物模型

|  |  |  |  |
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| 拟制 |  | 日期 |  |
| 评审人 |  | 日期 |  |
| 批准 |  | 日期 |  |

杭州控客信息技术有限公司

修改记录

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| 文件编号 | 版本号 | 拟制人/  修改人 | 拟制日期/  修改日期 | 更改理由 | 主要更改内容  （写要点即可） |
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# 1 与设备交互Topic及协议

## 1.1 物模型topic

### 1.1.1属性上报

**设备侧发布topic：**

/sys/kk/{productCode}/{deviceCode}/thing/event/property/post

|  |
| --- |
| {  "msgId":"\*\*\*\*\*\*\*",  "version":"1.0",  "params":{  "PowerSwitch":1  },  "time":1524448722000,  "method":"thing.event.property.post"  } |

**设备侧订阅topic：**

/sys/kk/{productCode}/{deviceCode}/thing/event/property/post\_reply

|  |
| --- |
| {  "msgId":"\*\*\*\*\*\*\*",  "code":200,  "data":{}  } |

### 1.1.2属性设置

**设备侧订阅topic：**

/sys/kk/{productCode}/{deviceCode}/thing/service/property/set

|  |
| --- |
| {  "msgId":"\*\*\*\*\*\*\*",  "version":"1.0",  "params":{  "PowerSwitch":1  },  "method":"thing.service.property.set"  } |

**设备侧发布topic：**

/sys/kk/{productCode}/{deviceCode}/thing/service/property/set\_reply

|  |
| --- |
| {  "msgId":"\*\*\*\*\*\*\*",  "code":200,  "data":{}  } |

### 1.1.3 服务调用

**设备侧订阅topic：**

/sys/kk/{productCode}/{deviceCode}/thing/service/{tsl.service.identifier}

|  |
| --- |
| {  "msgId":"\*\*\*\*\*\*\*",  "version":"1.0",  "params":{  "PowerSwitch":1  },  "method":"thing.service. {tsl.service.identifier}"  } |

**设备侧发布topic：**

/sys/kk/{productCode}/{deviceCode}/thing/service/{tsl.service.identifier}\_reply

|  |
| --- |
| {  "msgId":"\*\*\*\*\*\*\*",  "code":200,  "data":{}  } |

### 1.1.4 事件上报

**设备侧发布topic：**

/sys/kk/{productCode}/{deviceCode}/thing/event/{tsl.event.identifier}/post

|  |
| --- |
| {  "msgId":"\*\*\*\*\*\*\*",  "version":"1.0",  "params":{  "PowerSwitch":1  },  "time":1524448722000,  "method":"thing.event.{tsl.event.identifier}.post "  } |

**设备侧订阅topic：**

/sys/kk/{productCode}/{deviceCode}/thing/event/{tsl.event.identifier}/post\_reply

|  |
| --- |
| {  "msgId":"\*\*\*\*\*\*\*",  "code":200,  "data":{}  } |

## 1.2 设备拓扑关系topic

Topic：为主机设备

### 1.2.1 添加子设备

**设备侧发布topic：**

/sys/kk/{productCode}/{deviceCode}/thing/topo/add

|  |
| --- |
| {  "msgId":"\*\*\*\*\*\*\*",  "version":"1.0",  "params":{  "deviceCode":"1023",  "productCode":"light",  "mac":"0E:FD:12:5C: 00:12:4B "  },  "method":"thing.topo.add"  } |

**设备侧订阅topic：**

/sys/kk/{productCode}/{deviceCode}/thing/topo/add\_reply

|  |
| --- |
| {  "msgId":"\*\*\*\*\*\*\*",  "code":200,  "data":{}  } |

### 1.2.2 删除子设备

**设备侧发布topic：**

/sys/kk/{productCode}/{deviceCode}/thing/topo/delete

|  |
| --- |
| {  "msgId":"\*\*\*\*\*\*\*",  "version":"1.0",  "params":{  "deviceCode":"1023",  "productCode":"light"  },  "method":"thing.topo.delete"  } |

**设备侧订阅topic：**

/sys/kk/{productCode}/{deviceCode}/thing/topo/delete\_reply

|  |
| --- |
| {  "msgId":"\*\*\*\*\*\*\*",  "code":200,  "data":{}  } |

### 1.2.3 获取设备拓扑关系

**设备侧订阅topic：**

/sys/kk/{productCode}/{deviceCode}/thing/topo/get

|  |
| --- |
| {  "msgId":"\*\*\*\*\*\*\*",  "version":"1.0",  "params":{},  "method":"thing.topo.get "  } |

**设备侧发布topic：**

/sys/kk/{productCode}/{deviceCode}/thing/topo/get\_reply

|  |
| --- |
| {  "msgId":"\*\*\*\*\*\*\*",  "code":200,  "data":{  "devices":[  {  "deviceCode":"1023",  "productCode":"light",  "mac":"0E:FD:12:5C: 00:12:4B "  }]  }  } |

### 1.2.4 发现设备列表上报

**设备侧发布topic：**

/sys/kk/{productCode}/{deviceCode}/thing/topo/found

|  |
| --- |
| {  "msgId":"",  "version":"1.0",  "params":{  "devices":[  {  "deviceCode":"",  "productCode":"",  "mac":""  }]  },  "method":"thing.topo.found"  } |

**设备侧订阅topic：**

/sys/kk/{productCode}/{deviceCode}/thing/topo/found\_reply

|  |
| --- |
| {  "msgId":"\*\*\*\*\*\*\*",  "code":200,  "data":{}  } |

### 1.2.5 通知设备topo关系改变

**设备侧订阅topic：**

/sys/kk/{productCode}/{deviceCode}/thing/topo/change

|  |
| --- |
| {  "msgId":"",  "version":"1.0",  "params":{  "changeType": 1  "devices":[  {  "deviceCode":"",  "productCode":""  }]  },  "method":"thing.topo.change"  } |

**设备侧发布topic：**

/sys/kk/{productCode}/{deviceCode}/thing/topo/change\_reply

|  |
| --- |
| {  "msgId":"\*\*\*\*\*\*\*",  "code":200,  "data":{}  } |

### 1.2.6 批量添加子设备

**设备侧发布topic：**

/sys/kk/{productCode}/{deviceCode}/thing/topo/batch\_add

|  |
| --- |
| {  "msgId":"\*\*\*\*\*\*\*",  "version":"1.0",  "params":{  "devices":[  {  "deviceCode":"设备唯一标识",  "productCode":"light"，  "mac":"0E:FD:12:5C: 00:12:4B ",  "parentCode":""  }]  },  "method":"thing.topo.batchAdd"  } |

**设备侧订阅topic：**

/sys/kk/{productCode}/{deviceCode}/thing/topo/batch\_add\_reply

|  |
| --- |
| {  "msgId":"\*\*\*\*\*\*\*",  "code":200,  "data":{}  } |

### 1.2.7 批量删除子设备

**设备侧发布topic：**

/sys/kk/{productCode}/{deviceCode}/thing/topo/batch\_delete

|  |
| --- |
| {  "msgId":"\*\*\*\*\*\*\*",  "version":"1.0",  "params":{  "devices":[  {  "deviceCode":"设备唯一标识",  "productCode":"light"  }]  },  "method":"thing.topo. batchDelete "  } |

**设备侧订阅topic：**

/sys/kk/{productCode}/{deviceCode}/thing/topo/batch\_delete\_reply

|  |
| --- |
| {  "msgId":"\*\*\*\*\*\*\*",  "code":200,  "data":{}  } |

## 1.3 设备上下线topic

以下topic中的productType、productCode及deviceCode均为网关信息

### 1.3.1 子设备上线

**设备侧发布topic：**

/sys/kk/{productCode}/{deviceCode}/thing/status/online

|  |
| --- |
| {  "msgId":"\*\*\*\*\*\*\*",  "version":"1.0",  "params":{  "deviceCode":"1023"  },  "method":"thing.status.online"  } |

**设备侧订阅topic：**

/sys/kk/{productCode}/{deviceCode}/thing/status/online\_reply

|  |
| --- |
| {  "msgId":"\*\*\*\*\*\*\*",  "code":200,  "data":{}  } |

### 1.3.2 子设备下线

**设备侧发布topic：**

/sys/kk/{productCode}/{deviceCode}/thing/status/offline

|  |
| --- |
| {  "msgId":"\*\*\*\*\*\*\*",  "version":"1.0",  "params":{  "deviceCode":"1023"  },  "method":"thing.status.offline"  } |

**设备侧订阅topic：**

/sys/kk/{productCode}/{deviceCode}/thing/status/offline\_reply

|  |
| --- |
| {  "msgId":"\*\*\*\*\*\*\*",  "code":200,  "data":{}  } |

## 1.4 设备注册topic

设备注册topic

### 1.4.1 子设备注册

**设备侧发布topic：**

/sys/kk/{productCode}/{deviceCode}/thing/sub/register

|  |
| --- |
| {  "msgId":"",  "version":"1.0",  "params":{  "devices":[  {  "deviceCode":"",  "productCode":"",  "mac":"",  "gatewayMac":""  }]  },  "method":"thing.sub.register"  } q |

**设备侧订阅topic：**

/sys/kk/{productCode}/{deviceCode}/thing/sub/register\_reply

|  |
| --- |
| {  "msgId":"\*\*\*\*\*\*\*",  "code":200,  "data":{}  } |

## 1.5 同步设备信息

同步设备信息

### 1.5.1 子设备注册

**设备侧发布topic：**

/sys/kk/{productCode}/{deviceCode}/thing/sync

|  |
| --- |
| {  "msgId":"",  "version":"1.0",  "params":{  "deviceCode":""  },  "method":"thing.sync "  } q |

**设备侧订阅topic：**

/sys/kk/{productCode}/{deviceCode}/thing/ sync\_reply

|  |
| --- |
| {  "msgId":"\*\*\*\*\*\*\*",  "code":200,  "data":{}  } |

# 2 物模型

## 2.1 基础模型

**属性：**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **属性名称** | **属性标识** | **数据类型** | **读写类型** | **版本号** |
|  |  |  |  |  |

**服务：**

|  |  |  |
| --- | --- | --- |
| **服务名称** | **服务标识** | **版本号** |
| 设置服务 | set | V0.1 |
| 获取属性 | get | V0.1 |

**事件：**

|  |  |  |  |
| --- | --- | --- | --- |
| **事件名称** | **事件标识** | **事件类型** | **版本号** |
| 属性上报 | property | Info | V0.1 |

## 2.2 主机物模型

**属性：**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **属性名称** | **属性标识** | **数据类型** | **读写类型** | **版本号** |
| 设备SN | SN | text | r | V0.1 |
| Mac地址 | MACAddress | text | r | V0.1 |
| 云服务状态 | IOTCloudState | bool | r | V0.1 |
| 内网IP地址 | LanIPAddress | text | r | V0.1 |
| 外网链路状态 | WanState | bool | r | V0.1 |
| 版本 | Version | text | r | V0.1 |

**服务：**

|  |  |  |
| --- | --- | --- |
| **服务名称** | **服务标识** | **版本号** |
| 设置服务 | set | V0.1 |
| 获取属性 | get | V0.1 |
| 恢复出厂 | restoreFactory | V0.1 |

**事件：**

|  |  |  |  |
| --- | --- | --- | --- |
| **事件名称** | **事件标识** | **事件类型** | **版本号** |
| 属性上报 | property | Info | V0.1 |
| 恢复出厂通知消息 | restoreFactoryNotification | Info | V0.1 |
| 故障上报 | error | Error | V0.1 |

## 2.3 网关物模型

**属性：**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **属性名称** | **属性标识** | **数据类型** | **读写类型** | **版本号** |
| 设备SN | SN | text | r | V0.1 |
| Mac地址 | MACAddress | text | r | V0.1 |
| IP地址 | IPAddress | bool | r | V0.1 |
| 网关通信端口号 | Port | text | r | V0.1 |
| 版本 | Version | text | r | V0.1 |
| 在线侦测开关状态 | OnlineDetectionState | bool | rw | V0.1 |
| 白名单状态 | WhiteListState | bool | rw | V0.1 |
| 组网通道状态 | NetChannelState | bool | rw | V0.1 |

**服务：**

|  |  |  |
| --- | --- | --- |
| **服务名称** | **服务标识** | **版本号** |
| 设置服务 | set | V0.1 |
| 获取属性 | get | V0.1 |
| 恢复出厂 | restoreFactory | V0.1 |
| 添加设备白名单 | addWhiteList | V0.1 |
| 删除白名单 | deleteWhiteList | V0.1 |
| 获取白名单列表 | getWhiteList | V0.1 |

**事件：**

|  |  |  |  |
| --- | --- | --- | --- |
| **事件名称** | **事件标识** | **事件类型** | **版本号** |
| 属性上报 | property | Info | V0.1 |
| 恢复出厂通知消息 | restoreFactoryNotification | Info | V0.1 |
| 故障上报 | error | Error | V0.1 |
| 添加设备白名单通知 | whiteListAddedNotification | Info | V0.1 |
| 删除设备白名单通知 | whiteListDeletedNotification | Info | V0.1 |
| 获取白名单通知消息 | getWhiteListNotification | Info | V0.1 |

## 2.4 开关物模型

**属性：**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **属性名称** | **属性标识** | **数据类型** | **读写类型** | **版本号** |
| 电源开关 | PowerSwitch | bool | rw | V0.1 |

**服务：**

|  |  |  |
| --- | --- | --- |
| **服务名称** | **服务标识** | **版本号** |
| 设置服务 | set | V0.1 |
| 获取属性 | get | V0.1 |

**事件：**

|  |  |  |  |
| --- | --- | --- | --- |
| **事件名称** | **事件标识** | **事件类型** | **版本号** |
| 属性上报 | property | Info | V0.1 |

## 2.5 插座物模型

**属性：**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **属性名称** | **属性标识** | **数据类型** | **读写类型** | **版本号** |
| 电源开关 | PowerSwitch | bool | rw | V0.1 |
| 明暗度 | Brightness | Int | rw | V0.1 |
| 明暗度改变时长 | BrightnessChangeTime | Int | rw | V0.1 |
| 指示灯 | IndicatorLight | bool | rw | V0.1 |

**服务：**

|  |  |  |
| --- | --- | --- |
| **服务名称** | **服务标识** | **版本号** |
| 设置服务 | set | V0.1 |
| 获取属性 | get | V0.1 |

**事件：**

|  |  |  |  |
| --- | --- | --- | --- |
| **事件名称** | **事件标识** | **事件类型** | **版本号** |
| 属性上报 | property | Info | V0.1 |

## 2.6 窗帘物模型

**属性：**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **属性名称** | **属性标识** | **数据类型** | **读写类型** | **版本号** |
| 窗帘操作模式 | OperationMode | enum | rw | V0.1 |
| 窗帘打开位置 | Position | int | rw | V0.1 |
| 窗帘工作模式 | WorkMode | enum | rw | V0.1 |

**服务：**

|  |  |  |
| --- | --- | --- |
| **服务名称** | **服务标识** | **版本号** |
| 设置服务 | set | V0.1 |
| 获取属性 | get | V0.1 |

**事件：**

|  |  |  |  |
| --- | --- | --- | --- |
| **事件名称** | **事件标识** | **事件类型** | **版本号** |
| 属性上报 | property | Info | V0.1 |

## 2.6 灯物模型

**属性：**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **属性名称** | **属性标识** | | **数据类型** | **读写类型** | **版本号** |
| 电源开关 | PowerSwitch | | bool | rw | V0.1 |
| RGB调色 | RGBColor | Red | int | rw | V0.1 |
| Green | int | rw | V0.1 |
| Blue | int | rw | V0.1 |
| 亮度 | Brightness | | int | rw | V0.1 |
| 白光亮度 | WhiteBrightness | | int | rw | V0.1 |
| 模式 | Mode | | enum | rw | V0.1 |
| 模式类型 | ModeType | | enum | rw | V0.1 |

**服务：**

|  |  |  |
| --- | --- | --- |
| **服务名称** | **服务标识** | **版本号** |
| 设置服务 | set | V0.1 |
| 获取属性 | get | V0.1 |

**事件：**

|  |  |  |  |
| --- | --- | --- | --- |
| **事件名称** | **事件标识** | **事件类型** | **版本号** |
| 属性上报 | property | Info | V0.1 |

## 2.7 推窗器物模型

**属性：**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **属性名称** | **属性标识** | **数据类型** | **读写类型** | **版本号** |
| 推窗器操作模式 | OperationMode | enum | rw | V0.1 |

**服务：**

|  |  |  |
| --- | --- | --- |
| **服务名称** | **服务标识** | **版本号** |
| 设置服务 | set | V0.1 |
| 获取属性 | get | V0.1 |

**事件：**

|  |  |  |  |
| --- | --- | --- | --- |
| **事件名称** | **事件标识** | **事件类型** | **版本号** |
| 属性上报 | property | Info | V0.1 |