@ubuntu: /home/harry/DeviceHub2.1.3
make[1]: Leaving directory '/clouddata/cloudversion/src'
install the database..
upgrade_execute!
1.0.0
2.0.0
2.1.0
tbl_acs_version is not exist
current database version is 1.0.0
version/2.0.0 -> version/2.0.0.tmp
ERROR 1396 (HY000) at line 3: Operation DROP USER failed for 'urs_myacs'@'localhost'

excute upgrade of 2.0.0 finish
version/2.1.0 -> version/2.1.0.tmp
excute upgrade of 2.1.0 finish
Starting stund!STUN server version 0.97
If your machine does not have exactly two ethernet interfaces, you must specify the server and alt server
Warning - no alternate ip address STUN will not work

Shutting down MySQL
. *
Starting MySQL
.. *
Stopping redis-server!/usr/local/bin/redis-server: no process found

Starting redis-server!
Gracefully shutting down php-fpm . done
Starting php-fpm done
Starting nginx!
* SAMS has already been stopped or has problems
* Please contact Tomas
Using CATALINA_BASE:   /clouddata/server/tomcat7
Using CATALINA_HOME:   /clouddata/server/tomcat7
Using CATALINA_TMPDIR: /clouddata/server/tomcat7/temp
Using JRE_HOME:        /clouddata/server/java/jre
Using CLASSPATH:        /clouddata/server/tomcat7/bin/bootstrap.jar:/clouddata/server/tomcat7/bin/tomcat-juli.jar
Tomcat started.
----- Installation of DeviceHub [2.1.3] is complete! -----
Processing triggers for libc-bin (2.23-0ubuntu1) ...
root@ubuntu:/home/harry/DeviceHub2.1.3#
```

Registration

After installation, open the browser and type the IP address to open the registration page. Fill in the following information and click "Install" to complete the registration. **Administrator Account(Required)**

Admin Email: the email address working as root account of the DeviceHub

Password: define the password of the root account

Outgoing Mail Server(Optional)

SMTP Email: Email address used for sending alarm emails or sub-account activation emails

Password: Password of the email address

Server: SMTP server address for email service

Port: SMTP server port for email service

Security: encryption mode for email service

Administrator Account

Admin Email Password

Outgoing Mail Server (SMTP)

SMTP Email Password Server Port Security ☒ NO ☐ SSL ☐ STARTTLS

After completing all information, click “TEST” to check if your outgoing mail server is valid. If yes, a SUCCESS prompt will show and DeviceHub will save the email settings.

Install Wizard

Administrator Account

Admin Email Password

Outgoing Mail Server (SMTP)

SMTP Email Password Server Port Security ☒ NO ☐ SSL ☐ STARTTLS

Otherwise there is error message “Authentication failed”.

Install Wizard

Administrator Account

Admin Email

Password

Outgoing Mail Server (SMTP)

Authentication failed

SMTP Email

Password

Server

Port

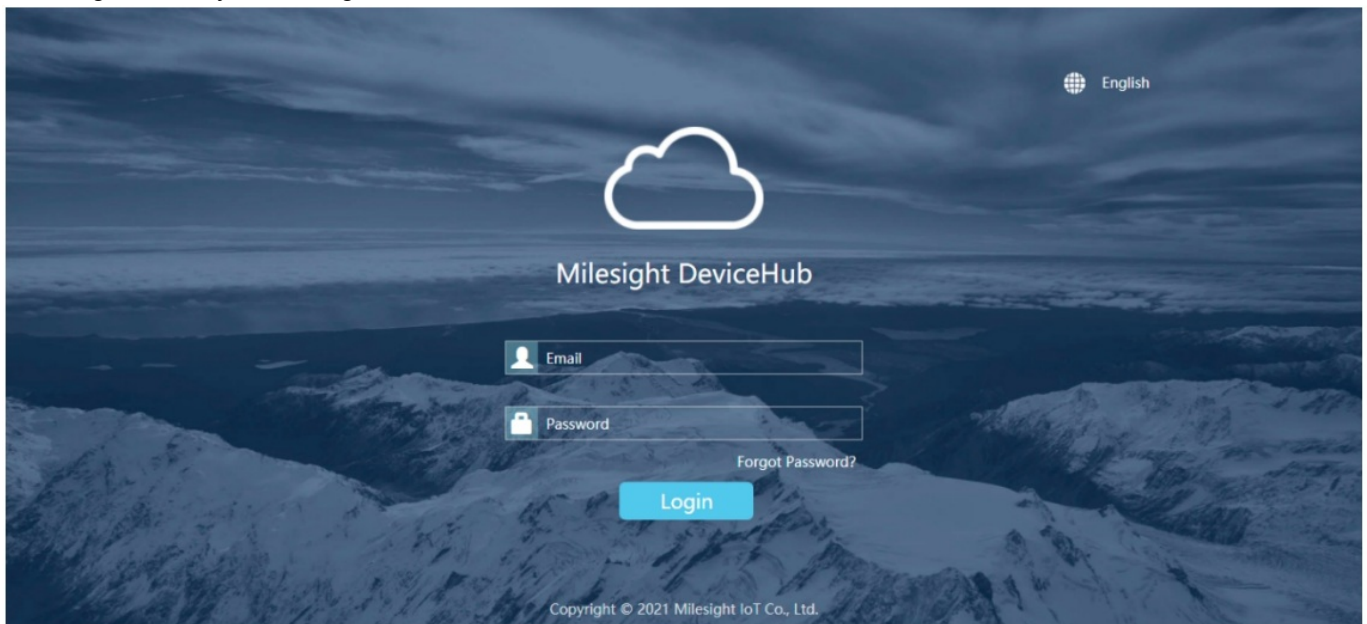
Security ☒ NO ☐ SSL ☐ STARTTLS

TEST

Note:

1. Outgoing mail server information is optional and you can click "Install" to skip the configurations.
2. You can also log in the DeviceHub via administrator account and go to "Settings > Email" to configure or change the outgoing mail server settings.
3. If the outgoing mail server is not verified by "TEST" button, it will not be saved.

After registration, you can log in the DeviceHub via administrator account.



Services and Ports

In order to ensure the security and unblocked communication, here are ports for services:

Port	Protocol	Description
22	TCP	SSH Service
80	TCP	NGINX Agent(Non-encrypted)
443	TCP	NGINX Agent(Encrypted)
3478	UDP	STUND Service
3479	UDP	STUND Service
6379	TCP	Message Broker
8080	TCP	TR069 Service(Non-encrypted)
8443	TCP	TR069 Service(Encrypted)
10000-10100	TCP	Remote Access Service
20000-20100	TCP	Remote Access Service

Expand Manage Devices

The number of available managing devices can be checked in “Settings > General” tab. Maximum number of managing devices is 25 by default for on-premises version. Please refer to following steps to expand manage devices.

1. Log in DeviceHub with root account and go to “Settings > General” tab, then click “Create&Download” to download license info file.
2. Contact Milesight sales or technical support and send the license info file.
3. Get expand license from Milesight and click “Browse” to import the license.
4. Click “save” to save the settings and the max manageable devices will change.

My Information

Name	Administrator
------	---------------

Email	yuxy@milesight.com
-------	--------------------

Role	Root
------	------

Managing/Max Manageable	2/25
-------------------------	------

License	
---------	--

Create&Download

Browse



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Documents / Resources

	<p>Milesight DeviceHub IoT Device [pdf] Installation Guide DeviceHub IoT Device, DeviceHub, IoT Device</p>
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References

-  [Milesight IoT - LoRaWAN, 5G & AIoT](#)