MQTT 协议

Topic 定义

- 请求
  face/sn/request：控制指定sn设备
  face/request： 批量控制
- 回复
  face/id/response： 获取返回值topic
  face/response： 推送人脸识别结果topic
  will/sn/response： 推送遗嘱topic
  online/response: mqtt上线topic

目录

1. Topic : face/sn/request(face/request)

1.1 重启系统

请求:

```
{
        "client_id":"c356d7b5-c8f9-420b-bd23-85720cdc681a",      //MQTT Client ID
        "cmd_id":"ffffffff",    //消息ID(可选)
        "version": "0.2",
        "cmd": "reboot_cam"                    //重启指令
}
```

应答:

```
{
        "reply": "ACK",
        "cmd_id":"ffffffff",
        "cmd": "reboot_cam",
        "sn":"ffff-ffff",          //设备SN
        "code": 0
}
```

1.2 IO 设备控制

请求:

```
{
        "client_id":"c356d7b5-c8f9-420b-bd23-85720cdc681a",      //MQTT Client ID
        "cmd_id":"ffffffff",    //消息ID(可选)
        "version":"0.2",
        "cmd":"gpio control",    //io 控制指令
        "ctrl_type": "on"          //开闸
}
```

应答:

```
{
        "reply": "ACK",
        "cmd_id":"ffffffff",
        "cmd":"gpio control",
        "sn":"ffff-ffff",          //设备SN
        "code": 0
}
```

1.3 串口透传协议

请求:

```
{
        "client_id":"c356d7b5-c8f9-420b-bd23-85720cdc681a",      //MQTT Client ID
        "cmd_id":"ffffffff",    //消息ID(可选)
        "version": "0.2",
        "cmd": "send_rs485",     // 485 发送指令
        "body":{
                "source":0,                     // RS485-1\2\3
                "data":"123456"
        }
}
```

应答:

```
{
        "reply": "ACK",
        "cmd_id":"ffffffff",
        "cmd": "send_rs485",
        "sn":"ffff-ffff",         //设备SN
        "code": 0
}
```

1.4 设置时间

请求:

```
{
        "client_id":"c356d7b5-c8f9-420b-bd23-85720cdc681a",      //MQTT Client ID
        "cmd_id":"ffffffff",    //消息ID(可选)
        "version": "0.2",
        "cmd": "ss_set_timing",          //设置时间指令
        "body":{
                "datetime" : "2018-09-18 21:24:44"        //设置时间参数
        }
}
```

应答:

```
{
        "reply": "ACK",
        "cmd_id":"ffffffff",
        "cmd": "ss_set_timing",
        "sn":"ffff-ffff",         //设备SN
        "code": 0
}
```

1.5 设置人脸比对确性分数

请求:

```
{
        "client_id":"c356d7b5-c8f9-420b-bd23-85720cdc681a",      //MQTT Client ID
        "cmd_id":"ffffffff",     //消息ID(可选)
        "version": "0.2",
        "cmd": "set_match_score",
        "body":{
                "score":0          //确性分数 0 - 100
        }
}
```

应答:

```
{
        "reply": "ACK",
        "cmd_id":"ffffffff",
        "cmd": "set_match_score",
        "sn":"ffff-ffff",          //设备SN
        "code": 0
}
```

1.6 设置外接显示屏标题

请求:

```
{
        "client_id":"c356d7b5-c8f9-420b-bd23-85720cdc681a", //MQTT Client ID
        "cmd_id":"ffffffff",     //消息ID(可选)
        "version": "0.2",
        "cmd": "set_ui_title",
        "body":{
                "title":"title"          //显示屏标题 utf8 编码
        }
}
```

应答:

```
{
        "reply": "ACK",
        "cmd_id":"ffffffff",
        "cmd": "set_ui_title",
        "sn":"ffff-ffff",          //设备SN
        "code": 0
}
```

1.7 设置韦根协议类型

请求:

```
{
        "client_id":"c356d7b5-c8f9-420b-bd23-85720cdc681a", //MQTT Client ID
        "cmd_id":"ffffffff",     //消息ID(可选)
        "version": "0.2",
        "cmd": "set_wg_type",
        "body":{
                "type":0           //WG26 = 0,WG34 = 1,WG36 = 2,WG44 = 3
        }
}
```

应答:

```
{
        "reply": "ACK",
        "cmd_id":"ffffffff",
        "cmd": "set_wg_type",
        "sn":"ffff-ffff",        //设备SN
        "code": 0
}
```

1.8 设置是否开启活体检测

请求:

```
{
        "client_id":"c356d7b5-c8f9-420b-bd23-85720cdc681a",      //MQTT Client ID
        "cmd_id":"ffffffff",     //消息ID(可选)
        "version": "0.2",
        "cmd": "set_spoofing",
        "body":{
                "status":0       //0：不开启，1：开启
        }
}
```

应答:

```
{
        "reply": "ACK",
        "cmd_id":"ffffffff",
        "cmd": "set_spoofing",
        "sn":"ffff-ffff",        //设备SN
        "code": 0
}
```

1.9 设置是否开启戴帽检测

请求：

```
{
        "client_id":"c356d7b5-c8f9-420b-bd23-85720cdc681a", //MQTT Client ID
        "cmd_id":"ffffffff",    //消息ID(可选)
        "version": "0.2",
        "cmd": "set_attr",
        "body":{
                "status":0       //0：不开启，1：开启
        }
}
```

应答：

```
{
        "reply": "ACK",
        "cmd_id":"ffffffff",
        "cmd": "set_attr",
        "sn":"ffff-ffff",         //设备SN
        "code": 0
}
```

1.10 设置语音配置

请求：

```
{
        "client_id":"c356d7b5-c8f9-420b-bd23-85720cdc681a", //MQTT Client ID
        "cmd_id":"ffffffff",    //消息ID(可选)
        "version": "0.2",
        "cmd": "set_voice_cfg",
        "body":{
                "volume":18      //音量：1 - 25
        }
}
```

应答：

```
{
        "reply": "ACK",
        "cmd_id":"ffffffff",
        "cmd": "set_voice_cfg",
        "sn":"ffff-ffff",         //设备SN
        "code": 0
}
```

1.11 设置屏幕睡眠时间

请求:

```
{
        "client_id":"c356d7b5-c8f9-420b-bd23-85720cdc681a",  //MQTT Client ID
        "cmd_id":"ffffffff",     //消息ID(可选)
        "version": "0.2",
        "cmd": "set_sleep_time",
        "body":{
                "time":0         //1 - 24 * 60 * 60,范围外为永不休眠
        }
}
```

应答:

```
{
        "reply": "ACK",
        "cmd_id":"ffffffff",
        "cmd": "set_sleep_time",
        "sn":"ffff-ffff",        //设备SN
        "code": 0
}
```

1.12 设置是否开启水印

请求:

```
{
        "client_id":"c356d7b5-c8f9-420b-bd23-85720cdc681a", //MQTT Client ID
        "cmd_id":"ffffffff",     //消息ID(可选)
        "version": "0.2",
        "cmd": "set_water_mark",
        "body":{
                "status":0               //0:关闭，1：开启
        }
}
```

应答:

```
{
        "reply": "ACK",
        "cmd_id":"ffffffff",
        "cmd": "set_water_mark",
        "sn":"ffff-ffff",        //设备SN
        "code": 0
}
```

1.13 设置是否开启人脸叠加框

请求:

```
{
        "client_id":"c356d7b5-c8f9-420b-bd23-85720cdc681a", //MQTT Client ID
        "cmd_id":"ffffffff",    //消息ID(可选)
        "version": "0.2",
        "cmd": "set_face_show",
        "body":{
                "status":0                //0:关闭，1：开启
        }
}
```

应答:

```
{
        "reply": "ACK",
        "cmd_id":"ffffffff",
        "cmd": "set_face_show",
        "sn":"ffff-ffff",        //设备SN
        "code": 0
}
```

1.14 设置验证模式

请求:

```
{
        "client_id":"c356d7b5-c8f9-420b-bd23-85720cdc681a",  //MQTT Client ID
        "cmd_id":"ffffffff",    //消息ID(可选)
        "version": "0.2",
        "cmd": "set_reco_mode",
        "body":{
                "mode":0
                //0：刷脸，1：刷卡，2：刷身份证，3：刷脸+刷卡
                //4：刷脸+刷身份证，5：刷脸或刷卡，6：刷脸或刷身份证，7：过人开闸
        }
}
```

应答:

```
{
        "reply": "ACK",
        "cmd_id":"ffffffff",
        "cmd": "set_reco_mode",
        "sn":"ffff-ffff",        //设备SN
        "code": 0
}
```

1.15 设置身份证比对确性分数

请求：

```
{
        "client_id":"c356d7b5-c8f9-420b-bd23-85720cdc681a", //MQTT Client ID
        "cmd_id":"ffffffff",     //消息ID(可选)
        "version": "0.2",
        "cmd": "set_idcard_score",
        "body":{
                "score":0        //确性分数 0 - 100
        }
}
```

应答：

```
{
        "reply": "ACK",
        "cmd_id":"ffffffff",
        "cmd": "set_idcard_score",
        "sn":"ffff-ffff",        //设备SN
        "code": 0
}
```

1.16 设置是否启用未带安全帽禁止通行配置

请求：

```
{
        "client_id":"c356d7b5-c8f9-420b-bd23-85720cdc681a",  //MQTT Client ID
        "cmd_id":"ffffffff",     //消息ID(可选)
        "version": "0.2",
        "cmd": "set_hat_pass",
        "body":{
                "status":0               //0:不启用，1：启用
        }
}
```

应答：

```
{
        "reply": "ACK",
        "cmd_id":"ffffffff",
        "cmd": "set_hat_pass",
        "sn":"ffff-ffff",        //设备SN
        "code": 0
}
```

1.17 设置人脸识别模式

请求：

```
{
        "client_id":"c356d7b5-c8f9-420b-bd23-85720cdc681a",  //MQTT Client ID
        "cmd_id":"ffffffff",  //消息ID(可选)
        "version": "0.2",
        "cmd": "set_face_mode",
        "body":{
                "mode":0                         //0:普通，1：大脸模式
        }
}
```

应答：

```
{
        "reply": "ACK",
        "cmd_id":"ffffffff",
        "cmd": "set_face_mode",
        "sn":"ffff-ffff",          //设备SN
        "code": 0
}
```

1.18 发送韦根数据

请求：

```
{
        "client_id":"c356d7b5-c8f9-420b-bd23-85720cdc681a",  //MQTT Client ID
        "cmd_id":"ffffffff",      //消息ID(可选)
        "version": "0.2",
        "cmd": "send_wg_data",
        "body":{
                "data":1000                 //unsigned int
        }
}
```

应答：

```
{
        "reply": "ACK",
        "cmd_id":"ffffffff",
        "cmd": "send_wg_data",
        "sn":"ffff-ffff",          //设备SN
        "code": 0
}
```

1.19 人脸创建

请求：
```
{
        "client_id": "c356d7b5-c8f9-420b-bd23-85720cdc681a",
        "cmd_id":"ffffffff",      //消息ID(可选)
        "version": "0.2",
        "cmd": "create_face",
        "per_id": "ff00ff",
        "face_id": "ff00ff",
        "per_name": "ning",
        "idcardNum": "123456",   //韦根号,智能卡号
        "img_url": "http://dqfile-1251895221.cos.ap-guangzhou.myqcloud.
                    com/img/DC681D46EA932574179933CA04F29998A99F2EF9.jpg",        //图片的url
        "idcardper": "51102419999999171x",        //身份证号
        "s_time": 0,      //启用日期时间戳
        "e_time": 1000, //有效日期时间戳
        "per_type": 0,   //0：普通人员。  1：白名单人员。  2：黑名单人员
        "usr_type": 0    //权限类型，取值 0 - 5，默认 0
}
```

应答：
```
{
        "reply": "ACK",
        "cmd_id":"ffffffff",
        "cmd": "create_face",
        "sn" : "ffffffff",          //设备的SN信息
        "code": 0                //若下载图片数据失败则无code字段
}
```

1.20 修改人脸信息

请求：

请求：

```
{
        "client_id":"c356d7b5-c8f9-420b-bd23-85720cdc681a",
        "cmd_id":"ffffffff",      //消息ID(可选)
        "version": "0.2",
        "cmd": "update_face",     //更新人员指令
        "per_id":"ff00ff",                      //人员 ID
        "face_id":"ff00ff",                     //人脸 ID（不填则自动生成）(可选)
        "per_name":"tony",                  //人员名字
        "idcardNum":"123456",     //韦根号,智能卡号(可选)
        "img_url":"http://dqfile-1251895221.cos.ap-guangzhou.myqcloud.
                    com/img/DC681D46EA932574179933CA04F29998A99F2EF9.jpg",          //图片的url
        "idcardper":"51102419999999171x",               //身份证号(可选)
        "s_time":0,                    //启用日期时间戳(可选)
        "e_time":1000,   //有效日期时间戳(可选)
        "per_type":0,    //0：普通人员。 1：白名单人员。 2：黑名单人员(可选)
        "usr_type":0     //权限类型，取值 0 - 5，默认 0(可选)
}
```

应答：

```
{
        "reply": "ACK",
        "cmd_id":"ffffffff",
        "cmd": "update_face",
        "sn" : "ffffffff",          //设备的SN信息
        "code": 0          //若下载图片数据失败则无code字段
}
```

1.21 删除注册人员

```
enum DEL_PERSON_MODE {
        DEL_PERSON_ID = 0,          //删除指定 ID 人员
        DEL_PERSON_WHITE,           //删除白名单人员
        DEL_PERSON_BLACK,           //删除黑名单人员
        DEL_PERSON_COMM,            //删除普通人员
        DEL_PERSON_ALL              //删除所有人员
};
```

请求:

```
{
        "client_id":"c356d7b5-c8f9-420b-bd23-85720cdc681a",
        "cmd_id":"ffffffff",      //消息ID(可选)
        "version": "0.2",
        "cmd": "delete_face",     //删除人员指令
        "type": 0,                                    //删除类型，参考 DEL_PERSON_MODE
        "per_id" : "ff00ff"               //DEL_PERSON_ID 需传入此参数
}
```

应答:

```
{
        "reply": "ACK",
        "cmd_id":"ffffffff",
        "cmd": "delete_face",
        "code": 0,
        "sn" : "ffffffff"           //设备的SN信息
}
```

1.22 人脸查询时推送

请求：

```
{
        "client_id":"c356d7b5-c8f9-420b-bd23-85720cdc681a",
        "cmd_id":"ffffffff",  //消息ID(可选)
        "version": "0.2",
        "cmd": "query_face",  //查询人脸指令
        "id":20,                   //总下标(页数*页大小 + 第几条)，0 - n(可选)
        "per_id":"12345",         //per_id 查询(可选)
        "name":"dcy"      //姓名查询(可选) 备注：优先级 per_id > 姓名 > id
}
```

应答：

id/per_id 应答：

```
{
        "reply": "ACK",
        "cmd_id":"ffffffff",
        "cmd": "query_face",
        "code": 0,
        "count" : 100,   //人员总数
        "per_id" : "ff00ff",     //人员 ID
        "idcardNum":"1234",                //韦根号,智能卡号
        "name" : "tony",         //人员名字
        "url": "ffffffffffffffff",     //图片 url
        "idcardper":"5110241999999171x",        //身份证号
        "s_time":0,             //启用日期时间戳
        "e_time":1000,   //有效日期时间戳
        "per_type":0,    //1:白名单，2:黑名单
        "usr_type":0,    //权限类型，取值 0 - 5，默认 0
        "sn" : "ffffffff"        //设备的SN信息
}
```

name 应答：

```
{
        "reply": "ACK",
        "cmd_id":"ffffffff",
        "cmd": "query_face",
        "code": 0,
        "count" : 100,   //人员总数
        "per_id" : "ff00ff",     //人员 ID
        "idcardNum":"1234",                //韦根号,智能卡号
        "name" : "tony",                //人员名字
        "url": "ffffffffffffffff",     //图片url
        "idcardper":"5110241999999171x",        //身份证号
        "s_time":0,             //启用日期时间戳
        "e_time":1000,   //有效日期时间戳
        "per_type":0,    //0:白名单，1:黑名单
        "usr_type":0,    //权限类型，取值 0 - 5，默认 0
```

```
    "sn" : "ffffffff",        //设备的SN信息
    "pers_id":                         //人员列表（可能存在多人同名情况）
        [
            {
                "per_id" : "ff00ff"      //人员 ID
            },
            {
                "per_id" : "ff00ff"
            }
        ]
}
```

2. Topic : face/request

2.1 搜索设备

请求:

```
{
    "cmd": "face_search",
    "cmd_id":"ffffffff",    //消息ID(可选)
    "client_id":"c356d7b5-c8f9-420b-bd23-85720cdc681a"  //MQTT Client ID
}
```

应答:
```
{
    "version": "0.2",
    "cmd_id":"ffffffff",
    "cmd": "face_search",
    "sn":"ffff-ffff",  //设备SN
}
```

3. Topic : face/response

3.1 推送识别结果

应答:
```
{
        "type" : "face_result" ,
        "body" : {
                "e_imgurl" : "http://jupiter-1251895221.cos.ap-guangzhou.myqcloud.
                            com/20190907/8080078b-c30d4f7b_1567816001_95_101.jpg",
                //人脸图url（若识别后不存在全图数据以及上传img_data失败，不推送此字段）

                "e_imgsize" : 159792,  //人脸图大小
                "hat" : 255,
                "matched" : 95, //比对结果(100分制)，0：未比对。-1：比对失败。大于0的取值
                "name" : "k",    //人员姓名
                "per_id" : "20190906135824899",
                "role" : 1,       //人员角色，0：普通人员。 1：白名单人员。 2：黑名单人员
                "usec" : 1567816001,
                "sn"   : "ffffffff"              //设备的SN信息
                }
}
```

4. Topic : will/sn/response

4.1 推送遗嘱消息

应答:
```
{
        "cmd": "mqtt_lwt",
        "sn": "ffffffff",
        "result": "mqtt network occurring error"
}
```

5. Topic : online/response

5.1 推送mqtt上线通知

应答:
```
{
        "cmd": "mqtt_online",
        "sn": "fffffff",
        "result": "mqtt is online"
}
```