GIGA REST API

V2.2

1. Authentication

1.1. Login

- Resource URL:

  https://<snmp_ip>/api/login

- Curl Request:

  curl -i -X POST -H "Content-Type: application/json" -H "Content-Length: 0" -H "Authorization: Digest nc=71217564; username=admin;nc=00000001;cnonce=a0b9ac23463677df;activation_code=954ab498ecb00175817c9291e78b7bf6;response=7dW2uQ3lVogn0b6ywupxcA==" -k http://[snmp_ip]/api/login

- Curl Response:

  HTTP/1.1 200 OK

  Set-Cookie: trackid=43a46d1edff84557b893947e736ef20d; Path=/; Version=1; Max-Age=1800

  Set-Cookie: uid=0326a15927d3349f; Path=/; Version=1; Max-Age=1800

  Date: [GMT Date]

  {"auth":3}

Name	Description
Response	A base64 "string" which proves that the user knows a password.
	response = base64(evp-aes-256-cbc(password, key_ascii_hex (activation_code), iv_ascii_hex (cnonce)))
	key: 256 bit, iv: 128 bit
	EX: assume password is "admin"
	response = base64(evp-aes-256-cbc(admin,
	key_ascii_hex("5a04ec902686fb05a6b7a338b6e07760"), iv_ascii_hex ("49153a7a0aed25a8")))
	For detailed encryption algorithms, please refer to the "rest api" example.
	Linux example:
	$ xxd -pu -l 16 <<< "49153a7a0aed25a8"
	34393135333631376313061656432356138
	$ xxd -pu -l 32 <<< "5a04ec902686fb05a6b7a338b6e07760"
	356130346563393030323638336666623035613136623237613333338623653037373630
	$ echo -n "admin"	openssl enc -aes-256-cbc -nosalt -base64 -K '356130346563393030323638336666623035613136623237613333338623653037373630' -iv '34393135333631376313061656432356138'
	E3yFZ6uzvc1JOL+h2mBuSg==
	$curl -i -X POST -H "Content-Type: application/json" -H "Content-Length: 0" -H

	"Authorization: Digest nc=00000001; username=admin;nc=00000001;cnonce=49153a7a0aed25a8;activation_code=5a04ec902686fb05a6b7a338b6e07760;response=E3yFZ6uzvc1JOL+h2mBuSg==" -k http://[IP]/api/login {"auth":3}
nc	The nc-value is the hexadecimal count of the number of requests that the client has sent with the nonce value in this request. nc has 8 digits. EX: 00000000 ~ 99999999
cnonce	The cnonce-value is an opaque quoted "string" value provided by the client and used by both client and server to avoid chosen plaintext attacks. It has 8 words. EX: a0b9ac23463677df
username	Login username
trackid	It is a 256-bit hex "string" converted from 128-bit integer number (UUID) used to authenticate user. EX: 43a46d1edff84557b893947e736ef20d
activation_code	It is a 256-bit hex "string" converted from 128-bit integer random number. It is the key of evp-aes-256-cbc during authentication. EX: 03b5f9b72582e6f5
uid	It is a 128-bit hex "string" to identify user. EX: 0326a15927d3349f
auth	3: admin, 2:Outlet Manager, 1:guest, 0: no privilege

1.2. Logout

■ Resource URL:

https://<snmp_ip>/api/logout

■ Curl Request:

curl -i -X POST -H "Content-Type: application/json" -H "Content-Length: 0" --cookie "trackid=43a46d1edff84557b893947e736ef20d;uid=0326a15927d3349f;nc=00000001;cnonce=a0b9ac23463677df " -k http://[snmp_ip]/api/logout

■ Curl Response:

If user logout is successful, Response as below

    HTTP/1.1 401 Unauthorized

    Set-Cookie: trackid=; Path=/; Version=1; Max-Age=1800

    Set-Cookie: uid=; Path=/; Version=1; Max-Age=1800

    Content-type: application/json

    Content-Length: 11

    Date: [GMT Date]

    {"error":1}

Name	Description

trackid	This is the cookie value, obtained when logging in
uid	This is the cookie value, obtained when logging in
nc	obtained when logging in
cnonce	obtained when logging in

1.3. Get User Privilege

- ■ Resource URL:

  https://<snmp_ip>/api/usr_priv

- ■ Curl Request:

  curl -i -X GET -H "Content-Length: 0" --cookie
  "trackid=43a46d1edff84557b893947e736ef20d;uid=0326a15927d3349f;nc=00000001;cnonce=a
  0b9ac23463677df" -k http://[snmp_ip]/api/usr_priv

- ■ Curl Response:

  HTTP/1.1 200 OK

  Set-Cookie: trackid=43a46d1edff84557b893947e736ef20d; Path=/; Version=1; Max-Age=1800

  Set-Cookie: uid=0326a15927d3349f; Path=/; Version=1; Max-Age=1800

  {

    "usr_privilege":integer, /*3: admin, 2:Outlet Manager, 1:guest, 0: no privilege*/

    "usr_logined":integer, /* login status */

    "daisy_chain_salve":integer /* daisy chain salve, 1: enable, 0: disable */

    "daisy_chain_mode": /*Master mode: 1:enable, 0:disable*/

  }

Name	Description
trackid	This is the cookie value, obtained when logging in
uid	This is the cookie value, obtained when logging in
nc	obtained when logging in
cnonce	obtained when logging in

2. Device Monitoring

- Resource URL:
  https://<snmp_ip>/api/pdu_mon
- Curl Request:
  curl -i -X GET -H "Content-Length: 0" --cookie
  "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnonce=a0b
  9ac23463677df" -k http://[snmp_ip]/api/pdu_mon
- Curl Response:
  http/1.1 200 OK
  Set-Cookie: trackid=43a46d1edff84557b893947e736ef20d; Path=/; Version=1; Max-Age=1800
  Set-Cookie: uid=034f1b705e094a04; Path=/; Version=1; Max-Age=1800

```
{
    "pdu_mon":{
        "local":{ /* refer section 2.1 */ },
        "daisy01":{ /* refer section 2.1 */ },
        ......
        "daisy15":{ /* refer section 2.1 */ },
        "inlet_status": {
            "valid":integer,
            "name":"string"
        },
        "net_connect":{ /* refer section 2.5*/ },
        "alarm":{ /*refer section 2.6 */ }
    }
}
```

2.1. PDU

■ Resource URL:

https://<snmp_ip>/api/pdu_mon/<local or daisy01~daisy15>

■ Curl Request:

curl -i -X GET -H "Content-Length: 0" --cookie
"trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnonce=a0b
9ac23463677df" -k http://[snmp_ip]/api/pdu_mon/local

■ Curl Response:

http/1.1 200 OK

Set-Cookie: trackid=43a46d1edff84557b893947e736ef20d; Path=/; Version=1; Max-Age=1800

Set-Cookie: uid=034f1b705e094a04; Path=/; Version=1; Max-Age=1800

```
{
    "local":{
       "inlet":{ /*refer section 2.2*/ },
            "outlet":{ /*refer section 2.3*/ },
          "emd":{ /*refer section 2.4*/ }
       }
}
```

2.2. Inlet

■ Resource URL:

https://<snmp_ip>/api/pdu_mon/<local or daisy01~daisy15>/inlet

■ Curl Request:

curl -i -X GET -H "Content-Length: 0" --cookie
"trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnonce=a
0b9ac23463677df" -k http://[snmp_ip]/api/pdu_mon/local/inlet

■ Curl Response:

http/1.1 200 OK

Set-Cookie: trackid=43a46d1edff84557b893947e736ef20d; Path=/; Version=1; Max-Age=1800

Set-Cookie: uid=034f1b705e094a04; Path=/; Version=1; Max-Age=1800

```
{
        "valid":integer,
        "name":"string",        /* maximum length is 31. */
        "bid":integer,          /* Board ID*/
                                /* Bit0: Force is 1 */
                                /* Bit1: 1/3 Phase. 0 is 1-Phase, 1 is 3-Phase */
                                /* Bit9: Inlet/Outlet. 0 is Inlet, 1 is Outlet */
                                /* Bit10: CT Channel. 0 is 1CH, 1 is 2CH */
                                /* Bit11: Current Breaker. 0 is 16A, 1 is 32A. */
                                /* Bit15: A2 Format Bitmap, must is 1*/


        "fw_type":integer,      /* Firmware Type */
        "fw_ver":integer,       /* Firmware Version */
        "volt_ph1":integer,     /* Unit:0.1V */
        "volt_ph2":integer,
        "volt_ph3":integer,
        "freq_ph1":integer,     /* Unit:0.1Hz */
        "freq_ph2":integer,
        "freq_ph3":integer,
        "pf_ph1_b1":integer,    /* Unit:0.01 */
        "pf_ph2_b1":integer,
        "pf_ph3_b1":integer,
        "pf_ph1_b2":integer,
        "pf_ph2_b2":integer,
        "pf_ph3_b2":integer,
        "current_ph1_b1":integer,    /* Unit:0.01A */
        "current_ph1_b2":integer,
        "current_ph2_b1":integer,
```

```
"current_ph2_b2":integer,
"current_ph3_b1":integer,
"current_ph3_b2":integer,
"act_power_ph1":integer,     /* Unit:0.1W */
"act_power_ph2":integer,
"act_power_ph3":integer,
"app_power_ph1":integer,     /* Unit:0.1VA */
"app_power_ph2":integer,
"app_power_ph3":integer,
"ract_power_ph1":integer,    /* Unit:0.1Var */
"ract_power_ph2":integer,
"ract_power_ph3":integer,
"energy _ph1":integer,       /* Unit:1WH */
"energy_ph2":integer,
"energy_ph3":integer,
"energy_total":integer,
"energy_time_ph1":"string",
"energy_time_ph2":"string",
"energy_time_ph3":"string",
"energy_time_total":"string",
"load_balance":integer,      /* Unit:% */
"evt_over_load":integer,     /* Bitmap bit0: critical , bit1: warning */

"evt_status_ph1":integer,    /* Bitmap bit0: critical , bit1: warning */
                             /* bit2: current b1 critical, bit3: current b1 warning */
                             /* bit4: voltage critical, bit5: voltage warning */
                             /* bit6: current b2 critical, bit7: current b2 warning */
                             /* bit8: balance critical, bit9: balance warning */
                             /* bit10: total current critical */
                             /* bit11: total current warning */

"evt_status_ph2":integer,    /* Bitmap bit0: critical , bit1: warning */
                             /* bit2: current b1 critical, bit3: current b1 warning */
                             /* bit4: voltage critical, bit5: voltage warning */
                             /* bit6: current b2 critical, bit7: current b2 warning */
                             /* bit8: balance critical, bit9: balance warning */
                             /* bit10: total current critical */
                             /* bit11: total current warning */

"evt_status_ph3":integer,    /* Bitmap bit0: critical , bit1: warning */
```

```
                                        /* bit2: current b1 critical, bit3: current b1 warning */
                                        /* bit4: voltage critical, bit5: voltage warning */
                                        /* bit6: current b2 critical, bit7: current b2 warning */
                                        /* bit8: total current critical */
                                        /* bit9: total current warning */

        "evt_load_balance":integer,  /* Bitmap bit0: critical , bit1: warning */
        "rcm_valid":integer,         /* 1:valid, 0:invalid */
        "rcm_current"::integer,      /* Unit: 0.1mA, Range is 0~600*/
        "rcm_alarm":integer          /* 1: alarm, 0 is normal*/
    }
```

2.3. Outlet

- **Resource URL:**

  https://<snmp_ip>/ap/pdu_mon/<local or daisy01~daisy15>/outlet

- **Curl Request:**

  curl -i -X GET -H "Content-Length: 0" --cookie
  "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnonce=a
  0b9ac23463677df" -k http://[snmp_ip]/api/pdu_mon/local/outlet/

- **Curl Response:**

  http/1.1 200 OK
  Set-Cookie: trackid=43a46d1edff84557b893947e736ef20d; Path=/; Version=1; Max-Age=1800
  Set-Cookie: uid=034f1b705e094a04; Path=/; Version=1; Max-Age=1800

```
    {
        "outlet":{
            "port_size":integer,
            "info":[
                    /*refer section 2.3.1*/
            ],
        }
    }
```

2.3.1. Outlet Information

- Resource URL:

https://<snmp_ip>/api/pdu_mon/<local or daisy01~daisy15>/outlet/info

- Curl Request:

curl -i -X GET -H "Content-Length: 0" --cookie
"trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnon
ce=a0b9ac23463677df" -k http://[snmp_ip]/api/pdu_mon/local/outlet/info

- Curl Response:

```
http/1.1 200 OK
Set-Cookie: trackid=43a46d1edff84557b893947e736ef20d; Path=/; Version=1; Max-
Age=1800
Set-Cookie: uid=034f1b705e094a04; Path=/; Version=1; Max-Age=1800
{
        "valid": [ integer, ......],
        "name":["string", ......],        /* maximum length is 31. */
        "bid": [ integer, ......],        /* Board ID */
                                          /* Bit0: Force is 1 */
                                          /* Bit1: 1/3 Phase. 0 is 1-Phase, 1 is 3-Phase */
                                          /* Bit9: Inlet/Outlet. 0 is Inlet, 1 is Outlet */
                                          /* Bit10: Outlet 2P/6P. 0 is 2-Port, 1 is 6-Port */
                                          /* Bit11: Relay Type. 0 is relay, 1 is non-relay */
                                          /* Bit12: Meter Type. 0 is meter, 1 is non-meter */
                                          /* Bit15: A2 Format Bitmap, must is 1 */

        "fw_type": [ integer, ......],    /* Firmware Type */
        "fw_ver": [ integer, ......],     /* Firmware Version */
        "rly_state": [ integer, ......],  /*0:relay off, 1:relay on*/
        "evt_status": [ integer, ......], /* Bitmap bit0: critical , bit1: warning */
                                          /* bit2: current critical, bit3: current warning */
                                          /* bit4: power critical, bit5: power warning */
        "volt": [ integer, ......],       /* Unit:0.1V */
        "current": [ integer, ......],    /* Unit:0.01A */
        "pf": [ integer, ......],         /* Unit:0.01 */
        "act_power": [ integer, ......],  /* Unit:0.1W */
        "app_power": [ integer, ......],  /* Unit:0.1VA */
        "energy":[ integer, ......],      /* Unit:1WH */
        "energy_time": ["string", ......]
}
```

2.4. EMD

- Resource URL:

https://<snmp_ip>/api/deb_mon/<local or daisy01~daisy15>/emd

- Curl Request:

curl -i -X GET -H "Content-Length: 0" --cookie
"trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnonce=a
0b9ac23463677df" -k http://[snmp_ip]/api/pdu_mon/local/emd

- Curl Response:

http/1.1 200 OK

Set-Cookie: trackid=43a46d1edff84557b893947e736ef20d; Path=/; Version=1; Max-Age=1800

Set-Cookie: uid=034f1b705e094a04; Path=/; Version=1; Max-Age=1800

```
{
    "valid": [integer, ……], /* array size is 8 */
    "version":["string", ……],
    "type": [integer, ……],
    "name":["string", ……],
    "temp_name": ["string", ……],
    "humi_name": ["string", ……],
    "alarm1_name": ["string", ……],
    "alarm2_name": ["string", ……],
    "temp": [integer, ……],          /* Unit:0.1C */
    "humi": [integer, ……],          /*Unit:0.1%*/
    "temp_st": [integer, ……],      /*bit0:Warning, bit1: Critical, bit2: High, bit3:Low*/
    "humi_st": [integer, ……],      /*bit0:Warning, bit1: Critical, bit2: High, bit3:Low*/
    "alarm1": [integer, ……],        /* 0:invalid, 1:alarm non-triggered, 2:alarm triggered */
    "alarm2":[integer, ……]          /* 0:invalid, 1:alarm non-triggered, 2:alarm triggered */
}
```

2.5. Network Connection

■ Resource URL:

https://<snmp_ip>/api/pdu_mon/net_connect

■ Curl Request:

curl -i -X GET -H "Content-Length: 0" --cookie
"trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnonce=a
0b9ac23463677df" -k http://[snmp_ip]/api/pdu_mon/local/emd

■ Curl Response:

```
http/1.1 200 OK
Set-Cookie: trackid=43a46d1edff84557b893947e736ef20d; Path=/; Version=1; Max-Age=1800
Set-Cookie: uid=034f1b705e094a04; Path=/; Version=1; Max-Age=1800
{
    "net_connect":{
        "tcp":[
            {
                "pid":integer,
                "uid":integer,
                "type":"string",
                "local_addr":"string",
                "remote_addr":"string",
                "remote_port":integer,
                "status":"string"
            },
            ……
        ],
        "tcp6":[
            {
                "pid":integer,
                "uid":integer,
                "type":"string",
                "local_addr":"string",
                "remote_addr":"string",
                "remote_port":integer,
                "status":"string"
            },
            ……
        ],
        "total_connect":integer
    }
```

}

2.6. Alarm List

Get Alarm List

■ Request URL:

https://<snmp_ip>/api/pdu_mon/alarm?lang=<lang_tag>

■ Curl Request:

curl -i -X GET -H "Content-Length: 0" --cookie
"trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnonce=a
0b9ac23463677df" -k http://[snmp_ip]/api/pdu_mon/alarm?lang=en_US

■ Curl Response:

http/1.1 200 OK

Set-Cookie: trackid=43a46d1edff84557b893947e736ef20d; Path=/; Version=1; Max-Age=1800

Set-Cookie: uid=034f1b705e094a04; Path=/; Version=1; Max-Age=1800

```
{
    "last_alarm_id":integer,
    "last_alarm_time":"string",
    "last_alarm_desc":"string",
    "alarm_count":integer,
    "alarm_list":[
        {
            "alarm_id":integer,
            "alarm_time":"string",
            "alarm_desc":"string"
        },
        ……
    ]
}
```

Name	Description
lang	en_US, de_DE, es_ES, user_1, user_2

3. Device Management

3.1. Management

- **POST**
  - **Resource URL:**

    https://<snmp_ip>/api/pdu_mgmt
  - ~~Curl Request: (Example)~~
  - **Request:**

    POST <snmp_ip>/api/pdu_mgmt HTTP / 1.1

    Host: localhost

    Cookie:

    trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;cnonce=69153d25a8a7a0ae

```
{
    "pdu_mgmt":{
        "local":{
            "inlet": {
                /* refer section 3.1 */
            },
            "outlet": {
                /* refer section 3.2 */
            },
            "emd": {
                /* refer section 3.3 */
            }
        },
        "daisy01":{
            "inlet": {
                /* refer section 3.1 */
            },
            "outlet": {
                /* refer section 3.2 */
            },
            "emd": {
                /* refer section 3.3 */
            }
        },
        ......,
        "daisy15":{
```

```
                    "inlet": {
                            /* refer section 3.1 */
                    },
                    "outlet": {
                            /* refer section 3.2 */
                    },
                    "emd": {
                            /* refer section 3.3 */
                    }
            },
            "schd":[
                    {
                            /* refer section 3.4 */
                    },
                    ……
            ],
            "grp":[
                    {
                            /* refer section 3.5 */
                    },
                    ……
            ]
        }
    }
```

- **Curl Response:**
  http/1.1 200 OK
  Set-Cookie: trackid=43a46d1edff84557b893947e736ef20d; Path=/; Version=1; Max-Age=1800
  Set-Cookie: uid=034f1b705e094a04; Path=/; Version=1; Max-Age=1800
  Content-type: application/json
  { "error":0 }   /* 0:success, 1:error */

- **Resource URL**
  GET <snmp_ip>/api/pdu_mgmt
- **Curl Request:**
  curl -i -X GET -H "Content-Length: 0" --cookie
  "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnonce=a
  0b9ac23463677df" -k http://[snmp_ip]/api/pdu_mgmt
- **Curl Response:**
  http/1.1 200 OK
  Set-Cookie: trackid=43a46d1edff84557b893947e736ef20d; Path=/; Version=1; Max-Age=1800

Set-Cookie: uid=034f1b705e094a04; Path=/; Version=1; Max-Age=1800

/* refer POST content */

3.2. Inlet

- POST
  - Resource URL:

    https://<snmp_ip>/api/pdu_mgmt/<local or daisy01~daisy15>/inlet
  - Curl Request: (Example: Energy clear & modify inlet name)

    curl -i -X POST -H "Content-Type: application/json" --cookie "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnonce=a0b9ac23463677df" -d '{"energy_clr":1,name:"test1"}' -k http:// [snmp_ip]/api/pdu_mgmt/local/inlet
  - Curl Request: (Example: Energy clear)

    curl -i -X POST -H "Content-Type: application/json" --cookie "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnonce=a0b9ac23463677df" -d '{"energy_clr":1 }' -k http:// [snmp_ip]/api/pdu_mgmt/local/inlet
  - Request:

    POST <snmp_ip>/api/pdu_mgmt/<local or daisy01~daisy15>/inlet HTTP / 1.1

    Host: localhost

    Cookie: trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;cnonce=69153d25a8a7a0ae

    ```
    {
        "inlet":{
            "energy_clr":integer,          /* [bit0]:clear phase1 energy*/
                                           /* [bit1]:clear phase2 energy*/
                                           /* [bit2]:clear phase3 energy*/
                                           /* [bit3]:clear total energy */
            "valid":integer,
            "name":"string",
            "over_load_warn":integer,
            "over_load_crit":integer,
            "load_balance_warn":integer,
            "load_balance_crit":integer,
            "over_volt_warn_ph1":integer,          /* Unit:0.1V */
            "over_volt_warn_ph2":integer,
            "over_volt_warn_ph3":integer,
            "over_volt_crit_ph1":integer,
            "over_volt_ crit_ph2":integer,
            "over_volt_ crit_ph3":integer,
            "over_curr_total_warn_ph1":integer,    /* Unit:0.01A */
            "over_curr_total_warn_ph2":integer,
    ```

```
            "over_curr_total_warn_ph3":integer,
            "over_curr_total_crit_ph1":integer,
            "over_curr_total_crit_ph2":integer,
            "over_curr_total_crit_ph3":integer,
            "over_curr_b1_warn_ph1":integer,
            "over_curr_b1_warn_ph2":integer,
            "over_curr_b1_warn_ph3":integer,
            "over_curr_b1_crit_ph1":integer,
            "over_curr_b1_crit_ph2":integer,
            "over_curr_b1_crit_ph3":integer,
            "over_curr_b2_warn_ph1":integer,
            "over_curr_b2_warn_ph2":integer,
            "over_curr_b2_warn_ph3":integer,
            "over_curr_b2_crit_ph1":integer,
            "over_curr_b2_crit_ph2":integer,
            "over_curr_b2_crit_ph3":integer,
            "rcm_current_thld":integer        /*Unit is 1mA, Range 3~50 */
        }
    }
```

■ Response:

http/1.1 200 OK

Set-Cookie: trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-Age=1800

Accept: application/json

Content-type: application/json

{ "error":0 }   /* 0:success, 1:error */

■ GET

■ Resource URL:

GET <snmp_ip>/api/pdu_mgmt/<local or daisy01~daisy15>/inlet

■ Curl Request:

curl -i -X GET -H "Content-Length: 0" --cookie
"trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnon
ce=a0b9ac23463677df" -k http://[snmp_ip]/api/pdu_mgmt/local

■ Curl Response:

http/1.1 200 OK

Set-Cookie: trackid=43a46d1edff84557b893947e736ef20d; Path=/; Version=1; Max-Age=1800

Set-Cookie: uid=034f1b705e094a04; Path=/; Version=1; Max-Age=1800

/* refer POST content */

3.3. Outlet

- POST
  - Resource URL:

    https://<snmp_ip>/api/pdu_mgmt/<local or daisy01~daisy15>/outlet
  - Curl Request: (Example: Modify outlet name)

    curl -i -X POST -H "Content-Type: application/json" --cookie
    "trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000001;cnon
    ce=a0b9ac23463677df" -d '{"name":["modyfi_outlet1","outlet 02","outlet 03","outlet
    04","outlet 05","outlet 06","outlet 07","outlet 08","outlet 09","outlet 10","outlet
    11","outlet 12","outlet 13","outlet 14","outlet 15","outlet 16","outlet 17","outlet
    18","outlet 19","outlet 20","outlet 21","outlet 22","outlet 23","outlet 24","outlet
    25","outlet 26","outlet 27","outlet 28","outlet 29","outlet 30","outlet 31","outlet
    32","outlet 33","outlet 34","outlet 35","outlet 36","outlet 37","outlet 38","outlet
    39","outlet 40","outlet 41","outlet 42","outlet 43","outlet 44","outlet 45","outlet
    46","outlet 47","outlet 48","outlet 49","outlet 50","outlet 51","outlet 52","outlet
    53","outlet 54","outlet 55","outlet 56","outlet 57","outlet 58","outlet 59","outlet
    60","outlet 61","outlet 62","outlet 63","outlet 64"]}' -k
    http://[snmp_ip]/api/pdu_mgmt/local/outlet/setting
  - Request:

    POST <snmp_ip>/api/pdu_mgmt/<local or daisy01~daisy15>/outlet HTTP / 1.1
    Host: localhost
    Cookie:
    trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;cnonc
    e=69153d25a8a7a0ae

    ```
    {
        "outlet":{
            "port_size":integer,
            "setting":{      /* array size is 64 */
                "valid":[integer, ……]           /* device valid */
                "energy_clr":[integer, ……]    /* 1:clear energy, 0:no action*/
                "name":["string", ……],
                "on_delay":[integer, ……],    /*bit7: 1 is enable delay */
                "off_delay":[integer, ……],    /*bit7: 1 is enable delay */
                "reboot_time":[integer, ……],
                "over_curr_warn":[integer, ……],        /* Unit:0.01A */
                "over_curr_crit":[integer, ……],
                "over_power_warn":[integer, ……],      /* Unit:1 */
                "over_power_crit":[integer, ……]
            },
    ```

```
            "rly_ctrl":{        /* array size is 8, 64Port = 8 * 8 bits */
                    "imm_on":[integer, ……],
                    "delay_on":[integer, ……],
                    "imm_off":[integer, ……],
                    "delay_off":[integer, ……],
                    "cycle":[integer, ……],
                    "delay_cycle":[integer, ……],
            }
        }
    }
```

■   Response:
    http/1.1 200 OK
    Set-Cookie: trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-
    Age=1800
    Accept: application/json
    Content-type: application/json
    { "error":0 }   /* 0:success, 1:error */

■   GET
    ■   Resource URL:
        GET <snmp_ip>/api/pdu_mgmt/<local or daisy01~daisy15>/outlet
    ■   Curl Request:
        curl -i -X GET -H "Content-Length: 0" --cookie
        "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnon
        ce=a0b9ac23463677df" -k http://[snmp_ip]/api/pdu_mgmt/local/outlet
    ■   Curl Response:
        http/1.1 200 OK
        Set-Cookie: trackid=43a46d1edff84557b893947e736ef20d; Path=/; Version=1; Max-
        Age=1800
        Set-Cookie: uid=034f1b705e094a04; Path=/; Version=1; Max-Age=1800

        /* refer POST content */

3.3.1. Clear Outlet Energy

■ Resource URL:

https://<snmp_ip>/api/pdu_mgmt/<local or daisy01~daisy15>/outlet/setting

■ Curl Request: (Example: Energy clear)

curl -i -X POST -H "Content-Type: application/json" --cookie
"trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnon
ce=a0b9ac23463677df" -d
'{"energy_clr":[1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,
0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0]}' -k
http://[snmp_ip]/api/pdu_mgmt/local/outlet/setting

■ Request:

POST <snmp_ip>/api/pdu_mgmt/<local or daisy01~daisy15>/outlet/setting/energy_clr HTTP
/ 1.1
Host: localhost
Cookie:
trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;cnonc
e=69153d25a8a7a0ae
{ /* array size is 64 */
      "energy_clr": [integer, ……],   /*1:clear energy, 0:no action*/
}

■ Response:

http/1.1 200 OK
Set-Cookie: trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-
Age=1800
Accept: application/json
Content-type: application/json
{ "error":0 }   /* 0:success, 1:error */

3.4. EMD

- **POST**
  - **Resource URL:**
    https://<snmp_ip>/api/pdu_mgmt/<local or daisy01~daisy15>/emd
  - **Curl Request: (Example: Modify outlet name)**
    curl -i -X POST -H "Content-Type: application/json" --cookie
    "trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000001;cnon
    ce=a0b9ac23463677df" -d '{"name":["EMD1-
    1","EMD2","EMD3","EMD4","EMD5","EMD6","EMD7","EMD8"]}' -k
    http://[snmp_ip]/api/pdu_mgmt/local/emd/name
  - **Request:**
    POST <snmp_ip>/ api/pdu_mgmt/<local or daisy01~daisy15>/emd HTTP / 1.1
    Host: localhost
    Cookie:
    trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;cnonc
    e=69153d25a8a7a0ae

```
{
    "emd":{ /* array size is 8 */
        "valid": [integer, ……],
        "version":["string", ……],
        "type": [integer, ……],
        "name": ["string", ……],
        "temp_name": ["string", ……],
        "humi_name": ["string", ……],
        "alarm1_name": ["string", ……],
        "alarm2_name":["string", ……],
        "temp": [integer, ……],                    /* Unit: 0.1C */
        "humi": [integer, ……],                    /* Unit: 0.1% */
        "temp_st": [integer, ……],
        "humi_st": [integer, ……],
        "temp_high_warn_en": [integer, ……],  /* 0:disabled, 1:enabled */
        "temp_low_warn_en": [integer, ……],   /* 0:disabled, 1:enabled */
        "temp_high_crit_en": [integer, ……],    /* 0:disabled, 1:enabled */
        "temp_low_crit_en": [integer, ……],     /* 0:disabled, 1:enabled */
        "temp_high_warn": [integer, ……],
        "temp_low_warn": [integer, ……],
        "temp_high_crit": [integer, ……],
        "temp_low_crit": [integer, ……],
        "temp_cali": [integer, ……],            /* 0:+5.4C, 1:+4.5C, 2:+3.6C 3:+2.7C 4:+1.8C */
```

```
                                                    /* 5:+0.9C, 6:+0C, 7:-0.9C, 8:-1.8C, 9:-2.7C */
                                                    /* 10:-3.2C, 11:-4.5C, 12:-5.4C */
            "temp_hyst": [integer, ……],          /* Unit:1C, Range is 0 ~ 20 */
            "humi_high_warn_en": [integer, ……],   /* 0:disabled, 1:enabled */
            "humi_low_warn_en": [integer, ……],    /* 0:disabled, 1:enabled */
            "humi_high_crit_en": [integer, ……],    /* 0:disabled, 1:enabled */
            "humi_low_crit_en": [integer, ……],     /* 0:disabled, 1:enabled */
            "humi_high_warn": [integer, ……],
            "humi_low_warn": [integer, ……],
            "humi_high_crit": [integer, ……],
            "humi_low_crit": [integer, ……],
            "humi_cali": [integer, ……],           /*0:+6%, 1:+5% 2:+4%, 3:+3%, 4:+2%, 5:+1% */
                                                    /* 6:+0%, 7:-1%, 8:-2%, 9:-3%, 10:-4%*/
                                                    /* 11:-5%, 12:-6% */
            "humi_hyst": [integer, ……],    /* Unit:1%, Range is 0 ~ 20 */
            "alarm1": [integer, ……],         /* 0:invalid, 1:normal, 2:alarm*/
            "alarm2": [integer, ……],         /* 0:invalid, 1:normal, 2:alarm*/
            "alarm1_setup": [integer, ……], /* 0:disabled, 1:normal open, */
                                            /* 2:normal close */
            "alarm2_setup":[integer, ……], /* 0:disabled, 1:normal open, */
                                            /* 2:normal close */
            "lt_close":[integer, ……]              /* Read only, 0:disabled, 1:enabled */
            "set_lt_close":[integer, ……]          /* 0:disabled, 1:enabled */
        }
    }
```

■ Response:
http/1.1 200 OK
Set-Cookie: trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-Age=1800
Accept: application/json
Content-type: application/json
{ "error":0 }   /* 0:success, 1:error */

■ GET
　■ Resource URL:
　GET <snmp_ip>/api/dev_ mgmt/<local or daisy01~daisy15>/emd
　■ Curl Request:
　curl -i -X GET -H "Content-Length: 0" --cookie
　"trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnonce=a0b9ac23463677df" -k http://[snmp_ip]/api/pdu_mgmt/local/emd
　■ Curl Response:

http/1.1 200 OK

Set-Cookie: trackid=43a46d1edff84557b893947e736ef20d; Path=/; Version=1; Max-Age=1800

Set-Cookie: uid=034f1b705e094a04; Path=/; Version=1; Max-Age=1800

/* refer POST content */

3.5. Schedule

- **POST**
  - **Resource URL:**
    https://<snmp_ip>/api/pdu_mgmt/sched
  - **Request:**
    POST <snmp_ip>/api/pdu_mgmt/sched HTTP / 1.1
  - ~~**Curl Request:**~~
  - **Response:**
    http/1.1 200 OK
    Set-Cookie: trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-Age=1800
    Accept: application/json
    Content-type: application/json

```json
{
    "sched":{
        "ad":{
            "one":{ /* refer section 3.5.1 */ },
            "day":{ /* refer section 3.5.2 */ },
            "week":{ /* refer section 3.5.3 */ },
        },
        "u1":{
            "one":{ /* refer section 3.5.1 */ },
            "day":{ /* refer section 3.5.2 */ },
            "week":{ /* refer section 3.5.3 */ },
        },
        ……,
        "u8":{
            "one":{ /* refer section 3.5.1 */ },
            "day":{ /* refer section 3.5.2 */ },
            "week":{ /* refer section 3.5.3 */ },
        },
        "r1":{
            "one":{ /* refer section 3.5.1 */ },
            "day":{ /* refer section 3.5.2 */ },
            "week":{ /* refer section 3.5.3 */ },
        },
        ……,
        "r8":{
            "one":{ /* refer section 3.5.1 */ },
```

```
                    "day":{ /* refer section 3.5.2 */ },
                    "week":{ /* refer section 3.5.3 */ },
                }
            }
        }
```

■ GET

    ■ Resource URL:

    GET <snmp_ip>/api/pdu_mgmt/sched

    ■ Curl Request:

    curl -i -X GET -H "Content-Length: 0" --cookie
    "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnon
    ce=a0b9ac23463677df" -k http://[snmp_ip]/api/pdu_mgmt/sched

    ■ Curl Response:

    http/1.1 200 OK
    Set-Cookie: trackid=43a46d1edff84557b893947e736ef20d; Path=/; Version=1; Max-
    Age=1800
    Set-Cookie: uid=034f1b705e094a04; Path=/; Version=1; Max-Age=1800

    /* refer POST content */

3.5.1. Single Schedule

■   POST
  ■   Resource URL:
      https://<snmp_ip>/api/pdu_mgmt/sched/<ad or u1~u8 or r1~r8 >/one
  ■   Curl Request: (Example: Single schedule 1 control)
      curl -i -X POST -H "Content-Type: application/json" --cookie
      "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;
      cnonce=a0b9ac23463677df" -d '**{"one":{"ctrl":[1,0,0,0,0,0,0,0]}}** -k
      http://[snmp_ip]/api/pdu_mgmt/sched/ad
  ■   Request:
      POST <snmp_ip>/api/pdu_mgmt/sched/<ad or u1~u8 or r1~r8 >/one HTTP / 1.1
      Host: localhost
      Cookie:
      trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;c
      nonce=69153d25a8a7a0ae
      {
          "one":{ /* array size is 8 */
              "ctrl":integer,   /*[Control] 1:enable, 0:disable*/
              "name":" string",
              "action":integer,   /*1:OnImm, 2:OnDelay, 3:OffImm, 4:OffDelay,
                                              5:CycleImm, 6:CycleDelay */
              "date":"string",   /* dd/mm/yyyy hh:mm:ss */
              "bitmap":[[integer, ……],……[integer, ……]]   /* array size 8 * 128 */
                                      /* 16PDU * 64Port = 1024bits = 8 * 128 */
          }
      }
  ■   Response:
      http/1.1 200 OK
      Set-Cookie:
      trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-Age=1800
      Accept: application/json
      Content-type: application/json
      { "error":0 }   /* 0:success, 1:error */

■   GET
  ■   Resource URL:
      GET <snmp_ip>/api/pdu_mgmt/sched/<ad or u1~u8 or r1~r8 >/one HTTP / 1.1
  ■   Curl Request:
      curl -i -X GET -H "Content-Length: 0" --cookie

"trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;
cnonce=a0b9ac23463677df" -k http://[snmp_ip]/api/pdu_mgmt/sched/ad

- ■ Curl Response:
  http/1.1 200 OK
  Set-Cookie: trackid=43a46d1edff84557b893947e736ef20d; Path=/; Version=1; Max-Age=1800
  Set-Cookie: uid=034f1b705e094a04; Path=/; Version=1; Max-Age=1800

  /* refer POST content */

3.5.2. Daily Schedule

- **POST**
  - **Resource URL:**
    https://<snmp_ip>/api/pdu_mgmt/sched/<ad or u1~u8 or r1~r8 >/day
  - **Curl Request: (Example: Day schedule 1 control)**
    curl -i -X POST -H "Content-Type: application/json" --cookie
    "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;
    cnonce=a0b9ac23463677df" -d '**{"day":{"ctrl":[1,0,0,0,0,0,0,0]}}** -k http://
    [snmp_ip]/api/pdu_mgmt/sched/ad
  - **Request:**
    POST <snmp_ip>/api/pdu_mgmt/sched/<ad or u1~u8 or r1~r8 >/day HTTP / 1.1
    Host: localhost
    Cookie:
    trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;c
    nonce=69153d25a8a7a0ae
    ```
    {
        "day":{
            "ctrl":integer,                    /*1:enable, 0:disable*/
            "name":" string",
            "action":integer,                  /*1:OnImm, 2:OnDelay, 3:OffImm, 4:OffDelay,
                                                 5:CycleImm, 6:CycleDelay */
            "time":"string",                   /* hh:mm */
          "bitmap":[[integer, ……],……[integer, ……]]      //* array size 8 * 128 */
                                    /* 16PDU * 64Port = 1024bits = 8 * 128 */
        }
    }
    ```
  - **Response:**
    http/1.1 200 OK
    Set-Cookie:
    trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-Age=1800
    Accept: application/json
    Content-type: application/json
    { "error":0 }   /* 0:success, 1:error */

- **GET**
  - **Resource URL:**
    GET <snmp_ip>/api/pdu_mgmt/sched/<ad or u1~u8 or r1~r8 >/day
  - **Curl Request:**
    curl -i -X GET -H "Content-Length: 0" --cookie

"trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;
cnonce=a0b9ac23463677df" -k http://[snmp_ip]/api/pdu_mgmt/sched/ad/day

- ■ Curl Response:

http/1.1 200 OK

Set-Cookie: trackid=43a46d1edff84557b893947e736ef20d; Path=/; Version=1; Max-Age=1800

Set-Cookie: uid=034f1b705e094a04; Path=/; Version=1; Max-Age=1800

/* refer POST content */

3.5.3. Weekly Schedule

■ POST
  ■ Resource URL:
  https://<snmp_ip>/api/pdu_mgmt/sched/<ad or u1~u8 or r1~r8 >/week
  ■ Curl Request: (Example: Week schedule 1 control)
  curl -i -X POST -H "Content-Type: application/json" --cookie
  "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;
  cnonce=a0b9ac23463677df" -d '**{"week":{"ctrl":[1,0,0,0,0,0,0,0]}}** -k http://
  [snmp_ip]/api/pdu_mgmt/sched/ad
  ■ Request:
  POST <snmp_ip>/api/pdu_mgmt/sched/<ad or u1~u8 or r1~r8 >/week HTTP / 1.1
  Host: localhost
  Cookie:
  trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;c
  nonce=69153d25a8a7a0ae
  {
      "week":{
          "ctrl":integer,   /*1:enable, 0:disable*/
          "name":" string",
          "action":integer,   /*1:OnImm, 2:OnDelay, 3:OffImm, 4:OffDelay,
                                            5:CycleImm, 6:CycleDelay */
          "date":integer,   /* (0 ~ 6, Sunday is 0) */
          "time":"string",   /* hh:mm */
         "bitmap":[[integer, ……],……[integer, ……]]   /* array size 8 * 128 */
                                         /* 16PDU * 64Port = 1024bits = 8 * 128 */
      }
  }
  ■ Response:
  http/1.1 200 OK
  Set-Cookie:
  trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-Age=1800
  Accept: application/json
  Content-type: application/json
  { "error":0 }   /* 0:success, 1:error */

■ GET
  ■ Resource URL:
  GET <snmp_ip>/api/pdu_mgmt/sched/<ad or u1~u8 or r1~r8 >/week
  ■ Curl Request:

```
curl -i -X GET -H "Content-Length: 0" --cookie
"trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;
cnonce=a0b9ac23463677df" -k http://[snmp_ip]/api/pdu_mgmt/sched/ad/week
```

■ Curl Response:

```
http/1.1 200 OK
Set-Cookie: trackid=43a46d1edff84557b893947e736ef20d; Path=/; Version=1; Max-
Age=1800
Set-Cookie: uid=034f1b705e094a04; Path=/; Version=1; Max-Age=1800

/* refer POST content */
```

3.6. Grouping

- **POST**
  - **Resource URL:**
    https://<snmp_ip>/api/pdu_mgmt/group
  - ~~**Curl Request:**~~
  - **Request:**
    POST <snmp_ip>/api/pdu_mgmt/group HTTP / 1.1
  - **Response:**
    http/1.1 200 OK
    Set-Cookie: trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-Age=1800
    Accept: application/json
    Content-type: application/json

    ```
    {
        "group":{
            "ad": { /* refer section 3.5.1 */ },
            "u1":{ /* refer section 3.5.1 */ },
            ……,
            "u8":{ /* refer section 3.5.1 */ },
            "r1":{ /* refer section 3.5.1 */ },
            ……,
            "r8":{ /* refer section 3.5.1 */ }
        }
    }
    ```

- **GET**
  - **Resource URL:**
    GET <snmp_ip>/api/pdu_mgmt/group
  - **Curl Request:**
    curl -i -X GET -H "Content-Length: 0" --cookie
    "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnonce=a0b9ac23463677df" -k http://[snmp_ip]/api/pdu_mgmt/group
  - **Curl Response:**
    http/1.1 200 OK
    Set-Cookie: trackid=43a46d1edff84557b893947e736ef20d; Path=/; Version=1; Max-Age=1800
    Set-Cookie: uid=034f1b705e094a04; Path=/; Version=1; Max-Age=1800

    /* refer POST content */

3.6.1. Grouping Setting

■ POST
- ■ Resource URL:

  https://<snmp_ip>/api/dev_ mgmt/group/<ad or u1~u8 or r1~r8>
- ■ Curl Request: (Example: Modify Group1 name)

  curl -i -X POST -H "Content-Type: application/json" --cookie
  "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;
  cnonce=a0b9ac23463677df" -d ' {"name":["group1","","","","","","",""]}' -k http://
  [snmp_ip]/api/pdu_mgmt/group/ad
- ■ Request:

  POST <snmp_ip>/api/dev_ mgmt/grp/setting HTTP / 1.1

  Host: localhost

  Cookie:

  trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;c
  nonce=69153d25a8a7a0ae

  ```
  {
      "ad":{
          "name":"string",
          "bitmap":[[integer, ......],......[integer, ......]]    /* array size 8 * 128 */
                                    /* 16PDU*64 = 1024bits = 8 * 128 */
      }
  }
  ```
- ■ Response:

  http/1.1 200 OK

  Set-Cookie:

  trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-Age=1800

  Accept: application/json

  Content-type: application/json

  { "error":0 }   /* 0:success, 1:error */

■ GET
- ■ Resource URL:

  GET <snmp_ip>/api/pdu_mgmt/group/<ad or u1~u8 or r1~r8>
- ■ Curl Request:

  curl -i -X GET -H "Content-Length: 0" --cookie
  "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;
  cnonce=a0b9ac23463677df" -k http://[snmp_ip]/api/pdu_mgmt/group/ad
- ■ Curl Response:

  http/1.1 200 OK

  Set-Cookie: trackid=43a46d1edff84557b893947e736ef20d; Path=/; Version=1; Max-

Age=1800

Set-Cookie: uid=034f1b705e094a04; Path=/; Version=1; Max-Age=1800

/* refer POST content */

4. Network Setting

4.1. TCP/IP

- POST
  - Resource URL:

    https://<snmp_ip>/api/net/tcpip
  - Curl Request: (Example: Enable DHCP)

    curl -i -X POST -H "Content-Type: application/json" --cookie "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnonce=a0b9ac23463677df" -d ' {"bootp_dhcp":1}' -k http://[snmp_ip]/api/net/tcpip/ipv4
  - Request:

    POST <snmp_ip>/api/net/tcpip HTTP / 1.1

    Host: localhost

    Cookie:

    trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;cnonce=69153d25a8a7a0ae

    ```
    {
        "tcpip":{
            "ipv4":{
                "bootp_dhcp":integer,        /* 0:disabled, 1:enabled */
                "ip_address":"string",
                "gateway_address":"string",
                "subnet_mask":"string",
                "dns_address":["string","string"]
            },
            "ipv6":{
                "ipv6_en":integer,           /* 0:disabled, 1:enabled */
                "config_auto":integer,       /* 0:automatic, 1:DHCPV6 */
                                             /* 2:manual, 3:disable IPV6 */
                "ip_address":"string",
                "prefix_len":integer,
                "router_address":"string",
                "dns_address":["string", "string"]
            }
        }
    }
    ```
  - Response:

    http/1.1 200 OK

    Set-Cookie: trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-

Age=1800

Accept: application/json

Content-type: application/json

{ "error":0 }　　　　　/* 0:success, 1:error */

- **GET**
  - **Resource URL:**

    GET <snmp_ip>/api/net/tcpip
  - **Curl Request:**

    curl -i -X GET -H "Content-Length: 0" --cookie "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnonce=a0b9ac23463677df" -k http://[snmp_ip]/api/net/tcpip
  - **Curl Response:**

    http/1.1 200 OK

    Set-Cookie: trackid=43a46d1edff84557b893947e736ef20d; Path=/; Version=1; Max-Age=1800

    Set-Cookie: uid=034f1b705e094a04; Path=/; Version=1; Max-Age=1800

    /* refer POST content */

4.2. Dual Ethernet

- **POST**
  - **Resource URL:**

    https://<snmp_ip>/api/net/dual_eth
  - **Curl Request: (Example: Modify ethernet mode)**

    curl -i -X POST -H "Content-Type: application/json" --cookie "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnonce=a0b9ac23463677df" -d ' {"eth_mode":0}' -k http://[snmp_ip]/api/net/dual_eth
  - **Request:**

    POST <snmp_ip>/api/net/dual_eth HTTP / 1.1

    Host: localhost

    Cookie: trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;cnonce=69153d25a8a7a0ae

    {
    　　　"dual_eth":{
    　　　　　"eth_mode":integer,　　　　　/* Ethernet Mode, range 0 ~ 3 */
    　　　　　　　　　　　　　　　　　　　/* 0 is Active-Backup */
    　　　　　　　　　　　　　　　　　　　/* 1 is 802.3ad */
    　　　　　　　　　　　　　　　　　　　/* 2 is Balance alb */

```
                                          /* 3 is Bridge */
        "eth_down_delay":integer,         /*Down delay, range 0 ~ 65535 */
        "eth_up_delay":integer,           /* Up delay, range 0 ~ 65535 */
        "eth_miimon":integer,             /* Miimon(MII monitoring), range 1 ~ 65535 */
        "eth_primary":integer,            /* Primary device, Only valid Active-Backup */
                                          /* 0 is eth0, 1 is eth1 */

    }
}
```

- **Response:**

  http/1.1 200 OK

  Set-Cookie: trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-Age=1800

  Accept: application/json

  Content-type: application/json

  { "error":0 }   /* 0:success, 1:error */

- **GET**
  - **Resource URL:**

    GET <snmp_ip>/api/net/dual_eth

  - **Curl Request:**

    curl -i -X GET -H "Content-Length: 0" --cookie "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnonce=a0b9ac23463677df" -k http://[snmp_ip]/api/net/dual_eth

  - **Curl Response:**

    http/1.1 200 OK

    Set-Cookie: trackid=43a46d1edff84557b893947e736ef20d; Path=/; Version=1; Max-Age=1800

    Set-Cookie: uid=034f1b705e094a04; Path=/; Version=1; Max-Age=1800

    /* refer POST content */

4.3. Accessible IP Setting

- **POST**
  - **Resource URL:**

    https://<snmp_ip>/api/net/accessip

  - **Curl Request: (Example: Modify priority)**

    curl -i -X POST -H "Content-Type: application/json" --cookie "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnonce=a0b9ac23463677df" -d ' {"priority":[0,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0]}' -k http://[snmp_ip]/api/net/accessip

  - **Request:**

POST <snmp_ip>/api/net/accessip HTTP / 1.1

Host: localhost

Cookie:

trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;cnonce=69153d25a8a7a0ae

```
{
    "accessip":{      /* array size is 16 */
        "priority" :[integer, ......], /*range 0~4, 0 is disable */
        "ip_address":["string", ......],
        "prefix_len":[integer, ......],
        "action": [integer, ......]        /* 1:Deny, 0:Allow */
    }
}
```

■ Response:

http/1.1 200 OK

Set-Cookie: trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-Age=1800

Accept: application/json

Content-type: application/json

{ "error":0 }   /* 0:success, 1:error */

■ GET
   ■ Resource URL:
      GET <snmp_ip>/api/net/accessip
   ■ Curl Request:
      curl -i -X GET -H "Content-Length: 0" --cookie
      "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnonce=a0b9ac23463677df" -k http://[snmp_ip]/api/net/accessip
   ■ Curl Response:
      http/1.1 200 OK

      Set-Cookie: trackid=43a46d1edff84557b893947e736ef20d; Path=/; Version=1; Max-Age=1800

      Set-Cookie: uid=034f1b705e094a04; Path=/; Version=1; Max-Age=1800

      /* refer POST content */

4.4. Security

- **POST**
  - **Resource URL:**

    https://<snmp_ip>/api/net/security
  - **Curl Request: (Example: Enable Security)**

    curl -i -X POST -H "Content-Type: application/json" --cookie "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnonce=a0b9ac23463677df" -d ' {"access_protect_en":1}' -k http:// [snmp_ip]/api/net/security
  - **Request:**

    POST <snmp_ip>/api/net/security HTTP / 1.1

    Host: localhost

    Cookie:

    trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;cnonce=69153d25a8a7a0ae

    ```
    {
        "security":{
            "access_protect_en":integer,      /* 0:Disabled, 1:Enable */
            "ssh_en":integer,                 /* 0:Disabled, 1:Enable */
            "ssh_interval":integer,           /* 0:1min, 1:5min, 2:10min, 3:30min */
            "ssh_time":integer,               /* 0:5, 1:10, 2:20, 3:30, 4:100 */
            "ssh_block":integer,              /* 0:5min, 1:30min, 2:1hour, 3:1day */
            "snmp_en":integer,                /* 0:Disabled, 1:Enable */
            "snmp_interval":integer,          /* 0:1min, 1:5min, 2:10min, 3:30min */
            "snmp_time":integer,              /* 0:5, 1:10, 2:20, 3:30, 4:100 */
            "snmp_block":integer,             /* 0:5min, 1:30min, 2:1hour, 3:1day */
            "http_en":integer,                /* 0:Disabled, 1:Enable */
            "http_interval":integer,          /* 0:1min, 1:5min, 2:10min, 3:30min */
            "http_time":integer,              /* 0:5, 1:10, 2:20, 3:30, 4:100 */
            "http_block":integer,             /* 0:5min, 1:30min, 2:1hour, 3:1day */
        },
        "ca_upload":{ /* refer section 4.3.1 */ }
    }
    ```
  - **Response:**

    http/1.1 200 OK

    Set-Cookie: trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-Age=1800

    Accept: application/json

    Content-type: application/json

    { "error":0 }   /* 0:success, 1:error */

- **GET**
  - **Resource URL:**
    GET <snmp_ip>/api/net/security
  - **Curl Request:**
    curl -i -X GET -H "Content-Length: 0" --cookie
    "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnon
    ce=a0b9ac23463677df" -k http://[snmp_ip]/api/net/security
  - **Curl Response:**
    http/1.1 200 OK
    Set-Cookie: trackid=43a46d1edff84557b893947e736ef20d; Path=/; Version=1; Max-
    Age=1800
    Set-Cookie: uid=034f1b705e094a04; Path=/; Version=1; Max-Age=1800

    /* refer POST content */

4.4.1. CA Upload

- **POST**
  - **Request:**
    POST <snmp_ip>/api/net/security/ca_upload HTTP / 1.1
    Host: localhost
    Cookie:
    trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;c
    nonce=69153d25a8a7a0ae
    Content-Type: multipart/form-data; boundary=-------------------------xxxxxx…
    Content-Disposition: form-data; filename=ca.sct
    /* file content */
  - **Response:**
    http/1.1 200 OK
    Set-Cookie:
    trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-Age=1800
    Accept: application/json
    Content-type: application/json
    { "error":0 }
- **GET**
  - **Resource URL:**
    GET <snmp_ip>/api/net/security/ca_upload
  - **Curl Request:**
    curl -i -X GET -H "Content-Length: 0" --cookie
    "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;
    cnonce=a0b9ac23463677df" -k http://[snmp_ip]/api/net/security/ca_upload
  - **Curl Response:**
    http/1.1 200 OK
    Set-Cookie: trackid=43a46d1edff84557b893947e736ef20d; Path=/; Version=1; Max-Age=1800
    Set-Cookie: uid=034f1b705e094a04; Path=/; Version=1; Max-Age=1800
    { "progress":integer }   /* the uploading % */

4.5. Network Service

- **POST**
  - **Resource URL:**

    https://<snmp_ip>/api/net/service
  - **Curl Request: (Example: Enable SSH)**

    curl -i -X POST -H "Content-Type: application/json" --cookie "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnonce=a0b9ac23463677df" -d ' {"ssh_en":1}' -k http:// [snmp_ip]/api/net/service
  - **Request:**

    POST <snmp_ip>/api/net/service HTTP / 1.1

    Host: localhost

    Cookie:

    trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;cnonce=69153d25a8a7a0ae

    ```
    {
        "service":{
            "ssh_en":integer,              /* 0:Disabled, 1:Enable */
            "ssh_port":integer,
            "https_en":integer,            /* 0:Disabled, 1:Enable */
            "https_port":integer,
            "force_https":integer,           /* 0:Disabled, 1:Enable */
            "ping_en":integer,             /* 0:Disabled, 1:Enable */
            "modbus_tcp_en":integer    /* 0:Disabled, 1:Enable */
            "modbus_tcp_port":integer
            "radius_en":integer,           /* 0:Disabled, 1:Enable */
            "radius_ip":"string",
            "radius_port":integer,
            "radius_seckey":"string",
            "radius_timeout":integer,
            "radius_retry":integer
        },
    }
    ```
  - **Response:**

    http/1.1 200 OK

    Set-Cookie: trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-Age=1800

    Accept: application/json

    Content-type: application/json

    { "error":0 }   /* 0:success, 1:error */

- GET
  - Resource URL:

    GET <snmp_ip>/api/net/service
  - Curl Request:

    curl -i -X GET -H "Content-Length: 0" --cookie "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnonce=a0b9ac23463677df" -k http://[snmp_ip]/api/net/service
  - Curl Response:

    http/1.1 200 OK

    Set-Cookie: trackid=43a46d1edff84557b893947e736ef20d; Path=/; Version=1; Max-Age=1800

    Set-Cookie: uid=034f1b705e094a04; Path=/; Version=1; Max-Age=1800

    /* refer POST content */

4.6. SNMP Setting

- POST
  - Resource URL:

    https://<snmp_ip>/api/net/snmp_setting
  - Curl Request: (Example: Enable SNMP)

    curl -i -X POST -H "Content-Type: application/json" --cookie "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnonce=a0b9ac23463677df" -d ' {"snmp_en":1}' -k http://[snmp_ip]/api/net/snmp_setting
  - Request:

    POST <snmp_ip>/api/net/snmp_setting HTTP / 1.1

    Host: localhost

    Cookie:

    trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;cnonce=69153d25a8a7a0ae

    Accept: application/json

    Content-type: application/json

    ```
    {
        "snmp_setting":{
            "snmp_en":integer,              /* 0:Disabled, 1:Enable */
            "snmp_port":integer,
            "snmp_ver":integer,             /* 0:v1, 1:v2c, 2:v3 */
            "v1v2c_read":"string",          /* base64(evp-aes-256-cbc) */
            "v1v2c_write":"string",         /* base64(evp-aes-256-cbc) */
            "v3_user":"string",
            "v3_sec_level":integer,         /* 0:noAuthNoPriv, */
    ```

```
                                      /* 1:authNoPriv, 2:authPriv */
        "v3_auth_mode":integer,       /* 0:MD5, 1:SHA */
        "v3_auth_passwd":"string",    /* base64(evp-aes-256-cbc) */
        "v3_privacy_mode":integer,    /* 0:DES, 1:AES */
        "v3_privacy_passwd":"string"  /* base64(evp-aes-256-cbc) */
    }
}
```

- Note 1 :
  base64(evp-aes-256-cbc) = base64(EVP-AES-256-CBC(password, key(trackid), iv(cnonce)))

- Response:
  http/1.1 200 OK
  Set-Cookie: trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-Age=1800
  Accept: application/json
  Content-type: application/json
  { "error":0 }   /* 0:success, 1:error */

- GET
  - Resource URL:
    GET <snmp_ip>/api /net/snmp_setting
  - Curl Request:
    curl -i -X GET -H "Content-Length: 0" --cookie
    "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnonce=a0b9ac23463677df" -k http://[snmp_ip]/api/net/snmp_setting
  - Curl Response:
    http/1.1 200 OK
    Set-Cookie: trackid=43a46d1edff84557b893947e736ef20d; Path=/; Version=1; Max-Age=1800
    Set-Cookie: uid=034f1b705e094a04; Path=/; Version=1; Max-Age=1800

    /* refer POST content */

4.7. SNMP Trap Setting

■ POST
  ■ Resource URL:
    https://<snmp_ip>/api/net/snmp_trap
  ■ Curl Request: (Example: Modify tarp 1 ip address)
    curl -i -X POST -H "Content-Type: application/json" --cookie
    "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnon
    ce=a0b9ac23463677df" -d ' {"ip_address":["127.0.0.1","","","","","","","","","","","","","","",""]}' -
    k http://[snmp_ip]/api/net/snmp_trap
  ■ Request:
    POST <snmp_ip>/api/net/snmp_trap HTTP / 1.1
    Host: localhost
    Cookie:
    trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;cnonc
    e=69153d25a8a7a0ae
    Accept: application/json
    Content-type: application/json
    {
        "snmp_trap":{   /* array size is 16 */
            "ip_address":["string", ……],
            "evt_lev":[integer, ……],   /* 0: Critical, 1:Warning, 2: Information */
            "trap_ver":[integer, ……],   /* 0:v1, 1:v2c, 2:v3 */
            "desc":["string", ……]
        }
    }
  ■ Response:
    http/1.1 200 OK
    Set-Cookie: trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-
    Age=1800
    Accept: application/json
    Content-type: application/json
    { "error":0 }   /* 0:success, 1:error */
■ GET
  ■ Resource URL:
    GET <snmp_ip>/api /net/snmp_trap
  ■ Curl Request:
    curl -i -X GET -H "Content-Length: 0" --cookie
    "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnon
    ce=a0b9ac23463677df" -k http://[snmp_ip]/api/net/snmp_trap

■ Curl Response:

http/1.1 200 OK

Set-Cookie: trackid=43a46d1edff84557b893947e736ef20d; Path=/; Version=1; Max-Age=1800

Set-Cookie: uid=034f1b705e094a04; Path=/; Version=1; Max-Age=1800

/* refer POST content */

4.8. SNMP Trap Test

- ■ POST
  - ■ Resource URL:

    https://<snmp_ip>/api/net/snmp_test
  - ■ Curl Request: (Example: Send test trap 1)

    curl -i -X POST -H "Content-Type: application/json" --cookie
    "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnon
    ce=a0b9ac23463677df" -d ' {"send":1}' -k http://[snmp_ip]/api/net/snmp_test
  - ■ Request:

    POST <snmp_ip>/api/net/snmp_test HTTP / 1.1

    Host: localhost

    Cookie:

    trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;cnonc
    e=69153d25a8a7a0ae

    Accept: application/json

    Content-type: application/json

    {

        "send":integer /*0:nothing, 1~16: send test trap index (0 ~ 15). */

    }
  - ■ Response:

    http/1.1 200 OK

    Set-Cookie: trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-
    Age=1800

    Accept: application/json

    Content-type: application/json

    { "error":0 }　　　　　/* 0:success, 1:error */

5. General Setting

5.1. System Configuration

- POST
    - Resource URL:
    https://<snmp_ip>/api/setting/sys_config
    - Curl Request: (Example: Send test trap 1)
    curl -i -X POST -H "Content-Type: application/json" --cookie
    "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnon
    ce=a0b9ac23463677df" -d ' {"sys_name":"SystemName"}' -k
    http://[snmp_ip]/api/setting/sys_config
    - Request:
    POST <snmp_ip>/api/setting/sys_config HTTP / 1.1
    Host: localhost
    Cookie:
    trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;cnonc
    e=69153d25a8a7a0ae
    Accept: application/json
    Content-type: application/json
    {
    　　"sys_config":{
    　　　　"sys_name":"string",
    　　　　"sys_contact":"string",
    　　　　"sys_location":"string",
    　　　　"log_interval":integer,
    　　　　"web_refresh_interval":integer,
    　　　　"web_timeout_en":integer,　　　　　　/* 0:Enabled, 1:Disabled */
    　　　　"web_timeout_interval":integer,　　　/*range is 1-3600S*/
    　　　　"time_zone":integer,
    　　　　"time_format":integer,　　　　　　　　/* 0:dd/mm/yyyy, 1:mm/dd/yyyy, */
    　　　　　　　　　　　　　　　　　　　　　　　　　　/* 2:yyyy/mm/dd */
    　　　　"time_set":integer,　　　　　　　　　　/* 0:24hr, 1:12hr */
    　　　　"now_time":"string",　　　　　　　　　/* dd/mm/yy */
    　　　　"now_date":"string",　　　　　　　　　/* hh:mm:ss */
    　　　　"ntp_en":integer,　　　　　　　　　　　/* 0:Enabled, 1:Disabled */
    　　　　"ntp_server":"string",
    　　　　"ntp_sync_interval":integer,
    　　　　"ntp_sync_interval_unit":integer,　　/* 0:day, 1:month */
    　　　　"daylight_save_en":integer

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```
            }
        }
```
- ■ Response:

  http/1.1 200 OK

  Set-Cookie: trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-Age=1800

  Accept: application/json

  Content-type: application/json

  { "error":0 }   /* 0:success, 1:error */

- ■ GET
  - ■ Resource URL:

    GET <snmp_ip>/api /setting/sys_config

  - ■ Curl Request:

    curl -i -X GET -H "Content-Length: 0" --cookie "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnonce=a0b9ac23463677df" -k http://[snmp_ip]/api/setting/sys_config

  - ■ Curl Response:

    http/1.1 200 OK

    Set-Cookie: trackid=43a46d1edff84557b893947e736ef20d; Path=/; Version=1; Max-Age=1800

    Set-Cookie: uid=034f1b705e094a04; Path=/; Version=1; Max-Age=1800

    /* refer POST content */

5.2. Authentication Configuration

- POST
  - Resource URL:

    https://<snmp_ip>/api/setting/auth_config
  - Curl Request: (Example: Send test trap 1)

    curl -i -X POST -H "Content-Type: application/json" --cookie
    "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnon
    ce=a0b9ac23463677df" -d ' {"admin":"admin"}' -k http://[snmp_ip]/api/setting/auth_config
  - Request:

    POST <snmp_ip>/api/setting/auth_config HTTP / 1.1

    Host: localhost

    Cookie:

    trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;cnonc
    e=69153d25a8a7a0ae

    Accept: application/json

    Content-type: application/json

    ```
    {
        "auth_config":{
            "admin_name":"string",
            "admin_password":"string"    /* base64(evp-aes-256-cbc) */
        }
    }
    ```
  - Response:

    http/1.1 200 OK

    Set-Cookie: trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-
    Age=1800

    Accept: application/json

    Content-type: application/json

    { "error":0 }   /* 0:success, 1:error */
- GET
  - Resource URL:

    GET <snmp_ip>/api /setting/auth_config
  - Curl Request:

    curl -i -X GET -H "Content-Length: 0" --cookie
    "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnon
    ce=a0b9ac23463677df" -k http://[snmp_ip]/api/setting/auth_config
  - Curl Response:

    http/1.1 200 OK

    Set-Cookie: trackid=43a46d1edff84557b893947e736ef20d; Path=/; Version=1; Max-

Age=1800
Set-Cookie: uid=034f1b705e094a04; Path=/; Version=1; Max-Age=1800

/* refer POST content */

5.3. iEC View Management

■ POST
- ■ Resource URL:

  https://<snmp_ip>/api/setting/iec_mgmt

- ■ Curl Request: (Example: Send test trap 1)

  curl -i -X POST -H "Content-Type: application/json" --cookie "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnonce=a0b9ac23463677df" -d ' {"iec_en":1}' -k http:// [snmp_ip]/api/setting/iec_mgmt

- ■ Request:

  POST <snmp_ip>/api/setting/iec_mgmt HTTP / 1.1

  Host: localhost

  Cookie:

  trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;cnonce=69153d25a8a7a0ae

  Accept: application/json

  Content-type: application/json

  ```
  {
      "auth_config":[
          "iec_en":integer,                  /* 0:Disabled, 1:Enable */
          "iec_server_ip":"string",
          "iec_server_port":"integer,
          "iec_server_password":"string"    /* base64(evp-aes-256-cbc) */
      ]
  }
  ```

- ■ Response:

  http/1.1 200 OK

  Set-Cookie: trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-Age=1800

  Accept: application/json

  Content-type: application/json

  { "error":0 }   /* 0:success, 1:error */

■ GET
- ■ Resource URL:

  GET <snmp_ip>/api /setting/iec_mgmt

- ■ Curl Request:

  curl -i -X GET -H "Content-Length: 0" --cookie "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnonce=a0b9ac23463677df" -k http://[snmp_ip]/api/setting/iec_mgmt

- ■ Curl Response:

http/1.1 200 OK

Set-Cookie: trackid=43a46d1edff84557b893947e736ef20d; Path=/; Version=1; Max-Age=1800

Set-Cookie: uid=034f1b705e094a04; Path=/; Version=1; Max-Age=1800

/* refer POST content */

5.4. Maintenance

- **POST**
  - **Resource URL:**

    https://<snmp_ip>/api/setting/maintenance
  - **Curl Request: (Example: reboot)**

    curl -i -X POST -H "Content-Type: application/json" --cookie "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnonce=a0b9ac23463677df" -d ' {"reset_default":2}' -k http://[snmp_ip]/api/setting/maintenance
  - **Curl Reuqest:(Example:Firmware upgrade)**

    curl -X POST -H "Accept: application/json" --cookie " trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnonce=a0b9ac23463677df " **-F upload_file=@[file_path]/pdu.bin** -k http://[snmp_ip]/api/setting/maintenance/fw_update
  - **Request:**

    POST <snmp_ip>/api/setting/maintenance HTTP / 1.1

    Host: localhost

    Cookie:

    trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;cnonce=69153d25a8a7a0ae

    Accept: application/json

    Content-type: application/json
    ```
    {
        "maintenance":{
            "fw_update":{ /* refer section 5.4.1 */ },
            "reset_default":integer,      /* 0:do nothing,   1:reset to default without IP */
                                          /* 2:reboot */
            "suspend_schd":integer,
            "sys_version":"string"        /*Read only*/
        }
    }
    ```
  - **Response:**

    http/1.1 200 OK

    Set-Cookie: trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-Age=1800

    Accept: application/json

    Content-type: application/json

    { "error":0 }   /* 0:success, 1:error */
- **GET**

- **Resource URL:**

  GET <snmp_ip>/api /setting/maintenance

- **Curl Request:**

  curl -i -X GET -H "Content-Length: 0" --cookie
  "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnon
  ce=a0b9ac23463677df" -k http://[snmp_ip]/api/setting/maintenance

- **Curl Response:**

  http/1.1 200 OK

  Set-Cookie: trackid=43a46d1edff84557b893947e736ef20d; Path=/; Version=1; Max-
  Age=1800

  Set-Cookie: uid=034f1b705e094a04; Path=/; Version=1; Max-Age=1800

  /* refer POST content */

5.4.1. Firmware Update

- **POST**
  - **Request:**
    POST <snmp_ip>/api/setting/maintenance/fw_update HTTP / 1.1
    Host: localhost
    Cookie:
    trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;c
    nonce=69153d25a8a7a0ae
    Content-Type: multipart/form-data; boundary=------------------------xxxxxx…
    Content-Disposition: form-data; filename=fw.bin
    /* file content */
  - **Response:**
    http/1.1 200 OK
    Set-Cookie:
    trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-Age=1800
    Accept: application/json
    Content-type: application/json
    { "error":0 }
- **GET**
  - **Resource URL:**
    GET <snmp_ip>/api/setting/maintenance/fw_update
  - **Curl Request:**
    curl -i -X GET -H "Content-Length: 0" --cookie
    "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;
    cnonce=a0b9ac23463677df" -k http://[snmp_ip]/api/setting/maintenance/fw_update
  - **Curl Response:**
    http/1.1 200 OK
    Set-Cookie: trackid=43a46d1edff84557b893947e736ef20d; Path=/; Version=1; Max-
    Age=1800
    Set-Cookie: uid=034f1b705e094a04; Path=/; Version=1; Max-Age=1800

    { "progress":integer }   /* the uploading % */

5.5. Import/Export

5.5.1. Import

- POST
  - Request:
    POST <snmp_ip>/api/setting /import HTTP / 1.1
    Host: localhost
    Cookie:
    trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;c
    nonce=69153d25a8a7a0ae
    Content-Type: multipart/form-data; boundary=-------------------------xxxxxx…
    Content-Disposition: form-data; filename=config.xml
    /* file content */
  - Response:
    http/1.1 200 OK
    Set-Cookie:
    trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-Age=1800
    Accept: application/json
    Content-type: application/json
    { "error":0 }
- GET
  - Resource URL:
    GET <snmp_ip>/api/setting/import
  - Curl Request:
    curl -i -X GET -H "Content-Length: 0" --cookie
    "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;
    cnonce=a0b9ac23463677df" -k http://[snmp_ip]/api/setting/import
  - Curl Response:
    http/1.1 200 OK
    Set-Cookie: trackid=43a46d1edff84557b893947e736ef20d; Path=/; Version=1; Max-
    Age=1800
    Set-Cookie: uid=034f1b705e094a04; Path=/; Version=1; Max-Age=1800
    Content-type: application/json
    { "progress":integer }　　　　　/* the uploading % */

5.5.2. Export

- GET
    - Resource URL:
    GET \<snmp_ip>/api/setting /export
    Host: localhost
    Cookie:
    trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;c
    nonce=69153d25a8a7a0ae
    - Response:
    http/1.1 200 OK
    Set-Cookie:
    trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-Age=1800
    Accept: application/json
    Content-type: application/json
    Contect-Desposition: attachment; filename=conf_file.xml
    /* file content */

5.6. Configure SMTP Server

- POST
    - Resource URL:
    https://\<snmp_ip>/api/setting/smtp
    - Curl Request: (Example: Modify smtp ip address)
    curl -i -X POST -H "Content-Type: application/json" --cookie
    "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnon
    ce=a0b9ac23463677df" -d ' {"smtp_ip":"120.0.0.1"}' -k http://[snmp_ip]/api/setting/smtp
    - Request:
    POST \<snmp_ip>/api/setting/smtp HTTP / 1.1
    Host: localhost
    Cookie:
    trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;cnonc
    e=69153d25a8a7a0ae
    Accept: application/json
    Content-type: application/json
    {
        "smtp":{
            "smtp_ip":"string"   /* string length is 63 */
            "smtp_port":integer,
            "smtp_sender":"string"   /* string length is 63 */
            "smtp_subject":"string"   /* string length is 31 */

```
            "smtp_auth_en":integer,
            "smtp_auth_user":"string",         /* string length is 31 */
            "smtp_auth_passwd":"string"    /* string length is 31, base64(evp-aes-256-cbc) */
        }
    }
```

■ Response:

http/1.1 200 OK

Set-Cookie: trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-Age=1800

Accept: application/json

Content-type: application/json

{ "error":0 }   /* 0:success, 1:error */

■ GET

　■ Resource URL:

GET <snmp_ip>/api /setting/smtp

　■ Curl Request:

curl -i -X GET -H "Content-Length: 0" --cookie "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnonce=a0b9ac23463677df" -k http://[snmp_ip]/api/setting/smtp

　■ Curl Response:

http/1.1 200 OK

Set-Cookie: trackid=43a46d1edff84557b893947e736ef20d; Path=/; Version=1; Max-Age=1800

Set-Cookie: uid=034f1b705e094a04; Path=/; Version=1; Max-Age=1800

/* refer POST content */

5.7. Email Notification Setting

- POST
  - Resource URL:

    https://<snmp_ip>/api/setting/mail_notify
  - Curl Request: (Example: modify mail 1 type)

    curl -i -X POST -H "Content-Type: application/json" --cookie "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnonce=a0b9ac23463677df" -d ' {"reset_mail_type":[1,0,0,0,0,0,0,0,0,0,0,0,0,0,0,0]}' -k http://[snmp_ip]/api/setting/mail_notify
  - Request:

    POST <snmp_ip>/api/setting/mail_notify HTTP / 1.1

    Host: localhost

    Cookie:

    trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;cnonce=69153d25a8a7a0ae

    Accept: application/json

    Content-type: application/json

    {
        "mail_notify":{ /* array size is 16 *
            "recv_address":["string", ……],
            "mail_type": [integer, ……], /*0:none, 1:events, 2:events/status*/
            "evt_lev":[integer, ……], /* 0: Critical, 1:Warning, 2: Information */
            "desc":["string", ……]
        }
    }
  - Response:

    http/1.1 200 OK

    Set-Cookie: trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-Age=1800

    Accept: application/json

    Content-type: application/json

    { "error":0 }   /* 0:success, 1:error */
- GET
  - Resource URL:

    GET <snmp_ip>/api /setting/email_notify
  - Curl Request:

    curl -i -X GET -H "Content-Length: 0" --cookie "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnonce=a0b9ac23463677df" -k http://[snmp_ip]/api/setting/email_notify

- Curl Response:

  http/1.1 200 OK

  Set-Cookie: trackid=43a46d1edff84557b893947e736ef20d; Path=/; Version=1; Max-Age=1800

  Set-Cookie: uid=034f1b705e094a04; Path=/; Version=1; Max-Age=1800

  /* refer POST content */

5.8. Send Test Mail

■ POST

    ■ Resource URL:

    https://<snmp_ip>/api/setting/test_mail

    ■ Curl Request: (Example: send test mail 1)

    curl -i -X POST -H "Content-Type: application/json" --cookie
"trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnon
ce=a0b9ac23463677df" -d ' {"send":1}' -k http://[snmp_ip]/api/setting/test_mail

    ■ Request:

    POST <snmp_ip>/api/net/snmp_test HTTP / 1.1

    Host: localhost

    Cookie:

    trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;cnonc
e=69153d25a8a7a0ae

    Accept: application/json

    Content-type: application/json

    {

        "send":integer   /*0:nothing, 1~16: send test trap index (0 ~ 15). */

    }

    ■ Response:

    http/1.1 200 OK

    Set-Cookie: trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-
Age=1800

    Accept: application/json

    Content-type: application/json

    { "error":0 }   /* 0:success, 1:error */

5.9. Local User

■ POST

    ■ Resource URL:

    https://<snmp_ip>/api/setting/local_user

    ■ Curl Request: (Example: send test mail 1)

    curl -i -X POST -H "Content-Type: application/json" --cookie
"trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnon
ce=a0b9ac23463677df" -d ' {"name":["test1","","","","","","",""]}' -k
http://[snmp_ip]/api/setting/local_user

    ■ Request:

    POST <snmp_ip>/api/setting/local_user HTTP / 1.1

    Host: localhost

Cookie:

trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;cnonce=69153d25a8a7a0ae

Accept: application/json

Content-type: application/json

```
{
    "local_user":{
        "name":["string", …….], /* array size 8 */
        "password":"string",     /* base64(evp-aes-256-cbc) */
        "privilege":integer,         /* 2: Outlet Manager, 1:User */
        "bitmap":[[integer, ……],……[integer, ……]]    /* array size 8 * 128 */
                                    /* 16PDU * 64Port = 1024bits = 8 * 128 */
    }
}
```

- Response:

    http/1.1 200 OK

    Set-Cookie: trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-Age=1800

    Accept: application/json

    Content-type: application/json

    { "error":0 }   /* 0:success, 1:error */

- GET
    - Resource URL:

        GET <snmp_ip>/api /setting/local_user

    - Curl Request:

        curl -i -X GET -H "Content-Length: 0" --cookie "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnonce=a0b9ac23463677df" -k http://[snmp_ip]/api/setting/local_user

    - Curl Response:

        http/1.1 200 OK

        Set-Cookie: trackid=43a46d1edff84557b893947e736ef20d; Path=/; Version=1; Max-Age=1800

        Set-Cookie: uid=034f1b705e094a04; Path=/; Version=1; Max-Age=1800

        /* refer POST content */

5.10. Radius User

■ POST
- ■ Resource URL:

  https://<snmp_ip>/api/setting/radius_user
- ■ Curl Request: (Example: send test mail 1)

  curl -i -X POST -H "Content-Type: application/json" --cookie
  "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnon
  ce=a0b9ac23463677df" -d ' {"name":["test1","","","","","","",""]}' -k
  http://[snmp_ip]/api/setting/radius_user
- ■ Request:

  POST <snmp_ip>/api/setting/radius_user HTTP / 1.1

  Host: localhost

  Cookie:

  trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;cnonc
  e=69153d25a8a7a0ae

  Accept: application/json

  Content-type: application/json

  ```
  {
      "radius_user":{
          "name":"string",
          "privilege":integer,        /* 2: Outlet Manager, 1:User */
          "bitmap":[[integer, ……],……[integer, ……]]    /* array size 8 * 128 */
                                      /* 16PDU * 64Port = 1024bits = 8 * 128 */


      }
  }
  ```
- ■ Response:

  http/1.1 200 OK

  Set-Cookie: trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-
  Age=1800

  Accept: application/json

  Content-type: application/json

  { "error":0 }   /* 0:success, 1:error */

■ GET
- ■ Resource URL:

  GET <snmp_ip>/api /setting/radius_user
- ■ Curl Request:

  curl -i -X GET -H "Content-Length: 0" --cookie
  "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnon

ce=a0b9ac23463677df" -k http://[snmp_ip]/api/setting/radius_user

- Curl Response:

http/1.1 200 OK

Set-Cookie: trackid=43a46d1edff84557b893947e736ef20d; Path=/; Version=1; Max-Age=1800

Set-Cookie: uid=034f1b705e094a04; Path=/; Version=1; Max-Age=1800

/* refer POST content */

5. Logs

6.1. System Log

Get system log.

■ Request URL:

https://<snmp_ip>/api/logs/sys_log

■ Request:

GET

<snmp_ip>/api/logs/sys_log?startIdx=integer&displayNum=integer&eventLevel=integer&lang=en_US&time1=dd/mm/yyyy&time2=dd/mm/yyyy HTTP 1.1

Host: localhost

Cookie:

trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;cnonce=69153d25a8a7a0ae

Name	Description
startIdx	the offset of log from specific datetime
displayNum	log count, which will be displayed on the web page
eventLevel	2:Information(include Warning and Critical), 1:Warning(include Critical), 0:Critical
lang	en_US, de_DE, es_ES, user_1, user_2
time1	start date (if there is no time1, read from the last log)
time2	end date (time1 and time2 must be paired, otherwise an error will be returned)

■ Request:

HTTP/1.1 200 OK

Set-Cookie: trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-Age=1800

Accept: application/json

Content-type: application/json

```
{
    "total_count":integer,
    "return_count":integer,
    "log_data":[
        {
            "date":"string",            /* data is returned from startIdx */
            "time":"string",
            "log_level":integer,        /* refer eventLevel */
            "description":"string"
        },
        ……
    ]
```

}

6.2. Event Log

Get event log.

■ Request URL:

https://<snmp_ip>/api/logs/evt_log

■ Request:

GET

<snmp_ip>/api/logs/evt_log?startIdx=integer&displayNum=integer&eventLevel=integer&dev=stri
ng&lang=en_US&time1=dd/mm/yyyy&time2=dd/mm/yyyy HTTP 1.1

Host: localhost

Cookie:

trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;cnonce=69
153d25a8a7a0ae

Name	Description
startIdx	the offset of log from specific datetime
displayNum	log count, which will be displayed on the web page
eventLevel	2:Information(include Warning and Critical), 1:Warning(include Critical), 0:Critical
dev	device name
lang	en_US, de_DE, es_ES, user_1, user_2
time1	start date (if there is no time1, read from the last log)
time2	end date (time1 and time2 must be paired, otherwise an error will be returned)

■ Request:

HTTP/1.1 200 OK

Set-Cookie: trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-
Age=1800

Accept: application/json

Content-type: application/json

```
{
    "total_count":integer,
    "return_count":integer,
    "log_data":[
        {
            "date":"string",          /* data is returned from startIdx */
            "time":"string",
            "log_level":integer,      /* refer eventLevel */
            "description":"string"
        },
        ……
    ]
```

}

6.3. Inlet History Log

Get inlet event log.

■   Request URL:

https://<snmp_ip>/api/logs/inlet_log

■   Request:

GET

<snmp_ip>/api/logs/inlet_log?startIdx=integer&displayNum=integer&eventLevel=integer&dev_id
x=integer&lang=en_US&time1=dd/mm/yyyy&time2=dd/mm/yyyy HTTP 1.1

Host: localhost

Cookie:

trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;cnonce=69
153d25a8a7a0ae

Name	Description
startIdx	the offset of log from specific datetime
displayNum	log count, which will be displayed on the web page
eventLevel	2:Information(include Warning and Critical), 1:Warning(include Critical), 0:Critical
dev_idx	pdu device index. 0 is master, 1 is salve01 … 15 is salve15.
lang	en_US, de_DE, es_ES, user_1, user_2
time1	start date (if there is no time1, read from the last log)
time2	end date (time1 and time2 must be paired, otherwise an error will be returned)
drawUi	Draw UI (Option)

■   Request:

HTTP/1.1 200 OK

Set-Cookie: trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-
Age=1800

Accept: application/json

Content-type: application/json

{

    "total_count":integer,

    "return_count":integer,

    "log_data":[

        {

            "date":"string",   /* data is returned from startIdx */

            "time":"string",

            "pdu":"string",

            "power":integer,

            "power_max":integer,

            "energy":integer,

```
            "current_ph1_b1":integer,
            " current_ph1_b2":integer,
            " current_ph1":integer,
            " current_ph1_max":integer,
            "current_ph2_b1":integer,
            " current_ph2_b2":integer,
            " current_ph2":integer,
            " current_ph2_max":integer,
            "current_ph3_b1":integer,
            " current_ph3_b2":integer,
            " current_ph3":integer,
            " current_ph3_max":integer,
            "volt_ph1":integer,
            "volt_ph2":integer,
            "volt_ph3":integer,
            "pf_ph1_b1":integer,
            "pf_ph1_b2":integer,
            "pf_ph2_b1":integer,
            "pf_ph2_b2":integer,
            "pf_ph3_b1":integer,
            "pf_ph3_b2":integer,
            "freq_ph1":integer,
            "freq_ph2":integer,
            "freq_ph3":integer,
            "dev_idx":integer          /* When draw UI = 1*/
        },
        ……
    ]
}
```

6.4. Outlet History Log

Get outlet event log.
■　Request URL:
https://<snmp_ip>/api/logs/outlet_log
■　Request:
GET
<snmp_ip>/api/
logs/outlet_log?startIdx=integer&displayNum=integer&eventLevel=integer&dev_idx=integer&ole
t_dev=integer&lang=en_US&time1=dd/mm/yyyy&time2=dd/mm/yyyy HTTP 1.1
Host: localhost

Cookie:

trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;cnonce=69
153d25a8a7a0ae

Name	Description
startIdx	the offset of log from specific datetime
displayNum	log count, which will be displayed on the web page
eventLevel	2:Information(include Warning and Critical), 1:Warning(include Critical), 0:Critical
dev_idx	pdu device index. 0 is master, 1 is salve01 … 15 is salve15.
olet_idx	outlet index.
lang	en_US, de_DE, es_ES, user_1, user_2
time1	start date (if there is no time1, read from the last log)
time2	end date (time1 and time2 must be paired, otherwise an error will be returned)
drawUi	Draw UI (Option)

■ Request:

HTTP/1.1 200 OK

Set-Cookie: trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-
Age=1800

Accept: application/json

Content-type: application/json

```
{
    "total_count":integer,
    "return_count":integer,
    "log_data":[
        {
            "date":"string",          /* data is returned from startIdx */
            "time":"string",
            "pdu":"string",
            "outlet":"string",
            "power":integer,
            "power_max":integer
            "energy":integer,
            "current":integer,
            "pf":integer,
            "freq":integer,
            "dev_idx":integer,        /* When draw UI = 1*/
            "olet_idx":integer        /* When draw UI = 1*/
        },
        ……
    ]
}
```

6.5. Environment Log

Get inlet event log.

■ Request URL:

https://<snmp_ip>/api/logs/emd_log

■ Request:

GET

<snmp_ip>/api/logs/emd_log?startIdx=integer&displayNum=integer&eventLevel=integer&dev_id
x=integer&emd_idx=integer&lang=en_US&time1=dd/mm/yyyy&time2=dd/mm/yyyy HTTP 1.1

Host: localhost

Cookie:

trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;cnonce=69
153d25a8a7a0ae

Name	Description
startIdx	the offset of log from specific datetime
displayNum	log count, which will be displayed on the web page
eventLevel	2:Information(include Warning and Critical), 1:Warning(include Critical), 0:Critical
dev_idx	pdu device index. 0 is master, 1 is salve01 … 15 is salve15. -1 is all
emd_idx	emd device index, 0 is emd-1, …, 7 is emd-8, -1 is all
lang	en_US, de_DE, es_ES, user_1, user_2
time1	start date (if there is no time1, read from the last log)
time2	end date (time1 and time2 must be paired, otherwise an error will be returned)

■ Request:

HTTP/1.1 200 OK

Set-Cookie: trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-
Age=1800

Accept: application/json

Content-type: application/json

{

    "total_count":integer,

    "return_count":integer,

    "log_data":[

        {

            "date":"string",   /* data is returned from startIdx */

            "time":"string",

            "dev_idx":integer,

            "emd_idx":integer,

            "temp":integer,

            "humi":integer,

        },

```
        ……
    ]
}
```

6.6. Syslog Setting

■ POST
   ■ Resource URL:
    https://<snmp_ip>/api/logs/syslog_setting
   ■ Curl Request: (Example: enable syslog)
    curl -i -X POST -H "Content-Type: application/json" --cookie
    "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnon
    ce=a0b9ac23463677df" -d ' {"sys_evt_log":{"sys_evt_log_en":0}}' -k
    http://[snmp_ip]/api/logs/syslog_setting
   ■ Request:
    POST <snmp_ip>/api/logs/syslog_setting HTTP / 1.1
    Host: localhost
    Cookie:
    trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;cnonc
    e=69153d25a8a7a0ae
    Accept: application/json
    Content-type: application/json

```
{
    "syslog_settting":{
        "sys_evt_log":{
            "sys_evt_log_en":integer,      /* 0:Disabled, 1:Enable */
            "ip_address":"string",
            "port":integer
        },
        "his_log":{
            "his_log_en":integer,      /* 0:Disabled, 1:Enable */
            "ip_address":"string",
            "port":integer
        }
    }
}
```

   ■ Response:
    http/1.1 200 OK
    Set-Cookie: trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-
    Age=1800
    Accept: application/json

Content-type: application/json
{ "error":0 }   /* 0:success, 1:error */

- **GET**
  - **Resource URL:**
    GET <snmp_ip>/api /logs/syslog_setting
  - **Curl Request:**
    curl -i -X GET -H "Content-Length: 0" --cookie
    "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;cnonce=a0b9ac23463677df" -k http://[snmp_ip]/api/logs/syslog_setting
  - **Curl Response:**
    http/1.1 200 OK
    Set-Cookie: trackid=43a46d1edff84557b893947e736ef20d; Path=/; Version=1; Max-Age=1800
    Set-Cookie: uid=034f1b705e094a04; Path=/; Version=1; Max-Age=1800

    /* refer POST content */

6.7. Clear and Save Log

6.7.1. Save Log

6.7.2. Save system log.

- **Resource URL:**
  https://<snmp_ip>/api/ logs/save_log/sys_log
- **Request:**
  GET < snmp _ip>/api/logs/save_log/sys_log?lang=en_US HTTP 1.1
  Host: localhost
  Cookie:
  trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;cnonce=69153d25a8a7a0ae

Name	Description
lang	en_US, de_DE, es_ES, user_1, user_2

- **Response:**
  HTTP/1.1 200 OK
  Set-Cookie:
  trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-Age=1800
  Content-type: text/csv
  Content-Disposition: attachment; filename=SystemLog.csv
  /* file contect */

6.7.3. Save event log.

- ■ Resource URL:

  https://<snmp_ip>/api/logs/save_log/evt_log
- ■ Resource URL:

  GET < snmp _ip>/api/logs/save_log/evt_log?lang=en_US HTTP 1.1

  Host: localhost

  Cookie:

  trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;cnonce=69153d25a8a7a0ae

Name	Description
lang	en_US, de_DE, es_ES, user_1, user_2
- ■ Response:

  HTTP/1.1 200 OK

  Set-Cookie:

  trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-Age=1800

  Content-type: text/csv

  Content-Disposition: attachment; filename=EventLog.csv

  /* file contect

6.7.4. Save inlet log.

- ■ Resource URL:

  https://<snmp_ip>/api/logs/save_log/inlet_log
- ■ Resource URL:

  GET < snmp _ip>/api/logs/save_log/inlet_log?lang=en_US HTTP 1.1

  Host: localhost

  Cookie:

  trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;cnonce=69153d25a8a7a0ae

Name	Description
lang	en_US, de_DE, es_ES, user_1, user_2
- ■ Response:

  HTTP/1.1 200 OK

  Set-Cookie:

  trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-Age=1800

  Content-type: text/csv

  Content-Disposition: attachment; filename=InletHistoryLog.csv

  /* file contect

6.7.5. Save outlet log.

- ■ Resource URL:

  https://<snmp_ip>/api/logs/save_log/outlet_log

- Resource URL:

GET < snmp _ip>/api/logs/save_log/outlet_log?lang=en_US HTTP 1.1

Host: localhost

Cookie:

trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;c

nonce=69153d25a8a7a0ae

Name	Description
lang	en_US, de_DE, es_ES, user_1, user_2

- Response:

HTTP/1.1 200 OK

Set-Cookie:

trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-Age=1800

Content-type: text/csv

Content-Disposition: attachment; filename=OutletHistoryLog.csv

/* file contect

6.7.6. Save emd log.

- Resource URL:

https://<snmp_ip>/api/logs/save_log/emd_log

- Resource URL:

GET < snmp _ip>/api/logs/save_log/emd_log?lang=en_US HTTP 1.1

Host: localhost

Cookie:

trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;c

nonce=69153d25a8a7a0ae

Name	Description
lang	en_US, de_DE, es_ES, user_1, user_2

- Response:

HTTP/1.1 200 OK

Set-Cookie:

trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-Age=1800

Content-type: text/csv

Content-Disposition: attachment; filename=EmdHistoryLog.csv

/* file contect

6.7.7. Clear Log

Clear system log, event log and inlet history log and outlet history log and env log.

- Resource URL:

https://<snmp_ip>/api/logs/delete_log

- Resource URL:

DELETE < snmp

_ip>/api/logs/delete_log?sys_log=integer&evt_log=integer&inlet_log=integer&outlet_log=integer&emd_log=integer HTTP 1.1

Host: localhost

Cookie:

trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;cnonce=69153d25a8a7a0ae

Name	Description
integer	0:doesn't delete, 1:delete

■ Response:

HTTP/1.1 200 OK

Set-Cookie: trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-Age=1800

Content-type: application/json

Accept: application/json

Content-type: application/json

{ "error":integer }   /* 0:success, 1:error */

7. Advanced

7.1. Multi-Language

7.1.1.　Web and Event string

- **POST language #1**
  - **Resource URL:**
    https://<snmp_ip>/api/advance/multi_lang/string_conf?lang=1
  - **Request:**
    POST <snmp_ip>/api advance/multi_lang/string_conf?lang=1 HTTP / 1.1
    Host: localhost
    Cookie:
    trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;c
    nonce=69153d25a8a7a0ae
    Accept: application/json
    Content-type: application/json

```
{
    ".lang_config":{
        "usr_1_name":"string",
        "usr_1_enable":integer,        /* 0:disabled, 1:enabled */
        "serial":integer
        "timestamp":"string"           /* 2020-02-06T03:32:34.519Z */
    },
    "web":{
        "key1":"string",
        "key2":"string",
        ……
    },
    "event":{
        "key1":"string",
        "key2":"string",
        ……
    }
}
```

    key1 to keyn in web object will be replaced by Appendix 2. Page String List.
    key1 to keyn in event object will be replaced by id field of langEventList in Appendix 3.
  - **Response:**
    http/1.1 200 OK
    Set-Cookie:

trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-Age=1800

Accept: application/json

Content-type: application/json

{ "error":0 }   /* 0:success, 1:error */

- **POST language #2**
  - **Resource URL:**

    https://<snmp_ip>/api/advance/multi_lang/string_conf?lang=2
  - **Request:**

    POST <snmp_ip>/api advance/multi_lang/string_conf?lang=2 HTTP / 1.1

    Host: localhost

    Cookie:

    trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;c

    nonce=69153d25a8a7a0ae

    Accept: application/json

    Content-type: application/json

    ```
    {
        ".lang_config":{
            "usr_2_name":"string",
            "usr_2_enable":integer,        /* 0:disabled, 1:enabled */
            "serial":integer
            "timestamp":"string"           /* 2020-02-06T03:32:34.519Z */
        },
        "web":{
            "key1":"string",
            "key2":"string",
            ……
        },
        "event":{
            "key1":"string",
            "key2":"string",
            ……
        }
    }
    ```

    key1 to keyn in web object will be replaced by Appendix 2. Page String List.

    key1 to keyn in event object will be replaced by id field of langEventList in Appendix 3.
  - **Response:**

    http/1.1 200 OK

    Set-Cookie:

    trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-Age=1800

    Accept: application/json

Content-type: application/json

{ "error":0 }   /* 0:success, 1:error */

- ■ Get language #2
  - ■ Resource URL:

    https://<snmp_ip>/api/advance/multi_lang/string_conf?lang=n
  - ■ Request:

    GET <snmp_ip>/api advance/multi_lang/string_conf?lang=n HTTP / 1.1

    Cookie:

    trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;cnonce=69153d25a8a7a0ae
  - ■ Response:

    http/1.1 200 OK

    Set-Cookie:

    trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-Age=1800

    Accept: application/json

    Content-type: application/json

    /* refer POST content */

7.1.2. Upload/Download

- ■ Download language #1
  - ■ Resource URL:

    https://<snmp_ip>/api/advance/multi_lang/download?lang=1
  - ■ Request:

    GET <snmp_ip>/api advance/multi_lang/download?lang=1 HTTP / 1.1

    Cookie:

    trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;cnonce=69153d25a8a7a0ae
  - ■ Response:

    http/1.1 200 OK

    Set-Cookie:

    trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-Age=1800

    Accept: application/octet-stream

    Content-Disposition: attachment; filename=sps_lang1

    /* file content */

- ■ Download language #2
  - ■ Resource URL:

    https://<snmp_ip>/api/advance/multi_lang/download?lang=2
  - ■ Request:

    GET <snmp_ip>/api advance/multi_lang/download?lang=2 HTTP / 1.1

    Cookie:

trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;c
nonce=69153d25a8a7a0ae

- ■ Response:
  http/1.1 200 OK
  Set-Cookie:
  trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-Age=1800
  Accept: application/octet-stream
  Content-Disposition: attachment; filename=sps_lang2
  /* file content */
- ■ Upload language
  - ■ Resource URL:
    https://<snmp_ip>/api/advance/multi_lang/upload
  - ■ Request:
    POST <snmp_ip>/api advance/multi_lang/upload HTTP / 1.1
    Host: localhost
    Cookie:
    trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;c
    nonce=69153d25a8a7a0ae
    Content-Type: multipart/form-data; boundary= -------------------------xxxxxx…
    Content-Disposition: form-data; filename=sps_lang
    /* file content */

  - ■ Response:
    http/1.1 200 OK
    Set-Cookie:
    trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-Age=1800
    Accept: application/json
    Content-type: application/json
    { "error":integer }   /* 0:success, 1:error */
- ■ Get upload status
  - ■ Resource URL:
    https://<snmp_ip>/api/advance/multi_lang/upload
  - ■ Resource URL:
    GET <snmp_ip>/api/advance/multi_lang/upload
  - ■ Curl Request:
    curl -i -X GET -H "Content-Length: 0" --cookie
    "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;
    cnonce=a0b9ac23463677df" -k http://[snmp_ip]/api/advance/multi_lang/upload
  - ■ Curl Response:
    http/1.1 200 OK

Set-Cookie: trackid=43a46d1edff84557b893947e736ef20d; Path=/; Version=1; Max-Age=1800

Set-Cookie: uid=034f1b705e094a04; Path=/; Version=1; Max-Age=1800

Content-type: application/json

{ "progress":integer }   /* the uploading % */

7.2. WiFi Configuration

- ■ POST
  - ■ Resource URL:
    https://<snmp_ip>/api/advance/wifi_conf
  - ■ Curl Request: (Example: enable wifi control)
    curl -i -X POST -H "Content-Type: application/json" --cookie
    "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;
    cnonce=a0b9ac23463677df" -d ' {"manu_setting":{"wifi_ctrl":1}}' -k
    http://[snmp_ip]/api/advance/wifi_conf
  - ■ Request:
    POST <snmp_ip>/api/advance/wifi_conf   HTTP / 1.1

    Host: localhost

    Cookie:

    trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;c
    nonce=69153d25a8a7a0ae

    Accept: application/json

    Content-type: application/json

```
{
    "manu_setting":{
        "wifi_ctrl":integer,            /* 0:disabled, 1:enabled */
        "wifi_ssid":"string",
        "wifi_psw":"string",            /* refer note 1 */
        "wifi_encryption":integer,      /* 0:none, 1:WEP, 2:WPA-PSK, 3:WPA2-PSK */
        "wifi_security":integer,        /* 0:none, 1:TKIP, 2:AES, 3:TKIP + AES */
        "wifi_set":integer              /* setting index, manual setting is 16 */
    },
    "status":{
        "conn_status":integer,          /* 0:disconnection, 1:Associated, 2:connection
*/
        "ip_addr":"string",
        "net_mask":"string",
        "gw_addr":"string",
        "mac_addr":"string"
    },
```

       "reconnect":integer

    }

- Response:
  http/1.1 200 OK
  Set-Cookie:
  trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-Age=1800
  Accept: application/json
  Content-type: application/json
  { "error":integer }   /* 0:success, 1:error */

- Get
  - Resource URL:
    https://<snmp_ip>/api/advance/wifi_conf
  - Curl Request:
    curl -i -X GET -H "Content-Length: 0" --cookie
    "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;
    cnonce=a0b9ac23463677df" -k http://[snmp_ip]/api/advance/wifi_conf
  - Curl Response:
    http/1.1 200 OK
    Set-Cookie: trackid=43a46d1edff84557b893947e736ef20d; Path=/; Version=1; Max-Age=1800
    Set-Cookie: uid=034f1b705e094a04; Path=/; Version=1; Max-Age=1800

    /* refer POST content */

7.3. SMS Configuration

7.3.1. SMS Setting

- POST
  - Resource URL:
  https://<snmp_ip>/api/advance/sms_conf/setting
  - Curl Request: (Example: enable sms control)
  curl -i -X POST -H "Content-Type: application/json" --cookie
  "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;
  cnonce=a0b9ac23463677df" -d ' {"sms_ctrl":1}' -k
  http://[snmp_ip]/api/advance/sms_conf
  - Request:
  POST <snmp_ip>/api advance/sms_conf/setting   HTTP / 1.1
  Host: localhost
  Cookie:
  trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;c
  nonce=69153d25a8a7a0ae
  Accept: application/json
  Content-type: application/json
  {
      "sms_ctrl":integer,   /* 0:disabled, 1:enabled */
      "sms_auth":integer,   /* 0:disabled, 1:enabled */
      "pin_code":"string",   /* base64(aes-cbc-256(pin_code)) */
      "phone":["string", ...],   /* array size is 16, the order in object, start from 0 */
      "severity":[integer, ...],   /* 0:information, 1:warning, 2:critical */
      "body":["string", ...],   /*prefix body */
      ~~"action":[integer, ...]~~   ~~/* 0:disabled, 1:enabled */~~
      ~~"condition":[integer, ...]~~ ~~/* prefix checkbox, 0:disabled, 1:enabled */~~
      ~~"filter":[[integer, ...], ...]~~   ~~/* event filter, array size is 8 * 32 */~~
  }

condition	bit0:prefix

- Note 1 :
base64(evp-aes-256-cbc) = base64(EVP-AES-256-CBC(password, key(trackid), iv(cnonce)))
  - Response:
  http/1.1 200 OK
  Set-Cookie:
  trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-Age=1800
  Accept: application/json
  Content-type: application/json

{ "error":integer }   /* 0:success, 1:error */

- Get
    - Resource URL:

    https://<snmp_ip>/api/advance/sms_conf/setting

    - Curl Request:

    curl -i -X GET -H "Content-Length: 0" --cookie
    "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;
    cnonce=a0b9ac23463677df" -k http://[snmp_ip]/api/advance/sms_conf/setting

    - Curl Response:

    http/1.1 200 OK
    Set-Cookie: trackid=43a46d1edff84557b893947e736ef20d; Path=/; Version=1; Max-
    Age=1800
    Set-Cookie: uid=034f1b705e094a04; Path=/; Version=1; Max-Age=1800

    /* refer POST content */

7.3.2. SMS Test

■ POST

  ■ Resource URL:

  https://<snmp_ip>/api/advance/sms_conf/test

  ■ Curl Request: (Example: send test sms 1)

  curl -i -X POST -H "Content-Type: application/json" --cookie
  "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;
  cnonce=a0b9ac23463677df" -d ' {"send":1}' -k
  http://[snmp_ip]/api/advance/sms_conf/test

  ■ Request:

  POST <snmp_ip>/api advance/sms_conf/test   HTTP / 1.1

  Host: localhost

  Cookie:

  trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;c
  nonce=69153d25a8a7a0ae

  Accept: application/json

  Content-type: application/json

  {

      "sned":integer   /*0:nothing, 1~16: send test trap index (0 ~ 15). */

  }

  ■ Response:

  http/1.1 200 OK

  Set-Cookie:

  trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-Age=1800

  Accept: application/json

  Content-type: application/json

  { "error":integer }   /* 0:success, 1:error */

3. External Link

Get external link.

- Resource URL:

https://< snmp _ip>/api/external_link

- Request:

GET <sps_ip>/api/external_link HTTP 1.1

Host: localhost

Cookie:

trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;cnonce=6915
3d 25a8a7a0ae

- Response:

HTTP/1.1 200 OK

Set-Cookie: trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-Age=1800

Accept: application/json

Content-type: application/json

```
{
    "screen_text":["string",……],          /* array size is 4 */
    "link_addr":["string", ……],
    "status":[integer, ……]            /* 0:hide, 1:show */
}
```

9. Manufacture

9.1.1. Upload inlet/outlet firmware

- **POST**
  - **Request:**
    POST <snmp_ip>/api/manufacture/fw_dev/upload HTTP / 1.1
    Host: localhost
    Cookie:
    trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;c
    nonce=69153d25a8a7a0ae
    Content-Type: multipart/form-data; boundary=-------------------------xxxxxx…
    Content-Disposition: form-data; filename=fw.485
    /* file content */
  - **Response:**
    http/1.1 200 OK
    Set-Cookie:
    trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-Age=1800
    Accept: application/json
    Content-type: application/json
    { "error":0 }
- **GET**
  - **Resource URL:**
    GET <snmp_ip>/api/manufacture/fw_dev/upload
  - **Curl Request:**
    curl -i -X GET -H "Content-Length: 0" --cookie
    "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;
    cnonce=a0b9ac23463677df" -k http://[snmp_ip]/api/fw_dev/upload
  - **Curl Response:**
    http/1.1 200 OK
    Set-Cookie: trackid=43a46d1edff84557b893947e736ef20d; Path=/; Version=1; Max-
    Age=1800
    Set-Cookie: uid=034f1b705e094a04; Path=/; Version=1; Max-Age=1800
    Content-type: application/json
    {
        "upload_progress":integer,   /* the uploading % */
        "img_size":integer,
        "img_type":[ingeter, ……],
        "img_ver":[integer, ……],
        "precent":[integer, ……],

```
                    "status":[integer, ......],
                    "ver":[integer, ......],
                    "addr":[integer, ......],
                    "type":[integer, ......]
            }
```

9.2. EMD Upgrade

9.2.1. Upload emd firmware

- **POST**
  - **Request:**
    POST <snmp_ip>/api/manufacture/fw_emd/upload_fw HTTP / 1.1
    Host: localhost
    Cookie:
    trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;nc=00000002;c
    nonce=69153d25a8a7a0ae
    Content-Type: multipart/form-data; boundary=-------------------------xxxxxx...
    Content-Disposition: form-data; filename=fw.485
    /* file content */
  - **Response:**
    http/1.1 200 OK
    Set-Cookie:
    trackid=ddc8369e9c91ae4dfba1d51441588a1d;uid=7a0aedfba1d514c9;Max-Age=1800
    Accept: application/json
    Content-type: application/json
    { "error":0 }
- **GET**
  - **Resource URL:**
    GET <snmp_ip>/api/manufacture/fw_emd/upload
  - **Curl Request:**
    curl -i -X GET -H "Content-Length: 0" --cookie
    "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;
    cnonce=a0b9ac23463677df" -k http://[snmp_ip]/api/fw_emd/upload
  - **Curl Response:**
    http/1.1 200 OK
    Set-Cookie: trackid=43a46d1edff84557b893947e736ef20d; Path=/; Version=1; Max-
    Age=1800
    Set-Cookie: uid=034f1b705e094a04; Path=/; Version=1; Max-Age=1800
    Content-type: application/json
    {

```

```
        "upload_progress":integer,   /* the uploading % */
        "upload_version":"string",
        "update_percent":[integer,……],
        "update_ver":["string",……],
        "update_addr":[integer,……],
        "update_type":[integer,……],
        "update_status":[integer, ……]
}
```

# 10. Web Information

## 10.1. Web Information

- GET
  - Resource URL:
    GET <snmp_ip>/api/web_info
  - Curl Request:
    curl -i -X GET -H "Content-Length: 0" --cookie
    "trackid=43a46d1edff84557b893947e736ef20d;uid=034f1b705e094a04;nc=00000001;
    cnonce=a0b9ac23463677df" -k http://[snmp_ip]/api/web_info
  - Curl Response:
    http/1.1 200 OK
    Set-Cookie: trackid=43a46d1edff84557b893947e736ef20d; Path=/; Version=1; Max-Age=1800
    Set-Cookie: uid=034f1b705e094a04; Path=/; Version=1; Max-Age=1800
    Content-type: application/json
    {
        "web_refersh_interval":integer,
        "web_timeout_en":integer,
        "web_timeout_interval":integer
    }

Appendix 1. Resource Mapping

TBD

# Appendix 2. Page String List

TBD

# Appendix 3. Event String List

TBD

# History:

| Date | Version | Description |
|---|---|---|
| 12/16/2020 | 1.0 | First record. |
| 12/16/2020 | 1.1 | Delete "lt_close" & "set_lt_close" of EMD. |
| | | Add temperature & humidity hysteresis description of EMD. |
| | | Modify the length of the outlet bitmap from 8 * 64 to 16 * 64. |
| 12/21/2020 | 1.2 | Modify one schedule date format (string -> integer). |
| | | Add a field for the week schedule date. |
| 12/22/2020 | 1.3 | Modify local/radius user privilege define. |
| | | Add "inlet total energy clear" |
| | | Modify inlet & outlet log parameter name, (dev_idx, olet_idx) |
| 12/29/2020 | 1.4 | Add MFG function. |
| 01/05/2021 | 1.5 | Modify EMD log filter field. (dev_idx, emd_idx). |
| | | Add firmware version of inlet & outlet. |
| 01/13/2021 | 1.6 | Add Web information. |
| | | Modify one schedule date format. |
| | | Modify unit value of voltage current PF. |
| 01/25/2021 | 1.7 | Modify the definition of event level description. |
| | | Modify energy unit. |
| 02/09/2021 | 1.8 | Modify the RCM current description. |
| 03/09/2021 | 1.9 | Modify send test mail. |
| | | Add mail type & mail event level comment. |
| | | Add send test mail/trap/sms index field. |
| 04/16/2021 | 2.0 | Modify temperature and humidity calibration to define EMD index. (position) |
| | | Modify outlet on/off delay description. (position) |
| | | Modify the security interval and time field mapping definition. (position) |
| | | Modify the RCM current unit. (position) |
| 05/05/2021 | 2.1 | Modify the Dual Ethernet setting range. (position) |
| | | Add priority field of accessible IP. (position) |
| | | Modify the IPv6 config range. (position) |
| 28/03/2024 | 2.2 | Modify action define of accessible IP. (position) |
| | | Add daisy chain status of User Privilege. (position) |
| | | Add non-meter of Outlet BID. (position) |