dataprobe

iBCS Restful API V4
URL Control
V230918W

1. Overview

The iBoot-G2, iBoot-PoE and iBoot-PDU Family of products provides a simple Restful API (URL Control) that allows users to control them easily from their own websites and portals. This, however, requires the knowledge of the IP Address of the iBoot(s) that need to be controlled. This is not always practical. Some internet connections do not provide static IP addresses making it impossible to use the local Restful API. The iBoot Cloud Services (iBCS) is a perfect solution to this problem.

iBoots make an outgoing connection to the iBCS for monitoring and control. Since the iBCS does have a static IP address as well as a domain name, this makes it the perfect solution to the aforementioned problem. This document provides a specification for the first stage of the iBCS Restful API.

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3. Restful API v4 Specifications

The addition of the ability to configure devices from the cloud is an iBCS roadmap item. To this end Dataprobe released the iBoot-G2 Restful API v3.2 as a starting point for iBCS G2 family configuration. The Restful API known as Restful API v4 will include all the v3.2 features as they existed and add some support for the configuration for the iBoot-PDU series. The iBCS supports a Token based Restful API for controlling, monitoring and configuring iBoot-G2 family devices. Version 4 will allow the iBoot-PDU series to be programmed by utilizing the existing Token based API and the command Line Interface (CLI) already built into the iBoot-PDU devices.

The Restful API v4 will include the following customer suggestions:

- The Restful API should be Token based.
- The Restful API should be able to get configuration data.
- The Restful API will allow use of the existing CLI command set in the PDU.

3.1. Token

An Authorized token is required for All Restful API communications. The token is valid until a programmable amount of inactivity has elapsed. The inactivity timer is programmable from 1 minute to 12 months. It can be programmed from the Restful API or via the Web UI. All tokens can be revoked at any time through the Restful API v4.

- Authorization Tokens **will** be acquired from:
  https://iboot.co/services/v4/auth

  Authorization Requests **will** use the following JSON Structure:

```
{
        "username":"<username>",      //Username
        "password":"<password>",      //Password
        "timeout": {                  //optional timeout
                "interval":"",        //timeout interval
                "scale":""            //Minutes, Hours, Days, Months
        },
        "revoke":"token"              //optional token to revoke
}
```

- Authorization requests will respond with the following JSON structure:

```
{

        "success":"<true|false>",     //Result code true or false
        "message":"<message>",        //Error Message from the server.
        "token":"####-####-####-####" //64 bit randomly generated token
}
```

3.2. Control

The iBCS Control Restful API will function as the same as current Control Restful API. The only change will be to use an Authorization Token.

- Control will be accessed at:
  https://iboot.co/services/v4/control
- Control will use the following JSON structure:

```
{
        "token":"",                   //Authorization Token
        "mac":"",                     //MAC address of the iBoot
        "outlet":"",                  //Outlet to control [0|1|2|3|4|5|6|7]
        "control":""                  //Action to take [cycle|on|off]
}
```

- Control will respond with the following JSON structure:

```
{
        "success":"",                 //Result code [true|false]
        "message":""                  //Message from the server
}
```

3.3. Retrieve

The iBCS Retrieve Restful API functionality will allow users to retrieve information on more than just one device at a time. Users can retrieve the status of all the devices in their account, all the devices in a specification location, or the status of just a specific type of device.

- Retrieve will be accessed at:
  https://iboot.co/services/v4/retrieve
- Retrieve will use one of the following the following JSON structures:

Retrieve All

This version of the Retrieve Command will Retrieve the status of all devices in the account. The user can optionally select all devices of a specific type.

```
{
        "token":"",                          //Valid Token
        "all":"[blank,G2,G2S,G2+,PoE,PDU]"   //Array of devices, types or blank for all
}
```

Retrieve Location

This version of the Retrieve Command will Retrieve the status of all devices in a selected location. The user can optionally select all devices of a specific type.

```
{
        "token":"",                          //Valid Token
        "location":"location",               //valid location name
        "all":"[blank,G2,G2S,G2+,PoE,PDU]"   //Array of devices, types or blank for all
}
```

Retrieve Specific

This version of the Retrieve Command will Retrieve the status of the device with the selected MAC address.

```
{
        "token":"",                          //Valid Token
        "mac":""                             //MAC address of the iBoot
}
```

Retrieve Response Format

- Retrieve will respond with the following structure for iBoot-G2/PoE:

```
{      "success":"true",                     //Result code [true|false]
       "message":"",                         //From Server [null if success is true]
       "devices":[{                          //Device information
               "mac":"",                     //MAC address of the device
               "name":"",                    //Device Name as displayed in the Cloud
               "online":"",                  //Online status [true/false]
               "location":"",                //The name of the location of the device
               "lastContact":"timestamp",    //Timestamp of last valid communication.
               "ip":"",                      //assigned local ip address
               "status":{
                          "Main":"",         //Outlet Status [ON or OFF]
                          "AP-1":"",         //Autoping 1 status [OK,FAIL,Inactive]
                          "AP-2":""          //Autoping 2 status [OK,FAIL,Inactive]
                      },
               "triggerInfo":{
                          "APT1":""          //Autoping Trigger Count
                          }
               }]
}
```

- Retrieve will respond with the following structure for iBoot-G2+/G2S:

```
{      "success":"true",                     //Result code [true|false]
       "message":"",                         //From Server [null if success is true]
       "devices":[{                          //Device information
               "mac":"",                     //MAC address of the device
               "name":"",                    //Device Name as displayed in the Cloud
               "online":"",                  //Online status [true/false]
               "location":"",                //The name of the location of the device
               "lastContact":"timestamp",    //Timestamp of last valid communication
               "ip":"",                      //assigned local ip address
               "status":{
                      "Main":"",             //Main Outlet Status (expansion mode)
                      "EXP-1":"",            //EXP-1 Status (expansion mode)
                      "EXP-2":"",            //EXP-2 Status (expansion mode)
                      "Main-2":"",           //Main-2 Outlet Status (Independent IO Mode)
                      "Input-1":"",          //Input-1 Status (Independent IO Mode)
                      "Input-2":"",          //Input-2 Status (Independent IO Mode)
                      "Output-1":"",         //Output-1 Status (Independent IO Mode)
                      "Output-2":"",         //Output-2 Status (Independent IO Mode)
                      "AP-1A":"",            //Autoping-1A Status
                      "AP-1B":"",            //Autoping-1B Status
                      "AP-2":"",             //Autoping-2 Status
                      "AP-3":"",             //Autoping-2 Status
                      "HB":"OK"              //Heartbeat Status
                      },
               "triggerInfo":{               //Trigger Information
                      "APT1":"",             //Autoping-1A & 1B Trigger Info
                      "APT2":"",             //Autoping-2 Trigger Info
                      "APT3":"",             //Autoping-3 Trigger Info
                      "HBT1":"0"             //Heartbeat Trigger Info
                      }
               }]
}
```

- Retrieve will respond with the following JSON structure for the iBoot-PDU:

```
{       "success":"true",                       //Result code [true/false]
        "message": "",                          //From Server [null if success is true]
        "devices":[{                            //Device information
                "mac":"mac address",            //MAC address of the device
                "name":"display name",          //Device Name as displayed in the Cloud
                "online":"true/false",          //Online status
                "location":"location",          //The name of the location of the device
                "lastContact":"timestamp",      //Timestamp of last valid communication
                "ip":"ip address",              //Future Use: it will be 0.0.0.0 for now
                "status": [                     //Outlet Status Information
                        {
                                "Outlet-1": "On"        //Outlet-1 Status
                        },
                        {
                                "Outlet-2": "On"        //Outlet-2 Status
                        },
                        {
                                "Outlet-3": "On"        //Outlet-3 Status
                        },
                        {
                                "Outlet-4": "On"         //Outlet-4 Status
                        },
                        {
                                "Outlet-5": "On"         //Outlet-5 Status
                        },
                        {
                                "Outlet-6": "On"        //Outlet-6 Status
                        },
                        {
                                "Outlet-7": "On"         //Outlet-7 Status
                        },
                        {
                                "Outlet-8": "On"        //Outlet-8 Status
                        }],
                "triggerInfo": []                       //Future Use (May not be implemented)
                }]
}
```

3.4. Retrieve Shareable PDU Manage Link

The iBCS Retrieve Manage Link functionality will allow users to retrieve a link that can be shared to log directly onto their iBoot-PDU series device as if they had clicked on the Manage button available in the iBCS webpage. The link will remain valid for 30 minutes, and if used for 30 minutes after inactivity.

- Retrieve Shareable PDU Manage Link will be accessed at: https://iboot.co/services/v4/manage_link
- Retrieve Shareable PDU Manage Link will use the following the following JSON structure:

```
{
        "token":"",                     //Valid Token
        "mac":""                        //MAC address of the iBoot-PDU
}
```

- Retrieve Shareable PDU Manage Link will respond with the following JSON structure:

```
{
        "success":"",                   //Result code [true/false]
        "message":""                    //Link code [https://uniquecode.device.iboot.co]
}
```

3.5. Configuration Set – G2 Series

The Configuration Restful API v4 will take a variable number of items in the JSON structures. This will allow for single variable changes. It will also allow for variables from different setup pages to be sent in a single API request. See Section 4 and 5 below for details regarding specific iBoot units.

- All configuration set will be done through:
  https://iboot.co/services/v4/configuration/iBoot/set
- The JSON structure will require at least 1 iBoot variable to configure.
- The iBCS will save all variables in the database.
- The iBCS will group the variables by product setting pages.
- The iBCS will push all variables for each effected setup group.
- The iBCS will push the data in HTTP Post format.
- The configuration set request will use the following JSON structure:

JSON Objects:

- Command:

```
{
        "token":"",                   //Authorization token
        "mac":"",                     //MAC address of the iBoot to be configured.
                                      //This variable can only be used if the
                                      //configuration object is not present
        "configuration": {            //This object contains the name, target and device
                                      //type.
                "name":"",            //Name of the configuration to be updated
                "target":[""],        //Optional list of device(s) to apply the config to
                                      //Change target to All, Location, Device, or MAC
                                      //Fill the array with location name(s), device
                                      //name(s)or MAC address(s)
                "type":""             //device type, iBoot-G2, iBoot-G2S, iBoot-G2+, or
                                      //iBoot-PoE
        "table 1":{                   //The table in the shadow database
                "variable 1":"",      //The first variable
                       •
                       •
                       •
                "variable n":""       //The last variable
                }
                •
                •
                •
        "table n":{                   //The table in the shadow database
                "variable 1":"",      //The first variable
                       •
                       •
                       •
                "variable n":""       //The last variable
                }
}
```

- Response:

```
{
        "Success":""                  //true or false
        "message":""                  //message describing the error
}
```

3.6. Configuration Get – G2 Series

The Configuration Restful API will be used to get the entire configuration or any part thereof, of the selected iBoot. See Section 6 and 7 below for details regarding specific iBoot units.

- All configurations get will be done through:
  https://iboot.co/services/v4/configuration/iBoot/get
- The configuration get request will use the following JSON structure:

```
{
        "token":"",                   //Authorization token
        "mac":"",                     //MAC address of the iBoot configuration to get
                                      //This cannot be used when the configuration
                                      //variable is present
        "configuration":"",           //The name of the configuration to get
                                      //This cannot be used when the mac variable is
                                      //present.  Using the name __all__ will return a
                                      //list (array) of all configuration names, as
                                      //table 1 in the return JSON packet
        "tables":[""]                 //optional list of tables to get
}
```

- The configuration get request will respond with the following JSON structure:

```
{
        "Success":""                  //true or false
        "message":""                  //message describing the error
        "table 1":{                   //The table in the shadow database
                "variable 1":"",      //The first variable
                       •
                       •
                       •
                "variable n":""       //The last variable
                }
                •
                •
                •
        "table n":{                   //The table in the shadow database
                "variable 1":"",      //The first variable
                       •
                       •
                       •
                "variable n":""       //The last variable
                }
}
```

3.7. Config Apply – G2 Series

The Configuration RestAPI will use this method (end point) to apply a selected Configuration to a list of Selected Devices.

- All configurations get will be done through:
  https://iboot.co/services/v4/configuration/iBoot/apply
- The configuration apply command will use the following JSON structure:

```
{
        "token":"",             //Authorization token
        "configuration": "",    //The name of the configuration to be applied.
        "target":[""],          //Optional list of device(s) to apply the config to
                                //Change target to All, Location, Device, or MAC
                                //Fill the array with location name(s), device
                                //name(s)or MAC address(s)
        "type":""               //device type, iBoot-G2, iBoot-G2S, iBoot-G2+, or
                                //iBoot-PoE

}
```

- JSON Response

```
{
        "Success":""                    //true or false
        "message":""                    //message describing the error
}
```

3.8. Shadow Database

It would be impractical for iBCS to process a get request by retrieving the iBoot configuration directly from iBoot. To work around this the iBCS will use a Shadow Database.

- The Shadow Database will contain 1 variable for each setup pages of the iBoot-G2 family.
- Each table will contain variable for all versions of the iBoot-G2 family.
- Each table will start as blank until
  1. The iBoot sends its setting to cloud via Commit Long Poll.
     - After a reboot or settings change saved on webpage
  2. The Configuration Set Restful API is used.
- The Restful API Set will apply factory defaults to all unset variables.

4. iBoot-G2 Configuration Set

4.1. Device Configuration Set

The following is used to POST JSON structure that will make changes to the iBoot-G2 units Device settings. https://iboot.co/services/v4/configuration/iBoot/set

Note: If the Location is changed a reboot is required.

```
{
        "token":"####-####-####-####",              //Authorization token
        "mac":"00-0d-ad-01-02-03",                  //MAC address of the iBoot to be configured
        "device":{                                  //Device configuration structure
                "location":"",                      //1-20 characters
                "cycleTime":"",                     //1-999 seconds
                "disableOff":"",                    //1=enable | 0=disable
                "initialState":"",                  //On | Off | Last
                "upgradeEnable":"",                 //1=enable | 0=disable
                "autoLogout":""                     //0-99 seconds
        }
}
```

4.2. Network Configuration Set

```
{
        "token":"####-####-####-####",              //Authorization token
        "mac":"00-0d-ad-01-02-03",                  //MAC address of the iBoot to be configured
        "network": {                                //Network configuration structure
                "ipMode":"",                        //static | dhcp
                "ipAddress":"",                     //dotted decimals (192.168.1.254)
                "subnetMask":"",                    //dotted decimals (255.255.255.0)
                "gateway":"",                       //dotted decimals (192.168.1.1)
                "dns":""                            //dotted decimals (8.8.8.8)
        }
}
```

4.3. Advanced Network Configuration Set

```
{
        "token":"####-####-####-####",              //Authorization token
        "mac":"00-0d-ad-01-02-03",                  //MAC address of the iBoot to be configured
        "advancedNetwork": {                        //Advanced Network configuration structure
                "httpPort":"",                      //1-65535
                "linkbackUrl":"",                   //1-64 characters
                "telnetPort":"",                    //1-65535
                "dxpPort":"",                       //1-65535
                "cloudEnabled":"",                  //1=enabled | 0=disabled
                "enableTimeServer":"",              //1=enabled | 0=disabled
                "timeServerAddress":"",             //1-64 characters
                "timezone":"",                      //-12 to 12
                "enableDst":"",                     //1=enabled | 0=disabled
                "dstStartWeek":"",                  //1st | 2nd | 3rd | 4th | last
                "dstStartDay":"",                   //Sunday through Saturday
                "dstStartMonth":"",                 //January through December
                "dstStartTime":"",                  //hh:mm in 24 hour format
                "dstStopWeek":"",                   //1st | 2nd | 3rd | 4th | last
                "dstStopDay":"",                    //Sunday through Saturday
                "dstStopMonth":"",                  //January through December
                "dstStopTime":""                    //hh:mm in 24 hour format
        }
}
```

4.4. Autoping Configuration Set

```
{
        "token":"####-####-####-####",               //Authorization token
        "mac":"00-0d-ad-01-02-03",                   //MAC address of the iBoot to be configured
        "autoping": {                                //Autoping configuration structure
                "apAAddress":"",                     //address to be pinged 1-32 characters
                "apBAddress":"",                     //address to be pinged 1-32 characters
                "apAFrequency":"",                   //1-999 seconds
                "apBFrequency":"",                   //1-999 seconds
                "apAFailcount":"",                   //1-999 failures
                "apBFailCount":"",                   //1-999 failures
                "apAMode":"",                        //and | or | single
                "apAAction":"",                      //None|On-Latch|On-Follow|Off-Latch|Off-
                                                     //Follow|cycle
                "apACycles":"",                      //0-999
                "apARestart":""                      //0-999 seconds
        }
}
```

4.5. Schedule Configuration Set

```
{
        "token":"####-####-####-####",                  //Authorization token
        "mac":"00-0d-ad-01-02-03",                      //MAC address of the iBoot to be configured
        "schedule": {                                   //Autoping configuration structure
                "date1":"",                             //mm/dd/yyyy or blank
                "date2":"",                             //mm/dd/yyyy or blank
                "date3":"",                             //mm/dd/yyyy or blank
                "date4":"",                             //mm/dd/yyyy or blank
                "date5":"",                             //mm/dd/yyyy or blank
                "date6":"",                             //mm/dd/yyyy or blank
                "date7":"",                             //mm/dd/yyyy or blank
                "date8":"",                             //mm/dd/yyyy or blank
                "time1":"",                             //hh:mm or blank
                "time2":"",                             //hh:mm or blank
                "time3":"",                             //hh:mm or blank
                "time4":"",                             //hh:mm or blank
                "time5":"",                             //hh:mm or blank
                "time6":"",                             //hh:mm or blank
                "time7":"",                             //hh:mm or blank
                "time8":"",                             //hh:mm or blank
                "repeat1":"",                           //0-999
                "repeat2":"",                           //0-999
                "repeat3":"",                           //0-999
                "repeat4":"",                           //0-999
                "repeat5":"",                           //0-999
                "repeat6":"",                           //0-999
                "repeat7":"",                           //0-999
                "repeat8":"",                           //0-999
                "repeatPeriod1":"",                     //days | hours | minutes
                "repeatPeriod2":"",                     //days | hours | minutes
                "repeatPeriod3":"",                     //days | hours | minutes
                "repeatPeriod4":"",                     //days | hours | minutes
                "repeatPeriod5":"",                     //days | hours | minutes
                "repeatPeriod6":"",                     //days | hours | minutes
                "repeatPeriod7":"",                     //days | hours | minutes
                "repeatPeriod8":"",                     //days | hours | minutes
                "action1":"",                           //on | off | cycle
                "action2":"",                           //on | off | cycle
                "action3":"",                           //on | off | cycle
                "action4":"",                           //on | off | cycle
                "action5":"",                           //on | off | cycle
                "action6":"",                           //on | off | cycle
                "action7":"",                           //on | off | cycle
                "action8":"",                           //on | off | cycle
                "enable1":"",                           //1=enabled | 0=disabled
                "enable2":"",                           //1=enabled | 0=disabled
                "enable3":"",                           //1=enabled | 0=disabled
                "enable4":"",                           //1=enabled | 0=disabled
                "enable5":"",                           //1=enabled | 0=disabled
                "enable6":"",                           //1=enabled | 0=disabled
                "enable7":"",                           //1=enabled | 0=disabled
                "enable8":""                            //1=enabled | 0=disabled
        }
}
```

4.6. Reboot

```
{
        "token":"####-####-####-####",                  //Authorization token
        "mac":"00-0d-ad-01-02-03",                      //MAC address of the iBoot to be configured
        "reboot":"1",                                   //1=reboot
}
```

5. iBoot-G2+/S Configuration Set

The following is used to POST JSON structure that will make changes to the iBoot-G2P or iBoot-G2S Device settings. https://iboot.co/services/v4/configuration/iBoot/set

Note: If the Location is changed a reboot is required.

5.1. Device Configuration Set

```
{
        "token":"####-####-####-####",              //Authorization token
        "mac":"00-0d-ad-01-02-03",                  //MAC address of the iBoot to be configured
        "device":{                                  //Device configuration structure
                "location":"",                      //1-20 characters
                "cycleTime":"",                     //1-999 seconds
                "initialState":"",                  //on | off | last
                "upgradeEnable":"",                 //1=enabled | 0=disabled
                "autoLogout":"",                    //0-99 seconds
                "exp1CycleTime":"",                 //1-999 seconds
                "exp2CycleTime":"",                 //1-999 seconds
                "delayTime":"",                     //0-999 seconds
                "exp1InitialState":"",              //on | off | last
                "exp2InitialState":"",              //on | off | last
                "outletName":"",                    //1-20 characters
                "exp1OutletName":"",                //1-20 characters
                "exp2OutletName":"",                //1-20 characters
                "disableOff":""                     //1=enabled | 0=disabled
        }
}
```

5.2. Expansion Configuration Set

```
{
        "token":"####-####-####-####",              //Authorization token
        "mac":"00-0d-ad-01-02-03",                  //MAC address of the iBoot to be configured
        "expansion":{                               //Expansion configuration structure
                "expMode":"",                       //iBoot Expansion Unit|Independent
                                                    //I/O|Power Control
                "exp1Hide":"",                      //1=enabled | 0=disabled
                "exp2Hide":"",                      //1=enabled | 0=disabled
                "exp1linkToMain":"",                //1=enabled | 0=disabled
                "exp2linkToMain":"",                //1=enabled | 0=disabled
                "exp1RemoteIp":"",                  //dotted decimals (192.168.1.253)
                "exp2RemoteIp":"",                  //dotted decimals (192.168.1.254)
                "exp1Relay":"",                     //1 through 8
                "exp2Relay":"",                     //1 through 8
                "exp1Username":"",                  //1-15 characters
                "exp2Username":"",                  //1-15 characters
                "exp1Password":"",                  //1-15 characters
                "exp2Password":"",                  //1-15 characters
                "input1Outlet":"",                  //main | exp1 | exp2
                "input2Outlet":"",                  //main | exp1 | exp2
                "input1Action":"",                  //on | off | cycle | toggle
                "input2Action":""                   //on | off | cycle | toggle
        }

}
```

5.3. Network Configuration Set

```
{
        "token":"####-####-####-####",              //Authorization token
        "mac":"00-0d-ad-01-02-03",                  //MAC address of the iBoot to be configured
        "network": {                                //Network configuration structure
                "ipMode":"",                        //static | dhcp
                "ipAddress":"",                     //dotted decimals (192.168.1.254)
                "subnetMask":"",                    //dotted decimals (255.255.255.0)
                "gateway":"",                       //dotted decimals (192.168.1.1)
                "dns":""                            //dotted decimals (8.8.8.8)
        }
}
```

5.4. Advanced Network Configuration Set

```
{
        "token":"####-####-####-####",              //Authorization token
        "mac":"00-0d-ad-01-02-03",                  //MAC address of the iBoot to be configured
        "advancedNetwork":{                         //Advanced Network configuration structure
                "httpPort":"",                      //1-65535
                "linkbackUrl":""                    //1-64 characters
                "telnetPort":"",                    //1-65535
                "dxpPort":"",                       //1-65535
                "cloudEnabled":""                   //1=enabled | 0=disabled
                "enableTimeServer":""               //1=enabled | 0=disabled
                "timeServerAddress":""              //1-64 characters
                "timezone":""                       //-12 to 12
                "enableDst":""                      //1=enabled | 0=disabled
                "dstStartWeek":""                   //1st | 2nd | 3rd | 4th | last
                "dstStartDay":""                    //Sunday through Saturday
                "dstStartMonth":""                  //January through December
                "dstStartTime":""                   //hh:mm in 24 hour format
                "dstStopWeek":""                    //1st | 2nd | 3rd | 4th | last
                "dstStopDay":""                     //Sunday through Saturday
                "dstStopMonth":""                   //January through December
                "dstStopTime":""                    //hh:mm in 24 hour format
                "enableDxpControl":""               //1=enabled | 0=disabled
                "enableDxpQuery":""                 //1=enabled | 0=disabled
        }
}
```

5.5. Graceful Shutdown Configuration Set

```
{
        "token":"####-####-####-####",              //Authorization token
        "mac":"00-0d-ad-01-02-03",                  //MAC address of the iBoot to be configured
        "gracefulShutdown":{                        //Graceful Shutdown configuration structure
                "gsMainEnabled":"",                 //1=enabled | 0=disabled
                "gsExp1Enabled":"",                 //1=enabled | 0=disabled
                "gsExp2Enabled":"",                 //1=enabled | 0=disabled
                "gsMainIp":"",                      //dotted decimals (192.168.1.254)
                "gsExp1Ip":"",                      //dotted decimals (192.168.1.254)
                "gsExp2Ip":"",                      //dotted decimals (192.168.1.254)
                "gsMainUser":"",                    //1-20 characters
                "gsExp1User":"",                    //1-20 characters
                "gsExp2User":"",                    //1-20 characters
                "gsMainPassword":"",                //1-20 characters
                "gsExp1Password":"",                //1-20 characters
                "gsExp2Password":"",                //1-20 characters
                "gsMainShutdownDelay":"",           //1-999 seconds
                "gsExp1ShutdownDelay":"",           //1-999 seconds
                "gsExp2ShutdownDelay":"",           //1-999 seconds
                "gsMainRebootDelay":"",             //1-999 seconds
                "gsExp1RebootDelay":"",             //1-999 seconds
                "gsExp2RebootDelay":""              //1-999 seconds
        }
}
```

5.6. Autoping Configuration Set

```
{
        "token":"####-####-####-####",              //Authorization token
        "mac":"00-0d-ad-01-02-03",                  //MAC address of the iBoot to be configured
        "autoping":{                                //Autoping configuration structure
                "apAAddress":"",                    //address to be pinged 1-31 characters
                "apBAddress":"",                    //address to be pinged 1-31 characters
                "apAFrequency":"",                  //1-999 seconds
                "apBFrequency":"",                  //1-999 seconds
                "apAFailCount":"",                  //1-999 failures
                "apBFailCount":"",                  //1-999 failures
                "apAMode":"",                       //and | or | single
                "apAControl":"",                    //main | exp1 | exp2
                "apAAction":"",                     //none|on-latch|on-follow|off-latch|off-
                                                    //follow|cycle
                "apACycles":"",                     //0-999
                "apARestart":",                     //0-999 seconds
                "ap2Address":"",                    //address to be pinged 1-31 characters
                "ap3Address":"",                    //address to be pinged 1-31 characters
                "ap2Frequency":"",                  //1-999 seconds
                "ap3Frequency":"",                  //1-999 seconds
                "ap2FailCount":"",                  //1-999 failures
                "ap3FailCount":"",                  //1-999 failures
                "ap2Control":"",                    //main | exp1 | exp2
                "ap3Control":"",                    //main | exp1 | exp2
                "ap2Action":"",                     //none|on-latch|on-follow|off-latch|off-
                                                    //follow|cycle
                "ap3Action":"",                     //none|on-latch|on-follow|off-latch|off-
                                                    //follow|cycle
                "ap2Cycles":"",                     //0-999
                "ap3Cycles":"",                     //0-999
                "ap2Restart":"",                    //0-999 seconds
                "ap3Restart":""                     //0-999 seconds
        }
}
```

5.7. Heartbeat Configuration Set

```
{
        "token":"####-####-####-####",              //Authorization token
        "mac":"00-0d-ad-01-02-03",                  //MAC address of the iBoot to be configured
        "heartbeat":{                               //Heartbeat configuration structure
                "source":"",                        //none | usb | network
                "port":"",                          //1-65535
                "frequency":"",                     //1-999 seconds
                "failCount":"",                     //1-999 failures
                "action":"",                        //none|on-latch|on-follow|off-latch|off-
                                                    //follow|cycle
                "cycle":"",                         //0-999
                "control":""                        //main | exp1 | exp2
        }
}
```

5.8. Schedule Configuration Set

```
{
        "token":"####-####-####-####",              //Authorization token
        "mac":"00-0d-ad-01-02-03",                  //MAC address of the iBoot to be configured
        "schedule": {                               //Autoping configuration structure
                "date1":"",                         //mm/dd/yyyy or blank
                "date2":"",                         //mm/dd/yyyy or blank
                "date3":"",                         //mm/dd/yyyy or blank
                "date4":"",                         //mm/dd/yyyy or blank
                "date5":"",                         //mm/dd/yyyy or blank
                "date6":"",                         //mm/dd/yyyy or blank
                "date7":"",                         //mm/dd/yyyy or blank
                "date8":"",                         //mm/dd/yyyy or blank
                "time1":"",                         //hh:mm or blank
                "time2":"",                         //hh:mm or blank
                "time3":"",                         //hh:mm or blank
                "time4":"",                         //hh:mm or blank
                "time5":"",                         //hh:mm or blank
                "time6":"",                         //hh:mm or blank
                "time7":"",                         //hh:mm or blank
                "time8":"",                         //hh:mm or blank
                "repeat1":"",                       //0-999
                "repeat2":"",                       //0-999
                "repeat3":"",                       //0-999
                "repeat4":"",                       //0-999
                "repeat5":"",                       //0-999
                "repeat6":"",                       //0-999
                "repeat7":"",                       //0-999
                "repeat8":"",                       //0-999
                "repeatPeriod1":"",                 //days | hours | minutes
                "repeatPeriod2":"",                 //days | hours | minutes
                "repeatPeriod3":"",                 //days | hours | minutes
                "repeatPeriod4":"",                 //days | hours | minutes
                "repeatPeriod5":"",                 //days | hours | minutes
                "repeatPeriod6":"",                 //days | hours | minutes
                "repeatPeriod7":"",                 //days | hours | minutes
                "repeatPeriod8":"",                 //days | hours | minutes
                "action1":"",                       //on | off | cycle
                "action2":"",                       //on | off | cycle
                "action3":"",                       //on | off | cycle
                "action4":"",                       //on | off | cycle
                "action5":"",                       //on | off | cycle
                "action6":"",                       //on | off | cycle
                "action7":"",                       //on | off | cycle
                "action8":"",                       //on | off | cycle
                "enable1":"",                       //1=enabled | 0=disabled
                "enable2":"",                       //1=enabled | 0=disabled
                "enable3":"",                       //1=enabled | 0=disabled
                "enable4":"",                       //1=enabled | 0=disabled
                "enable5":"",                       //1=enabled | 0=disabled
                "enable6":"",                       //1=enabled | 0=disabled
                "enable7":"",                       //1=enabled | 0=disabled
                "enable8":"",                       //1=enabled | 0=disabled
                "date9":"",                         //mm/dd/yyyy or blank
                "dateA":"",                         //mm/dd/yyyy or blank
                "dateB":"",                         //mm/dd/yyyy or blank
                "dateC":"",                         //mm/dd/yyyy or blank
                "dateD":"",                         //mm/dd/yyyy or blank
                "dateE":"",                         //mm/dd/yyyy or blank
                "time9":"",                         //hh:mm or blank
                "timeA":"",                         //hh:mm or blank
                "timeB":"",                         //hh:mm or blank
                "timeC":"",                         //hh:mm or blank
                "timeD":"",                         //hh:mm or blank
                "timeE":"",                         //hh:mm or blank
                "repeat9":"",                       //0-999
                "repeatA":"",                       //0-999
                "repeatB":"",                       //0-999
                "repeatC":"",                       //0-999
                "repeatD":"",                       //0-999
                "repeatE":"",                       //0-999
                "repeatPeriod9":"",                 //days | hours | minutes
                "repeatPeriodA":"",                 //days | hours | minutes
                "repeatPeriodB":"",                 //days | hours | minutes
                "repeatPeriodC":"",                     //days | hours | minutes
                "repeatPeriodD":"",                     //days | hours | minutes
                "repeatPeriodE":"",                     //days | hours | minutes
                "action9":"",                           //on | off | cycle
                "actionA":"",                           //on | off | cycle
                "actionB":"",                           //on | off | cycle
                "actionC":"",                           //on | off | cycle
                "actionD":"",                           //on | off | cycle
                "actionE":"",                           //on | off | cycle
                "enable9":"",                           //1=enabled | 0=disabled
                "enableA":"",                           //1=enabled | 0=disabled
                "enableB":"",                           //1=enabled | 0=disabled
                "enableC":"",                           //1=enabled | 0=disabled
                "enableD":"",                           //1=enabled | 0=disabled
                "enableE":"",                           //1=enabled | 0=disabled
                "outlet1":"",                           //main | exp1 | exp2
                "outlet2":"",                           //main | exp1 | exp2
                "outlet3":"",                           //main | exp1 | exp2
                "outlet4":"",                           //main | exp1 | exp2
                "outlet5":"",                           //main | exp1 | exp2
                "outlet6":"",                           //main | exp1 | exp2
                "outlet7":"",                           //main | exp1 | exp2
                "outlet8":"",                           //main | exp1 | exp2
                "outlet9":"",                           //main | exp1 | exp2
                "outletA":"",                           //main | exp1 | exp2
                "outletB":"",                           //main | exp1 | exp2
                "outletC":"",                           //main | exp1 | exp2
                "outletD":"",                           //main | exp1 | exp2
                "outletE":""                            //main | exp1 | exp2
        }
}
```

5.9. Reboot

This JSON structure is used to reboot the iBoot-G2. It has the same effect pressing the reset button on the iBoot-G2.

```
{
        "token":"####-####-####-####",          //Authorization token
        "mac":"",                               //MAC address of the iBoot
        "reboot":"1"                            //1=reboot
}
```

6. iBoot-G2 Configuration Get

The Restful API Configuration get is a mechanism where users can request current device configuration data from iBCS.

The following is used to POST JSON structure that will retrieve current configuration of iBoot-G2 Device settings from iBCS. https://iboot.co/services/v4/configuration/iBoot/get

```
{
        "token":"",                         //Authorization token
        "mac":"",                           //MAC address of the iBoot to be retrieved
        "tables":["","",""]                 //one or multiple of the following
                                            //device, network, advancedNetwork, autoping, schedule
}
```

Upon posting the JSON structure above to iBCS, iBCS will return the current configuration for specified tables list. The response to the Restful API configuration get will be as follows: [sample data shown]

6.1. Device Configuration Get

```
{
        "success":"true",
        "device":{
                "location":"iBoot-G29ff0",
                "cycleTime":10,
                "disableOff":0,
                "initialState":"last",
                "upgradeEnable":0,
                "autoLogout":2
        }
}
```

6.2. Network Configuration Get

```
{
        "success":"true",
        "network":{
                "ipMode":"dhcp",
                "ipAddress":"192.168.1.254",
                "subnetMask":"255.255.255.0",
                "gateway":"192.168.1.1",
                "dns":"8.8.8.8"
        }
}
```

6.3. Advanced Network Configuration Get

```
{
        "success":"true",
        "advancedNetwork":{
                "httpPort":80,
                "linkbackUrl":"",
                "telnetPort":23,
                "dxpPort":9100,
                "cloudEnabled":1,
                "enableTimeServer":0,
                "timeServerAddress":"time.nist.gov",
                "timezone":-5,
                "enableDst":0,
                "dstStartWeek":"2nd",
                "dstStartDay":"sunday",
                "dstStartMonth":"march",
                "dstStartTime":"02:00",
                "dstStopWeek":"1st",
                "dstStopDay":"sunday",
                "dstStopMonth":"november",
                "dstStopTime":"02:00"
        }
}
```

6.4. Autoping Configuration Get

```
{
        "success":"true",
        "autoping":{
                "apAAddress":"mywebsite.com",
                "apBAddress":"",
                "apAFrequency":10,
                "apBFrequency":10,
                "apAFailCount":3,
                "apBFailCount":3,
                "apAMode":"single",
                "apAAction":"cycle",
                "apACycles":1,
                "apARestart":30
        }
}
```

6.5. Schedule Configuration Get

```
{
        "success":"true",
        "schedule":{
              "date1":"01/02/2024",
              "date2":"",
              "date3":"",
              "date4":"",
              "date5":"",
              "date6":"",
              "date7":"",
              "date8":"",
              "time1":"12:00",
              "time2":"",
              "time3":"",
              "time4":"",
              "time5":"",
              "time6":"",
              "time7":"",
              "time8":"",
              "repeat1":30,
              "repeat2":0,
              "repeat3":0,
              "repeat4":0,
              "repeat5":0,
              "repeat6":0,
              "repeat7":0,
              "repeat8":0,
              "repeatPeriod1":"minutes",
              "repeatPeriod2":"days",
              "repeatPeriod3":"days",
              "repeatPeriod4":"days",
              "repeatPeriod5":"days",
              "repeatPeriod6":"days",
              "repeatPeriod7":"days",
              "repeatPeriod8":"days",
              "action1":"cycle",
              "action2":"on",
              "action3":"on",
              "action4":"on",
              "action5":"on",
              "action6":"on",
              "action7":"on",
              "action8":"on",
              "enable1":1,
              "enable2":0,
              "enable3":0,
              "enable4":0,
              "enable5":0,
              "enable6":0,
              "enable7":0,
              "enable8":0
        }
}
```

7. iBoot-G2+/S Configuration Get

The Restful API Configuration get is a mechanism where users can request current device configuration data from iBCS.

The following is used to POST JSON structure that will retrieve current configuration of iBoot-G2+ and G2S Device settings from iBCS. https://iboot.co/services/v4/configuration/iBoot/get

```
{
        "token":"",                    //Authorization token
        "mac":"",                      //MAC address of the iBoot to be retrieved
        "tables":["","",""]            //one or multiple of the following
                                       //device, expansion, network, advancedNetwork,
}                                      //gracefulShutdown, autoping, heartbeat, schedule
```

Upon posting the JSON structure above to iBCS, iBCS will return the current configuration for specified tables list. The response to the Restful API configuration get will be as follows: [sample data shown]

7.1. Device Configuration Get

```
{
        "success":"true",
        "device":{
              "location":"iBoot-G2P-2171",
              "cycleTime":10,
              "initialState":"last",
              "upgradeEnable":0,
              "autoLogout":20,
              "exp1CycleTime":10,
              "exp2CycleTime":10,
              "delayTime":1,
              "exp1InitialState":"last",
              "exp2InitialState":"last",
              "outletName":"Main",
              "exp1OutletName":"Exp1",
              "exp2OutletName":"Exp2",
              "disableOff":0
        }
}
```

7.2. Expansion Configuration Get

```
{
        "success":"true",
        "expansion":{
              "expMode":"iboot expansion units",
              "exp1Hide":0,
              "exp2Hide":0,
              "exp1linkToMain":0,
              "exp2linkToMain":0,
              "exp1RemoteIp":"",
              "exp2RemoteIp":"",
              "exp1Relay":1,
              "exp2Relay":2,
              "exp1Username":"",
              "exp2Username":"",
              "exp1Password":"",
              "exp2Password":"",
              "input1Outlet":"main",
              "input2Outlet":"main",
              "input1Action":"on",
              "input2Action":"on"
        }
}
```

7.3. Network Configuration Get

```
{
        "success":"true",
        "network":{
              "ipMode":"dhcp",
              "ipAddress":"192.168.1.254",
              "subnetMask":"255.255.255.0",
              "gateway":"192.168.1.1",
              "dns":"8.8.8.8"
        }
}
```

7.4. Advanced Network Configuration Get

```
{
        "success":"",
        "advancedNetwork":{
              "httpPort":80,
              "linkbackUrl":"",
              "telnetPort":23,
              "dxpPort":9100,
              "cloudEnabled":1,
              "enableTimeServer":0,
              "timeServerAddress":"time.nist.gov",
              "timezone":-5,
              "enableDst":0,
              "dstStartWeek":"2nd",
              "dstStartDay":"sunday",
              "dstStartMonth":"march",
              "dstStartTime":"02:00",
              "dstStopWeek":"1st",
              "dstStopDay":"sunday",
              "dstStopMonth":"november",
              "dstStopTime":"02:00",
              "enableDxpControl":0,
              "enableDxpQuery":0
        }
}
```

7.5. Graceful Shutdown Configuration Get

```
{
        "success":"true",
        "gracefulShutdown":{
              "gsMainEnabled":0,
              "gsExp1Enabled":0,
              "gsExp2Enabled":0,
              "gsMainIp":"",
              "gsExp1Ip":"",
              "gsExp2Ip":"",
              "gsMainUser":"",
              "gsExp1User":"",
              "gsExp2User":"",
              "gsMainPassword":false,
              "gsExp1Password":false,
              "gsExp2Password":false,
              "gsMainShutdownDelay":120,
              "gsExp1ShutdownDelay":120,
              "gsExp2ShutdownDelay":120,
              "gsMainRebootDelay":120,
              "gsExp1RebootDelay":120,
              "gsExp2RebootDelay":120
        }
}
```

7.6. Autoping Configuration Get

```
{
        "success":"true",
        "autoping":{
              "apAAddress":"",
              "apBAddress":"",
              "apAFrequency":10,
              "apBFrequency":10,
              "apAFailCount":3,
              "apBFailCount":3,
              "apAMode":"single",
              "apAControl":"main",
              "apAAction":"none",
              "apACycles":0,
              "apARestart":0,
              "ap2Address":"",
              "ap3Address":"",
              "ap2Frequency":10,
              "ap3Frequency":10,
              "ap2FailCount":3,
              "ap3FailCount":3,
              "ap2Control":"exp1",
              "ap3Control":"exp2",
              "ap2Action":"none",
              "ap3Action":"none",
              "ap2Cycles":1,
              "ap3Cycles":1,
              "ap2Restart":0,
              "ap3Restart":0
        }
}
```

7.7. Heartbeat Configuration Get

```
{
        "success":"true",
        "heartbeat":{
              "source":"none",
              "port":9100,
              "frequency":10,
              "failCount":3,
              "action":"none",
              "cycle":1,
              "control":"main"
        }
}
```

7.8. Schedule Configuration Get

```
{
        "success":"true",
        "schedule":{
              "date1":"01/02/2024",
              "date2":"",
              "date3":"",
              "date4":"",
              "date5":"",
              "date6":"",
              "date7":"",
              "date8":"",
              "time1":"12:00",
              "time2":"",
              "time3":"",
              "time4":"",
              "time5":"",
              "time6":"",
              "time7":"",
              "time8":"",
              "repeat1":30,
              "repeat2":0,
              "repeat3":0,
              "repeat4":0,
              "repeat5":0,
              "repeat6":0,
              "repeat7":0,
              "repeat8":0,
              "repeatPeriod1":"minutes",
              "repeatPeriod2":"days",
              "repeatPeriod3":"days",
              "repeatPeriod4":"days",
              "repeatPeriod5":"days",
              "repeatPeriod6":"days",
              "repeatPeriod7":"days",
              "repeatPeriod8":"days",
              "action1":"cycle",
              "action2":"on",
              "action3":"on",
              "action4":"on",
              "action5":"on",
              "action6":"on",
              "action7":"on",
              "action8":"on",
              "enable1":1,
              "enable2":1,
              "enable3":1,
              "enable4":1,
              "enable5":1,
              "enable6":1,
              "enable7":1,
              "enable8":1,
              "date9":"",
              "dateA":"",
              "dateB":"",
              "dateC":"",
              "dateD":"",
              "dateE":"",
              "time9":"",
              "timeA":"",
              "timeB":"",
              "timeC":"",
              "timeD":"",
              "timeE":"",
              "repeat9":0,
              "repeatA":0,
              "repeatB":0,
              "repeatC":0,
              "repeatD":0,
              "repeatE":0,
              "repeatPeriod9":"days",
              "repeatPeriodA":"days",
              "repeatPeriodB":"days",
              "repeatPeriodC":"days",
              "repeatPeriodD":"days",
              "repeatPeriodE":"days",
              "action9":"on",
              "actionA":"on",
              "actionB":"on",
              "actionC":"on",
              "actionD":"on",
              "actionE":"on",
              "enable9":1,
              "enableA":1,
              "enableB":1,
              "enableC":1,
              "enableD":1,
              "enableE":1,
              "outlet1":"main",
              "outlet2":"main",
              "outlet3":"main",
              "outlet4":"main",
              "outlet5":"main",
              "outlet6":"main",
              "outlet7":"main",
              "outlet8":"main",
              "outlet9":"main",
              "outletA":"main",
              "outletB":"main",
              "outletC":"main",
              "outletD":"main",
              "outletE":"main"
        }
}
```

8. iBoot-PDU Configuration Set

8.1. Device Configuration Set

The following is used to POST JSON structure that will send iBoot-PDU CLI set commands to the iBoot-PDU to program the settings in the iBoot-PDU that the CLI would.
https://iboot.co/services/v4/configuration/pdu/set

- Command:

```
{
        "token":"####-####-####-####",          //Authorization token
        "mac":"00-0d-ad-01-02-03",              //MAC address of PDU to be configured
        "commands":["cmd-1","cmd-2"]            //Array of set commands to be sent
}
```

- Response:

```
{
        "success":"",                           //true or false
        "message":""                            //error response from iBoot-PDU
}
```

iBoot-PDU Device Configuration set quick example:

```
        "commands":" ["set device name Chicago-Building","set outlet 1 name Server-One"]
```

8.2. Device Configuration Get

The following is used to POST JSON structure that will send iBoot-PDU CLI get commands to the iBoot-PDU to retrieve the settings from the iBoot-PDU that the CLI would.
https://iboot.co/services/v4/configuration/pdu/get

- Command:

```
{
        "token":"####-####-####-####",          //Authorization token
        "mac":"00-0d-ad-01-02-03",              //MAC address of PDU to be queried
        "command":"cmd-1"                       //The get command to be sent
}
```

- Response:

```
{
        "success":"",                           //true or false
        "message":""                            //response from iBoot-PDU
}
```

iBoot-PDU Device Configuration get quick example:

```
        Send: "command":" "get device"

        Response: "message":"get device\n\nDevice Information:\n\nFirmware Version:
v1.44.08042023\nDevice Model:         iBoot-PDU8-N15\nDevice Name:          Chicago-
Building\nTemperature Unit:     Fahrenheit\nCountry Code:         181\nTimezone:
America/New_York\nUse Simple Passwords: False\n\nOk"
```

9. Examples

Below are some examples of iBoot-G2 family control, retrieve, configure get and configure set via Restful API v4.

9.1. Retrieve Token

To retrieve a valid token from the iBCS via the API for use with all subsequent API commands.
The username and password are for the iBoot.co account. Sample will retrieve a token valid for 20 minutes of inactivity using account name MyDemoUser and password Password123. [as per section 3.1]

```
curl -d '{"username":"MyDemoUser","password":"Password123","timeout":{"interval":"20","scale":"minutes"}}' -X
POST https://iboot.co/services/v4/auth
```

The command above will return a JSON structure as following:

```
{"success":"true","token":"e3ec-e4f6-910f-ac38"}
```

9.2. iBoot-G2/PoE Control Example

To control an iBoot-G2/PoE to Cycle via RestFul API: [as per section 3.2]

```
curl -d '{"token":"####-####-####-####","mac":"00-0d-ad-01-02-03","outlet":"0","control":"cycle"}' -X POST
https://iboot.co/services/v4/control
```

The command above will return a JSON structure as following:

```
{"success":"true","message":"Sent 'cycle' to 00-0d-ad-01-02-03 outlets (0)"}
```

9.3. iBoot Retrieve All Example

To query status of all devices in the account via RestFul API: [as per Retrieve All section 3.3]

```
curl -d '{"token":"####-####-####-####","all":[""]}' -X POST https://iboot.co/services/v4/retrieve
```

The command above will return a JSON structure based on all units In account similar to following:

```
{"success":"true","message":null,"devices":[{"mac":"00-0d-ad-01-02-03","name":"iBoot-G2-010203",
"online":true,"location":"on Desk","lastContact":"2023-04-17 18:04:54",
"ip":"192.168.1.205","status":{"Main":"ON","AP-1":"Inactive","AP-2":"Inactive"},"triggerInfo":{"APT1":"0"},
{"mac":"00-0d-ad-0a-0b-0c","name":"iBoot-G2-0a0b0c","online":false,"location":"at Home","lastContact":"2023-01-12
10:02:32", "ip":"192.168.1.205","status":{"Main":"ON","AP-1":"Inactive","AP-2":"Inactive"},
"triggerInfo":{"APT1":"0"}}]}
```

9.4. iBoot-G2 Retrieve Specific Example

To query an iBoot-G2/PoE status via RestFul API: [as per Retrieve Specific section 3.3]

```
curl -d '{"token":"####-####-####-####","mac":"00-0d-ad-01-02-03"}' -X POST https://iboot.co/services/v4/retrieve
```

The command above will return a JSON structure as following:

```
{"success":"true","message":null,"devices":[{"mac":"00-0d-ad-01-02-03","name":"iBoot-G2-
010203","online":true,"location":"on Desk","lastContact":"2023-04-14 18:04:54",
"ip":"192.168.1.254","status":{"Main":"ON","AP-1":"Inactive","AP-2":"Inactive"},"triggerInfo":{"APT1":"0"}}]}
```

9.5. iBoot-PDU Retrieve Shareable Manage Link

The iBoot-PDU series allows a Manage button from within the iBCS interface. The API will allow retrieval of an identical functioning link that can be shared. The link will expire after 30 minutes if not used and will expire after 30 minutes of inactivity if it is used. [as per section 3.4]

```
curl -d '{"token":"####-####-####-####","mac":"a8-e7-7d-01-02-03"}' -X POST https://iboot.co/services/v4/manage_link
```

The command above will return a JSON structure as following:

```
{"success":"true","message":"https://########.device.iboot.co"}
```

9.6. iBoot-G2 Configure Set Example

To Configure Device setting of an iBoot-G2: This sample sends to a specific iBoot by its mac address
[as per section 3.5]

```
curl -d "{"token":"####-####-####-####","mac":"00-0d-ad-01-02-03","device":{"location":"iBoot-G2-010203",
"cycleTime":"10","disableOff":"0","initialState":"last","upgradeEnable":"0","autoLogout":"60"}}" -X POST
https://iboot.co/services/v4/configuration/iBoot/set
```

The command above will return a JSON structure as following:

```
{"success":"true","message":{"0":"Sent 'location=iBoot-G2-010203&cycle=10&iMain=2&aLog=60' to device Old-G2 name
(00-0d-ad-01-02-03)"}}
```

9.7. iBoot-G2 Configure Get Example

To Retrieve Device configuration of iBoot-G2 via Restful API: This sample requests the device and network settings of a specific iBoot-G2. [as per section 3.6]

```
curl -d '{"token":"####-####-####-####","mac":"00-0d-ad-01-02-03","tables":["device",”network”]}' –X POST
https://iboot.co/services/v4/configuration/iBoot/get
```

The command above will return a JSON structure as following:

```
{"success":"true","device":{"location":"iBoot-G2-
010203","cycleTime":10,"disableOff":0,"initialState":"last","upgradeEnable":0,"autoLogout":60},"network":{"ipMode":"
static","ipAddress":"192.168.1.254","subnetMask":"255.255.255.0","gateway":"192.168.1.1","dns":"192.168.1.1"}}
```

9.8. iBoot-G2+/S Control Example

To control an iBoot-G2+/S to Cycle all 3 outlets via RestFul API: [as per section 3.2]

```
curl -d '{"token":"####-####-####-####","mac":"00-0d-ad-01-02-03","outlet":[“0”,”1”,”2”],"control":"cycle"}' -X POST
https://iboot.co/services/v4/control
```

The command above will return a JSON structure as following:

```
{"success":"true","message":"Sent 'cycle' to 00-0d-ad-01-02-03 outlets (0, 1, 2)"}
```

9.9. iBoot-G2+/S Retrieve Specific Example

To query an iBoot-G2+ or iBoot-G2S status via RestFul API: [as per Retrieve Specific section 3.3]

```
curl -d '{"token":"####-####-####-####","mac":"00-0d-ad-01-02-03"}' -X POST https://iboot.co/services/v4/retrieve
```

The command above will return a JSON structure as following:

```
{"success":"true","message":null,"devices":[{"mac":"00-0d-ad-01-02-03","name":"iBoot-G2S-010203",
"online":true,"location":"at Home","lastContact":"2023-04-15 20:35:04",
"ip":"192.168.1.208","status":{"Main":"ON","EXP-1":"ON","EXP-2":"ON","Main-2":"ON","Input-1":"Open","Input-
2":"Open","Output-1":"Closed","Output-2":"Closed","AP-1A":"Inactive","AP-1B":"Inactive","AP-2":"Inactive","AP-
3":"Inactive","HB":"Inactive"},"triggerInfo":{"APT1":"0","APT2":"0","APT3":"0","HBT1":"0"}}]}
```

9.10. iBoot-G2+/S Configure Set Example

To Configure Schedule setting of iBoot-G2+ or iBoot-G2S via Restful API: Sample sets a specific iBoot-G2S unit, event 1 as 4/24/2023 to cycle Main at 10:05, repeating Daily. [as per section 5.8]

```
curl -d "{"token":"####-####-####-####","mac":"00-0d-ad-01-02-03",
"schedule":{"date1":"04/24/2023","time1":"10:05","repeat1":"1","repeatPeriod1":"days","action1":"cycle","outlet1":"
Main","enable1":"1"}}" -X POST https://iboot.co/services/v4/configuration/iBoot/set
```

The command above will return a JSON structure as following:

Even though setting only 1 event all events are part of the reply.

```
{"success":"true","message":{"0":"Sent
'date1=04/24/2023&time1=10:05&rt1=1&rep1=0&act1=2&ctl1=0&run1=&date2=&date3=&date4=&date5=&date6=&dat
e7=&date8=&time2=&time3=&time4=&time5=&time6=&time7=&time8=&rt2=0&rt3=0&rt4=0&rt5=0&rt6=0&rt7=0&rt8=
0&rep2=0&rep3=0&rep4=0&rep5=0&rep6=0&rep7=0&rep8=0&act2=0&act3=0&act4=0&act5=0&act6=0&act7=0&act8=0
&run2=&run3=&run4=&run5=&run6=&run7=&run8=&date9=&dateA=&dateB=&dateC=&dateD=&dateE=&time9=&time
A=&timeB=&timeC=&timeD=&timeE=&rt9=0&rtA=0&rtB=0&rtC=0&rtD=0&rtE=0&rep9=0&repA=0&repB=0&repC=0&rep
D=0&repE=0&act9=0&actA=0&actB=0&actC=0&actD=0&actE=0&run9=&runA=&runB=&runC=&runD=&runE=&ctl2=0&ctl
3=0&ctl4=0&ctl5=0&ctl6=0&ctl7=0&ctl8=0&ctl9=0&ctlA=0&ctlB=0&ctlC=0&ctlD=0&ctlE=0&clr2=Clear&clr3=Clear&clr4=C
lear&clr5=Clear&clr6=Clear&clr7=Clear&clr8=Clear&clr9=Clear&clrA=Clear&clrB=Clear&clrC=Clear&clrD=Clear&clrE=Clear
' to device iBoot-G2S-010203 (00-0d-ad-01-02-03)"}}
```

9.11. iBoot-PDU Control Example

To control all outlets of the iBoot-PDU via RestFul API: [as per section 3.2]

```
curl -d '{"token":"####-####-####-####","mac":"a8-e7-7d-01-02-03","outlet":["0","1","2","3","4","5","6","7"],
"control":"cycle"}' -X POST https://iboot.co/services/v4/control
```

The command above will return a JSON structure as following:

```
{"success":"true","message":"Sent 'cycle' to a8-e7-7d-01-02-03 outlets (0, 1, 2,3,4,5,6,7)"}
```

9.12. iBoot G2 series Reboot Example

To force reboot of the iBoot (G2, PoE, G2S or G2+) via RestFul API: [as per section 4.6 and 5.9]

```
curl -d '{"token":"####-####-####-####","mac":"00-0d-ad-01-02-03","reboot":"1"}' -X POST
https://iboot.co/services/v4/control
```

The command above will return a JSON structure as following:

```
{"success":"true","message":"Sent 'reboot=' to 00-0d-ad-01-02-03"}
```

9.13. iBoot-PDU Retrieve Specific Example

To query an iBoot-PDU status via RestFul API: [as per Retrieve Specific section 3.3]

```
curl -d '{"token":"####-####-####-####","mac":"a8-e7-7d-01-02-03"}' -X POST https://iboot.co/services/v4/retrieve
```

The command above will return a JSON structure as following:

```
{"success":"true","message":null,"devices":[{"mac":"a8-e7-7d-01-02-03",
"name":"MainControlUnit","online":true,"location":"at Home","lastContact":"2023-04-15
09:47:17","ip":"0.0.0.0","status":[{"Server":"On"},{"Router":"On"},{"Outlet-3":"On"},{"Outlet-4":"On"},{"Outlet-
5":"On"},{"Outlet-6":"On"},{"Outlet-7":"Off"},{"Outlet-8":"Off"}],"triggerInfo":[]}]}
```

9.14. iBoot-PDU v4 set command Example

The following sample will add and configure a sequence named Wall to Schedule outlet 4 to go off, wait 10 seconds then turn outlet 4 back on and then create an autoping to ping google.com every 30 seconds with failure count of 4 and a restart time of 60 seconds. The autoping will run the sequence Wall when it fails. Please note the 25 commands are a repeat of what it would take to program the same sequence and autoping using the CLI if connected to the unit CLI interface.

```
curl -d "{"token":"####-####-####-####","mac":"00-0d-ad-01-02-03", "commands":[ "add sequence Wall","add sequence
Wall action","add sequence Wall action","add sequence Wall action","set sequence Wall action 1 type outlet","set sequence
Wall action 1 param1 localhost","set sequence Wall action 1 param2 4","set sequence Wall action 1 param3 OFF","set
sequence Wall action 2 type delay","set sequence Wall action 2 param1 10","set sequence Wall action 3 type outlet","set
sequence Wall action 3 param1 localhost","set sequence Wall action 3 param2 4","set sequence Wall action 3 param3
ON","set sequence Wall enabled true","set user admin sequence Wall yes","add autoping Wall","set autoping Wall address
google.com","set autoping Wall period 30","set autoping Wall count 4","set autoping Wall timeout 2","set autoping Wall
restartdelay 60","set autoping Wall failtriggersequence Wall","set autoping Wall cleartriggersequence none","set autoping
Wall enabled true"]}" -X POST https://iboot.co/services/v4/configuration/pdu/set
```

The command above will return a JSON structure as following:

```
{"success":"true","message":"add sequence Wall\n\nOk\nadd sequence Wall action\n\nOk\nadd sequence Wall
action\n\nOk\nadd sequence Wall action\n\nOk\nset sequence Wall action 1 type outlet\n\nOk\nset sequence Wall
action 1 param1 localhost\n\nOk\nset sequence Wall action 1 param2 4\n\nOk\nset sequence Wall action 1 param3
OFF\n\nOk\nset sequence Wall action 2 type delay\n\nOk\nset sequence Wall action 2 param1 10\n\nOk\nset sequence
Wall action 3 type outlet\n\nOk\nset sequence Wall action 3 param1 localhost\n\nOk\nset sequence Wall action 3 param2
4\n\nOk\nset sequence Wall action 3 param3 ON\n\nOk\nset sequence Wall enabled true\n\nOk\nset user admin
sequence Wall yes\n\nOk\nadd autoping Wall\n\nOk\nset autoping Wall address google.com\n\nOk\nset autoping Wall
period 30\n\nOk\nset autoping Wall count 4\n\nOk\nset autoping Wall timeout 2\n\nOk\nset autoping Wall restartdelay
60\n\nOk\nset autoping Wall failtriggersequence Wall\n\nOk\nset autoping Wall cleartriggersequence none\n\nOk\nset
autoping Wall enabled true\n\nOk"}
```