Ensure Data Completeness with Data Supplement's Auto Mode, on Demand, and on Schedule

Moxa Technical Support Team

support@moxa.com

Contents

Copyright © 2018 Moxa Inc.   Released on March 27, 2018

About Moxa

Moxa is a leading manufacturer of industrial networking, computing, and automation solutions. With over 25 years of industry experience, Moxa has connected more than 30 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 automation systems. Information about Moxa's solutions is available at www.moxa.com. You may also contact Moxa by email at info@moxa.com.
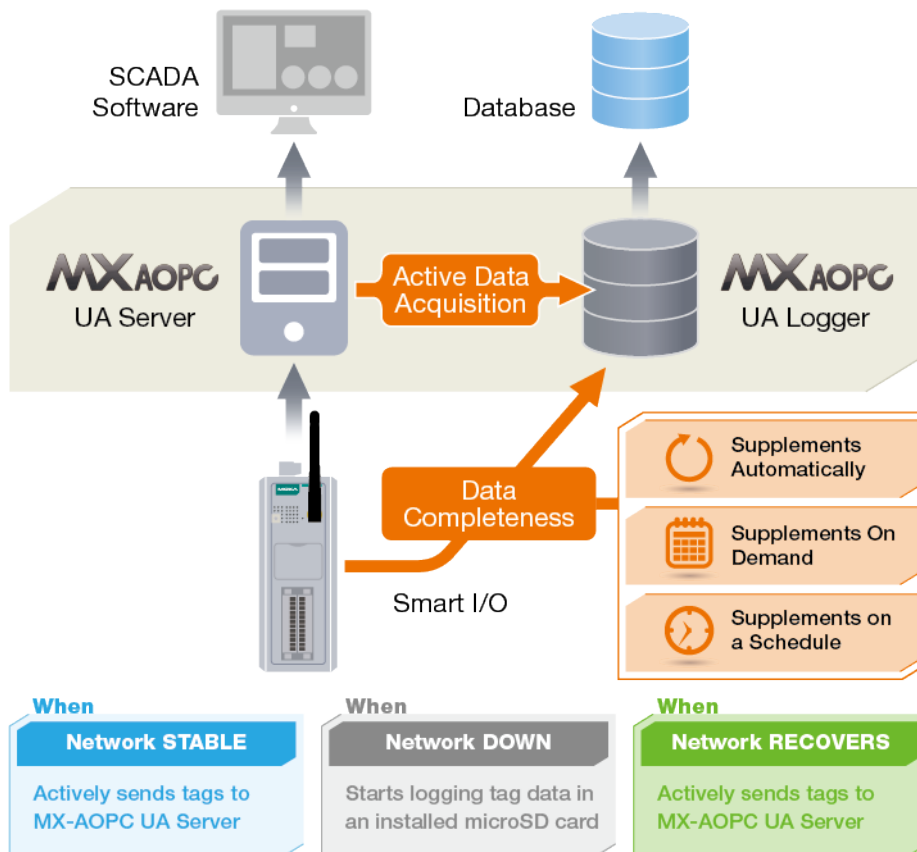
How to Contact Moxa

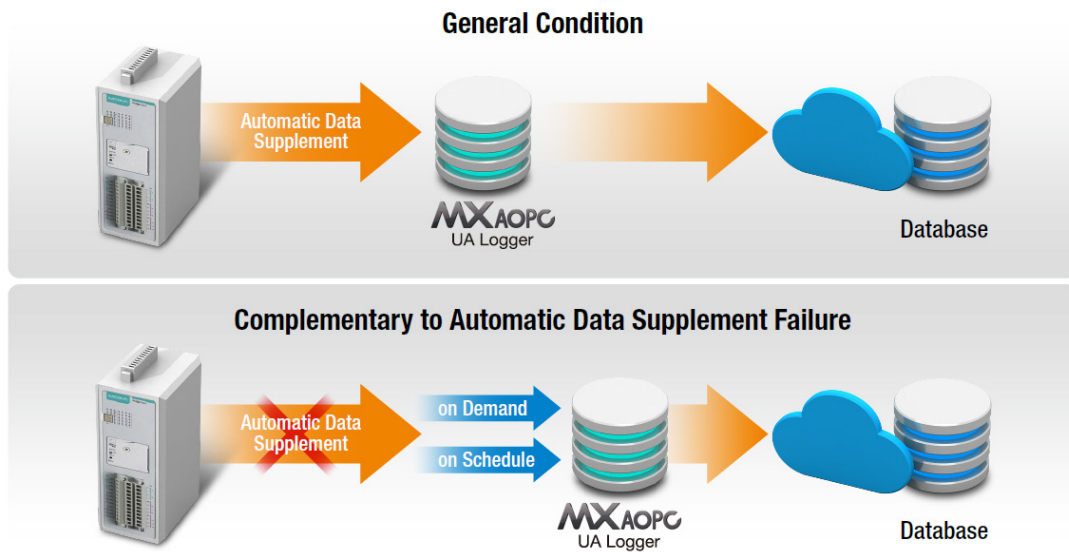Tel: +886-2-8919-1230
Fax: +886-2-8919-1231

MOXA®

Reliable Networks ▲ Sincere Service

Everyone has heard the old adage, "garbage in, garbage out," but the reality is that ensuring the quality and integrity of big data is not particularly easy. A cause for concern is the inevitable unexpected connection interruptions that plague any network, and which could result in data loss and expensive shutdowns of important business processes. Moxa's smart data acquisition method ensures data completeness by shrinking the amount of data that needs to be transmitted.

With the automatic data supplement function, after each network reconnection, MX-AOPC UA Logger will compare historical data stored on the SD cards located in individual Moxa ioLogik 2500 devices with the real time data it has already stored locally, and then supplement any missing data by requesting that the devices retransmit the lost data.

We should point out, however, that automatic data supplement could fail due to unstable network conditions or a failure to access the database. To help avoid these problems, MX-AOPC Logger supports "on demand" and "on schedule" data supplement to allow users to manually trigger data supplement at any time or specify a fixed time for Logger to automatically execute a data supplement every day.

In this tech note, we illustrate how to set up different data supplement methods: automatic, on-demand, and on-schedule. For demonstration purposes, data supplement is implemented by exporting the data to an Excel file. To further understand how to build a public cloud-based solution, check the following links:

Tech note for public cloud-based solutions:

http://www.moxa.com/support/sarch_result.aspx?prod_id=3049&type_id=7&type=doc

Tech note title:

- How to Build a Public Cloud with MX-AOPC UA Server and Logger

Prerequisites for data completeness solution:
1. **ioLogik 2500 series device with SD card**
2. **MX-AOPC UA Server & UA Logger software**
3. **IOxpress software**

Only three steps are required to finish setting up the data supplement methods:
Step 1. **Install MX-AOPC UA Server & UA Logger on your PC**
Step 2. **Configure you Moxa I/O device to send properly configured tags to MX-AOPC UA Server**

Step 3. **Configure MX-AOPC UA Server and Logger to implement one of the following functions:**

1. **Automatic data completeness**
2. **On-demand data supplement**
3. **On-schedule data supplement**

1 Install MX-AOPC UA Server and Logger on your PC

The MX-AOPC UA Server and MX-AOPC UA Logger software can be downloaded for free from Moxa's website at the following software download page:

http://www.moxa.com/product/MX-AOPC_UA_Suite.htm

Latest software versions:

- MX-AOPC UA Server v2.0
- MX-AOPC UA Logger v2.0

Refer to the user's manuals for MX-AOPC UA Server and MX-AOPC UA Logger for step-by-step installation instructions:

http://www.moxa.com/support/sarch_result.aspx?prod_id=3049&type_id=7&type=doc

User's manual titles:

- MX-AOPC UA Server User's Manual
- MX-AOPC UA Logger User's Manual

2 Configure your ioLogik 2500 device to send tags to MX-AOPC UA Server

To configure your ioLogik 2500 device, IOxpress can be downloaded for free from Moxa's website:

Software download page:

https://www.moxa.com/support/sarch_result.aspx?prod_id=4133&type_id=5&type=soft

Latest software versions:

- IOxpress Configuration Utility v2.1

Refer to the user's manuals of ioLogik 2500 on how to configure the device to send tags to MX-AOPC UA Server.
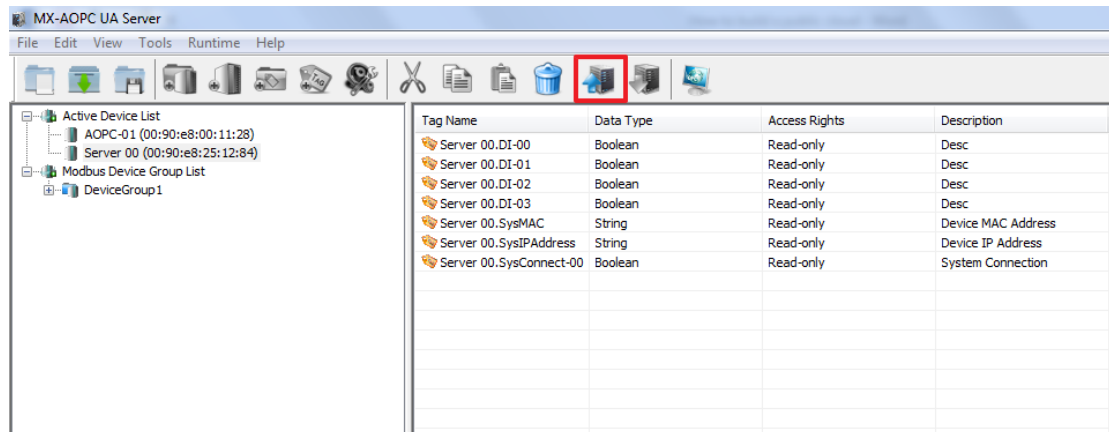
User's manual download page:

https://www.moxa.com/support/sarch_result.aspx?type=doc&prod_id=4133&type_id=7
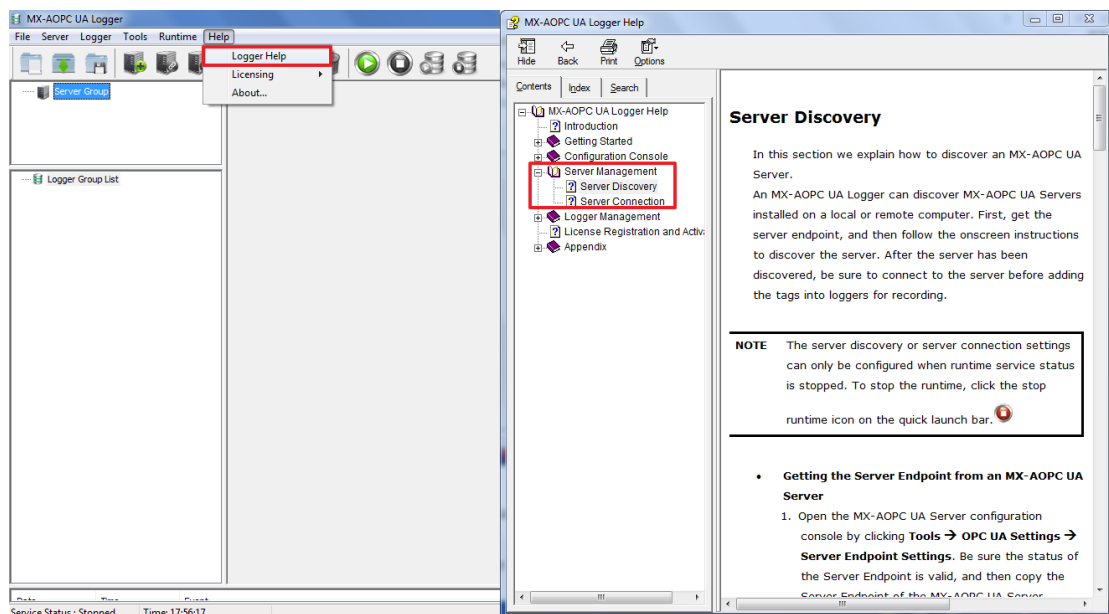
User's manual titles:

- ioLogik 2500 User's Manual
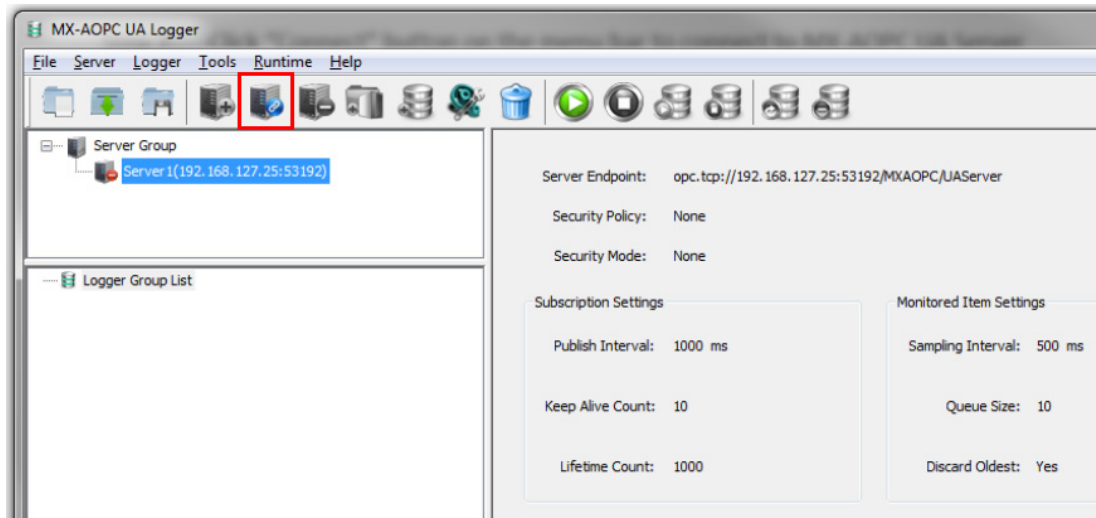
3 Configure MX-AOPC UA Server and Logger

Step 1.   Run MX-AOPC UA Server from your PC's start menu, and then click the "Get Configuration from Server" icon on the menu bar. Devices that are uploading tags to the server will be listed in the left panel, and the tags you configured in Step 2 above will be listed in the right panel.
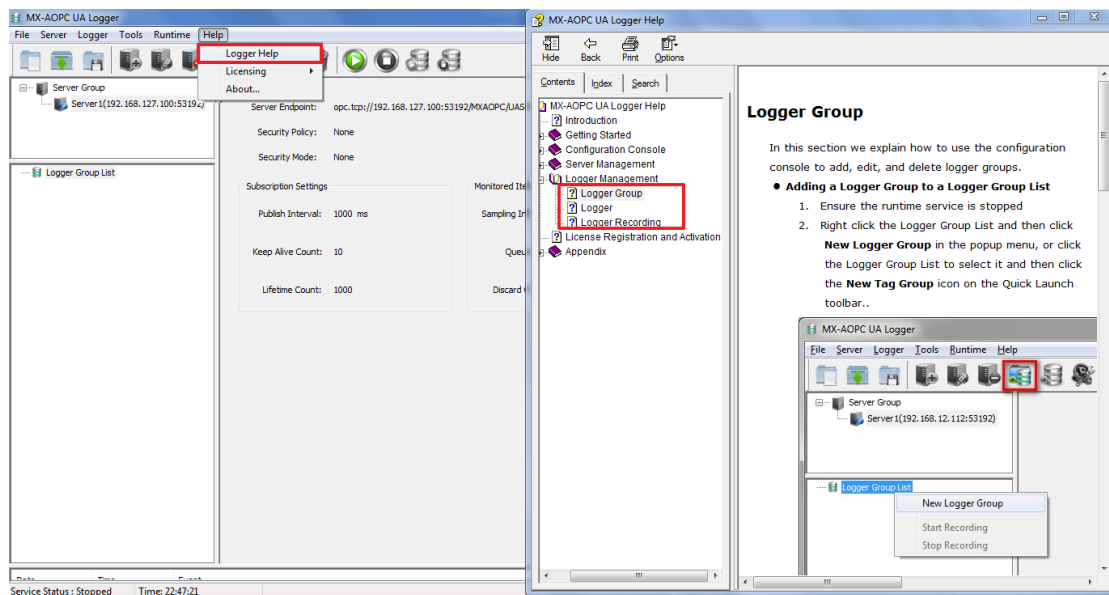

Step 2.   Run MX-AOPC UA Logger from your PC's start menu, and then click **Help → Logger Help** from the top menu bar. Follow the instructions in the "Server Management" section to connect MX-AOPC UA Logger to MX-AOPC UA Server.
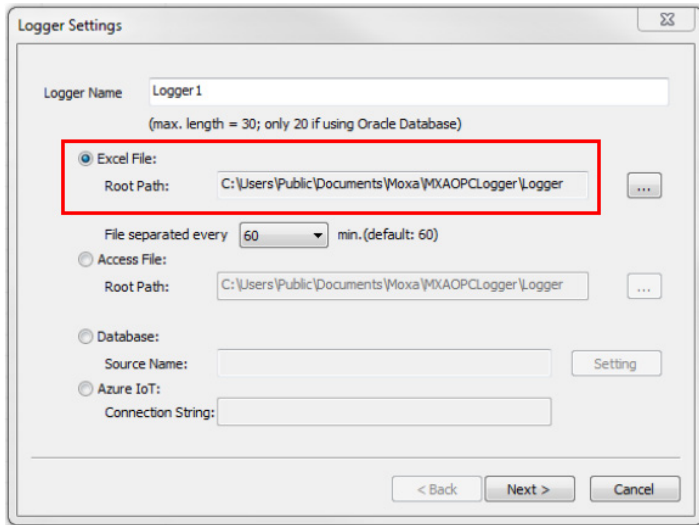
Step 3.   Click the "Connect" button on the menu bar to connect to MX-AOPC UA Server.
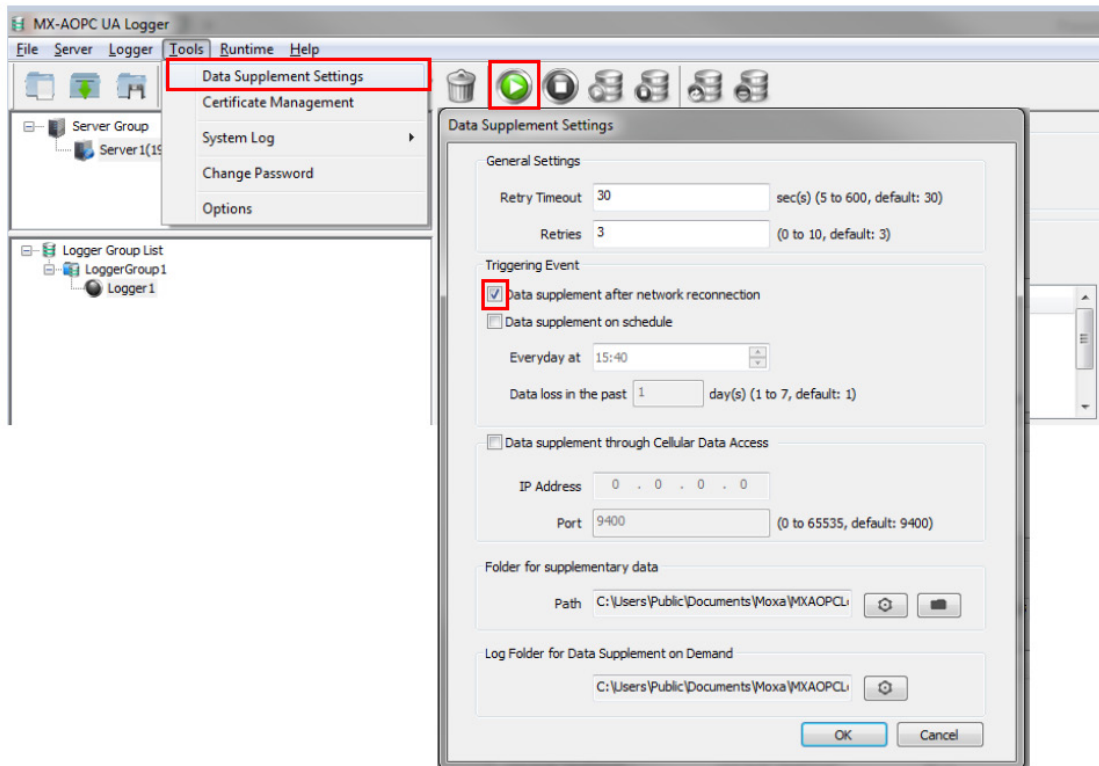

Step 4.   Click the "Help" menu and follow the instructions in the "Logger Management" section to create a logger to send the tags to a local Excel file.
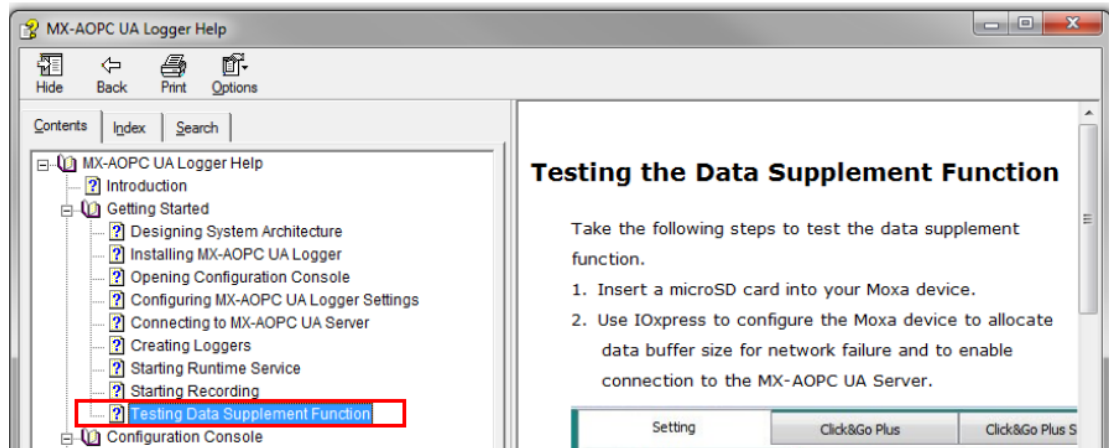
Step 5.1 <u>Automatic data supplement setting</u>

Click **Tools → Data Supplement Settings** from the top menu bar. Click "Data supplement after network reconnection" to activate the automatic data supplement function.
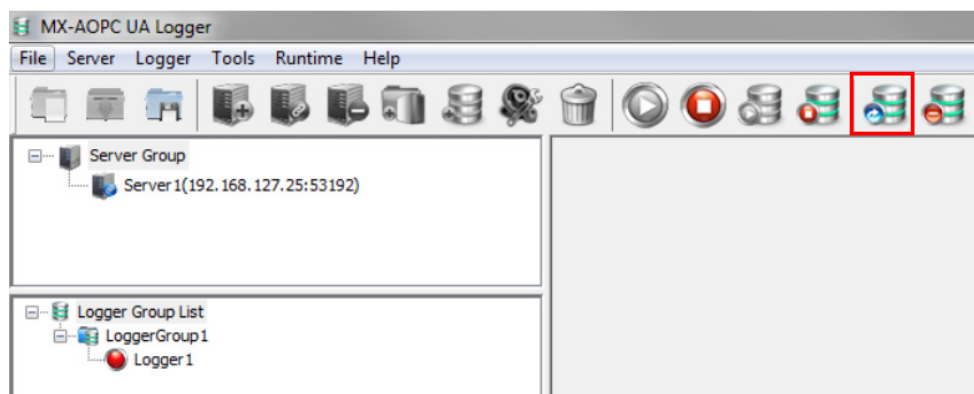

Note: Data Supplement Settings can only be modified when the logger stops recording, and the data supplement process can be performed when the logger is recording.

Step 5.2 Click the "Help" menu and follow the instructions in "Testing the Data Supplement Function" section to test the automatic data supplement function.
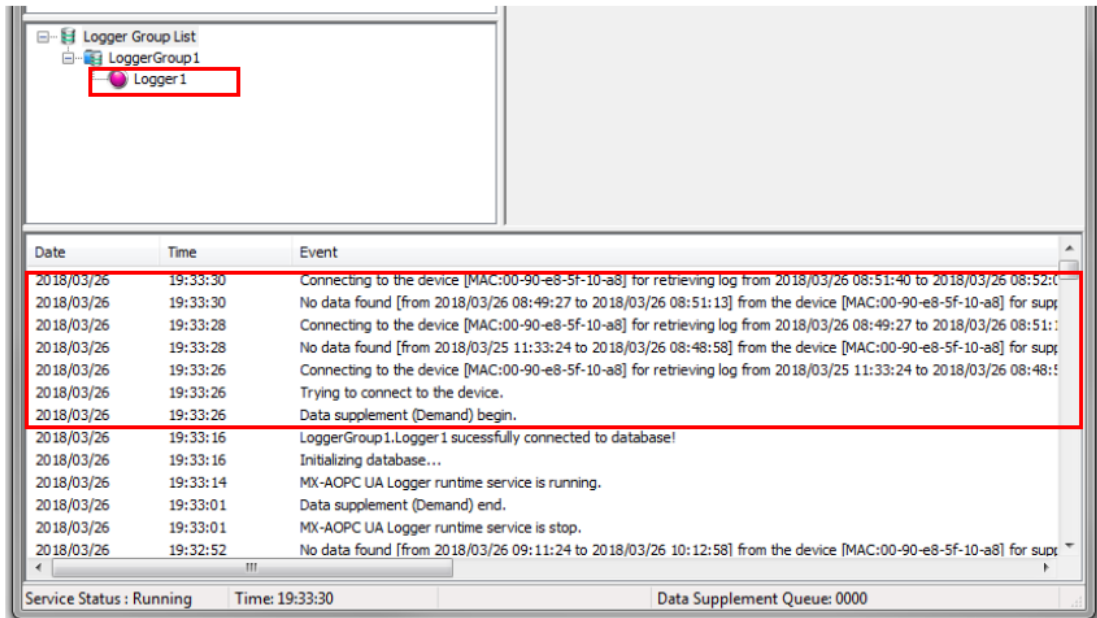

Step 6.1 On demand data supplement setting

To trigger the data supplement process manually, click the "Data Supplement on Demand" button.
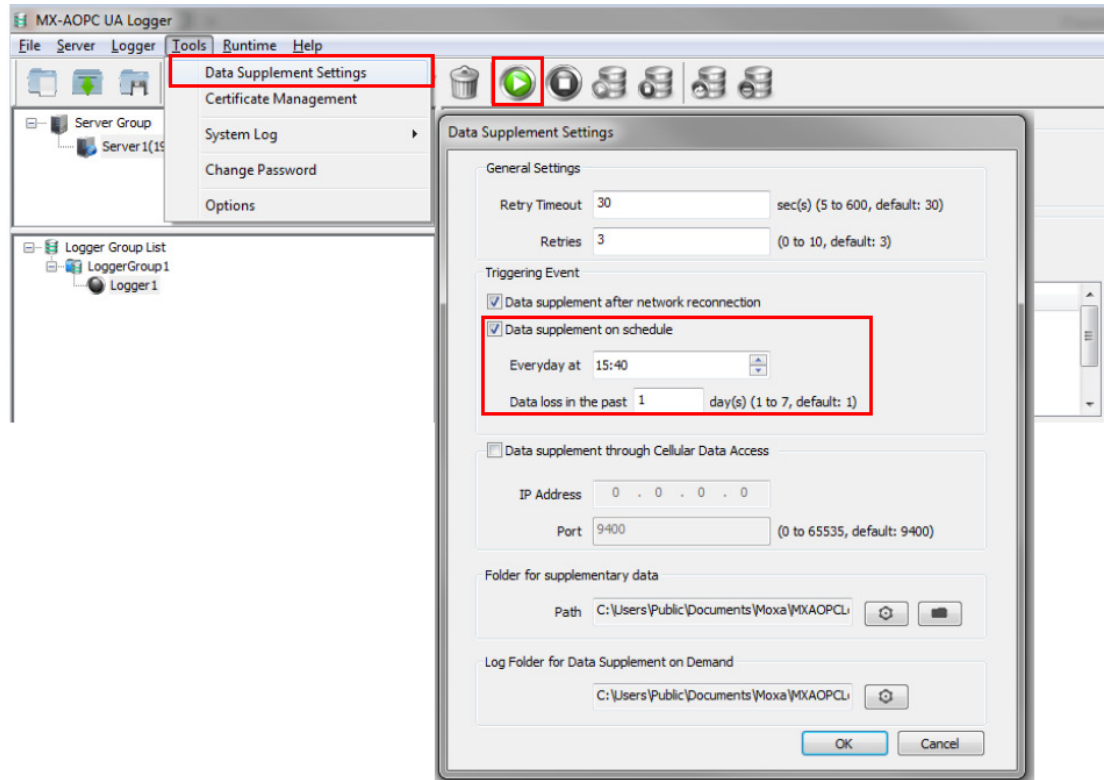
Step 6.2 Once the on-demand data supplement function has been triggered, the Logger icon will flash pink and gray light, indicating that the logger is performing the data supplement process. The progress of the data supplement process can be seen in the event log.

Step 7.1   On schedule data supplement setting

Click **Tools → Data Supplement Settings** from the top menu bar. Click "Data supplement on schedule" and specify the time and period; the data supplement process will start at the specified time.

Step 7.2 After the on-schedule data supplement process is complete, the event log will show how long the data supplement process took to perform and display the result of the supplement process.