新中控业务层通讯协议

VERSION 1.0.1

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修改记录

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| --- | --- | --- | --- |
| 日期 | 版本 | 修改人 | 修改记录 |
| 2020-09-03 | ver1.0.0 | 陈伟灿 | 1. 添加业务层协议 |
| 2020-09-18 | Ver1.0.1 | 陈伟灿 | 1. 添加删除子设备协议内容 |

# 一、概述

本协议主要用于中控Application层与Middware层之间的通讯，数据格式基于json。本协议需要结合控客物模型使用。

**通讯方向说明：** A->M:表示Application发送信息给Middware

M->A:表示Middware发送信息到Application

数据通讯格式为json，分为info和payload两部分,info中字段固定，payload内容参考物模型和下文详细说明。

{

"info":{

"msgtype":{value},

"productCode":{value},

"deviceCode":{value},

},

"payload":{}

}

# 二、详细协议说明

## （一）属性上报

**M->A:**

{

"info":{

"msgtype":"/thing/event/property/post", //消息类型

"productCode":"85", //子设备的产品ID

"deviceCode":"588E81FFFED0E44C", //子设备的deviceCode，必须唯一

},

"payload":{

"msgId":"\*\*\*\*\*\*\*",

"version":"1.0",

"params":{

"PowerSwitch":1

},

"time":1524448722000,

"method":"thing.event.property.post"

}

}

**A->M:**

{

"info":{

"msgtype":"/thing/event/property/post\_reply", //消息类型

"productCode":"85", //子设备的产品ID

"deviceCode":"588E81FFFED0E44C", //子设备的deviceCode，必须唯一

},

"payload":{

"msgId":"\*\*\*\*\*\*\*",

"code":200,

"data":{}

}

}

## （二）属性设置

**A->M:**

{

"info":{

"msgtype":"/thing/service/property/set", //消息类型

"productCode":"85", //子设备的产品ID

"deviceCode":"588E81FFFED0E44C", //子设备的deviceCode，必须唯一

},

"payload":{

"msgId":"\*\*\*\*\*\*\*",

"version":"1.0",

"params":{

"PowerSwitch":1

},

"method":"thing.service.property.set"

}

}

M**->A:**

{

"info":{

"msgtype":"/thing/service/property/set\_reply", //消息类型

"productCode":"85", //子设备的产品ID

"deviceCode":"588E81FFFED0E44C", //子设备deviceCode,必须唯一

},

"payload":{

"msgId":"\*\*\*\*\*\*\*",

"code":200,

"data":{}

}

}

## （三）事件上报

**M->A:**

{

"info":{

"msgtype":"/thing/event/{tsl.event.identifier}/post", //消息类型

"productCode":"85", //子设备的产品ID

"deviceCode":"588E81FFFED0E44C", //子设备的deviceCode，必须唯一

},

"payload":{

"msgId":"\*\*\*\*\*\*\*",

"version":"1.0",

"params":{

"PowerSwitch":1

},

"method":"thing.event.{tsl.event.identifier}.post"

}

}

A**->M:**

{

"info":{

"msgtype":"/thing/event/{tsl.event.identifier}/post\_reply", //消息类型

"productCode":"85", //子设备的产品ID

"deviceCode":"588E81FFFED0E44C", //子设备deviceCode,必须唯一

},

"payload":{

"msgId":"\*\*\*\*\*\*\*",

"code":200,

"data":{}

}

}

## （四）服务调用

**A->M:**

{

"info":{

"msgtype":"/thing/service/{tsl.service.identifier}", //消息类型

"productCode":"85", //子设备的产品ID

"deviceCode":"588E81FFFED0E44C", //子设备的deviceCode，必须唯一

},

"payload":{

"msgId":"\*\*\*\*\*\*\*",

"version":"1.0",

"params":{

"PowerSwitch":1

},

"method":"thing.service.{tsl.service.identifier}"

}

}

M**->A:**

{

"info":{

"msgtype":"/thing/service/{tsl.service.identifier}\_reply", //消息类型

"productCode":"85", //子设备的产品ID

"deviceCode":"588E81FFFED0E44C", //子设备deviceCode,必须唯一

},

"payload":{

"msgId":"\*\*\*\*\*\*\*",

"code":200,

"data":{}

}

}

## （五）设备拓扑关系

### 1.添加子设备

**M->A:**

{

"info":{

"msgtype":"/thing/topo/add", //消息类型

"productCode":"2", //网关设备的产品ID

"deviceCode":"14B457FFFE342263", //网关设备的deviceCode,必须唯一

},

"payload":{

"msgId":"\*\*\*\*\*\*\*",

"version":"1.0",

"params":{

"deviceCode":"588E81FFFED0E44C", //子设备deviceCode,必须唯一

"productCode":"85", //子设备产品ID

"mac":"588E81FFFED0E44C", //子设备mac

},

"time":1524448722000,

"method":"thing.topo.add"

}

}

**A->M:**

{

"info":{

"msgtype":"/thing/topo/add\_reply", //消息类型

"productCode":"2", //网关设备的产品ID

"deviceCode":"14B457FFFE342263", //网关设备deviceCode,必须唯一

},

"payload":{

"msgId":"\*\*\*\*\*\*\*",

"code":200,

"data":{}

}

}

### 2.删除子设备上报

**M->A:**

{

"info":{

"msgtype":"/thing/topo/delete", //消息类型

"productCode":"2", //网关设备的产品ID

"deviceCode":"14B457FFFE342263", //网关设备的deviceCode,必须唯一

},

"payload":{

"msgId":"\*\*\*\*\*\*\*",

"version":"1.0",

"params":{

"deviceCode":"588E81FFFED0E44C", //子设备deviceCode,必须唯一

"productCode":"85", //子设备产品ID

},

"time":1524448722000,

"method":"thing.topo.delete"

}

}

**A->M:**

{

"info":{

"msgtype":"/thing/topo/delete\_reply", //消息类型

"productCode":"2", //网关设备的产品ID

"deviceCode":"14B457FFFE342263", //网关设备deviceCode,必须唯一

},

"payload":{

"msgId":"\*\*\*\*\*\*\*",

"code":200,

"data":{}

}

}

### 3.子设备下线

**M->A:**

{

"info":{

"msgtype":"/thing/status/offline", //消息类型

"productCode":"2", //网关设备的产品ID

"deviceCode":"14B457FFFE342263", //网关设备的deviceCode,必须唯一

},

"payload":{

"msgId":"\*\*\*\*\*\*\*",

"version":"1.0",

"params":{

"deviceCode":"588E81FFFED0E44C", //子设备deviceCode,必须唯一

},

"time":1524448722000,

"method":"thing.topo.offline"

}

}

**A->M:**

{

"info":{

"msgtype":"/thing/status/offline\_reply", //消息类型

"productCode":"2", //网关设备的产品ID

"deviceCode":"14B457FFFE342263", //网关设备deviceCode,必须唯一

},

"payload":{

"msgId":"\*\*\*\*\*\*\*",

"code":200,

"data":{}

}

}

### 4.子设备上线

**M->A:**

{

"info":{

"msgtype":"/thing/status/online", //消息类型

"productCode":"2", //网关设备的产品ID

"deviceCode":"14B457FFFE342263", //网关设备的deviceCode,必须唯一

},

"payload":{

"msgId":"\*\*\*\*\*\*\*",

"version":"1.0",

"params":{

"deviceCode":"588E81FFFED0E44C", //子设备deviceCode,必须唯一

},

"time":1524448722000,

"method":"thing.topo.online"

}

}

**A->M:**

{

"info":{

"msgtype":"/thing/status/online\_reply", //消息类型

"productCode":"2", //网关设备的产品ID

"deviceCode":"14B457FFFE342263", //网关设备deviceCode,必须唯一

},

"payload":{

"msgId":"\*\*\*\*\*\*\*",

"code":200,

"data":{}

}

}

### 5.获取设备拓扑关系

**A->M:**

{

"info":{

"msgtype":"/thing/topo/get", //消息类型

"productCode":"2", //网关设备的产品ID

"deviceCode":"14B457FFFE342263", //网关设备的deviceCode,必须唯一

},

"payload":{

"msgId":"\*\*\*\*\*\*\*",

"version":"1.0",

"params":{},

"time":1524448722000,

"method":"thing.topo.get"

}

}

**M->A:**

{

"info":{

"msgtype":"/thing/topo/get\_reply", //消息类型

"productCode":"2", //网关设备的产品ID

"deviceCode":"14B457FFFE342263", //网关设备deviceCode,必须唯一

},

"payload":{

"msgId":"\*\*\*\*\*\*\*",

"code":200,

"data":{

"device":[

{

"deviceCode":"588E81FFFED0E44C", //子设备deviceCode

"productCode":"85", //子设备productCode

"mac":"588E81FFFED0E44C", //子设备mac

}]

}

}

}

### 6.子设备注册

**M->A:**

{

"info":{

"msgtype":"/thing/sub/register", //消息类型

"productCode":"2", //网关设备的产品ID

"deviceCode":"14B457FFFE342263", //网关设备的deviceCode,必须唯一

},

"payload":{

"msgId":"\*\*\*\*\*\*\*",

"version":"1.0",

"params":{

"device":[

{

"deviceCode":"588E81FFFED0E44C", //子设备deviceCode,必须唯一

"productCode":"85", //子设备产品ID

"mac":"588E81FFFED0E44C", //子设备mac

"gatewayMac":"14B457FFFE342263", //网关设备mac

}]

},

"time":1524448722000,

"method":"thing.sub.register"

}

}

**A->M:**

{

"info":{

"msgtype":"/thing/sub/register\_reply", //消息类型

"productCode":"2", //网关设备的产品ID

"deviceCode":"14B457FFFE342263", //网关设备deviceCode,必须唯一

},

"payload":{

"msgId":"\*\*\*\*\*\*\*",

"code":200,

"data":{}

}

}

### 7.删除子设备

**A->M**

{

"info":{

"msgtype":"/thing/topo/change", //消息类型

"productCode":"2", //网关设备的产品ID

"deviceCode":"14B457FFFE342263", //网关设备的deviceCode,必须唯一

},

"payload":{

"msgId":"\*\*\*\*\*\*\*",

"version":"1.0",

"params":{

"changeType": 1 //1 代表删除设备

"device":[

{

"deviceCode":"588E81FFFED0E44C", //子设备deviceCode,必须唯一

"productCode":"85", //子设备产品ID

}]

},

"time":1524448722000,

"method":"thing.topo.change"

}

}

## （六）设备OTA(内容待讨论)

## （七）物模型更新(内容待讨论)

## 私有协议（没有定义在物模型中）

### 1.主机连云状态查询

**M->A:**

{

"info":{

"msgtype":"/thing/ccu/cloudstate", //消息类型

"productCode":"15", //主机的产品ID

"deviceCode":"14B457FFFE342263", //主机的deviceCode

},

"payload":{

"msgId":"\*\*\*\*\*\*\*",

"version":"1.0",

"params":{

"deviceCode":"14B457FFFE342263", //主机的deviceCode

},

"time":1524448722000,

"method":"thing.ccu.cloudstate"

}

}

**A->M:**

{

"info":{

"msgtype":"/thing/ccu/cloudstate\_reply", //消息类型

"productCode":"15", //主机的产品ID

"deviceCode":"14B457FFFE342263", //主机deviceCod

},

"payload":{

"msgId":"\*\*\*\*\*\*\*",

"version":"1.0",

"params":{

"IOTCloudState":"1", //1：连上云;2:未连上

},

}

}

## 附A 支持的设备name表

## 附B 固件升级地址

## 附C 配置文件地址