

# How to Upload Device Data to a Remote Database Using the Log Upload Function

Moxa Technical Support Team  
[support@moxa.com](mailto:support@moxa.com)

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### About Moxa

Moxa is a leading provider of edge connectivity, industrial computing, and network infrastructure solutions for enabling connectivity for the Industrial Internet of Things. With over 30 years of industry experience, Moxa has connected more than 50 million devices worldwide and has a distribution and service network that reaches customers in more than 70 countries. Moxa delivers lasting business value by empowering industry with reliable networks and sincere service for industrial communications infrastructures. Information about Moxa’s solutions is available at [www.moxa.com](http://www.moxa.com).

### How to Contact Moxa

Tel: 1-714-528-6777  
Fax: 1-714-528-6778



## 1 Introduction

Moxa's ThingsPro™ 2.0 Suite simplifies the development of IoT applications and facilitates data acquisition as well as remote device management. ThingsPro provides Modbus communications, data acquisition, wireless networking, and device management capabilities that you can configure in a few simple steps, allowing you to focus on developing applications instead of complex system integration.

## 2 Application Scenario

ThingsPro 2.0 Suite is used as a Modbus data logger to create a historical database of field devices. The Modbus device template in ThingsPro is used to retrieve data from field devices and upload the data collected to a remote HTTP server.

## 3 Prerequisites


1. Moxa UC-8112 gateway computer with Internet access, and ThingsPro 2.0 Gateway and SD card installed.  
For information about setting up a Moxa UC-8112, refer to the *UC-8112-ME-T Series Hardware User's Manual*.
2. PC/notebook with Chrome browser and Internet access.
3. One or more Modbus devices (E.g.: Moxa ioLogik-E2242).

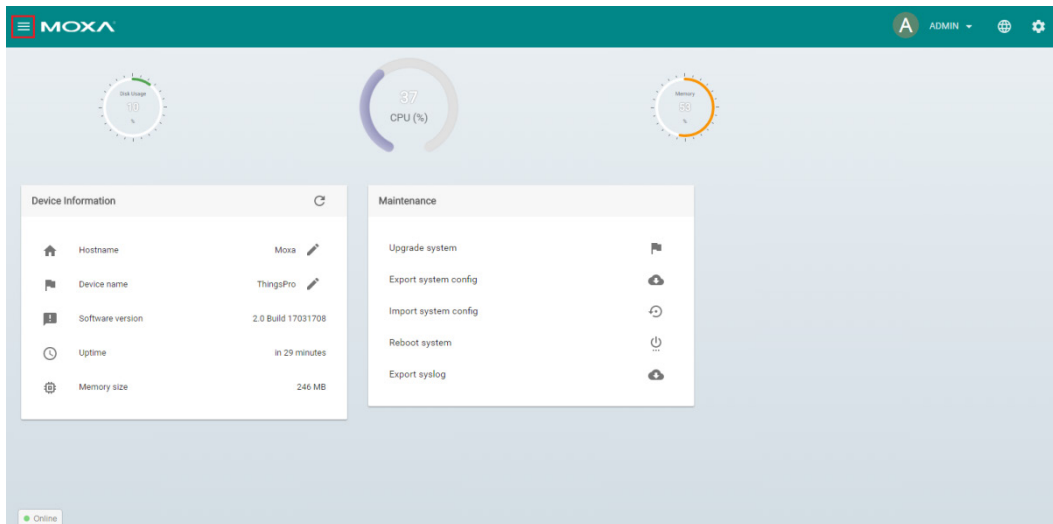
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## 4 Solution

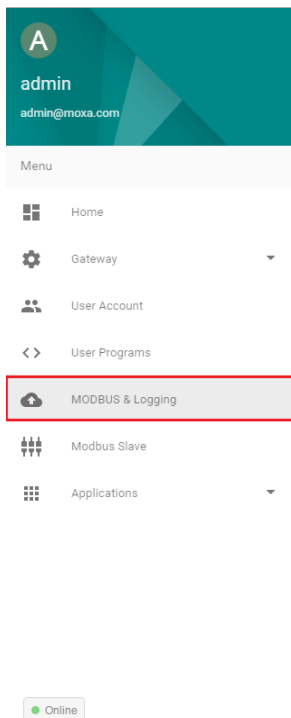
Complete the following steps to retrieve data from field devices using a Modbus template and upload the data collected to a remote HTTP server:

### 1. Choose an equipment template.

- a. In the ThingsPro Gateway web page, click  (Menu).



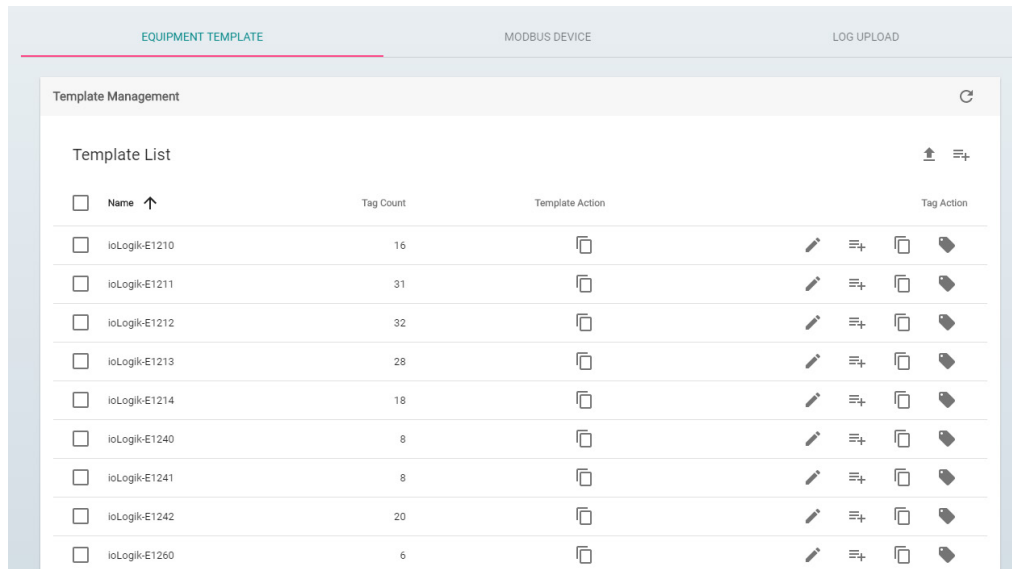
- b. In the ThingsPro Gateway menu, click on the **Modbus & Logging** link.



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- c. Open the **EQUIPMENT TEMPLATE** tab.
- d. Browse through the **Template List** to locate the template corresponding to the Modbus device or create a new template.

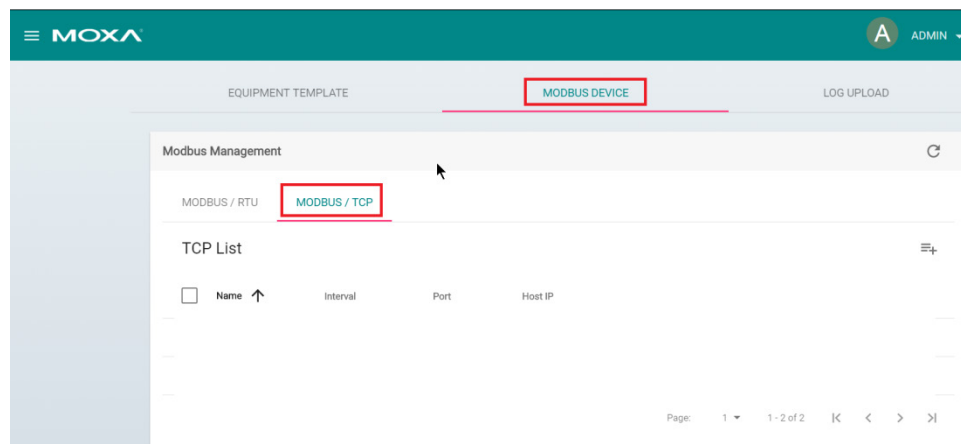
For details on creating a new template, refer to the *ThingsPro User's Manual*.



In this article, we use the Modbus device **E2242**, which is already listed in the **Template List**.

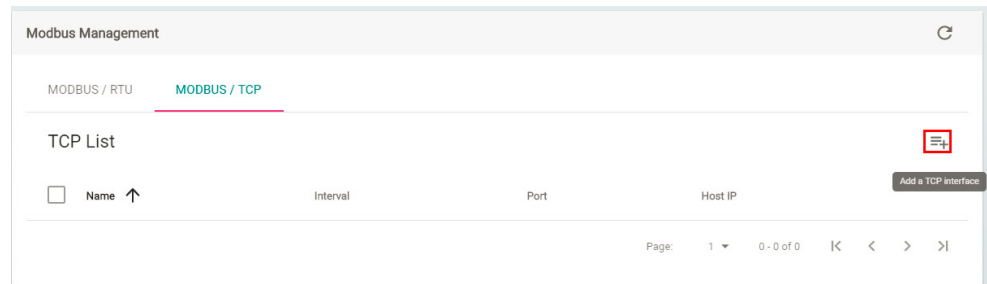
### 2. Create an instance of the Modbus device.

- a. Select the **MODBUS DEVICE** tab.
- b. Configure the Modbus device with a communication interface (serial or Ethernet). Because the connected device (E2242) in this case uses Modbus TCP protocol, click on the **MODBUS/TCP** tab.



- i. Click (Add TCP interface).

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- ii. Fill in the TCP interface settings and click **SAVE**.

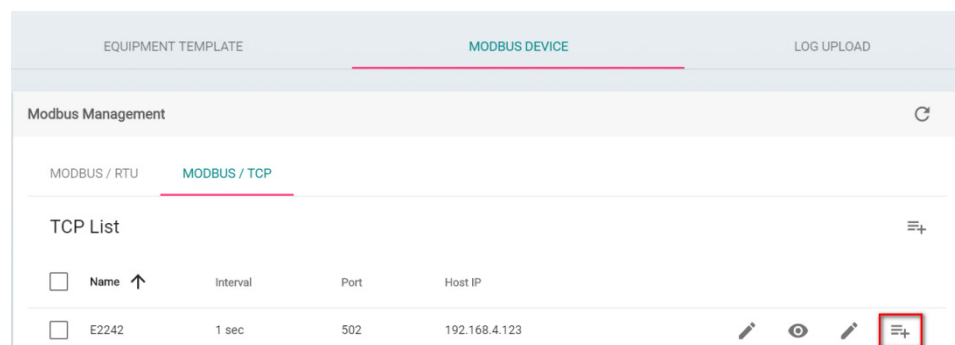
The 'Edit TCP Interface Settings' dialog box is shown with the following values:

- Interface Name \*: E2242
- Host IP \*: 192.168.4.123
- Port \*: 502
- Interval \*: 1000
- Response Timeout \*: 5000

A green 'SAVE' button is located at the bottom center of the dialog.

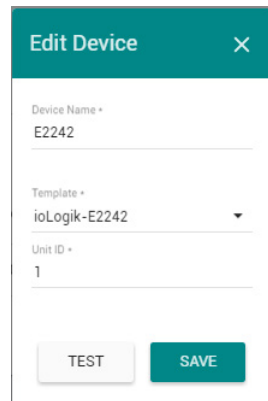
The Modbus/TCP interface for E2242 is added to the TCP List.

- iii. Click on the  (Add connected device) button corresponding to E2242 to add a connected device.



- iv. Fill in the **Device Name**.  
v. Select a **Template** to link the MODBUS/TCP interface with the Modbus device.  
vi. Specify the **Unit ID** for the device and click **SAVE**.

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Device Name +  
E2242

Template +  
ioLogik-E2242

Unit ID +  
1


TEST SAVE

ThingsPro will now start continuously polling data from the device and will send the data collected to ThingsPro MQTT topics.

To check the status, click  (Show connected devices).

If the **Request Status** is green, ThingsPro is able to send requests to the Modbus TCP device and receive data.

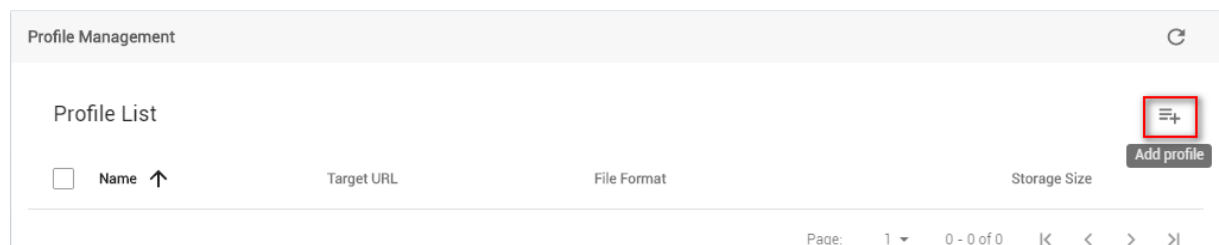
Device List

<input type="checkbox"/>	Name ↑	Request Time	Request Status	Update Time
<input type="checkbox"/>	E2242	25 ms	 6/6	2016-12-01 17:21:01

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### 3. Upload device data logs

- Select the **LOG UPLOAD** tab.
- Click  (Add a profile).



Profile Management

Profile List

<input type="checkbox"/>	Name ↑	Target URL	File Format	Storage Size
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Add profile


- Fill in the following details for the new profile and click **SAVE**.

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Field	Description
<b>Name</b>	Specify a name for the new data log profile. Length: 3-255 characters. Format: a-z, A-Z, 0-9, '_', '-'
<b>Target URL</b>	Specify the complete URL of the remote server to which the data log files associated with this profile should be uploaded.
<b>HTTP Basic Authentication</b>	Select this option to enable HTTP basic authentication
<b>No Check Certificate</b>	Select this option to skip the certificate check on the HTTPS connection
<b>Enable</b>	Enable file compression of the data files.

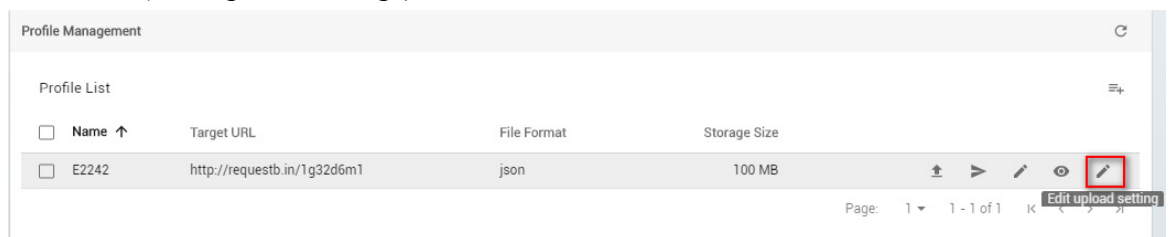
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Field	Description
<b>Compression</b>	
<b>File Rotate Count</b>	Specify the number of log file for this profile
<b>File Format</b>	Select a file format: XML, JSON, or CSV Note: This is not the format of the device log file, but the file format that you can use to download/upload data from the data logger.
<b>Schedule</b>	Set an upload schedule for the data log files. For example, daily at a specified time, hourly, or even every minute.

- d. Click  (Test target connection) to make sure that the target URL is valid.



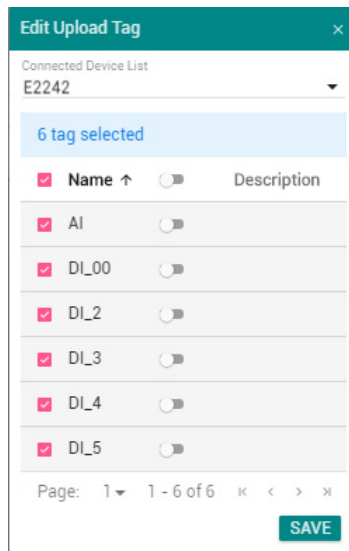
- e. Click  (Edit upload settings).




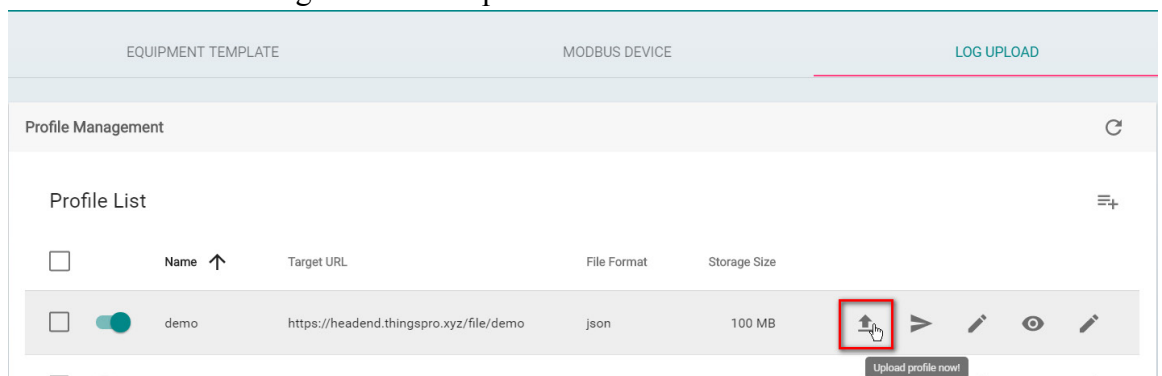
- f. Select the device from the **Connected Device List**.  
g. Select the tags for the device.



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- h. Click **SAVE**.
- i. Click  (Upload profile now!).  
The Modbus device log file will be uploaded to the remote HTTP server.



Once the HTTP server program receives the log files, the data will be available to user programs and applications.

## 5 Additional Reading

[InfluxDB in Grafana](#)