Specification

of

XKGW API

BY XANDAR KARDIAN

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· Release notes

Date	Release	Edit	Note	
19-06-26	1.0	Jerry	Created.	
19-07-02	1.1	Jerry	Request body format changed Added the SDK version information.	

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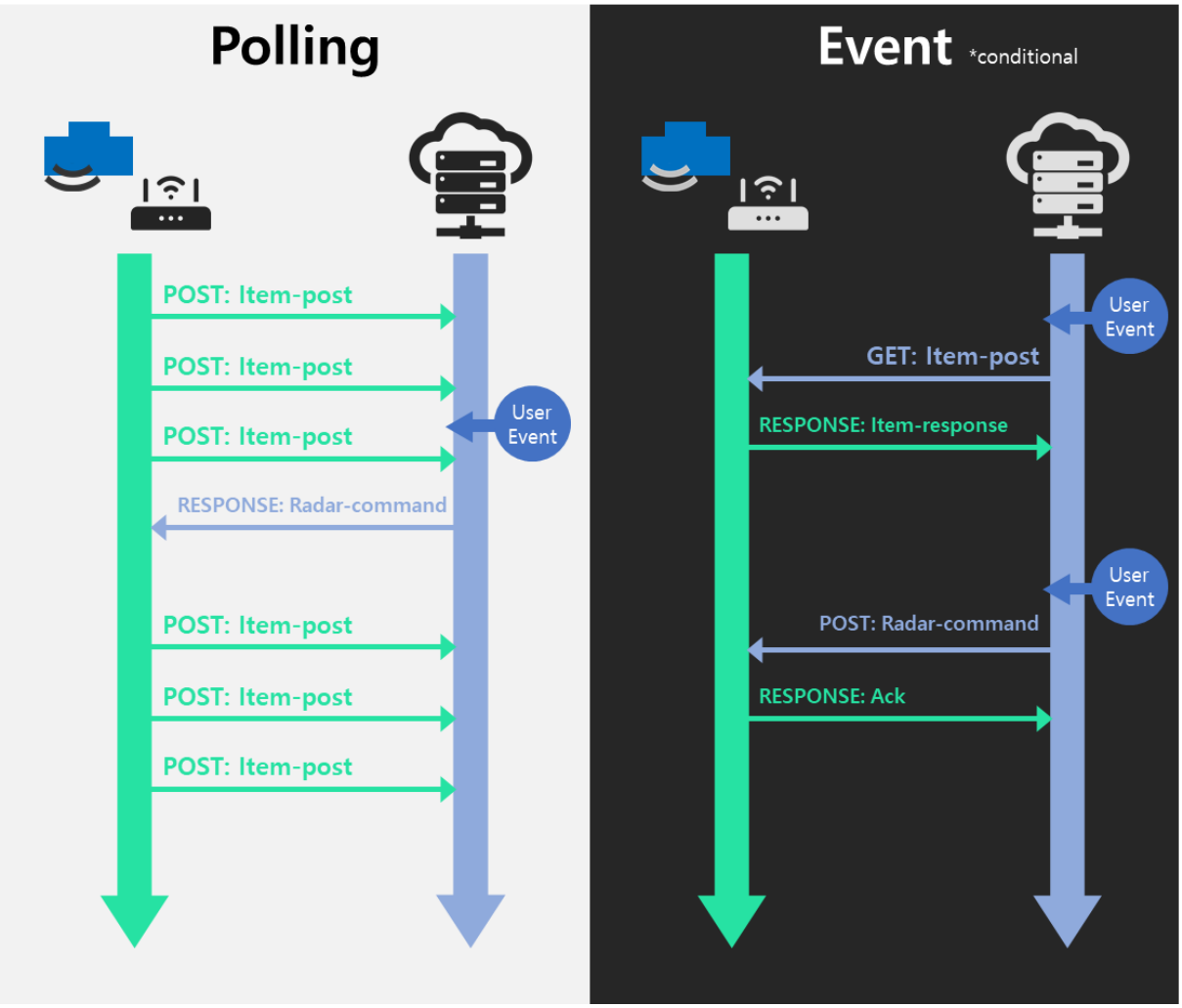
1. Chart

1.1. Sequence chart



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2. Specification

2.1. Client

Platform:

It uses 'XK-SDK' platform in Linux environment.

The platform uses the API to communicate data. And it does IP based communication(HTTP, HTTPS).

This is called 'XKGW-API'.

XK-SDK version: 1.3.3 applied

2.2. Server

Endpoint:

The endpoint settings are changed in the 'XK-SDK' platform. Allow IP address type, Domain name type.

Supports HTTP and HTTPS.

2.3. Mode

Polling mode:

It periodically transmits data to the server.

There is no logic for GET, and if you want to send data to the gateway, you can include it in the response.

Event mode:

Conditional support: If the address of the gateway is an external address or an internal address that can be port forwarded

The data can be read by 'GET' when the server needs data.

In the case of the command, use 'POST' to input the command to the gateway.

Will be updated later.

3. API

3.1. Polling mode

Item-post

Endpoint	(POST) anywhere
Description	Request gateway data and radar data to server. It periodically makes a request. (Changeable period) Item to be transferred can be changed in 'XK-SDK'.

Request Example	{
	"client":"google",
	"function":"XK-Radar-gateway",
	"device":"XKRP3BP-GGLE0001",
	"pi-serial":"9999-9999-9999",
	"free-mem":176656,
	"cpu-usage":10,
	"temperature":59.072,
	"start-date":"2019-06-26T10:26:27+09:00",
	"123456789123":{
	"radarID":22,
	"application":0,
	"serial":"123456789123",
	"port":1,
	"v0":0.00,
	"v1":0.69,
	"v2":7.00,
	...
	},
	"000055000055":{
	"radarID":55,
	"application":0,
	"serial":"000055000055",
	"port":0,
	"v0":55.00,
	"v1":0.20,
	"v2":7.00,
	},
	"000000000000":{
	"radarID":99,
	"application":0,
	"serial":"000000000000",
	"port":2,
	"v0":0.00,
	"v1":0.20,
	"v2":7.00,
	}
	}

Response With command Example Status 200	{
	"param":[31001, -1]
	}

Response Without command Example Status 200	{
	"param":[]
	}

Response Example Status 401	No response

3.1.1. Command

In the polling mode, a command is always included in the response to send a command to the gateway or radar.

- To Radar
  - Radar system command

Radar ID	Command	Payload 0	Payload 1	…	Payload n

  - Example
    If you want to reset the Radar #31001.
    ➔ "param": [31001, -1]
    If you want to return to the initial the Radar #31001's parameters.
    ➔ "param": [31001, 100100]

  - Radar parameter change

Radar ID	SOF R	Parameter Number 0	Parameter Value 0	…	Parameter Number n	Parameter Value n	EOF R	EOF R

* SOF (Start of Frame for radar): 1010.1010
* EOF (End of Frame for radar): 255.255

  - Example
    If you want to change Radar #31001's ID to 31002.
    ➔ "param": [31001, 1010.1010, 0, 31002, 255.255, 255.255]
    If you want to change Radar #31001's ID to 31002 and LED status on to off at once.
    ➔ "param": [31001, 1010.1010, 0, 31002, 4, 0, 255.255, 255.255]

· To Gateway

Radar ID	SOF G	Command	Payload 0	Payload 1	…	Payload n	EOF G

* SOF (Start of Frame for gateway): 4040.4040
* EOF (End of Frame for gateway): 255.255

- Example
  If you want to OTA update Radar #31001.
  ➔ "param": [31001, 4040.4040 1 255.255]
  If you want to receive only 11, 12, 13 of radar parameters.
  ➔ "param": [31001, 4040.4040 0 11 12 13 255.255]

3.2. Event mode

Not currently supported.