Arrowhead Device Registry Core Service 4.1.3 Release Notes

In Arrowhead version 4.1.3, the whole codebase of the Arrowhead framework has been rewritten using Spring Boot technology. We believe the new version is better both in code quality, performance and robustness. It is easier to use, maintain and improve.

However, this means that Arrowhead version 4.1.3, is NOT compatible with providers and consumers written for version 4.1.2 because the changes affect not just the backend but the public interface of the core services, too.

This document describes the new public API of the Arrowhead Device Registry Core Service 4.1.3 and shows the key differences between the new interface and the old one.

Client Services

These services can be used by providers and consumers of the Arrowhead Cloud. All date fields contain the text representation of a UTC timestamp.

Uri: /deviceregistry/echo
Type: GET

Returns a "Got it" message with the purpose of testing the core service availability.

Uri: /deviceregistry/query
Type: POST

Returns Device Registry data that fits the input specification.

Input JSON structure:

```
{
  "addressRequirement": "string",
  "deviceNameRequirements": "string",
  "macAddressRequirement": "string",
  "maxVersionRequirement": 0,
  "metadataRequirements": {
    "additionalProp1": "string",
    "additionalProp2": "string",
    "additionalProp3": "string"
  },
  "minVersionRequirement": 0,
  "versionRequirement": 0
}
```

Mandatory fields: "deviceNameRequirements"

Clients are allowed to query ONLY for the public core system services.

Returned JSON structure:

```
{
```

```
  "deviceQueryData": [
    {
      "createdAt": "string",
      "device": {
        "address": "string",
        "authenticationInfo": "string",
        "createdAt": "string",
        "deviceName": "string",
        "id": 0,
        "macAddress": "string",
        "updatedAt": "string"
      },
      "endOfValidity": "string",
      "id": 0,
      "metadata": {
        "additionalProp1": "string",
        "additionalProp2": "string",
        "additionalProp3": "string"
      },
      "updatedAt": "string",
      "version": 0
    }
  ],
  "unfilteredHits": 0
}
```

Uri: /deviceregistry/register
Type: POST

Registers a device. A client is allowed to register only its own device. It means that device name and certificate common name must match for successful registration.

Input JSON structure:

```
{
  "device": {
    "address": "string",
    "authenticationInfo": "string",
    "deviceName": "string",
    "macAddress": "string"
  },
  "endOfValidity": "string",
  "metadata": {
    "additionalProp1": "string",
    "additionalProp2": "string",
    "additionalProp3": "string"
  },
  "version": 0
}
```

Mandatory fields: "device", "version"

Returned JSON structure:

```
{
  "createdAt": "string",
  "device": {
    "address": "string",
    "authenticationInfo": "string",
```

```
    "createdAt": "string",
    "deviceName": "string",
    "id": 0,
    "macAddress": "string",
    "updatedAt": "string"
  },
  "endOfValidity": "string",
  "id": 0,
  "metadata": {
    "additionalProp1": "string",
    "additionalProp2": "string",
    "additionalProp3": "string"
  },
  "updatedAt": "string",
  "version": 0
}
```

Uri: /deviceregistry/unregister
Type: DELETE
Query params:
- *device_name* – name of provider
- *mac-address* – mac-address of the device

Removes a registered device. A client is allowed to unregister only its own device. It means that device name and certificate common name must match for successful unregistration.

Management Services

These services can only be used by the system operator of the local cloud. All date fields contain the text representation of a UTC timestamp.

Uri: /deviceregistry/mgmt
Type: GET
Query params:
- *page* – zero-based page index (optional),
- *item_per_page* – maximum number of items returned (optional),
- *sort_field* – sort field (optional, default: id, possible values: id, createdAt, updatedAt),
- *direction* – direction of sorting (optional, default: ASC, possible values: ASC or DESC)

Returns a page of device registry records. If page and item_per_page are not defined, returns all records.

Returned JSON structure:

```
{
  "count": 0,
  "data": [
    {
      "createdAt": "string",
      "device": {
        "address": "string",
        "authenticationInfo": "string",
        "createdAt": "string",
        "deviceName": "string",
        "id": 0,
        "macAddress": "string",
        "updatedAt": "string"
```

```
      },
      "endOfValidity": "string",
      "id": 0,
      "metadata": {
        "additionalProp1": "string",
        "additionalProp2": "string",
        "additionalProp3": "string"
      },
      "updatedAt": "string",
      "version": 0
    }
  ]
}
```

Uri: /deviceregistry/mgmt/{deviceId}
Type: GET

Returns the service registry record specified by the id path parameter.

Returned JSON structure:

```
{
  "createdAt": "string",
  "device": {
    "address": "string",
    "authenticationInfo": "string",
    "createdAt": "string",
    "deviceName": "string",
    "id": 0,
    "macAddress": "string",
    "updatedAt": "string"
  },
  "endOfValidity": "string",
  "id": 0,
  "metadata": {
    "additionalProp1": "string",
    "additionalProp2": "string",
    "additionalProp3": "string"
  },
  "updatedAt": "string",
  "version": 0
}
```

Uri: /deviceregistry/mgmt/devicename/{deviceName}
Type: GET
Query params:
- *deviceName* – name of the required device
- *page* – zero-based page index (optional),
- *item_per_page* – maximum number of items returned (optional),
- *sort_field* – sort field (optional, default: id, possible values: id, createdAt, updatedAt),
- *direction* – direction of sorting (optional, default: ASC, possible values: ASC or DESC)

Mandatory field: "deviceName"

Returns a page of device registry records specified by the deviceName path parameter. If page and item_per_page are not defined, returns all records.

Returned JSON structure:

```json
{
  "count": 0,
  "data": [
    {
      "createdAt": "string",
      "device": {
        "address": "string",
        "authenticationInfo": "string",
        "createdAt": "string",
        "deviceName": "string",
        "id": 0,
        "macAddress": "string",
        "updatedAt": "string"
      },
      "endOfValidity": "string",
      "id": 0,
      "metadata": {
        "additionalProp1": "string",
        "additionalProp2": "string",
        "additionalProp3": "string"
      },
      "updatedAt": "string",
      "version": 0
    }
  ]
}
```

Uri: /deviceregistry/mgmt
Type: POST

Creates device registry record and returns the newly created record.

Input JSON structure:

```json
{
  "device": {
    "address": "string",
    "authenticationInfo": "string",
    "deviceName": "string",
    "macAddress": "string"
  },
  "endOfValidity": "string",
  "metadata": {
    "additionalProp1": "string",
    "additionalProp2": "string",
    "additionalProp3": "string"
  },
  "version": 0
}
```

Mandatory fields: "device", "version"

Returned JSON structure:

```json
{
  "createdAt": "string",
  "device": {
```

```
    "address": "string",
    "authenticationInfo": "string",
    "createdAt": "string",
    "deviceName": "string",
    "id": 0,
    "macAddress": "string",
    "updatedAt": "string"
  },
  "endOfValidity": "string",
  "id": 0,
  "metadata": {
    "additionalProp1": "string",
    "additionalProp2": "string",
    "additionalProp3": "string"
  },
  "updatedAt": "string",
  "version": 0
}
```

Uri: /deviceregistry/mgmt/{deviceId}
Type: PUT

Updates and returns the modified devicce registry record specified by the id path parameter. Not defined fields are going to be updated to "null" value.

Input JSON structure:

```
{
  "device": {
    "address": "string",
    "authenticationInfo": "string",
    "deviceName": "string",
    "macAddress": "string"
  },
  "endOfValidity": "string",
  "metadata": {
    "additionalProp1": "string",
    "additionalProp2": "string",
    "additionalProp3": "string"
  },
  "version": 0
}
```

Mandatory fields: "device", "version"

Returned JSON structure:

```
{
  "createdAt": "string",
  "device": {
    "address": "string",
    "authenticationInfo": "string",
    "createdAt": "string",
    "deviceName": "string",
    "id": 0,
    "macAddress": "string",
    "updatedAt": "string"
  },
  "endOfValidity": "string",
```

```
  "id": 0,
  "metadata": {
    "additionalProp1": "string",
    "additionalProp2": "string",
    "additionalProp3": "string"
  },
  "updatedAt": "string",
  "version": 0
}
```

Uri: /deviceregistry/mgmt/{deviceId}
Type: PATCH

Updates and returns the modified device registry record specified by the deiceId path parameter. Not defined fields are going to be NOT updated.

Input JSON structure:

```
{
  "device": {
    "address": "string",
    "authenticationInfo": "string",
    "deviceName": "string",
    "macAddress": "string"
  },
  "endOfValidity": "string",
  "metadata": {
    "additionalProp1": "string",
    "additionalProp2": "string",
    "additionalProp3": "string"
  },
  "version": 0
}
```

Returned JSON structure:

```
{
  "createdAt": "string",
  "device": {
    "address": "string",
    "authenticationInfo": "string",
    "createdAt": "string",
    "deviceName": "string",
    "id": 0,
    "macAddress": "string",
    "updatedAt": "string"
  },
  "endOfValidity": "string",
  "id": 0,
  "metadata": {
    "additionalProp1": "string",
    "additionalProp2": "string",
    "additionalProp3": "string"
  },
  "updatedAt": "string",
  "version": 0
}
```

Uri: /deviceregistry/mgmt/{deviceId}

Type: DELETE

Remove the device registry record specified by the deviceId path parameter.

Uri: /deviceregistry/mgmt/devices
Type: GET
Query params:
- *page* – zero-based page index (optional),
- *item_per_page* – maximum number of items returned (optional),
- *sort_field* – sort field (optional, default: id, possible values: id, createdAt, updatedAt),
- *direction* – direction of sorting (optional, default: ASC, possible values: ASC or DESC)

Returns a page of device definition records. If page and item_per_page are not defined, returns all records.

Returned JSON structure:

```
{
  "count": 0,
  "data": [
    {
      "address": "string",
      "authenticationInfo": "string",
      "createdAt": "string",
      "deviceName": "string",
      "id": 0,
      "macAddress": "string",
      "updatedAt": "string"
    }
  ]
}
```

Uri: /deviceregistry/mgmt/device/{deviceId}
Type: GET

Returns the device definition record specified by the deviceId path parameter.

Returned JSON structure:

```
{
  "address": "string",
  "authenticationInfo": "string",
  "createdAt": "string",
  "deviceName": "string",
  "id": 0,
  "macAddress": "string",
  "updatedAt": "string"
}
```

Uri: /deviceregistry/mgmt/devices
Type: POST

Creates service definition record and returns the newly created record.
Input JSON structure:

```
{
  "address": "string",
  "authenticationInfo": "string",
  "deviceName": "string",
  "macAddress": "string"
}
```

Returned JSON structure:

```
{
  "address": "string",
  "authenticationInfo": "string",
  "createdAt": "string",
  "deviceName": "string",
  "id": 0,
  "macAddress": "string",
  "updatedAt": "string"
}
```

Uri: /deviceregistry/mgmt/devices/{deviceId}
Type: PUT

Updates and returns the modified device definition record specified by the deviceId path parameter.

Input JSON structure:

```
{
  "address": "string",
  "authenticationInfo": "string",
  "deviceName": "string",
  "macAddress": "string"
}
```

Returned JSON structure:

```
{
  "address": "string",
  "authenticationInfo": "string",
  "createdAt": "string",
  "deviceName": "string",
  "id": 0,
  "macAddress": "string",
  "updatedAt": "string"
}
```

Uri: /deviceregistry/mgmt/devices/{deviceId}
Type: PATCH

Updates and returns the modified device definition record specified by the deviceId path parameter.

Input JSON structure:

```
{
  "address": "string",
  "authenticationInfo": "string",
  "deviceName": "string",
  "macAddress": "string"
}
```

Returned JSON structure:

```
{
  "address": "string",
  "authenticationInfo": "string",
  "createdAt": "string",
  "deviceName": "string",
  "id": 0,
  "macAddress": "string",
  "updatedAt": "string"
}
```

Uri: /deviceregistry/mgmt/devices/{deviceId}
Type: DELETE

Removes the device definition record specified by the deviceId path parameter.

Private Services

These services can only be used by other core services, therefore they are not part of the public API.