Interface Design (IDD) Description\_Arrowhead\_Zwave\_System\_Demonstrator\_ WallPlugServices

**Abstract**

This document provides the Interface Design Description of Arrowhead compliant Interfaces of Zwave Wall Plug Services.

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1. Interface Design Description Overview

This document describes the services provided by Thermostat Valve with REST interface. This interface uses HTTPs.

|  |  |
| --- | --- |
| **Service description** | **Path** |
| get-state |  |
| set-state |  |
| get-power |  |
| get-energy-consumption |  |
| set-energy-counter-reset |  |
|  |  |

|  |  |
| --- | --- |
| **Communication Profile** | **Path** |
| REST-JSON-TLS |  |

1. Interfaces

**GetState**:

The base URL for the request is: https://<host>:<port>/zwave/plugs/get-state/{deviceID}

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Function | URL subpath | Method | Input | Output | Description |
| GetState | /plugs/get-state/{deviceID}  ” | GET | deviceID  (String) | deviceID  (String)  State  (String) | Get the Plug state “0” for OFF and “255” for ON for the given deviceID |

**SetState**:

The base URL for the request is: https://<host>:<port>/zwave/plugs/set-state/{deviceID}

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Function | URL subpath | Method | Input | Output | Description |
| SetState | /plugs/set-state/{deviceID}  ” | PUT | deviceID  (String)  State  (String) | UPDATED,  BAD\_REQUEST | Set the Plug state “0” for OFF and “255” for ON for the given deviceID |

**GetPower**:

The base URL for the request is: https://<host>:<port>/zwave/plugs/get-power/{deviceID}

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Function | URL subpath | Method | Input | Output | Description |
| GetPower | /plugs/get-power/{deviceID}  ” | GET | deviceID  (String) | deviceID  (String)  power  (String) | Get the Plug power (the power of the device connected to the plug) in KW for the given deviceID |

**GetEnergyConsumption**:

The base URL for the request is: https://<host>:<port>/zwave/plugs/ get-energy-consumption /{deviceID}

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Function | URL subpath | Method | Input | Output | Description |
| GetEnergyConsumption | /plugs/get-energy-consumption /{deviceID}  ” | GET | deviceID  (String) | deviceID  (String)  energyConsumption  (String) | Get the Plug energy consumption (the energy consumed by the device connected to the plug) in KWH for the given deviceID |

**SetEnergyCounterReset**:

The base URL for the request is: https://<host>:<port>/zwave/plugs/set-energy-counter-reset /{deviceID}

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| Function | URL subpath | Method | Input | Output | Description |
| SetEnergyCounterReset | /plugs/set-energy-counter-reset /{deviceID}  ” | PUT | deviceID  (String) | UPDATED,  BAD\_REQUEST | Set the Plug energy counter reset for the given deviceID |

1. Information Model

Example: SetState

Request:

{

" deviceID" : “24”,

" State" : "0",

}

Response:

The Plug is switched OFF with resource successfully updated with response of 200=OK

1. Data Model

|  |  |  |
| --- | --- | --- |
| Object Field | Value Type | Description |
| ” deviceID” | [String](#_bookmark12) | Unique ID of the device from 2 to N assigned by the zwave Hat |
| ” state” | String | Plug state “0” for OFF and “255” for ON |
| ” power” | String | Plug power (the power of the device connected to the plug) in KW |
| “energyConsumption” | String | Plug energy consumption (the energy consumed by the device connected to the plug) in KWH |

1. Revision history

# Amendments

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| No. | Date | Version | Subject of Amendments | Author |
| 1 | 2021-01-6 | 0.1 | First Draft | Salman Javed |
| 2 | 2021-03-18 | 0.2 | Second draft | Salman Javed |

# Quality Assurance

|  |  |  |  |
| --- | --- | --- | --- |
| No. | Date | Version | Approved by |
| 1 |  |  |  |