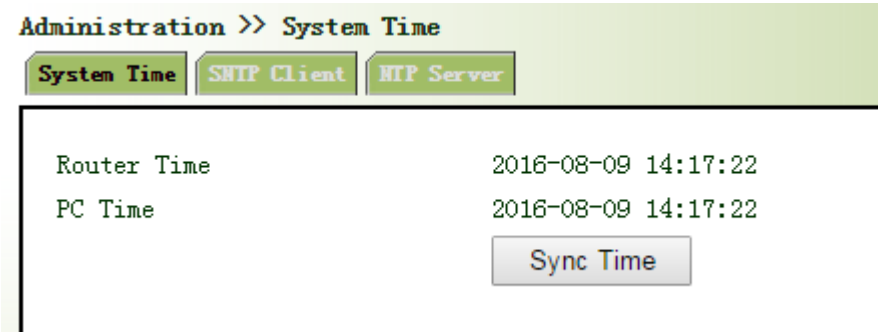
User Manual for Modbus Data Acquisition Based on Python

1. Prepare

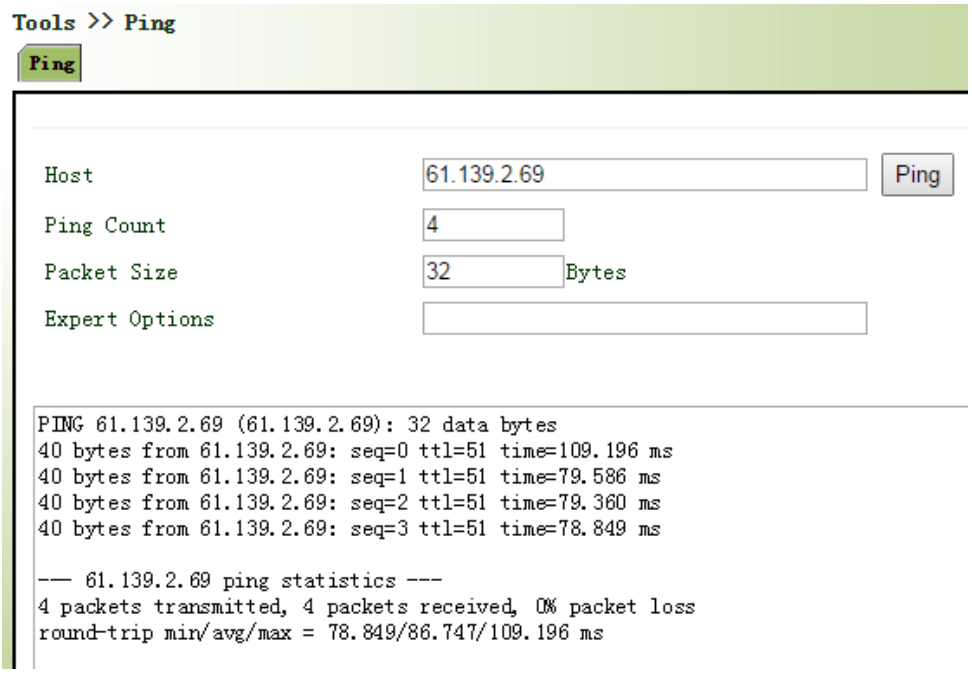
Device Model:IR915
App Files:Core.zip, InModbus.zip
Tools: WinSCP, putty ,telnet

2. Operations

Step 1: Make sure your device is running the firmware with this version **V1.0.0.r8330**, and synchronic time:



Step 2: Make sure your device is available to access internet

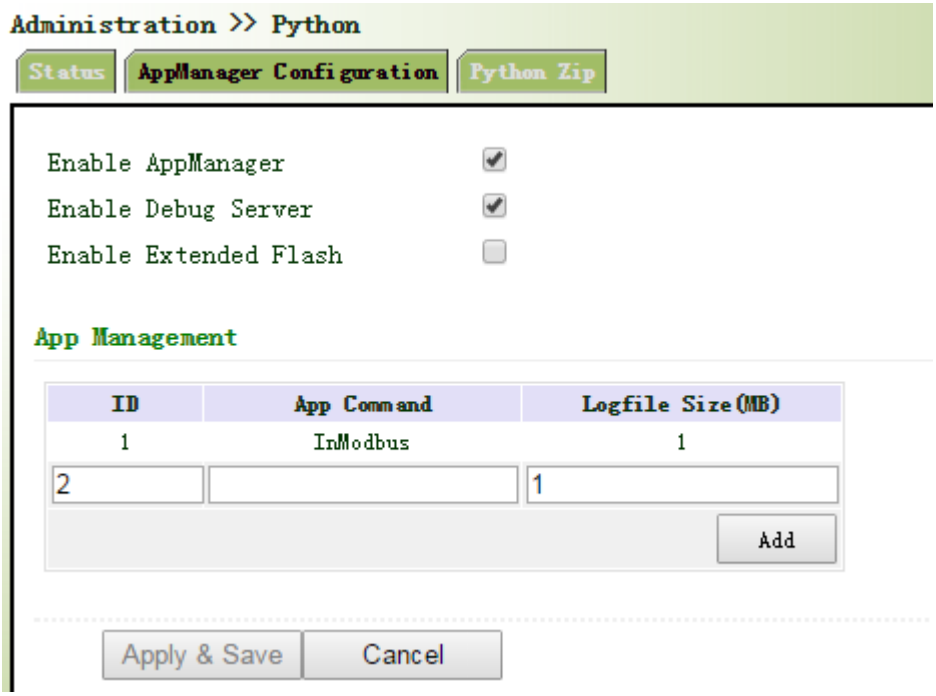


Step 3: Login the inhand DN cloud : **g.inhandnetworks.com**, and add the gateway, create controller and model, as the following show:

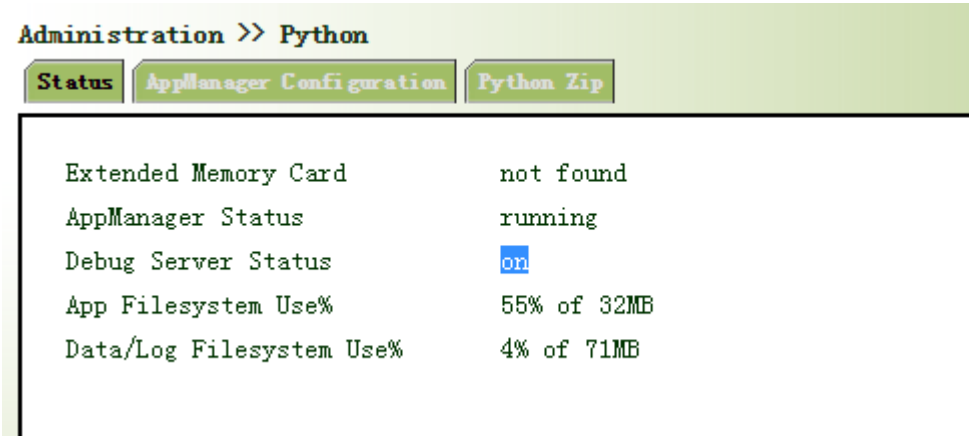
Step 4: Install Python SDK

a) Enable debug service

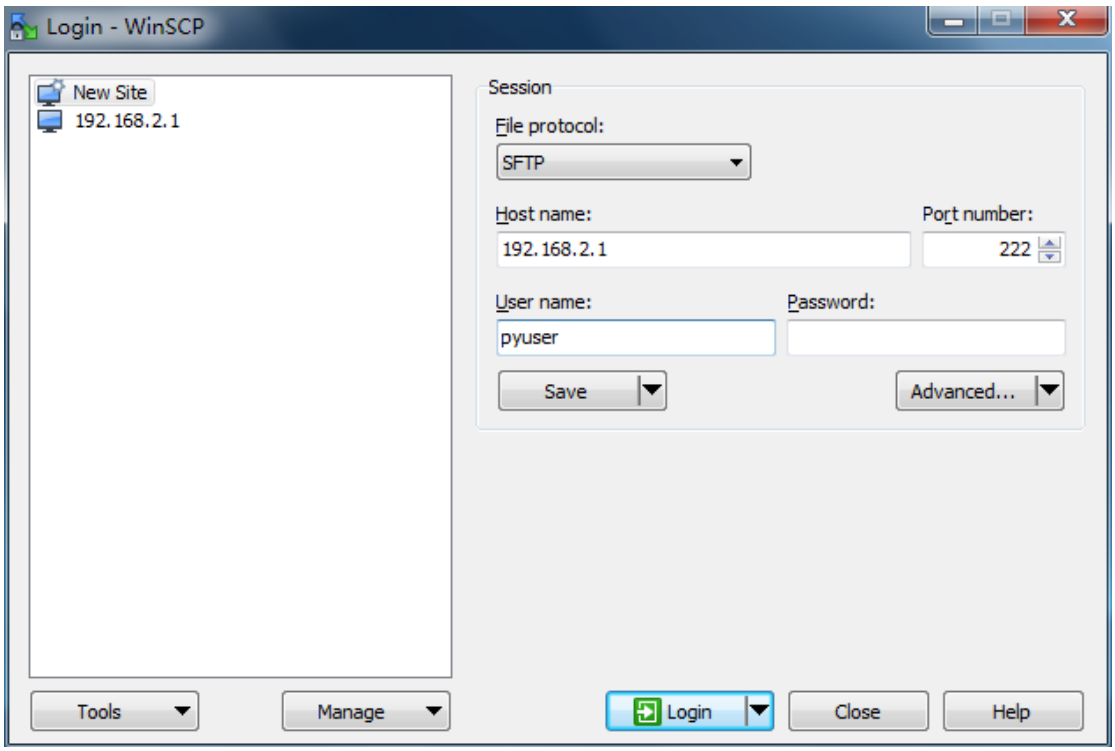
Administration >> python

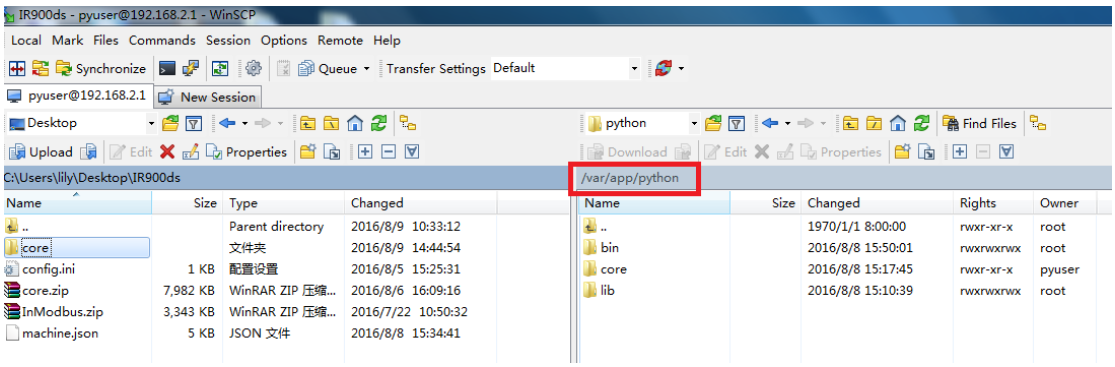


Check the debug server's status :

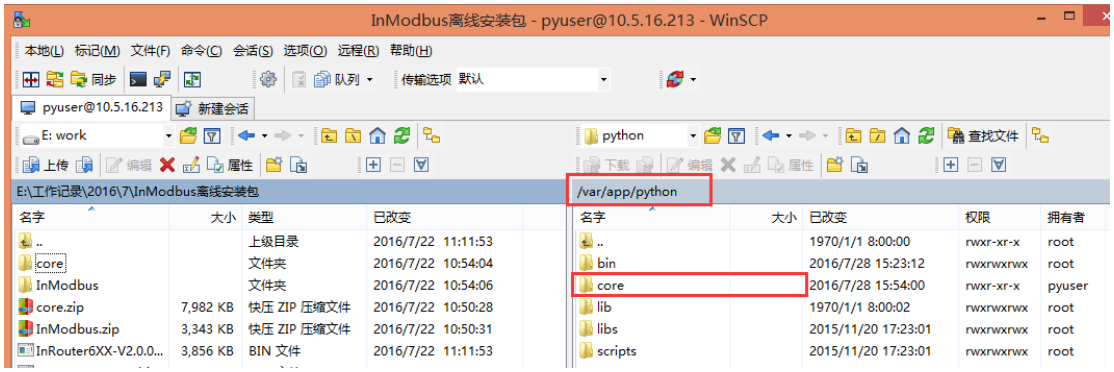


b) Upload core.zip, open WinSCP and access the devcie by SFTP





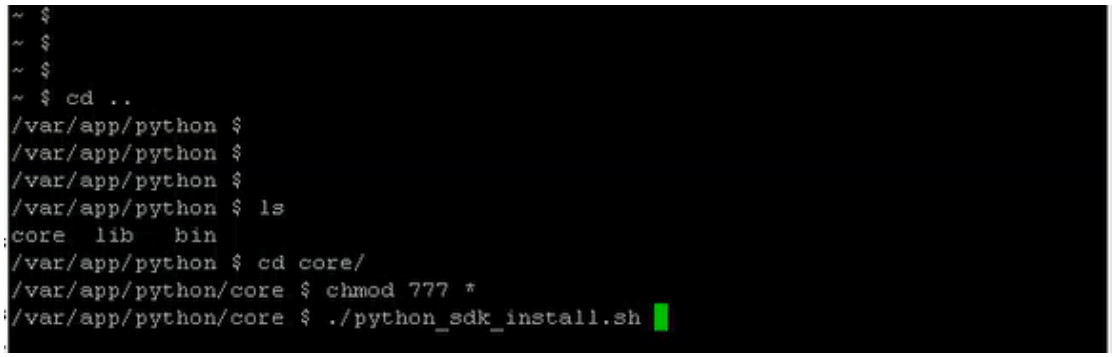
Unzip core.zip file and upload core file, the path is : **/var/app/python**



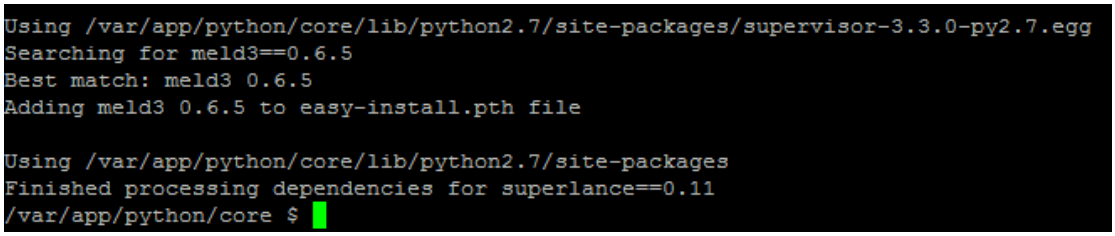
c) Change the access authority of file, use putty to login the device, and enter the directory: cd /var/app/python/core

chmod a+x * or chmod 777 *

d) Execute the installation scrip: ./python_sdk_install.sh , it will take around 2 minutes to install it, please keep the device is available to access internet.



e) : As the following show, the device has finished the python sdk installation



Step 5: Configure InModbus.zip

Under the directory InModbus.zip\InModbus\src, need to modify the following two files:

a) **config.ini** path: InModbus.zip\InModbus\src

b) **machine.json** path: InModbus.zip\InModbus\src

Config.ini needs to change “account” to your account on g.inhandnetworks.com and “password”is the password used for g.inhandnetworks.com

```
[API]
url=http://c.inhand.com.cn
client_id=00001795345025179809813 6
client_secret=08E9EC6793345759456CB8BAE52615F3
account=hanxd@inhand.com.cn
password=123456
password_type=1
grant_type=password

[AP]
protocol=tcp
host=114.215.82.171
port=21004
```

Modify Machine.json file, suggest to edit it by using notepad++

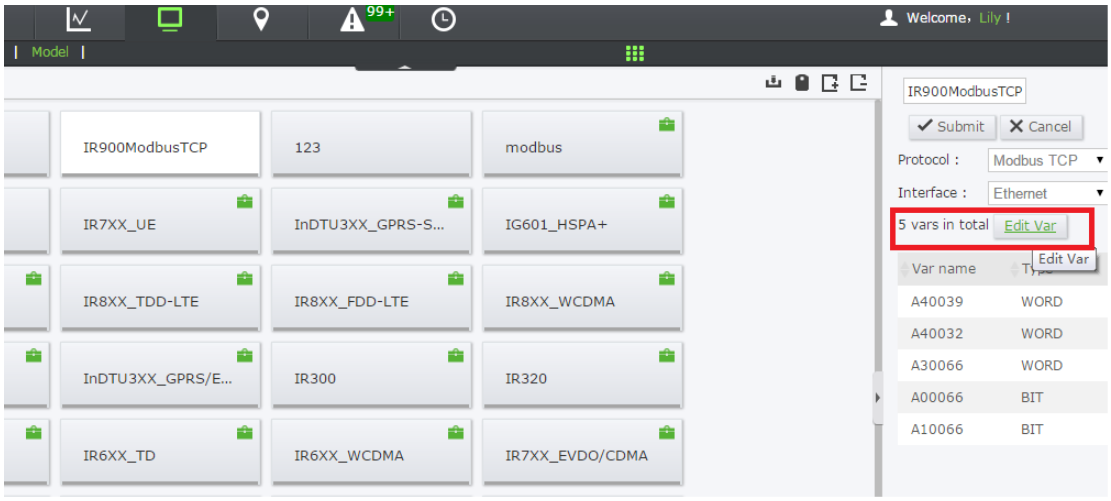
Modbus-RTU protocol, json file related parameters as following:

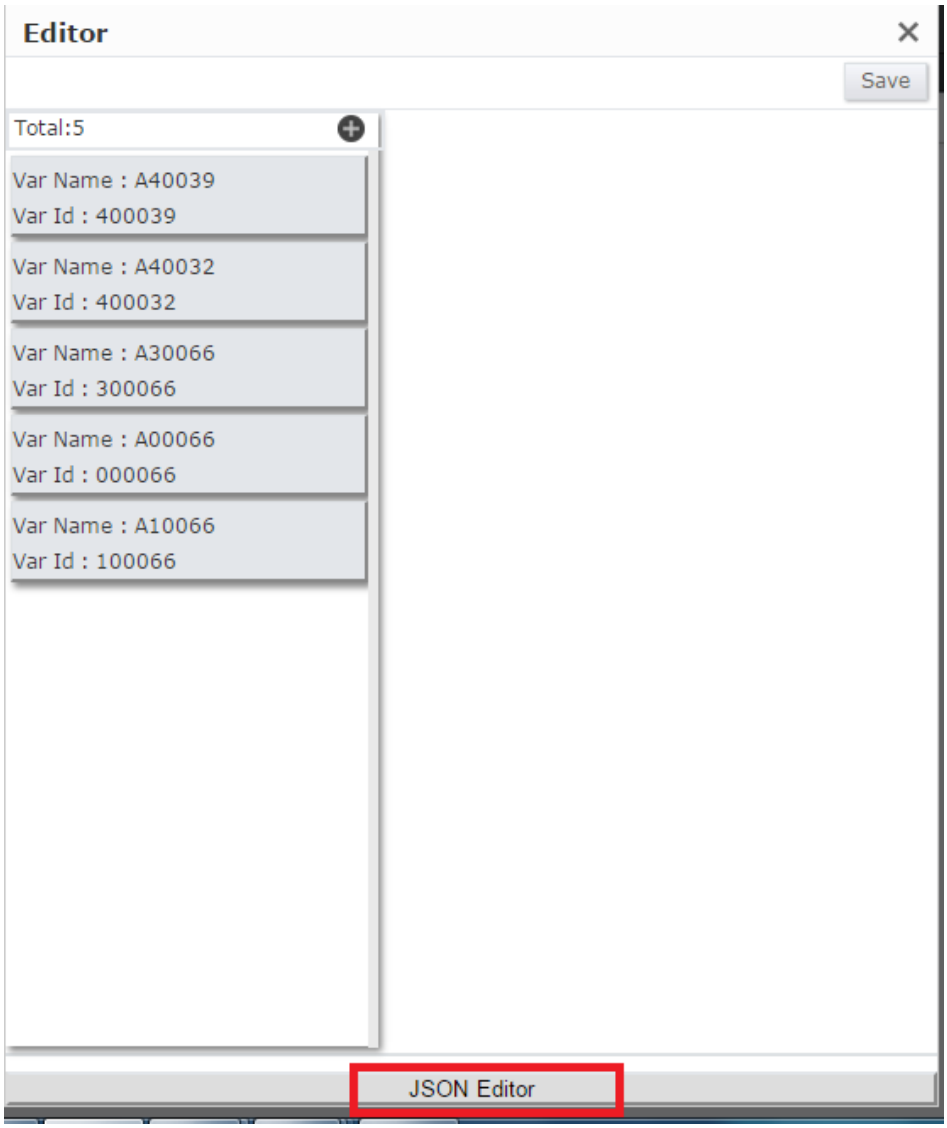
- "name": "liwei", same with PLCname on g server
- "plcName": "liwei", same with PLCname on g server
- "protocol": "MBRTU", protocol, MBRTU
- "address": 1, same with the PLC address on g server
- "serialport": "/dev/ttyO1", ttyO1 means serial port 232, ttyO5 means serial port 485
- "stopbits": 1, same with g server
- "baudrate":9600, same with g server
- "bytesize":8, same with g server
- "parity":"N", same with g server
- "xonxoff":0,
- "polling_interval": 5,
- "upload_interval": 30,
- "reconnect_interval":10,
- "vars": [], copy it from g server
- "nativeName": "" var group name, it can be blank

Modbus-TCP protocol, json related parameters as the following show:

- "name": "liwei", same with PLCname on g server
- "plcName": "liwei", same with PLCname on g server
- "protocol": "MBTCP", protocol MBTCP
- "host": "192.168.2.57", PLC's IP address
- "port": "502",
- "address": "2", P
- "conn_params": "9600-8-n-1",
- "polling_interval": 5,
- "upload_interval": 30,
- "reconnect_interval":10,
- "vars": [], copy it from g server
- "nativeName": "" var group name, it can be blank

Note: Here the vars need to be same with g server, so usually we directly copy it from the g server, as the following show:

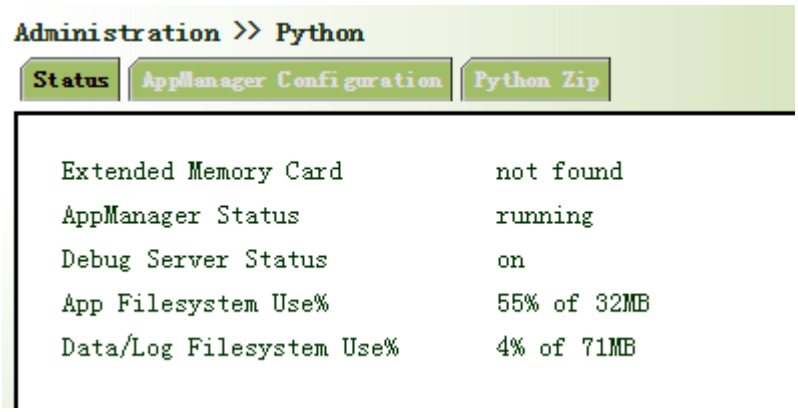




Step 6: Install InModbus service

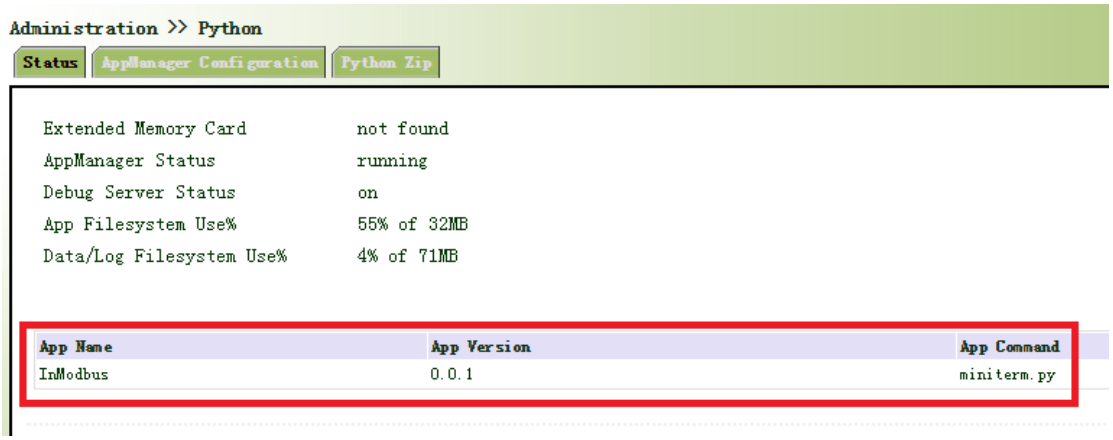
a) Enable Python APPManager

b) Check the AppManager running status

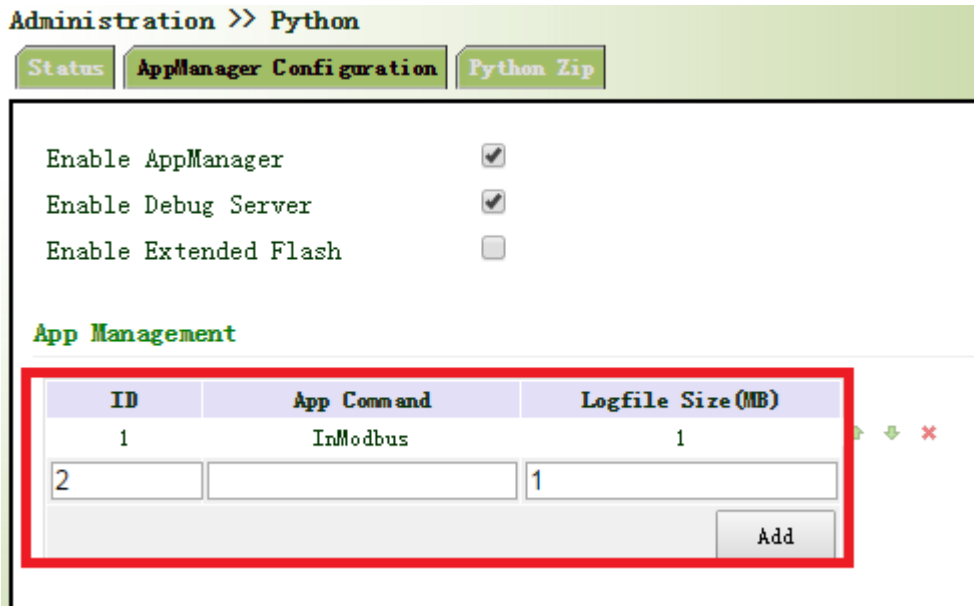


c) Upload the InModbus.zip file to the device , it will take around 10 minutes to install this sevice

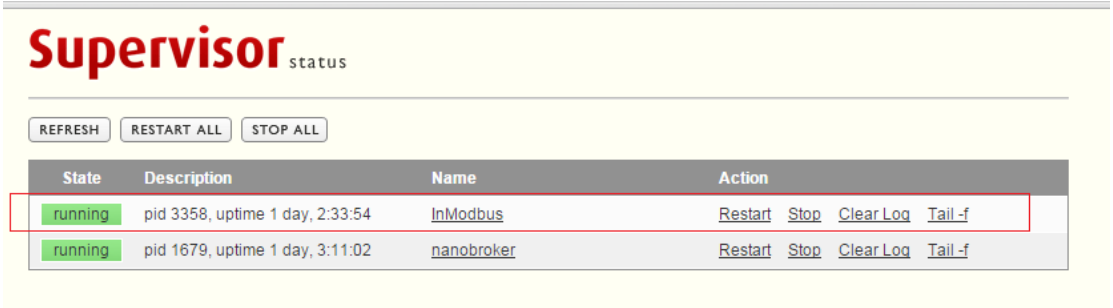
d) Check on the web server



e) Add InModbus APP



f) check the running status on the web server



Step 7: Monitoring history data

900	IR9XX_WCDMA
TCP	TCP
liwei	RTU

A40039	46163
A40032	46183
A30066	46203
A00066	0.0