



How to integrate with Hikvision LPR function via ISAPI

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Date: 2016-04-17

1. Revision

Revision History	Description	Reviser	Date
Version 1.0.0 Revision 1	[Add] /ISAPI/Traffic/channels/<ID>/vehicleDetect /ISAPI/ContentMgmt/search /ISAPI/System/Video/inputs/channels/ID/VCAResource /ISAPI/Event/notification/httpServers/ID http://<ipAddress>:<portNo>/<url>	2014.12.30	Carrie Feng
Version V1.0.0 Revision 2	[Add] /ISAPI/Traffic/channels/<ID>/vehicleDetect/config /ISAPI/Traffic/channels/<ID>/vehicleDetect/plates [MOD] /ISAPI/Traffic/channels/<ID>/vehicleDetect	2016.1.5	Carrie Feng

2. Overview

Vehicle Detection and Mixed-traffic Detection are available for the road traffic monitoring. In Vehicle Detection, the passed vehicle can be detected and the picture of its license plate can be captured; besides, the vehicle color, vehicle logo and other information can be recognized automatically.

In Mixed-traffic Detection, the pedestrian, motor vehicle and non-motor vehicle can be detected, and the picture of the object (for pedestrian/non-motor vehicle/motor vehicle without license plate) or license plate (for motor vehicle with license plate) can be captured. You can send alarm signal to notify the surveillance center and upload the captured picture to FTP server.

Note:

Road traffic function varies according to different camera models.

3. Services and General Resources

This part just introduces some key features (different with other general cameras) that you need to pay attention to. Those that the documentation doesn't mention are same as other IP cameras.

3.1 APIs of LPR Function

3.1.1 /ISAPI/Traffic/Capabilities

/ISAPI/Traffic/capabilities		General Resource	v2.0
GET			
Description	It is used to get device capability.		
Query	None		
Inbound Data	None		
Success Return	<TrafficCap>		
Notes:			

TrafficCap XML Block

```
<TrafficCap version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <plateCap><!-- opt --, >
    <supCustomStateOrProvince><!--opt, xs:boolean , --></supCustomStateOrProvince>
    <supCountry><!--opt ,xs:integer 1,2,3...-->
    </supCountry>
    <isSupportPlateList><!--opt --,xs:boolean></isSupportPlateList>
    <plateListNum><!--opt --, integer, ></plateListNum>
    <plateMaskLen><!--opt --, integer, ></plateMaskLen>
  </plateCap>
</TrafficCap>
```

3.1.2 /ISAPI/Traffic/plateList

/ISAPI/Traffic/plateList		General Resource v2.0		
GET				
Description	Export license plate of black and white black list			
Query	None			
Inbound Data	None			
Success Return	Opaque Data(.xls)			
PUT				
Description	Import license plate of black and white black list			
Query	None			
Inbound Data	Opaque Data(.xls)			
Success Return	<ImportplateError >			
Error Code	Status	statusCode	subStatusCode	description
		2	noMemory	noMemory
		2	importFail	importFail
		6	importErrorData	importErrorData
		2	configOperating	device importing or exporting

Notes:

Configuration file is device-dependant – it may be binary or any other format.

ImportplateError XML Block

```
<ImportResult version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">result
  <existError> <!-- req, xs:boolean --> </existError>
  <errorCode> <!-- opt, xs:string, importErrorData, importFail, configOperating, overLimit>
  </errorCode>
  <PlateErrorList/> <!-- opt -->
</ImportResult>
```

```
<PlateErrorList version="1.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <plateError> <!-- opt -->
    <id> <!-- req, xs:string , --> </id>
    <errorRowNo> <!-- req, xs:integer --> </errorRowNo>error number
    <errorType> <!-- req, xs:string, invalidGroup() --> </errorType>
  </plateError>
</PlateErrorList>
```

3.1.3 /ISAPI/ITC/capability

/ISAPI/ITC/capability		General Resource	v2.0
GET			
Description	GET ip traffic Capabilities		
Query	None		
Inbound Data	None		
Success Return	ITCCap		

ITCCap XML Block

```
<ITCCap version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <isSupportITC> <!-- dep, xs: boolean> </isSupportITC>
  <isSupportVehicleDetection> <!-- dep, xs: boolean> <isSupportVehicleDetection>
  <isSupportlicencePlateAuditData> <!-- opt, xs: boolean> <isSupportlicencePlateAuditData>
  <isSupportSearchLPListAudit><!--opt, xs: boolean></isSupportSearchLPListAudit>
</ITCCap>
```

3.1.4 /ISAPI/ContentMgmt/search

/ISAPI/ContentMgmt/search		General Resource	v2.0
---------------------------	--	------------------	------

GET POST	
Description	It is used to search picture.
Query	None
Inbound Data	CMSearchDescription
Success Return	CMSearchResult
Notes: Add new metaID——//recordType.meta.std-cgi.com/HVTVehicleDetection	

CMSearchDescription XML Block

```
<CMSearchDescription version="1.0" xmlns=" http://www.std-cgi.org/ver20/XMLSchema">
  <searchID><!-- req, xs: uuid --></searchID>
  <timeSpanList>
    <timeSpan>
      <startTime><!-- req, xs:time, ISO8601 time --></startTime>
      <endTime><!-- req, xs:time, ISO8601 time --></endTime>
    </timeSpan>
  </timeSpanList>
  <metadataList>
    <metadata>
      <metadataDescriptor>
        <metaID><!-- req, xs:string --></metaID>
        <CustomExtension>
          <plateSearchMask><!-- opt, xs:string --></plateSearchMask>
        </CustomExtension>
      </metadataDescriptor>
      <SearchProperty>
        <plateSearchMask><!-- opt, xs:string,1-31 --></plateSearchMask>
        <stateOrProvince><!-- opt, xs:integer --></stateOrProvince>
        <subType><!-- opt, xs:string, "all,pedestrian,nonMotorVehicle,motorVehicle" --></subType>
      </SearchProperty>
    </metadata>
  </metadataList>
  <searchResultPosition><!-- opt, xs: interger --></searchResultPosition>
  <maxResults><!-- opt, xs: interger --></maxResults>
</CMSearchDescription>
```

CMSearchDescription XML Block

```
<CMSearchDescription version="1.0" xmlns=" http://www.std-cgi.org/ver20/XMLSchema">
  <responseStatus><!-- req, xs:boolean--></responseStatus>
  <responseStatusStrg><!-- req, xs:string--></responseStatusStrg>
```

```
<numOfMatches><!-- req, xs:integer --></numOfMatches>
<matchList> <!-- opt -->
  <matchElement> <!-- opt -->
    <timeSpan> <!-- opt -->
      <startTime><!-- req, xs:datetime --></startTime>
      <endTime><!-- req, xs:datetime --></endTime>
    </timeSpan>
    <value> <!-- req, xs:integer --> </value>
  </matchElement>
</matchList>
</CMSearchDescription>
```

3.1.5 /ISAPI/Traffic/channels/<ID>/CurVehicleDetectMode

/ISAPI/Traffic/channels/<ID>/CurVehicleDetectMode		General Resource	v2.0
GET			
Description	It is used to get the current vehicle detection type.		
Query	None		
Inbound Data	None		
Success Return	CurVehicleDetectMode		
PUT			
Description	It is used to update the current vehicle detection type		
Query	None		
Inbound Data	CurVehicleDetectMode		
Success Return	ResponseStatus		
Notes:			

VehicleDetectCfg XML Block

```
<CurVehicleDetectMode version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <CurMode><!--req, xs:string,"hvtVehicleDetection,"vehicleDetection"--></CurMode>
</CurVehicleDetectMode>
```

3.1.6 /ISAPI/Traffic/channels/<ID>/vehicleCalibration

/ISAPI/Traffic/channels/<ID>/vehicleCalibration		General Resource	v2.0
GET			
Description	It is used to get the Vehicle Calibration.		
Query	None		

Inbound Data	None
Success Return	Calibration Region
Notes: /ISAPI/Traffic/channels/<ID>/vehicleCalibration/capabilities	

Calibration Region XML Block

```
<Calibration version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <CalibrationRegionList size="1">
    <CalibrationRegion>
      <id><!-- ro, req, xs:string --></id>
      <RegionCoordinatesList size="4">
        <RegionCoordinates> <!-- ro, req, -->
          <positionX><!-- ro, req, xs:integer;coordinate --></positionX>
          <positionY><!-- ro, req, xs:integer;coordinate --></positionY>
        </RegionCoordinates>
      </RegionCoordinatesList>
    </CalibrationRegion>
  </CalibrationRegionList>
</Calibration>
```

3.1.7 /ISAPI/Traffic/channels/<ID>/vehicleDetect/plates

/ISAPI/Traffic/channels/<ID>/vehicleDetect/plates		General Resource	v2.0
GET			
Description	Get the current picture of license plate		
Query	None		
Inbound Data	AfterTime		
Success Return	Plates		
POST			
Description	Set the current picture of license plate		
Query	None		
Inbound Data	AfterTime		
Success Return	Plates		
Notes:	<div><AfterTime> Get the license plate picture after the time</div> <div><Plate> license plate info</div> <div><country> Country</div>		

AfterTime XML Block

```
<AfterTime version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <picTime><!-- req, xs:string --></picTime>
</AfterTime>
```

Plates XML Block

```
<Plates version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <Plate>
    <captureTime><!-- req, xs:datetime --></captureTime>
    <plateNumber><!-- req, xs:string --></plateNumber>
    <picName><!-- req, xs:string --></picName>
    <country><!-- req, xs:string "BLR,...." --></country>
  </Plate>
</Plates>
```

3.1.8 /ISAPI/Traffic/channels/<ID>/vehicleDetect

/ISAPI/Traffic/channels/<ID>/vehicleDetect		General Resource	v2.0
GET			
Description	It is used to get the configuration of vehicle detection .		
Query	None		
Inbound Data	None		
Success Return	VehicleDetectCfg		
PUT			
Description	It is used to update the configuration of vehicle detection.		
Query	None		
Inbound Data	VehicleDetectCfg		
Success Return	ResponseStatus		
Notes:			
The number of PlateRecogRegion should be same with the number of lane.			

VehicleDetectCfg XML Block

```
<VehicleDetectCfg version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <enabled> <!-- req, xs:boolean --> </enabled>
  <stateOrProvinceName> <!-- opt, xs:string --> </stateOrProvinceName>
  <VehicleDetectSceneList>
    <VehicleDetectScene/>
  </VehicleDetectSceneList>
  <RodeType><!--opt, -->
    <type><!--opt,xs:string,"entrance,city,custom"--> </type>
    <Custom><!--dep, custom -->
      <delayTime><!--opt,xs:interger,[0,15000]--></delayTime>
      <delayTimeUnit><!--opt,xs:string,"ms"></delayTimeUnit>
    </Custom>
  </RodeType>
</VehicleDetectCfg>
```

3.1.9 /ISAPI/Traffic/channels/<ID>/vehicleDetects/<SID>

/ISAPI/Traffic/channels/<ID>/vehicleDetects/<SID>		General Resource	v2.0
GET			
Description	It is used to get the configuration of vehicle detection.		
Query	None		
Inbound Data	None		
Success Return	VehicleDetectScene		
PUT			
Description	It is used to update the configuration of vehicle detection.		
Query	None		
Inbound Data	VehicleDetectScene		
Success Return	ResponseStatus		
Notes:			
The number of PlateRecogRegion should be same with the number of lane.			

VehicleDetectCfg XML Block

```

<VehicleDetectScene xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <id>          <!-- req, xs:integer -->          </id>
  <sceneName> <!-- opt, xs:string --> </sceneName>
  <enabled>      <!-- req, xs:boolean -->      </enabled>
  <PlateRecogParam>
    <PlateRecogRegionList>
      <PlateRecogRegion>
        <id> <!-- req, xs:string--> </id>
        <RegionCoordinatesList>
          <RegionCoordinates> <!-- req, -->
            <positionX>      <!-- req, xs:integer;coordinate -->      </positionX>
            <positionY>      <!-- req, xs:integer;coordinate -->      </positionY>
          </RegionCoordinates>
        <RegionCoordinatesList>
        </PlateRecogRegion>
      </PlateRecogRegionList>
    <PlateRecogParam>
      <LaneConfig>
        <LaneList>
          <Lane>
            <laneId>      <!-- req xs:integer--> </laneId>
            <RegionCoordinatesList> <!-- req -->
              <RegionCoordinates> <!-- minoccurs=2,maxoccurs=2-->
                <positionX> <!-- req, xs:integer> </positionX>
                <positionY> <!-- req, xs:integer> </positionY>
              </RegionCoordinates>
            </RegionCoordinatesList>
          </Lane>
        </LaneList>
      </LaneConfig>
    </PlateRecogParam>
  </PlateRecogParam>
</VehicleDetectScene>

```

```

    </RegionCoordinates>
  </RegionCoordinatesList>
</Lane>
</LaneList>
</LaneConfig>
</VehicleDetectScene>

```

3.1.10 /ISAPI/Traffic/channels/<ID>/vehicleDetect/capabilities

/ISAPI/Traffic/channels/<ID>/vehicleDetect/capabilities		General Resource	v2.0
GET			
Description	It is used to get the configuration capabilities of vehicle detection .		
Query	None		
Inbound Data	None		
Success Return	VehicleDetectCfg		
Notes:			

VehicleDetectCfg XML Block

```

<VehicleDetectCfg version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <enabled> <!-- req, xs:boolean --> </enabled>
  <stateOrProvinceName opt=""> <!-- opt, xs:string --> </stateOrProvinceName>
  <VehicleDetectSceneList size="">
    <VehicleDetectScene>
      <id> <!-- req, xs:integer --> </id>
      <sceneName min="" max=""> <!-- opt, xs:string --> </sceneName>
      <enabled> <!-- req, xs:boolean --> </enabled>
      <PlateRecogParam>
        <PlateRecogRegionList size="">
          <PlateRecogRegion>
            <id> <!-- req, xs:string --> </id>
            <RegionCoordinatesList size="">
              <RegionCoordinates> <!-- req, -->
                <positionX> <!-- req, xs:integer;coordinate -->
</positionX>
                <positionY> <!-- req, xs:integer;coordinate -->
</positionY>
              </RegionCoordinates>
            </RegionCoordinatesList>
          </PlateRecogRegion>
        </PlateRecogRegionList>
      </PlateRecogParam>

```

```

<LaneConfig>
  <LaneList size="">
    <Lane>
      <laneId min="" max=""><!-- req xs:integer--> </laneId>
      <RegionCoordinatesList size=""><!-- req -->
        <RegionCoordinates> <!-- minoccurs=2,maxoccurs=2-->
          <positionX><!-- req, xs:integer> </positionX>
          <positionY><!-- req, xs:integer> </positionY>
        </RegionCoordinates>
      </RegionCoordinatesList>
    </Lane>
  </LaneList>
</LaneConfig>
</VehicleDetectScene>
</VehicleDetectSceneList>
<RodeType><!--opt, -->
  <type opt="entrance,city,custom"><!--opt,xs:string,""--> </type>
  <Custom><!--dep, custom -->
    <delayTime min="" max=""><!--opt,xs:interger,[0,15000]--></delayTime>
    <delayTimeUnit opt="ms"><!--opt,xs:string,"ms"></delayTimeUnit>
  </Custom>
</RodeType>
</VehicleDetectCfg>

```

3.1.11 /ISAPI/Traffic/channels/<ID>/licensePlateAuditData

/ISAPI/Traffic/channels/<ID>/licensePlateAuditData		General Resource v2.0	
GET			
Description	Get device’s licencePlateAudit data.		
Query	None		
Inbound Data	None		
Success Return	Opaque Data		
PUT			
Description	Update device’s licencePlateAudit data.		
Query	None		
Inbound Data	Opaque Data		
Success Return	<ResponseStatus>		
Error Status Code	statusCode	subStatusCode	description
	2	upgrading	Device upgrading
	3	badFlash	Flash error

	6	badVersion	Version mismatch
	6	badDevType	Device type mismatch
	6	badLanguage	Language mismatch
Notes:			

3.1.12 /ISAPI/Traffic/channels/<ID>/searchLPListAudit

/ISAPI/Traffic/channels/<ID>/searchLPListAudit		General Resource	v2.0
POST			
Description	Get Vehicle Audit List Info		
Query	None		
Inbound Data	<LPListAuditSearchDescription>		
Success Return	<LPListAuditSearchResult>		
Notes:			
channels/<ID>: video Channel			
LP:License Plate			

LPListAuditSearchDescription XML Block

```
<LPListAuditSearchDescription version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <searchID><!--req,xs:string; --></searchID>
  <searchResultPosition><!-- req, xs: integer--></searchResultPosition>
  <maxResults><!-- req, xs: integer --></maxResults>
</LPListAuditSearchDescription>
```

LPListAuditSearchResult XML Block

```
<LPListAuditSearchResult version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
<searchID><!--req,xs:string; --></searchID>
<responseStatus>true</responseStatus>
<responseStatusStr>OK</responseStatusStr>
<numOfMatches><!-- req, xs: integer --></numOfMatches>
<totalMatches><!-- req, xs: integer --></totalMatches>
<LicensePlateInfoList>
  <LicensePlateInfo>
    <id><!-- req, xs:string --></id>
    <LicensePlate><!--opt,xs:string,--></LicensePlate>
```

```

<type><!--opt,xs:string,"blackList,whitelist,allVehicleList,otherVehicleList"--></type>
<createTime><!--opt,xs:time, ISO8601 time --></createTime>
    <direction><!--opt,xs:string, "forward,reverse,unknown" --></direction>
    <laneNo><!--opt,xs:integer, "1" --></laneNo>
</LicensePlateInfo>
</LicensePlateInfoList>
</LPListAuditSearchResult>

```

3.1.13 /ISAPI/Traffic/channels/<ID>/picParam

/ISAPI/Traffic/channels/<ID>/picParam		General Resource	v2.0
GET			
Description	It is used to get the parameters of picture to be capture capabilities		
Query	None		
Inbound Data	None		
Success Return	PicParam		
PUT			
Description	It is used to set the parameters of picture to be capture capabilities		
Query	None		
Inbound Data	PicParam		
Success Return	ResponseStatus		
Notes:			
<picQuality> is requested when <mode> is set to “quality”,on the contrary, <picSize> is requested when <mode> is set to “size”.			
<item> values are: positionNo,positionInfo, cameraNo, captureTime, plateNo,vehicleColor,sceneName,carType,vehicleLogo,sceneNo			

PicParam XML Block

```

<PicParam version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
    <PictureCfg>
        <mode><!--req, xs:string,"quality,size"--></mode>
        <pictureQuality><!--dep, xs:integer,1-100 --></pictureQuality>
        <pictureSize><!--dep, xs:integer,unit:kb --></pictureSize>
    </PictureCfg>
    <Overlap>
        <enabled><!-- req, xs: boolean></enabled>
        <OverlapItem opt=""><!--req, xs:string,
"positionNo,positionInfo,cameraNo,captureT ime,plateNo,vehicleColor,sceneName,
carType,vehicleLogo,sceneNo"--></OverlapItem>

```

```

    <fontColor> <!--opt, xs: hexBinary;color --> </fontColor>
    <backColor> <!--opt, xs: hexBinary;color --> </backColor>
  </Overlap>
</PicParam>

```

3.1.14 /ISAPI/Traffic/channels/<ID>/picParam/capabilities

/ISAPI/Traffic/channels/<ID>/picParam/capabilities		General Resource	v2.0
GET			
Description	It is used to get the parameters of picture to be capture capabilities		
Query	None		
Inbound Data	None		
Success Return	PicParam		
Notes:			
<picQuality> is requested when <mode> is set to “quality”,on the contrary, <picSize> is requested when <mode> is set to “size”.			
<item> values are: positionNo,positionInfo, cameraNo, captureTime, plateNo,vehicleColor,sceneName,carType,vehicleLogo,sceneNo			

PicParam XML Block

```

<PicParam version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <PictureCfg>
    <mode opt="quality,size"> <!--req, xs:string,""--> </mode>
    <pictureQuality min="1" max="100"> <!--dep, xs:integer,1-100 --> </pictureQuality>
    <pictureSize> <!--dep, xs:integer,unit:kb --> </pictureSize>
  </PictureCfg>
  <Overlap>
    <enabled> <!-- req, xs: boolean> </enabled>
    <OverlapItem
    opt="positionNo,positionInfo,cameraNo,captureTime,plateNo,vehicleColor,sceneName,
    carType,vehicleLogo,sceneNo"><!--req, xs:string, "
    "--></OverlapItem>
    <fontColor> <!--opt, xs: hexBinary;color --> </fontColor>
    <backColor> <!--opt, xs: hexBinary;color --> </backColor>
  </Overlap>
</PicParam>

```

3.1.15 /ISAPI/System/Video/inputs/channels/ID/VCAResource

/ISAPI/System/Video/inputs/channels/ID/VCAResource		General Resource	v2.0
--	--	------------------	------

GET	
Description	Get the parameter configuration of VCA resources.
Query	None
Inbound Data	None
Success Return	VCAResource
PUT	
Description	Set the parameter configuration of VCA resources.
Query	None
Inbound Data	VCAResource
Success Return	ResponseStatus
Notes:	

VCAResource XML Block

```
<VCAResource version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <type> <!--req,xs:string,
"basicBehavior,fullBehavior,facesnapBehavior,facesnap,TFS,smartVehicleDetection,smartHVTDe
tection,smartDetection, vehicleDetection" --> </type>
</VCAResource>
```

3.1.16 /ISAPI/Traffic/channels/<ID>/vehicleDetect/config

/ISAPI/Traffic/channels/<ID>/vehicleDetect/config		General Resource	v2.0
GET			
Description	Get the realtime display configuration of license plate		
Query	None		
Inbound Data	None		
Success Return	Configuration		
PUT			
Description	Set realtime display configuration of license plate		
Query	None		
Inbound Data	Configuration		
Success Return	ResponseStatus		
Notes: <needAuth> whether need the authentication, if not, the authentication info won't be sent.			
<dir> directory of license plate picture			
<picTime>The capture time of the first license plate that saved in the device memory			
<picDisplay>Whether the captured picture need to be displayed			

Configuration XML Block

```
<Configuration version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <needAuth> <!-- req, xs:boolean --> </needAuth>
```

```
<dir> <!-- RO, xs:string --> </dir>
<picTime> <!-- RO, xs:string --> <picTime>
<picDisplay><!-- req, xs:boolean --><picDisplay>
</Configuration>
```

3.1.17 FTP Uploading

/ISAPI/System/Network/ftp/capabilities

/ISAPI/System/Network/ftp/capabilities		General Resource	v2.0
GET			
Description	It is used to get ftp capability.		
Query	None		
Inbound Data	None		
Success Return	< FTPNotificationList >		
Notes:			

FTPNotificationList XML Block

```
<FTPNotificationList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <FTPNotification/> <!-- opt -->
</FTPNotificationList>
```

FTPNotification XML Block

```
<FTPNotification version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string;id --> </id>
  <enabled> <!-- req, xs:boolean --> </enabled>
  <useSSL> <!-- opt, xs:boolean --> </useSSL>
  <addressingFormatType opt=" ipaddress,hostname">
    <!-- req, xs:string, -->
  </addressingFormatType>
  <hostName> <!-- dep, xs:string --> </hostName>
  <ipAddress> <!-- dep, xs:string --> </ipAddress>
  <ipv6Address> <!-- dep, xs:string --> </ipv6Address>
  <portNo> <!-- opt, xs:integer --> </portNo>
  <userName> <!-- req, xs:string --> </userName>
  <password> <!-- wo, xs:string --> </password>
  <passiveModeEnabled> <!-- opt, xs:boolean --> </passiveModeEnabled>
  <annoyftp> <!-- opt, xs:boolean --> </annoyftp>
  <uploadPicture> <!-- opt, xs:boolean --> </uploadPicture>
  <uploadVideoClip> <!-- opt, xs:Boolean --> </uploadVideoClip>
```

```

<uploadPath> <!--req -->
  <pathDepth> <!--req, xs:integer, 0...2 --> </pathDepth>
  <topDirNameRule opt="devName,devId,devIp,customize">
    <!-- dep, xs:string, -->
  </topDirNameRule>
  <topDirName/> <!-- dep, xs:string-->
  <subDirNameRule opt="chanName,chanId,customize">
    <!-- dep, xs:string,
  </subDirNameRule>
  <subDirName/> <!-- dep, xs:string-->
</uploadPath>
<FtpUpload version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <vehiclePicName>
    <mode opt="default,custom"> <!--req, xs:string, --> </mode>
    <NameRuleType>
      <RuleTypeItem size="">
        <RuleTypeItem>
          <id><!-- req, xs: interger --></id>
          <item opt="capture_time,plate_No,alarm_type,camera_name"><!--
req, xs: string --></item>
          <cameraName min="" max=""><!-- dep, xs: string
"camera_name"--></cameraName>
        </RuleTypeItem>
      </RuleTypeItemList>
    </NameRuleType>
  </vehiclePicName>
</FtpUpload>
<picArchivingInterval min="" max=""><!--opt,xs:integer,"1~30,0-close"
--></picArchivingInterval>
<picNameRuleType opt="default,prefix"><!-- opt, xs:string --></picNameRuleType>
<picNamePrefix min="0" max="32"><!-- dep, xs:string --></picNamePrefix>
</FTPNotification>

```

/ISAPI/System/Network/ftp

/ISAPI/System/Network/ftp		General Resource	v2.0
GET			
Description	It is used to get the configurations of FTP.		
Query	None		
Inbound Data	None		
Success Return	FTPNotificationList		
PUT			

Description	It is used to set the configurations of FTP.
Query	None
Inbound Data	FTPNotificationList
Success Return	ResponseStatus
Notes:	

FTPNotificationList XML Block

```
<FTPNotificationList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <FTPNotification/>  <!-- opt -->
</FTPNotificationList>
```

/ISAPI/System/Network/ftp/<ID>

/ISAPI/System/Network/ftp/ID

General Resource v2.0

GET	
Description	It is used to get the configuration of a particular FTP.
Query	None
Inbound Data	None
Success Return	FTPNotification
PUT	
Description	It is used to set the configurations of a particular FTP.
Query	None
Inbound Data	FTPNotification
Success Return	ResponseStatus

Notes:

Depending on the value of <addressingFormatType>, either the <hostName> or the IP address fields will be used to locate the NTP server.

Note: FTP transfers are always in binary mode.

<pathDepth> the depth of path. For example, / depth is 0, /a depth is 1, /a/b depth is 2

FTPNotification XML Block

```
<FTPNotification version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>  <!-- req, xs:string;id -->  </id>
  <enabled> <!--req, xs:boolean --> </enabled>
  <useSSL> <!--opt, xs:boolean> </useSSL>
  <addressingFormatType>
    <!-- req, xs:string, "ipaddress,hostname" -->
  </addressingFormatType>
```

```

<hostName> <!-- dep, xs:string --> </hostName>
<ipAddress> <!-- dep, xs:string --> </ipAddress>
<ipv6Address> <!-- dep, xs:string --> </ipv6Address>
<portNo> <!-- opt, xs:integer --> </portNo>
<userName> <!-- req, xs:string --> </userName>
<password> <!-- wo, xs:string --> </password>
<passiveModeEnabled> <!-- opt, xs:boolean --> </passiveModeEnabled>
<annoyftp> <!--opt, xs:boolean --> </annoyftp>
<uploadPicture> <!--opt, xs:boolean --> </uploadPicture>
<uploadVideoClip> <!-- opt, xs:Boolean --> </uploadVideoClip>
<uploadPath> <!--req -->
  <pathDepth> <!--req, xs:integer, 0...2 --> </pathDepth>
  <topDirNameRule>
    <!-- dep, xs:string, "devName, devId, devIp, customize" -->
  </topDirNameRule>
  <topDirName/> <!-- dep, xs:string-->
  <subDirNameRule>
    <!-- dep, xs:string, "chanName, chanId, customize"
  </subDirNameRule>
  <subDirName/> <!-- dep, xs:string-->
</uploadPath>
<picArchivingInterval><!--opt,xs:integer, --></picArchivingInterval>
<picNameRuleType><!-- opt, xs:string,"default,prefix" --></picNameRuleType>
<picNamePrefix><!-- dep, xs:string --></picNamePrefix>
</FTPNotification>

```

/ISAPI/System/Network/ftp/test

/ISAPI/System/Network/ftp/test		General Resource	v2.0
GET			
Description	It is used to test the ftp server available or not		
Query	None		
Inbound Data	FTPTestDescription		
Success Return	FTPTestResult		
POST			
Description	It is used to test the ftp server available or not		
Query	None		
Inbound Data	FTPTestDescription		
Success Return	FTPTestResult		
Notes:			

FTPTestDescription XML Block

```
<FTPTestDescription version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <useSSL> <!--opt, xs:boolean> </useSSL>
  <addressingFormatType>
    <!-- req, xs:string, "ipaddress,hostname" -->
  </addressingFormatType>
  <hostName>          <!-- dep, xs:string -->          </hostName>
  <ipAddress>          <!-- dep, xs:string -->          </ipAddress>
  <ipv6Address>        <!-- dep, xs:string -->          </ipv6Address>
  <portNo>             <!-- opt, xs:integer -->         </portNo>
  <userName>           <!-- req, xs:string -->          </userName>
  <password>           <!-- wo, xs:string -->           </password>
  <passiveModeEnabled> <!-- opt, xs:boolean -->         </passiveModeEnabled>
  <annoyftp> <!--opt, xs:boolean --> </annoyftp>
  <uploadPath> <!--req -->
    <pathDepth> <!--req, xs:integer, 0...2 --> </pathDepth>
    <topDirNameRule>
      <!-- dep, xs:string, "devName, devId, devIp, customize" -->
    </topDirNameRule>
    <topDirName/> <!-- dep, xs:string-->
    <subDirNameRule>
      <!-- dep, xs:string, "chanName, chanId, customize"
    </subDirNameRule>
    <subDirName/> <!-- dep, xs:string-->
  </uploadPath>
</FTPTestDescription>
```

FTPTestResult XML Block

```
<FTPTestResult version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <errorDescription> <!-- req, xs:string -->.</errorDescription>
</FTPTestResult>
```

/ISAPI/System/Network/ftp/uploadInfo

/ISAPI/System/Network/ftp/uploadInfo		General Resource	v2.0
GET			
Description	Get ftp Upload info Param		
Query	None		
Inbound Data	None		

Success Return	FtpUpload
PUT	
Description	Set ftp Upload info Param
Query	None
Inbound Data	FtpUpload
Success Return	ResponseStatus
Notes:	
<item> values are: capture_time,plate_No,alarm_type,camera_name	

FtpUpload XML Block

```
<FtpUpload version="2.0" xmlns="http://www.std-cgi.org/ver20/XMLSchema">
  <vehiclePicName>
    <mode><!--req, xs:string,"default,custom"--> </mode>
    <NameRuleType><!--dep," customType"-->
      <RuleTypeItemList >
        <RuleTypeItem>
          <id><!-- req, xs: interger --></id>
          <item><!-- req, xs: string --></item>
          <cameraName><!-- dep, xs: string "dep camera_name
node"--></cameraName>
        </RuleTypeItem>
      </RuleTypeItemList>
    </NameRuleType>
  </vehiclePicName>
</FtpUpload>
```

3.1.18 Snapshot

/ISAPI/Snapshot

/ISAPI/Snapshot	Service v2.0
Notes: snapshot service	

/ISAPI/Snapshot/channels

/ISAPI/Snapshot/channels	General Resource v2.0
GET	
Description	It is used to get the properties of snapshot channels for the device.

Query	None
Inbound Data	None
Success Return	SnapshotChannelList
PUT	
Description	It is used to update the properties of snapshot channels for the device.
Query	None
Inbound Data	SnapshotChannelList
Success Return	ResponseStatus
Notes:	

SnapshotChannelList XML Block

```
<SnapshotChannelList version="2.0"
  xmlns="http://www.isapi.org/ver20/XMLSchema">
  <SnapshotChannel/> <!-- opt -->
</SnapshotChannelList>
```

/ISAPI/Snapshot/channels/<ID>

/ISAPI/Snapshot/channel/ID		General Resource	v2.0
GET			
Description	It is used to get the properties of a particular snapshot channel.		
Query	None		
Inbound Data	None		
Success Return	SnapshotChannel		
PUT			
Description	It is used to update the properties of a particular snapshot channel.		
Query	None		
Inbound Data	SnapshotChannel		
Success Return	ResponseStatus		
Notes:			

SnapshotChannel XML Block

```
<SnapshotChannel version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string;id --> </id>
  <videoInputChannelID> <!-- req, xs:string;id --> </videoInputChannelID>
  <timingCapture> <!-- opt -->
    <enabled> <!-- req, xs:boolean --> </enabled>
    <supportSchedule> <!-- opt, ro, xs:boolean --> </supportSchedule>
    <compress>
      <pictureCodecType>
        <!-- req, xs:string, "JPEG,BMP,GIF,PNG" -->
```

```

</pictureCodecType>
<pictureWidth> <!-- req, xs:integer --> </pictureWidth>
<pictureHeight> <!-- req, xs:integer --> </pictureHeight>
<quality> <!-- opt, xs:integer, percentage, 0..100 --> </quality>
<captureInterval> <!-- opt, xs:integer, milliseconds --> </captureInterval>
<compress>
</timingCapture>
<eventCapture> <!-- opt -->
  <enabled> <!-- req, xs:boolean --> </enabled>
  <supportSchedule> <!-- opt, ro, xs:boolean --> </supportSchedule>
  <compress>
    <pictureCodecType>
      <!-- req, xs:string, "JPEG,BMP,GIF,PNG" -->
    </pictureCodecType>
    <pictureWidth> <!-- req, xs:integer --> </pictureWidth>
    <pictureHeight> <!-- req, xs:integer --> </pictureHeight>
    <quality> <!-- opt, xs:integer, percentage, 0..100 --> </quality>
    <captureInterval> <!-- opt, xs:integer, milliseconds --> </captureInterval>
  <compress>
</eventCapture>
</SnapshotChannel>

```

3.1.19 /ISAPI/Event

/ISAPI/Event		Service v2.0
GET		Viewer
Description	It is used to get the configuration of the device event behavior, scheduling and notifications.	
Query	None	
Inbound Data	None	
Success Return	EventNotification	
PUT		Operator
Description	It is used to update the configuration of the device event behavior, scheduling and notifications.	
Query	None	
Inbound Data	EventNotification	
Success Return	ResponseStatus	
Notes:		
The event trigger list defines the set of device behaviors that trigger events.		
The event schedule defines when event notifications are active.		

The event notification methods define what types of notification (e-mail) are supported.

EventNotification XML Block

```
<EventNotification version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <EventTriggerList/>      <!-- opt -->
  <EventNotificationMethods/>  <!-- opt -->
</EventNotification>
```

/ISAPI/Event/capabilities

/ISAPI/Event/capabilities		General Resource	v2.0
GET			
Description	It is used to get network capability.		
Query	None		
Inbound Data	None		
Success Return	< EventCap>		
Notes:			

EventCap XML Block

```
<EventCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <isSupportHDFull> <!-- opt, xs:boolean --> </isSupportHDFull>
  <isSupportHDError> <!-- opt, xs:boolean --> </isSupportHDError>
  <isSupportNicBroken> <!-- opt, xs:boolean --> </isSupportNicBroken>
  <isSupportIpConflict> <!-- opt, xs:boolean --> </isSupportIpConflict>
  <isSupportIllaAccess> <!-- opt, xs:boolean --> </isSupportIllaAccess>
  <isSupportViException> <!-- opt, xs:boolean --> </isSupportViException>
  <isSupportViMismatch> <!-- opt, xs:boolean --> </isSupportViMismatch>
  <isSupportRecordException> <!-- opt, xs:boolean --> </isSupportRecordException>
  <isSupportRaidException> <!-- opt, xs:boolean --> </isSupportRaidException>
  <isSupportSpareException> <!-- opt, xs:boolean --> </isSupportSpareException>
  <isSupportPoePowerException><!--opt, xs:boolean--></isSupportPoePowerException>
</EventCap>
```

/ISAPI/Event/triggersCap

/ISAPI/Event/triggersCap		General Resource	v2.0
GET			

Description	It is used to get the triggers capabilities of all event.
Query	None
Inbound Data	None
Success Return	EventTriggersCap
Notes: <maxPresetActionNum>, <maxPatrolActionNum> and <maxPatternActionNum> are only required if the <isSupportPTZ> is true;	

EventTriggerCap XML Block

```
<EventTriggersCap version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <DiskfullTriggerCap><!--opt,xs: EventTriggerCapType --></DiskfullTriggerCap>
  <DiskerrorTriggerCap><!--opt,xs: EventTriggerCapType --></DiskerrorTriggerCap>
  <NicbrokenTriggerCap><!--opt,xs: EventTriggerCapType --></NicbrokenTriggerCap>
  <IpconflictTriggerCap><!--opt,xs: EventTriggerCapType --></IpconflictTriggerCap>
  <IllaocesTriggerCap><!--opt,xs: EventTriggerCapType --></IllaocesTriggerCap>
  <BadvideoTriggerCap><!--opt,xs: EventTriggerCapType --></BadvideoTriggerCap>
  <VideomismatchTriggerCap><!--opt,xs: EventTriggerCapType -->
</VideomismatchTriggerCap>
  <IOTriggerCap><!--opt,xs: EventTriggerCapType --></IOTriggerCap>
  <RegionEntranceTriggerCap><!--opt,xs:EventTriggerCapType--></RegionEntranceTriggerCap>
  <RegionExitingTriggerCap><!--opt,xs:EventTriggerCapType--></RegionExitingTriggerCap>
  <LoiteringTriggerCap><!--opt,xs:EventTriggerCapType--></LoiteringTriggerCap>
  <GroupDetectionTriggerCap><!--opt,xs:EventTriggerCapType--></GroupDetectionTriggerCap>
  <RapidMoveTriggerCap><!--opt,xs:EventTriggerCapType--></RapidMoveTriggerCap>
  <ParkingTriggerCap><!--opt,xs:EventTriggerCapType--></ParkingTriggerCap>
  <UnattendedBaggageTriggerCap><!--opt,xs:EventTriggerCapType--></UnattendedBaggageTriggerCap>
>
  <AttendedBaggageTriggerCap><!--opt,xs:EventTriggerCapType--></AttendedBaggageTriggerCap>
  <BlackListTriggerCap><!--opt,xs:EventTriggerCapType--></BlackListTriggerCap>
  <WhiteListTriggerCap><!--opt,xs:EventTriggerCapType--></WhiteListTriggerCap>
  <AllVehicleListTriggerCap><!--opt,xs:EventTriggerCapType--></AllVehicleListTriggerCap>
  <OtherVehicleListTriggerCap><!--opt,xs:EventTriggerCapType--></OtherVehicleListTriggerCap>
  <PeopleDetectionTriggerCap><!--opt,xs:EventTriggerCapType--></PeopleDetectionTriggerCap>
  <StorageDetectionTriggerCap><!--opt,xs:EventTriggerCapType--></StorageDetectionTriggerCap>
</EventTriggersCap>
```

EventTriggerCap XML Block

```
<EventTriggerCapType version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <isSupportCenter><!-- opt, xs:boolean --></isSupportCenter>
  <isSupportRecord><!-- opt, xs:boolean --></isSupportRecord>
  <isSupportMonitorAlarm><!-- opt, xs:boolean --></isSupportMonitorAlarm>
  <isSupportBeep><!-- opt, xs:boolean --></isSupportBeep>
  <isSupportIO><!-- opt, xs:boolean --></isSupportIO>
```

```

<isSupportFTP><!-- opt, xs:boolean --></isSupportFTP>
<isSupportEmail><!-- opt, xs:boolean --></isSupportEmail>
<isSupportLightAudioAlarm><!-- opt, xs:boolean --></isSupportLightAudioAlarm>
<isSupportFocus><!-- opt, xs:boolean --></isSupportFocus>
<isSupportPTZ><!-- opt, xs:boolean --></isSupportPTZ>
<maxPresetActionNum><!--dep,xs:integer></maxPresetActionNum>
<maxPatrolActionNum><!--dep,xs:integer></maxPatrolActionNum>
<maxPatternActionNum><!--dep,xs:integer></maxPatternActionNum>
<isSupportTrack><!-- opt, xs:boolean --></isSupportTrack>
</EventTriggerCapType>

```

/ISAPI/Event/triggers

/ISAPI/Event/triggers		General Resource	v2.0
GET			
Description	It is used to get the list of event triggers.		
Query	None		
Inbound Data	None		
Success Return	EventTriggerList		
PUT			
Description	It is used to update the list of event triggers.		
Query	None		
Inbound Data	EventTriggerList		
Success Return	ResponseStatus		
POST			
Description	It is used to add an event trigger.		
Query	None		
Inbound Data	EventTrigger		
Success Return	ResponseStatus		
DELETE			
Description	It is used to delete the list of event triggers.		
Query	None		
Inbound Data	None		
Success Return	ResponseStatus		
Notes:			
Event triggering defines how the device reacts to particular events, such as video loss or motion detection.			

EventTriggerList XML Block

```
<EventTriggerList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <EventTrigger/> <!-- opt -->
</EventTriggerList>
```

/ISAPI/Event/triggers/<ID>

/ISAPI/Event/triggers/ID

General Resource v2.0

GET	
Description	It is used to get a particular event trigger configuration.
Query	None
Inbound Data	None
Success Return	EventTrigger
PUT	
Description	It is used to update a particular event trigger configuration.
Query	None
Inbound Data	EventTrigger
Success Return	ResponseStatus
DELETE	
Description	It is used to delete a particular event trigger.
Query	None
Inbound Data	None
Success Return	ResponseStatus
Notes:	
<p>An event trigger determines how the device reacts when a particular event is detected. The following types are supported:</p> <p>IO: trigger when an input IO port changes state.</p> <p>VMD: trigger on video motion detection.</p> <p>Video loss: trigger when the input video signal cannot be detected.</p> <p>Disk failure: trigger when a disk fails.</p> <p>Recording failure: trigger when recording fails: either there is a problem with the disk, or the storage volume is full, or the volume is corrupt.</p> <p>Bad video: trigger when the input video is bad.</p> <p>POS: trigger when a point-of-sale event is detected.</p> <p>Analytics: trigger on a general analytics event. Currently analytics events apart from VMD, which has its own event trigger, are not supported.</p> <p>Fan failure: trigger when a fan fails.</p> <p>Nicbroken: trigger when net interface is broken.</p> <p>Resolution mismatch: trigger when video input port resolution is not matched up to compress resolution.</p>	

The ID in “/Event/triggers/ID” is defined as following declaration:

If the event type is IO, the ID is IO-InputPortNumber.

Examples :

IO-1 :the first IO input port

If the event type is VMD, videoloss or tamperdetection, the ID style is VMD/videoloss/tamper/regionEntrance/regionExiting/loitering/group/rapidMove/parking/unattendedBaggage/attendedBaggage-InputChannelID.

Examples:

If video input channel id is “video1”, the id is as follows:

VMD-1: Video Motion Detection of video input channel “video1”.

videoloss-1: Video Loss Detection of video input channel “video1”.

tamper-1: Tamper Detection of video input channel “video1”.

regionEntrance-1: Region Entrance Detection of video input channel “video1”.

regionExiting-1: Region Exiting Detection of video input channel “video1”.

loitering-1: Loitering Detection of video input channel “video1”.

group-1: Group Detection of video input channel “video1”.

rapidMove-1: Rapid Move Detection of video input channel “video1”.

parking-1: Parking Detection of video input channel “video1”.

unattendedBaggage-1: Unattended Baggage Detection of video input channel “video1”.

attendedBaggage-1: Attended Baggage Detection of video input channel “video1”.

blackList-1:channel 1 black list

whiteList-1:channel1 white list

allVehicleList-1: channel1 allVehicle list

otherVehicleList-1: channel1 otherVehicle list

peopleDetection-1: People Detection of video input channel “video1”.

EventTrigger XML Block

```

<EventTrigger version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string;id --> </id>
  <eventType>
    <!-- req, xs:string,
      "IO,VMD,videoloss,raidfailure,recordingfailure,
      badvideo,POS,analytics,fanfailure,overheat, tamperdetection, diskfull, diskerror,
      nicbroken, ipconflict, illaccess, videomismatch, resolutionmismatch, radifailure,PIR,
      WLSensor, spareException, poePowerException,heatmap,
      counting,linedetection,fielddetection,regionEntrance,regionExiting,loitering,group,rapid
      Move,parking,unattendedBaggage,attendedBaggage,blackList,whitelist,peopleDetection
      ,vehicledetection,HVTVehicleDetection,storageDetection,allVehicleList,otherVehicleList"
    -->
  </eventType>
  <eventDescription><!-- opt, xs:string --></eventDescription>
  <inputIOPortID> <!-- dep, xs:string; id --> </inputIOPortID>
  <dynInputIOPortID> <!-- dep, xs:string; id --> </dynInputPortID>
  <videoInputChannelID> <!-- dep, xs:string; id, if <eventType> is "VMD,videoloss,
  tamperdetection,regionEntrance,regionExiting,loitering,group,rapidMove,parking,unattendedBag
  gage,attendedBaggage" --> </videoInputChannelID>
  <dynVideoInputChannelID> <!-- dep, xs:string; id --> </dynVideoInputChannelID>
  <intervalBetweenEvents> <!-- opt, xs:integer, seconds --></intervalBetweenEvents>
  <WLSensorID> <!-- dep, xs:string; id --> </WLSensorID>
  <EventTriggerNotificationList/> <!-- opt -->
</EventTrigger>

```

/ISAPI/Event/triggers/<ID>/notifications

/ISAPI/Event/triggers/ID/notifications		General Resource	v2.0
GET			
Description	It is used to get the list of notification methods and behaviors for an event trigger.		
Query	None		
Inbound Data	None		
Success Return	EventTriggerNotificationList		
PUT			
Description	It is used to update the list of notification methods and behaviors for an event trigger.		
Query	None		
Inbound Data	EventTriggerNotificationList		
Success Return	ResponseStatus		
DELETE			

Description	It is used to delete the list of notification method and behavior for an event trigger.
Query	None
Inbound Data	None
Success Return	ResponseStatus
Notes: ptz: PTZ action record: recording monitorAlarm : monitor alarm center:send alarm to center LightAudioAlarm : light blink and sound the alarm <outputIOPortID> or <dynOutputIOPortID> is only required if the <notificationMethod> is "IO". <videoInputID> or <dynVideoInputID> is only required if the <notificationMethod> is "record". <ptzAction> is only required if the <notificationMethod> is "ptz";	

EventTriggerNotificationList XML Block

```
<EventTriggerNotificationList version="2.0"
  xmlns="http://www.isapi.org/ver20/XMLSchema">
  <EventTriggerNotification/>  <!-- opt -->
</EventTriggerNotificationList>
```

EventTriggerNotification XML Block

```
<EventTriggerNotification>  <!-- opt -->
  <id>  <!-- req, xs:string;id -->  </id>
  <notificationMethod>
    <!-- req, xs:string, "email,IM,IO,syslog,HTTP,FTP,beep, ptz, record
,    monitorAlarm, center, LightAudioAlarm,focus,trace" -->
  </notificationMethod>
  <notificationRecurrence>
    <!-- opt, xs:string, "beginning,beginningandend,recurring" -->
  </notificationRecurrence>
  <notificationInterval> <!-- dep, xs:integer, milliseconds --> </notificationInterval>
  <outputIOPortID>  <!-- dep, xs:string;id -->  </outputIOPortID>
  <dynOutputIOPortID>  <!-- dep, xs:string;id -->  </dynOutputIOPortID>
  <videoInputID>  <!-- dep, xs:string;id -->  </videoInputID>
  <dynVideoInputID>  <!-- dep, xs:string;id -->  </dynVideoInputID>
  <ptzAction> <!-- dep -->
    <ptzChannelID> <!--req, xs:string; id -->  </ptzChannelID>
    <actionName> <!-- req, xs:string, "preset, pattern, patrol" --> </actionName>
    <actionNum> <!-- dep, xs:integer> </actionNum>
  </ptzAction>
</EventTriggerNotification>
```

/ISAPI/Event/schedules

/ISAPI/Event/schedules	General Resource	v2.0
Notes:		

/ISAPI/Event/schedules/inputs

/ISAPI/Event/schedules/inputs		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	InputScheduleList		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	InputScheduleList		
Success Return	ResponseStatus		
Notes:			

InputScheduleList XML Block

```
< InputScheduleList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  < Schedule/>    <!-- opt -->
</InputScheduleList>
```

/ISAPI/Event/schedules/inputs/<ID>

/ISAPI/Event/schedules/inputs/ID		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	Schedule		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	Schedule		
Success Return	ResponseStatus		

Notes:

/ISAPI/Event/schedules/outputs

/ISAPI/Event/schedules/outputs		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	OutputScheduleList		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	OutputScheduleList		
Success Return	ResponseStatus		
Notes:			

OutputScheduleList XML Block

```
<OutputScheduleList version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <Schedule/>          <!-- opt -->
</OutputScheduleList>
```

/ISAPI/Event/schedules/blackList

/ISAPI/Event/schedules/blackList		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	BlackListScheduleList		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	BlackListScheduleList		
Success Return	ResponseStatus		
Notes:			

BlackListScheduleList XML Block

```
<BlackListScheduleList version="2.0"
xmlns="http://www.isapi.org/ver20/XMLSchema">
  <Schedule/>          <!-- opt -->
</BlackListScheduleList>
```

/ISAPI/Event/schedules/ blackList/ID		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	Schedule		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	Schedule		
Success Return	ResponseStatus		
Notes:			
ID: blackList-1			

Schedule XML Block

```
<Schedule version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string; id --> </id>
  <inputIOPortID>      <!-- ro, dep, xs:string; id -->      </inputIOPortID>
  <outputIOPortID>     <!-- ro, dep, xs:string; id -->     </inputIOPortID>
  <videoInputChannelID><!-- ro, dep, xs:string; id --></videoInputChannelID>
  <TimeBlockList> <!-- req -->
    <TimeBlock>
      <dayOfWeek>
        <!-- opt, xs:integer, ISO8601 weekday number, 1=Monday, ... -->
      </dayOfWeek>
      <TimeRange>      <!-- req -->
        <beginTime>    <!-- req, xs:time, ISO8601 time -->    </beginTime>
        <endTime>      <!-- req, xs:time, ISO8601 time -->    </endTime>
      </TimeRange>
    </TimeBlock>
  </TimeBlockList>
  <HolidayBlockList> <!-- opt -->
    <TimeBlock>
      <TimeRange>      <!-- req -->
        <beginTime>    <!-- req, xs:time, ISO8601 time -->    </beginTime>
        <endTime>      <!-- req, xs:time, ISO8601 time -->    </endTime>
      </TimeRange>
    </TimeBlock>
  </HolidayBlockList>
</Schedule>
```

```
</TimeBlock>
</HolidayBlockList>
</Schedule>
```

/ISAPI/Event/schedules/whiteList

/ISAPI/Event/schedules/whiteList		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	WhiteListScheduleList		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	WhiteListScheduleList		
Success Return	ResponseStatus		
Notes:			

WhiteListScheduleList XML Block

```
<WhiteListScheduleList version="2.0"
xmlns="http://www.isapi.org/ver20/XMLSchema">
  <Schedule/>          <!-- opt -->
</WhiteListScheduleList>
```

/ISAPI/Event/schedules/ whiteList/ID		General Resource	v2.0
GET			
Description	It is used to get trigger schedule.		
Query	None		
Inbound Data	None		
Success Return	Schedule		
PUT			
Description	It is used to update trigger schedule.		
Query	None		
Inbound Data	Schedule		
Success Return	ResponseStatus		
Notes:			
ID:whiteList-1			

Schedule XML Block

```

<Schedule version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id> <!-- req, xs:string; id --> </id>
  <inputIOPortID> <!-- ro, dep, xs:string; id --> </inputIOPortID>
  <outputIOPortID> <!-- ro, dep, xs:string; id --> </inputIOPortID>
  <videoInputChannelID><!-- ro, dep, xs:string; id --></videoInputChannelID>
  <TimeBlockList> <!-- req -->
    <TimeBlock>
      <dayOfWeek>
        <!-- opt, xs:integer, ISO8601 weekday number, 1=Monday, ... -->
      </dayOfWeek>
      <TimeRange> <!-- req -->
        <beginTime> <!-- req, xs:time, ISO8601 time --> </beginTime>
        <endTime> <!-- req, xs:time, ISO8601 time --> </endTime>
      </TimeRange>
    </TimeBlock>
  </TimeBlockList>
  <HolidayBlockList> <!-- opt -->
    <TimeBlock>
      <TimeRange> <!-- req -->
        <beginTime> <!-- req, xs:time, ISO8601 time --> </beginTime>
        <endTime> <!-- req, xs:time, ISO8601 time --> </endTime>
      </TimeRange>
    </TimeBlock>
  </HolidayBlockList>
</Schedule>

```

/ISAPI/Event/notification/httpServers/ID

/ISAPI/Event/notification/httpServers/ID		General Resource	v2.0
GET			
Description	It is used to get the configuration of a particular http server.		
Query	None		
Inbound Data	None		
Success Return	HttpServer		
PUT			
Description	It is used to set the configuration of a particular http server.		
Query	None		
Inbound Data	HttpServer		
Success Return	ResponseStatus		
Notes:			

<enabled> Enable the event alarm uploading via ISAPI or not.
 <protocolType> HTTPS is not supported.
 <httpAuthenticationMethod> MD5digest is not supported.
 <uploadPicture> whether there is need to upload the picture.

HttpServer XML Block

```
<HttpServer version="2.0" xmlns="http://www.isapi.org/ver20/XMLSchema">
  <id>    <!-- req, xs:string;id -->    </id>
  <url>    <!-- req, xs:string -->    </url>
  <enabled>    <!-- req, xs:boolean -->    </enabled>
  <protocolType>    <!-- opt, xs:string, "HTTP,HTTPS" -->    </protocolType>
  <parameterFormatType>
    <!-- opt, xs:string, "XML,querystring" -->
  </parameterFormatType>
  <addressingFormatType>
    <!-- req, xs:string, "ipaddress,hostname" -->
  </addressingFormatType>
  <hostName>    <!-- dep, xs:string -->    </hostName>
  <ipAddress><!-- dep, xs:string -->    </ipAddress>
  <ipv6Address>    <!-- dep, xs:string -->    </ipv6Address>
  <portNo>    <!-- opt, xs:integer -->    </portNo>
  <userName>    <!-- dep, xs:string -->    </userName>
  <password><!-- dep, xs:string -->    </password>
  <httpAuthenticationMethod>
    <!-- req, xs:string, "MD5digest,none,basic" -->
  </httpAuthenticationMethod>
  <uploadPicture> <!--opt, xs:boolean --> </uploadPicture>
</HttpServer>
```

HTTP Notification Alert

http://<ipAddress>:<portNo>/<url>		General Resource	v2.0
POST			
Description	HTTP notification alert request.		
Query			
Inbound Data			
Success Return			
Notes: Alarm info is the query of url, picture exists in the http body. channel= dateTime= eventType= vehicleDetection			

licensePlate=
region=
country=
vehicleType=
vehicleColor=

Notification XML Alert

```
POST
/?channelID=1&dateTime=2014-12-30T11:03:40+08:00&eventType=vehicleDetection&licensePlate=1234567&region=EU&country=France&vehicleType=motorVehicle&vehicleColor=black
HTTP/1.1
Authorization: Basic YWRtaW46MTIzNDU=
Content-Type:image/jpeg
Content-Length:15453
```

(The binary data of JPEG is omitted.)