

# 物联网智能视频服务（行业版）

## API 接入指引



腾讯云

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## 文档目录

API 接入指引

API 基本概念

接入流程案例

# API 接入指引

## API 基本概念

最近更新时间：2023-05-25 15:32:03

本文为您介绍物联网智能视频服务（行业版）的 API 接口基本概念。

### 设备相关概念

- 主设备( master device )

主设备是指通过国标协议（GB28181 协议）接入到腾讯云物联网智能视频服务的设备，常见主设备包括：常规 IPC 摄像机，NVR，VMS 等，也可以由其他支持国标协议设备组成，例如车载监控设备，无人机，国标软终端，其他国标硬终端等。每个主设备在腾讯云平台创建后，会被分配一个主设备编码（DeviceCode）编码规则可以参考 GB/T28181-2016 详细定义。

- 通道( channel )

通道是对国标设备下具备音视频或者告警能力的描述，例如 NVR 下面可以接入8个IPC设备，在 NVR 内部描述为 D1~D8，可以描述为8个通道，每个通道都具备一个通道编码，编码规则可以参考 GB/T28181-2016 详细定义。

### API 文档概念解析

- 公共参数

参数名称	必选	类型	描述
Action	是	String	公共参数，本接口取值：DescribeGroupDevices。
Version	是	String	公共参数，本接口取值：2020-12-01。
Region	是	String	公共参数，详见产品支持的 <a href="#">地域列表</a> 。

- 设备编码(DeviceCode)

控制台添加设备，由平台分配的编码。

### 基本信息

备注名 利兴金堂

密码 \*\*\*\*\* [查看](#)

设备厂商 -

设备编码 44020000001180538960

设备类型 国标NVR设备

接入协议 GB/T 28181-2016

状态 在线

告警订阅 关闭

设备分组 行政分组

设备编码

- 通道编码(ChannelCode)

通道编码一般由用户自定义，通过 GB28181 协议上报到上级平台的。

### 通道信息

通道号	通道名称	通道编码	通道类型	状态	操作
1	IPCamera 06	3402000000132000006	视频通道	离线	<a href="#">播放地址</a> <a href="#">删除通道</a>
2	A区餐线	3402000000132000001	视频通道	在线	<a href="#">播放地址</a>
3	燃气管	3402000000132000003	视频通道	在线	<a href="#">播放地址</a>
4	IPCamera 07	3402000000132000007	视频通道	离线	<a href="#">播放地址</a> <a href="#">删除通道</a>

通道编码

- 设备 ID(DeviceId)

用户控制台添加主设备后，平台会分配一个主设备 ID，主设备 ID 可以用过接口 [DescribeDeviceList](#) 或者 [DescribeGroupDevices](#) 获取设备列表信息，这里以 [DescribeDeviceList](#) 为例：

```

1  {
2    "Uin":1,
3    "Action":"DescribeDeviceList",
4    "RequestId":"DescribeDeviceList-Request-1",
5    "AppId":"1"
6  }
    
```

Body Headers (3) Status Code 200 OK

Pretty Raw Preview JSON

```

1  {
2    "Response": {
3      "Devices": [
4        {
5          "NickName": "test tcp",
6          "DeviceId": "44020000001180864825_44020000001180864825",
7          "DeviceType": 3,
8          "Status": 3,
9          "ExtraInformation": "",
10         "DeviceCode": "44020000001180864825",
11         "Protocol": "GB28181",
12         "GroupId": "group_root",
13         "GroupName": "全部",
14         "GroupPath": "",
15         "ChannelNum": 0,
16         "VideoChannelNum": 0
17       },
18       {
19         "NickName": "ccc",
20         "DeviceId": "alertDevice_e4la1sbl",
21         "DeviceType": 9,
22         "Status": 0,
23         "ExtraInformation": "",
24         "DeviceCode": "alertDevice_e4la1sbl",
25         "Protocol": "TXHTTP",
26         "GroupId": "gro-kw2kb2ac",
27         "GroupName": "bbbbbb",
28         "GroupPath": "/gro-kw2kb2ac"
29       }
30     ]
31   }
32 }
    
```

对应的DeviceId信息

- 通道 ID(ChannelId)

添加主设备成功后，通过 GB28181 命令，设备上报 catlog 携带自身通道信息，平台会分配一个通道 ID，可以通过 [DescribeChannels](#) 接口获取，示例如下：

```

1 {
2   ... "Uin":1,
3   ... "Action":"DescribeChannels",
4   ... "RequestId":"DescribeChannels-Request-1",
5   ... "AppId":"1",
6   ... "DeviceId":"44020000001180099739_44020000001180099739" 传入设备ID
7   ... "ChannelTypes":[1]
8 }

```

Body Headers (3) Status Code 200 OK

Pretty Raw Preview JSON ↕

```

1 {
2   "Response": {
3     "Channels": [
4       {
5         "ChannelName": "PTZ球机",
6         "ChannelId": "44020000001180099739_11000000001322107501", 返回对应通道ID
7         "ChannelType": 1,
8         "ChannelCode": "11000000001322107501",
9         "ExtraInformation": "{\"Manufacturer\":\"Manufacturer\",\"Model\":\"Camera\"}",
10        "Status": 1,
11        "IsRecord": 1,
12        "DeviceId": "44020000001180099739_44020000001180099739",
13        "BusinessGroupId": "44020000001180099739_44020000001180099739"
14      }
15    ],
16    "RequestId": "DescribeChannels-Request-1",
17    "TotalCount": 1
18  }
19 }

```

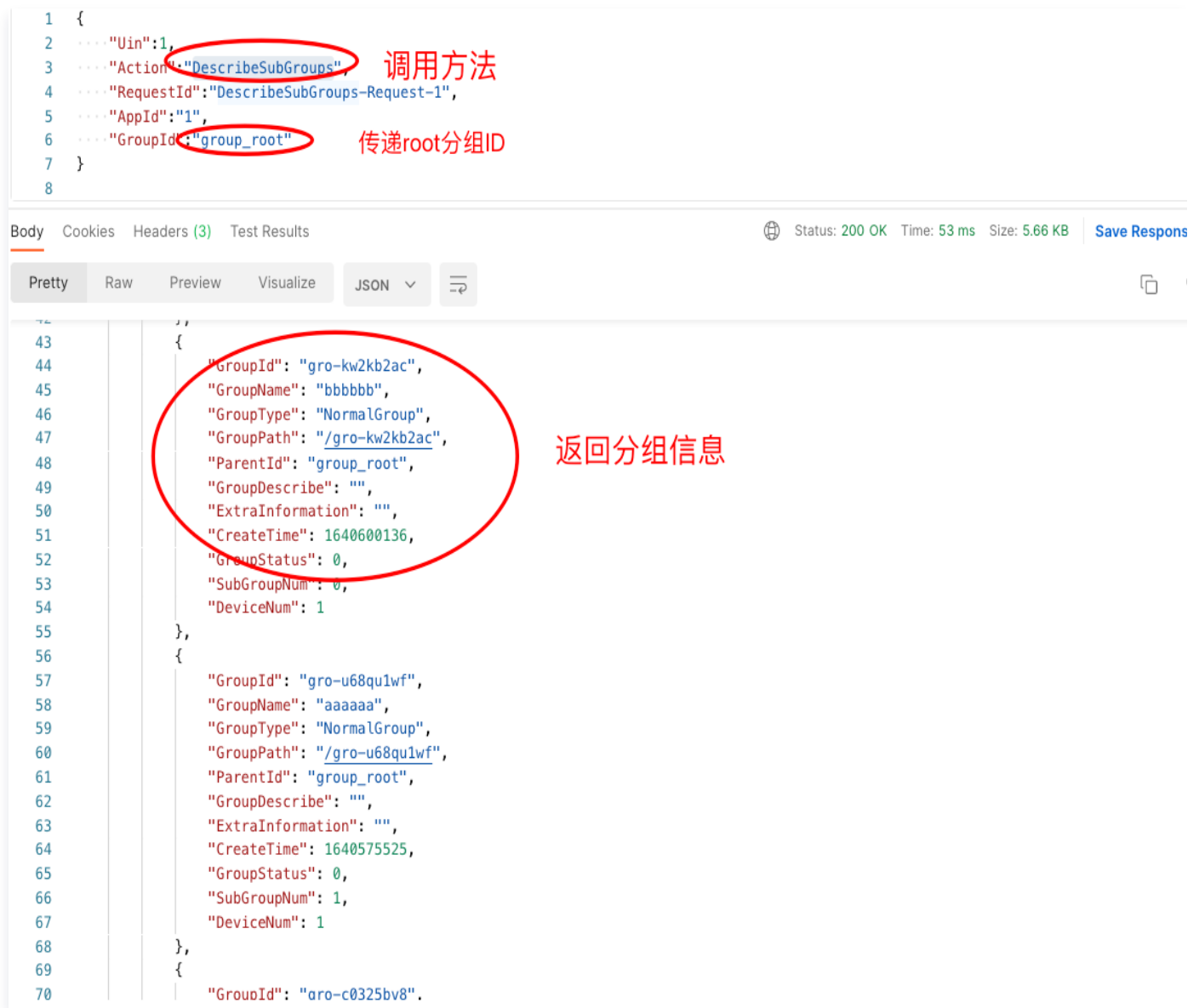
# 接入流程案例

最近更新时间：2022-01-13 14:37:48

本文为您介绍使用 API 使用案例。

## 1. 获取根目录子分组或者分组下子分组

- 根目录子分组，接口调用流程：[DescribeSubGroups](#)。



```

1 {
2   ... "Uin":1,
3   ... "Action":"DescribeSubGroups", 调用方法
4   ... "RequestId":"DescribeSubGroups-Request-1",
5   ... "AppId":"1",
6   ... "GroupId":"group_root" 传递root分组ID
7 }
8
    
```

Body Cookies Headers (3) Test Results Status: 200 OK Time: 53 ms Size: 5.66 KB Save Respons

Pretty Raw Preview Visualize JSON

```

43 {
44   "GroupId": "gro-kw2kb2ac",
45   "GroupName": "bbbbbb",
46   "GroupType": "NormalGroup",
47   "GroupPath": "/gro-kw2kb2ac",
48   "ParentId": "group_root",
49   "GroupDescribe": "",
50   "ExtraInformation": "",
51   "CreateTime": 1640600136,
52   "GroupStatus": 0,
53   "SubGroupNum": 0,
54   "DeviceNum": 1
55 },
56 {
57   "GroupId": "gro-u68qu1wf",
58   "GroupName": "aaaaaa",
59   "GroupType": "NormalGroup",
60   "GroupPath": "/gro-u68qu1wf",
61   "ParentId": "group_root",
62   "GroupDescribe": "",
63   "ExtraInformation": "",
64   "CreateTime": 1640575525,
65   "GroupStatus": 0,
66   "SubGroupNum": 1,
67   "DeviceNum": 1
68 },
69 {
70   "GrouoId": "aro-c0325bv8".
    
```

返回分组信息

- 分组下面子分组，接口调用流程：[DescribeSubGroups](#) 获取根目录分组信息 -> [DescribeSubGroups](#) 获取指定分组下子分组信息。



```

1  {
2    "Uin":1,
3    "Action":"DescribeSubGroups",
4    "RequestId":"DescribeSubGroups-Request-1",
5    "AppId":"1",
6    "GroupId":"gro-46fp7sd8" 目标分组ID
7  }
8

```

Body Cookies Headers (3) Test Results Status: 200 OK Time: 35 m

Pretty Raw Preview Visualize JSON ≡ ↻

```

1  {
2    "Response": {
3      "GroupList": [
4        {
5          "GroupId": "gro-vndt9a82",
6          "GroupName": "分组分组分组",
7          "GroupType": "NormalGroup",
8          "GroupPath": "/gro-46fp7sd8/gro-vndt9a82",
9          "ParentId": "gro-46fp7sd8",
10         "GroupDescribe": "",
11         "ExtraInformation": "",
12         "CreateTime": 1622808481,
13         "GroupStatus": 0,
14         "SubGroupNum": 1,
15         "DeviceNum": 1
16       },
17       {
18         "GroupId": "gro-v26kw21h",
19         "GroupName": "000我是111和222之后创建的",
20         "GroupType": "NormalGroup",
21         "GroupPath": "/gro-46fp7sd8/gro-v26kw21h",
22         "ParentId": "gro-46fp7sd8",
23         "GroupDescribe": "",
24         "ExtraInformation": "",
25         "CreateTime": 1622806087,
26         "GroupStatus": 0,
27         "SubGroupNum": 0,
28         "DeviceNum": 0

```

## 2. 获取分组下面设备列表

以根分组下面获取设备列表为例，调用接口：[DescribeGroupDevices](#)，其他分组传入对应分组 ID 即可。

```

1 {
2   ... "Uin":1,
3   ... "Action":"DescribeGroupDevices", 调用方法
4   ... "RequestId":"DescribeGroupDevices-Request-1",
5   ... "AppId":"1",
6   ... "GroupId":"group_root" 分组ID
7 }
8
    
```

Body Cookies Headers (3) Test Results

Status: 200 OK Time: 77 ms Size: 5.72 KB

Pretty Raw Preview Visualize JSON

```

1 {
2   "Response": {
3     "AllDeviceNum": 0,
4     "DeviceList": [
5       {
6         "NickName": "vmsapi",
7         "DeviceId": "44020000002000986280_44020000002000986280",
8         "Status": 1,
9         "ExtraInformation": "{\"Manufacturer\":\"\",\"Model\":\"\"}",
10        "DeviceType": 1,
11        "IsRecord": 1,
12        "DeviceCode": "44020000002000986280",
13        "Recordable": 1,
14        "Protocol": "GB28181",
15        "ChannelType": 0,
16        "ChannelNum": 16,
17        "VideoChannelNum": 14
18      },
19      {
20        "NickName": "hk002",
21        "DeviceId": "44020000001320371618_44020000001320371618",
22        "Status": 1,
23        "ExtraInformation": "",
24        "DeviceType": 2,
25        "IsRecord": 1,
26        "DeviceCode": "44020000001320371618",
27        "Recordable": 1,
28        "Protocol": "GB28181",
    
```

设备信息，详情见API文档

### 3. 获取设备下属通道列表

获取设备下属通道，调用接口：[DescribeChannels](#)。

```

1 {
2   ... "Uin":1,
3   ... "Action":"DescribeChannels",
4   ... "RequestId":"DescribeChannels-Request-1",
5   ... "AppId":"1",
6   ... "DeviceId":"44020000001180099739_44020000001180099739",
7   ... "ChannelTypes":[1]
8 }
    
```

Body Headers (3) Status Code 200 OK

Pretty Raw Preview JSON 🔍

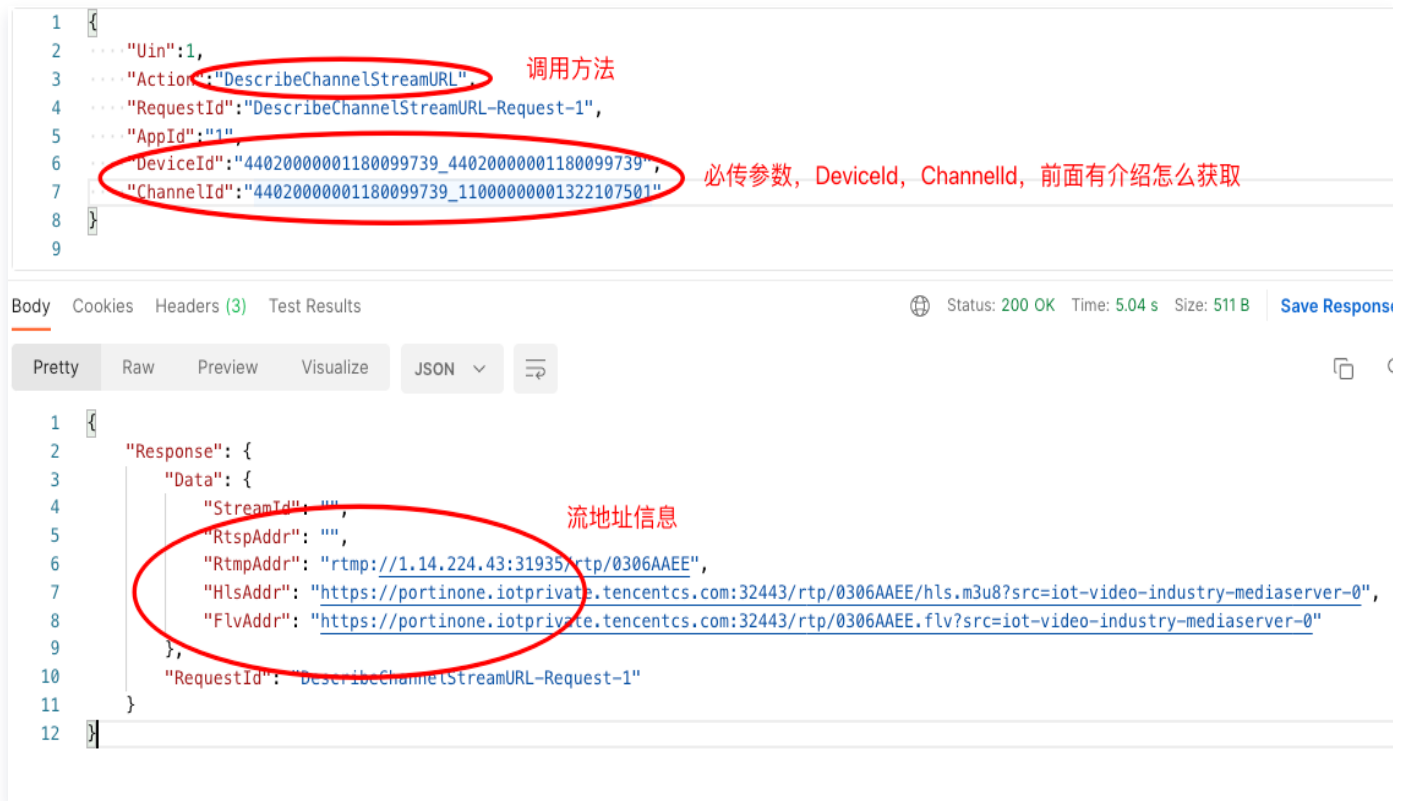
```

1 {
2   "Response": {
3     "Channels": [
4       {
5         "ChannelName": "PTZ球机",
6         "ChannelId": "44020000001180099739_11000000001322107501", 通道ID
7         "ChannelType": 1,
8         "ChannelCode": "11000000001322107501",
9         "ExtraInformation": "{\"Manufacturer\":\"Manufacturer\",\"Model\":\"Camera\"}",
10        "Status": 1,
11        "IsRecord": 1,
12        "DeviceId": "44020000001180099739_44020000001180099739",
13        "BusinessGroupId": "44020000001180099739_44020000001180099739"
14      }
15    ],
16    "RequestId": "DescribeChannels-Request-1",
17    "TotalCount": 1
18  }
19 }
    
```

🔍 Bootcamp 📄 Runner 🗑️ Tras

## 4. 获取设备流地址

- 获取实时流地址，调用接口：[DescribeChannelStreamURL](#)。



The screenshot shows a REST client interface with a request and response. The request is a JSON object with the following fields:

```

1 {
2   "Uin": 1,
3   "Action": "DescribeChannelStreamURL",
4   "RequestId": "DescribeChannelStreamURL-Request-1",
5   "AppId": "1",
6   "DeviceId": "4402000001180099739_4402000001180099739",
7   "ChannelId": "4402000001180099739_1100000001322107501"
8 }
9
    
```

Annotations in the image:

- Line 3: "Action": "DescribeChannelStreamURL" is circled in red with the label "调用方法" (Call Method).
- Line 6: "DeviceId": "4402000001180099739\_4402000001180099739" is circled in red with the label "必传参数, DeviceId, ChannelId, 前面有介绍怎么获取" (Required parameter, DeviceId, ChannelId, see introduction on how to get it).
- Line 7: "ChannelId": "4402000001180099739\_1100000001322107501" is circled in red.

The response is a JSON object with the following fields:

```

1 {
2   "Response": {
3     "Data": {
4       "StreamId": "",
5       "RtspAddr": "",
6       "RtmpAddr": "rtmp://1.14.224.43:31935/rtp/0306AAEE",
7       "HlsAddr": "https://portinone.iotprivate.tencentcs.com:32443/rtp/0306AAEE/hls.m3u8?src=iot-video-industry-mediaserver-0",
8       "FlvAddr": "https://portinone.iotprivate.tencentcs.com:32443/rtp/0306AAEE.flv?src=iot-video-industry-mediaserver-0"
9     },
10    "RequestId": "DescribeChannelStreamURL-Request-1"
11  }
12 }
    
```

Annotation in the image:

- Line 4: "StreamId": "" is circled in red with the label "流地址信息" (Stream address information).

- 获取设备本地回放流地址，调用接口：[DescribeVideoListByChannel](#) -> [DescribeChannelLocalRecordURL](#)。

```
1 {
2   ... "Uin":1,
3   ... "Action":"DescribeVideoListByChannel", 调用方法
4   ... "RequestId":"DescribeDeviceGroup-Request-1",
5   ... "AppId":"1",
6   ... "DeviceId":"44020000001180099739_44020000001180099739", 必传参数
7   ... "ChannelId":"44020000001180099739_11000000001322107501",
8   ... "Type":2 录像类型, 1 云端录像; 2 本地录像
9 }
10
```

Body Headers Status

Pretty Raw Preview JSON

```
1 {
2   "Response": {
3     "RequestId": "DescribeDeviceGroup-Request-1",
4     "TotalCount": 9,
5     "VideoList": [
6       {
7         "RecordId": "1640685762_1640691641", 本地录像ID, 后续获取地址时候需要用到
8         "RecordTaskId": "",
9         "RecordPlanId": "",
10        "StartTime": 1640685762,
11        "EndTime": 1640691641,
12        "EventId": 0,
13        "VideoUrl": "",
14        "RecordStatus": 0,
15        "InitID": 0,
16        "ExpectDeleteTime": 0,
17        "RecordTimeLen": 0,
18        "FileSize": 0,
19        "SceneId": 0,
20        "WarnId": 0
21      },
22      {
23        "RecordId": "1640677327_1640685762",
24        "RecordTaskId": "",
25        "RecordPlanId": "",
26        "StartTime": 1640677327,
```

录像信息列表

```

1  {
2    "Uin":1,
3    "Action":"DescribeChannelLocalRecordURL" 调用方法
4    "RequestId":"test-Request-1",
5    "AppId":"1",
6    "DeviceId":"4402000001180099739_4402000001180099739", 必传参数
7    "ChannelId":"4402000001180099739_1100000001322107501",
8    "RecordId":"1640685762_1640691641"
9  }
10
    
```

RecordId, 还有可选参数StartTime, EndTime, 可以传递在此区间的时间戳, 达到回放流seek的效果

---

Body Headers Status Code Enter Response Cod

Pretty Raw Preview JSON ≡

```

1  {
2    "Response": {
3      "Data": {
4        "StreamId": "40782BB4", 流ID, 可以用来做本地控制
5        "RtspAddr": "", 流地址信息
6        "RtmpAddr": "rtmp://1.14.224.43:31935/rtp/40782BB4",
7        "HlsAddr": "https://portinone.iotprivate.tencentcs.com:32443/rtp/40782BB4/hls.m3u8?src=iot-video-industry-mediaserver-0",
8        "FlvAddr": "https://portinone.iotprivate.tencentcs.com:32443/rtp/40782BB4.flv?src=iot-video-industry-mediaserver-0"
9      },
10     "RequestId": "test-Request-1"
11   }
12 }
    
```

● 控制本地回放流，调用方法：[ControlChannelLocalRecord](#)。

```

1  {
2    "Uin":1,
3    "Action":"ControlChannelLocalRecord" 调用方法
4    "RequestId":"test-Request-1",
5    "AppId":"1",
6    "DeviceId":"4402000001180099739_4402000001180099739", 必传参数
7    "ChannelId":"4402000001180099739_1100000001322107501",
8    "StreamId":"416ACED0", 流ID
9    "Command":{"Action":"PAUSE"}
10 }
    
```

---

Body Headers Status Co

Pretty Raw Preview JSON ≡

```

1  {
2    "Response": {
3      "RequestId": "test-Request-1"
4    }
5  }
    
```