# Nuki Bridge API

# V1.13.3

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# 1. Introduction

The REST API on the Nuki Bridge offers simple endpoints to list all available Nuki Smart Locks and Nuki Openers, retrieve their current lock state and perform lock operations.

Check for the latest version of this document at our Developer Plattform.

## 1.1 Abbreviations used

| Abbr. | Long form | Description |
|---|---|---|
| cm | Continuous Mode | Nuki Opener Mode with Ring to Open continuously activated |
| lng | Lock 'n' Go | Unlock and lock again automatically |
| rto | Ring to Open | Nuki Opener State in which ringing the bell activates the electric strike actuation |

# 2. Calling URL

This is the address used to call the available services of the internal webserver.

The IP address is shown in the bridge settings within the Nuki App or can be retrieved from the bridge discovery URL.

The server is listening for incoming requests either on default port 8080 or the configured one if it has been modified within the Nuki App.

## 2.1 Example

The following base url will be used in upcoming examples:

http://192.168.1.50:8080/

# 3. Bridge discovery & API activation

Calling the URL https://api.nuki.io/discover/bridges returns a JSON array with all bridges which have been connected to the Nuki Servers through the same IP address than the one calling the URL within the last 30 days. The array contains the local IP address, port, the ID of each bridge and the date of the last change of the entry in the JSON array.

## 3.1 Example


```
{
  "bridges": [
    {
      "bridgeId":2117604523,"ip":"192.168.1.50","port":8080,"dateUpdated":"2017-06-14
T06:53:44Z"
    }
  ],
  "errorCode":0
}
```


Once a bridge has been discovered on the LAN the API can be activated and the API token retrieved by calling the /auth command. The user has to confirm this request by pressing the button on the bridge. For more details see the description of the /auth command. Alternatively you can activate the API and set the token by managing the Bridge in the Nuki App.

If discovery is disabled via /configAuth or through the Nuki App, the IP is 0.0.0.0 and the port 0. In this case the /auth command fails with HTTP error 403.

### 3.1.1 Alternative via Nuki App

As an alternative you can activate and manage the Bridge API via the Nuki App by opening *Burger menu* > *Manage my devices* > *Bridge* and follow the described steps:

## 3.2 Token

We offer two ways of verifying calls to endpoints with a token:

| **Method** | **Usage** |
|---|---|
| Plain token | You can use the plain token for testing and in private, secured WIFIs or VLANs. |

| | |
|---|---|
| Hashed token<br>**deprecated** | Use if you do not want to send the plain token within your API-calls. |
| Encrypted token | Use if you do not want to send any plain text information within your API-calls.<br><br>**Note:** Only available for the hardware bridge running firmware version:<br>Bridge 1.0: ≥1.22.1<br>Bridge 2.0: ≥2.14.0 |

### 3.2.1 Parameters

| Name | Parameter | Values | Example |
|---|---|---|---|
| Plain token | token | uint8[20] | 123456 |
| Timestamp | ts | YYY-MM-DD**T**HH:MM:SS**Z** | 2019-03-05T01:06:53Z |
| Random number | rnr | uint16 | 4711 |
| Hash | hash | sha256("ts,mr,token") | f52eb5ce382e356c4239f8fb4d0a87402bb95b7b3124f0762b806ad7d0d01cb6 |
| Encrypted token | ctoken | xsalsa20poly1305(“ts, rnr, secret, nonce”) | a7f6b4df6758b92445bd5470b755b43ba41cf50af8b3f6e19368348ddfb1686291555dfd90b31f9333 |

sha256("2019-03-05T01:06:53Z,4711,123456") =
f52eb5ce382e356c4239f8fb4d0a87402bb95b7b3124f0762b806ad7d0d01cb6

### Calculation Parameters

Following parameters are just required for the calculation of the Encrypted token:

| Name | Parameter | Values | Example |
|---|---|---|---|

| | | | |
|---|---|---|---|
| Secret for encrypted token | secret | sha256(“token”) | 8d969eef6ecad3c29a3a629280e686cf0c3f5d5a86aff3ca12020c923adc6c92 |
| Nonce for encrypted token | nonce | 24 byte random nonce | 119c38fb6d7d707b8a45f14e688b74b8c4c1acf33643c71a |

### 3.2.2 Example calls

**Plain token:**
http://192.168.1.50:8080/info?token=123456

**Hashed token (deprecated):**
http://192.168.1.50:8080/info?ts=2019-03-05T01:06:53Z&rnr=4711&hash=f52eb5ce382e356c4239f8fb4d0a87402bb95b7b3124f0762b806ad7d0d01cb6

A hashed token will only be valid with a sufficiently current timestamp and can not be reused, to prevent replay attacks. So making two calls with the exact same timestamp will only work with different random numbers.
To debug problems with non synchronous times you can check the current time on the bridge via bridge discovery

**Crypted token:**
http://192.168.1.50:8080/info?ctoken=a7f6b4df6758b92445bd5470b755b43ba41cf50af8b3f6e19368348ddfb1686291555dfd90b31f9333&nounce=119c38fb6d7d707b8a45f14e688b74b8c4c1acf33643c71a

A crypted token will only be valid within a 60 seconds timeframe based on the timestamp used for the calculation, to prevent replay attacks. So making two calls with the exact same timestamp will only work with different random numbers or by using a different nonce.

# 4 States and Actions

## 4.1 Device Types

Nuki device connected to the bridge.

0 ... smartlock - Nuki Smart Lock 1.0/2.0
2 ... opener - Nuki Opener
3 ... smartdoor - Nuki Smart Door
4 ... smartlock3 - Nuki Smart Lock 3.0 (Pro)

## 4.2 Modes

| mode | smartlock | opener | Description |
|---|---|---|---|
| 2 | door mode | door mode | Operation mode after complete setup |
| 3 | - | continuous mode | Ring to Open permanently active |

**Note:** Only modes 2 and 3 can appear in JSON elements, as the HTTP API is not available in the other modes.

## 4.3 Lock States

Possible lock states (used in Endpoints below).

| ID | smartlock | opener |
|---|---|---|
| 0 | uncalibrated | untrained |
| 1 | locked | online |
| 2 | unlocking | - |
| 3 | unlocked | rto active |
| 4 | locking | - |
| 5 | unlatched | open |
| 6 | unlocked (lock ‘n’ go) | - |
| 7 | unlatching | opening |
| 253 | - | boot run |
| 254 | motor blocked | - |
| 255 | undefined | undefined |

## 4.4 Lock Actions

Possible lock actions (used in Endpoints below):

| ID | smartlock | opener |
|---|---|---|
| 1 | unlock | activate rto |
| 2 | lock | deactivate rto |
| 3 | unlatch | electric strike actuation |
| 4 | lock ‘n’ go | activate continuous mode |
| 5 | lock ‘n’ go with unlatch | deactivate continuous mode |

## 4.5 Simple Lock Actions

Possible outcome of a simple lock action (mapping handled in the firmware of the device):

| action | smartlock / knob | smartlock / handle | opener |
|---|---|---|---|
| /lock | lock | lock | deactivate rto and cm |
| /unlock | unlatch | unlock | open |

To use this features your Nuki devices need the following firmware version:

| Nuki device | Firmware version |
|---|---|
| Bridge | 1.14.0/2.5.0 (or higher) |
| Smart Lock 1.0 | 1.8.0 (or higher) |
| Smart Lock 2.0 | 2.4.3 (or higher) |
| Opener | 1.3.0 (or higher) |

## 4.6 Doorsensor States

Possible door sensor states (used in Endpoints below).

| ID | name |
|---|---|
| 1 | deactivated |
| 2 | door closed |
| 3 | door opened |
| 4 | door state unknown |
| 5 | calibrating |
| 16 | uncalibrated |
| 240 | removed |
| 255 | unknown |

# 5. Endpoints

## /auth

| | | |
|---|---|---|
| **URL** | http://192.168.1.50:8080/auth | |
| **Usage** | Enables the api (if not yet enabled) and returns the api token.<br><br>If no api token has yet been set, a new (random) one is generated.<br><br>When issuing this API-call the bridge turns on its LED for 30 seconds.<br><br>The button of the bridge has to be pressed within this timeframe. Otherwise the bridge returns a negative success and no token. | |
| **Response** | JSON list containing the success of the authorization | |
| | **token** | The api token |
| | **success** | Flag indicating the success of the authorization |
| **Errors** | **HTTP 403** | Returned if the authentication is disabled |
| **Example-Call** | http://192.168.1.50:8080/auth | |
| **Example-Response** | <pre>{<br>"token": “token123”,<br>"success": true<br>}</pre> | |

## /configAuth

| | | |
|---|---|---|
| **URL** | http://192.168.1.50:8080/configAuth | |
| **Usage** | Enables or disables the authorization via /auth and the publication of the local IP and port to the discovery URL (https://api.nuki.io/discover/bridges). | |
| **URL-Parameters** | **enable** | Flag (0 or 1) indicating whether or not the authorization should be enabled |
| | **token** | The api token configured via the Nuki app when enabling the API |
| **Response** | JSON list containing the success of the operation | |
| | **success** | Flag indicating the success of the authorization |
| **Errors** | **HTTP 400** | Returned if the given value for **enable** is invalid (neither 0 nor 1) |
| | **HTTP 401** | Returned if the given **token** is invalid or a **hashed token** parameter is missing. |
| **Example-Calls** | http://192.168.1.50:8080/configAuth?enable=0&token=123456<br>http://192.168.1.50:8080/configAuth?enable=0&ts=2019-03-05T01:06:53Z&rnr=4711&hash=f52eb5ce382e356c4239f8fb4d0a87402bb95b7b3124f0762b806ad7d0d01cb6 | |
| **Example-Response** | {<br>"success": true<br>} | |

## /list

| | | | |
|---|---|---|---|
| **URL** | http://192.168.1.50:8080/list | | |
| **Usage** | Returns a list of all paired Nuki devices | | |
| **URL-Parameters** | **token** | The api token configured via the Nuki app when enabling the API | |
| **Response** | JSON array. One item of the following per Nuki device | | |
| | **nukiId** | ID of the Nuki device | |
| | **deviceType** | Nuki device type<br>● 0 => smartlock *(Nuki Smart Lock 1.0/2.0*)<br>● 2 => opener *(Nuki Opener)*<br>● 3 => smartdoor *(Nuki Smart Door*)<br>● 4 => opener *(Nuki Smart Lock 3.0 (Pro))* | |
| | **name** | Name of the Nuki device | |
| | **lastKnownState** | JSON list containing the last known lock state of the Nuki device | |
| | | **mode** | ID of the lock mode (see Modes) |
| | | **state** | ID of the lock state (see Lock States) |
| | | **stateName** | Name of the lock state (see Lock States) |
| | | **batteryCritical** | Flag indicating if the batteries of the Nuki device are at critical level |
| | | **batteryChargeState** | Value representing the current charge status in % |
| | | **keypadBatteryCri** | Flag indicating if the |

| | | | |
|---|---|---|---|
| | | **tical** | batteries of the paired Nuki Keypad are at critical level |
| | | **keypadBatteryCritical** | Flag indicating if the batteries of the paired Nuki Keypad are at critical level |
| | | **doorsensorState** | ID of the door sensor state |
| | | **doorsensorStateName** | Name of the door sensor state |
| | | **ringactionTimestamp** | timestamp of the last ring-action |
| | | **ringactionState** | Flag indicating if a ring-action is currently occuring or not (reset after 30 seconds) |
| | | **timestamp** | Timestamp of the retrieval of this lock state |
| **Errors** | **HTTP 401** | Returned if the given **token** is invalid or a **hashed token** parameter is missing. | |
| **Example-Calls** | http://192.168.1.50:8080/list?token=123456<br>http://192.168.1.50:8080/list?ts=2019-03-05T01:06:53Z&rnr=4711&hash=f52eb5ce382e356c4239f8fb4d0a87402bb95b7b3124f0762b806ad7d0d01cb6 | | |
| **Example-Response** | [{<br>"nukiId": 1,<br>"deviceType": 0,<br>"name": "Home",<br>"lastKnownState": {<br>"mode": 2,<br>"state": 1,<br>"stateName": "unlocked",<br>"batteryCritical": false,<br>"batteryCharging": false, | | |

| | |
|---|---|
| | <pre>"batteryChargeState": 85,<br>"keypadBatteryCritical": false,<br>"doorsensorState": 2,<br>"doorsensorStateName": "door closed",<br>"timestamp": "2018-10-03T06:49:00+00:00" }<br>},{<br>"nukiId": 2,<br>"deviceType": 2,<br>"name": "Community door",<br>"lastKnownState": {<br>"mode": 3,<br>"state": 3,<br>"stateName": "rto active",<br>"batteryCritical": false,<br>"ringactionTimestamp": 2020-04-27T16:13:00+00:00”,<br>"ringactionState": false,<br>"timestamp": "2018-10-03T06:49:00+00:00"<br>}<br>}]</pre> |

## /lockState

***Warning:*** /lockstate gets the current state directly from the device and so should not be used for constant polling to avoid draining the batteries too fast. /list can be used to get regular updates on the state, as is it cached on the bridge.

| | | |
|---|---|---|
| **URL** | http://192.168.1.50:8080/lockState | |
| **Usage** | Retrieves and returns the current lock state of a given Nuki device | |
| **URL-Parameters** | **nukiId** | The ID of the Nuki device from which the lock state should be retrieved |
| | **deviceType** | Nuki device type (see Device Types; *defaults to 0)* |

| | | |
|---|---|---|
| | **token** | The api token configured via the Nuki app when enabling the API |
| **Response** | JSON list containing the retrieved lock state | |
| | **mode** | ID of the lock mode (see Modes) |
| | **state** | ID of the lock state (see Lock States) |
| | **stateName** | Name of the lock state (see Lock States) |
| | **batteryCritical** | Flag indicating if the batteries of the Nuki device are at critical level |
| | **batteryCharging** | Flag indicating if the batteries of the Nuki device are charging at the moment |
| | **batteryChargeState** | Value representing the current charge status in % |
| | **keypadBatteryCritical** | Flag indicating if the batteries of the paired Nuki Keypad are at critical level |
| | **doorsensorState** | ID of the door sensor state |
| | **doorsensorStateName** | Name of the door sensor state |
| | **ringactionTimestamp** | timestamp of the last ring-action |
| | **ringactionState** | Flag indicating if a ring-action is currently occuring or not (reset after 30 seconds) |
| | **success** | Flag indicating if the lock state retrieval has been successful |
| **Errors** | **HTTP 401** | Returned if the given **token** is invalid or a **hashed token** parameter is missing. |
| | **HTTP 404** | Returned if the given Nuki device is unknown |

| | | |
|---|---|---|
| | **HTTP 503** | Returned if the given Nuki device is offline |
| **Example-Calls** | http://192.168.1.50:8080/lockState?nukiId=1&deviceType=0&token=123456<br>http://192.168.1.50:8080/lockState?nukiId=1&deviceType=&0ts=2019-03-05T01:06:53Z&rnr=4711&hash=f52eb5ce382e356c4239f8fb4d0a87402bb95b7b3124f0762b806ad7d0d01cb6 | |
| **Example-Response** | {<br>"mode": 2,<br>"state": 1,<br>"stateName": "locked",<br>"batteryCritical": false,<br>"batteryCharging": false,<br>"batteryChargeState": 85,<br>"keypadBatteryCritical": false,<br>"ringactionTimestamp": 2020-04-27T16:13:00+00:00",<br>"ringactionState": false,<br>"doorsensorState": 2,<br>"doorsensorStateName": "door closed",<br>"success": true<br>} | |

## /lockAction

| | | |
|---|---|---|
| **URL** | http://192.168.1.50:8080/lockAction | |
| **Usage** | Performs a lock action on the given Nuki device | |
| **URL-Parameters** | **nukiId** | The ID of the Nuki device which should execute the lock action |
| | **deviceType** | Nuki device type (see Device Types; *defaults to 0)* |
| | **action** | The desired lock action (see Lock Actions) |

| | | |
|---|---|---|
| | **nowait** | Flag (0 or 1) indicating whether or not to wait for the lock action to complete and return its result *(optional; defaults to 0)* |
| | **token** | The api token configured via the Nuki app when enabling the API |
| **Response** | JSON list containing the result of the lock action | |
| | **batteryCritical** | Flag indicating if the batteries of the Nuki device are at critical level |
| | **success** | Flag indicating if the lock action has been executed successfully |
| **Errors** | **HTTP 400** | Returned if the given **action** is invalid |
| | **HTTP 401** | Returned if the given **token** is invalid or a **hashed token** parameter is missing. |
| | **HTTP 404** | Returned if the given SNuki device is unknown |
| | **HTTP 503** | Returned if the given Nuki device is offline |
| **Example-Calls** | http://192.168.1.50:8080/lockAction?nukiId=1&deviceType=0&action=1&token=123456<br>http://192.168.1.50:8080/lockAction?nukiId=1&deviceType=0&action=1&ts=2019-03-05T01:06:53Z&rnr=4711&hash=f52eb5ce382e356c4239f8fb4d0a87402bb95b7b3124f0762b806ad7d0d01cb6 | |
| **Example-Response** | `{`<br>`  "success": true,`<br>`  "batteryCritical": false`<br>`}` | |

## /lock

| | |
|---|---|
| **URL** | http://192.168.1.50:8080/lock |

| | | |
|---|---|---|
| **Usage** | Send the simple lock action "lock" to a given Nuki device | |
| **URL-Parameters** | **nukiId** | The ID of the Nuki device which should execute the lock action |
| | **deviceType** | Nuki device type (see Device Types; *defaults to 0)* |
| | **token** | The api token configured via the Nuki app when enabling the API |
| **Response** | JSON list containing the result of the lock action | |
| | **batteryCritical** | Flag indicating if the batteries of the Nuki device are at critical level |
| | **success** | Flag indicating if the lock action has been executed successfully |
| **Errors** | **HTTP 401** | Returned if the given **token** is invalid or a **hashed token** parameter is missing. |
| | **HTTP 404** | Returned if the given Nuki device is unknown |
| | **HTTP 503** | Returned if the given Nuki device is offline |
| **Example-Calls** | http://192.168.1.50:8080/lock?nukiId=1&deviceType=0&token=123456<br>http://192.168.1.50:8080/lock?nukiId=11&deviceType=0&ts=2019-03-05T01:06:53Z&rnr=4711&hash=f52eb5ce382e356c4239f8fb4d0a87402bb95b7b3124f0762b806ad7d0d01cb6 | |
| **Example-Response** | {<br>"success": true,<br>"batteryCritical": false<br>} | |

## /unlock

| | | |
|---|---|---|
| **URL** | http://192.168.1.50:8080/unlock | |
| **Usage** | Send the simple lock action "unlock" to a given Nuki device | |
| **URL-Parameters** | **nukiId** | The ID of the Nuki device which should execute the lock action |
| | **deviceType** | Nuki device type (see Device Types; *defaults to 0)* |
| | **token** | The api token configured via the Nuki app when enabling the API |
| **Response** | JSON list containing the result of the unlock action | |
| | **batteryCritical** | Flag indicating if the batteries of the Nuki device are at critical level |
| | **success** | Flag indicating if the unlock action has been executed successfully |
| **Errors** | **HTTP 401** | Returned if the given **token** is invalid or a **hashed token** parameter is missing. |
| | **HTTP 404** | Returned if the given Nuki device is unknown |
| | **HTTP 503** | Returned if the given Nuki device is offline |
| **Example-Calls** | http://192.168.1.50:8080/unlock?nukiId=1&deviceType=0&token=123456<br>http://192.168.1.50:8080/unlock?nukiId=11&deviceType=0&ts=2019-03-05T01:06:53Z&rnr=4711&hash=f52eb5ce382e356c4239f8fb4d0a87402bb95b7b3124f0762b806ad7d0d01cb6 | |
| **Example-Response** | {<br>"success": true,<br>"batteryCritical": false | |

| | |
|---|---|
| | } |

## /unpair

not available on software bridge

| | | |
|---|---|---|
| **URL** | http://192.168.1.50:8080/unpair | |
| **Usage** | Removes the pairing with a given Nuki device | |
| **URL-Parameters** | **nukiId** | The ID of the Nuki device which should be unpaired |
| | **deviceType** | Nuki device type (see Device Types; *defaults to 0)* |
| | **token** | The api token configured via the Nuki app when enabling the API |
| **Response** | JSON list containing the result of the operation | |
| | **success** | Flag indicating if the lock action has been executed successfully |
| **Errors** | **HTTP 401** | Returned if the given **token** is invalid or a **hashed token** parameter is missing. |
| | **HTTP 404** | Returned if the given Nuki device is unknown |
| **Example-Calls** | http://192.168.1.50:8080/unpair?nukiId=1&token=123456<br>http://192.168.1.50:8080/unpair?nukiId=1&ts=2019-03-05T01:06:53Z&rnr=4711&hash=f52eb5ce382e356c4239f8fb4d0a87402bb95b7b3124f0762b806ad7d0d01cb6 | |
| **Example-Response** | {<br>“success”: true<br>} | |

## /info

| | | | |
|---|---|---|---|
| **URL** | http://192.168.1.50:8080/info | | |
| **Usage** | Returns all Nuki devices in range and some device information of the bridge itself | | |
| **URL-Parameters** | **token** | The api token configured via the Nuki app when enabling the API | |
| **Response** | JSON list with the result | | |
| | **bridgeType** | • 1 => Hardware bridge<br>• 2 => Software bridge | |
| | **ids** | JSON list containing the ids of the bridge | |
| | | **hardwareId** | Hardware ID *(hardware bridge only)* |
| | | **serverId** | Server ID |
| | **versions** | JSON list containing the versions of bridge | |
| | | **firmwareVersion** | Version of the bridges firmware *(hardware bridge only)* |
| | | **wifiFirmwareVersion** | Version of the WiFi modules firmwarehardware bridge only |
| | | **appVersion** | Version of the bridge appsoftware bridge only |
| | **uptime** | Uptime of the bridge in seconds | |
| | **currentTime** | Current timestamp | |

<table>
<tr><td></td><td>serverConnected</td><td colspan="2">Flag indicating whether or not the bridge is connected to the Nuki server</td></tr>
<tr><td></td><td>scanResults</td><td colspan="2">JSON Array. One item of the following per Nuki device</td></tr>
<tr><td></td><td></td><td>nukiId</td><td>Nuki device ID</td></tr>
<tr><td></td><td></td><td>deviceType</td><td>Nuki device type (see Device Types)</td></tr>
<tr><td></td><td></td><td>name</td><td>BLE-Name of the Nuki device</td></tr>
<tr><td></td><td></td><td>rssi</td><td>RSSI value</td></tr>
<tr><td></td><td></td><td>paired</td><td>Flag indicating whether or not a pairing with this<br><br>Nuki device has already been established</td></tr>
<tr><td>Errors</td><td>HTTP 401</td><td colspan="2">Returned if the given token is invalid or a hashed token parameter is missing.</td></tr>
<tr><td>Example-Calls</td><td colspan="3">http://192.168.1.50:8080/info?token=123456<br>http://192.168.1.50:8080/info?ts=2019-03-05T01:06:53Z&rnr=4711&hash=f52eb5ce382e356c4239f8fb4d0a87402bb95b7b3124f0762b806ad7d0d01cb6</td></tr>
<tr><td>Example-Response</td><td colspan="3"><pre>{
  "bridgeType": 1,
  "ids": {"hardwareId": 12345678, "serverId":
     12345678},
  "versions": { "firmwareVersion": "0.1.0",
     "wifiFirmwareVersion": "0.2.0" },
  "uptime": 120,
  "currentTime": "2018-04-01T12:10:11Z",
  "serverConnected": true,
  "scanResults": [ { "nukiId": 10, "type": 0,</pre></td></tr>
</table>

| | |
|---|---|
| | "name": "Nuki_00000010", "rssi": -87, "paired": true }, { "nukiId": 11, "deviceType": 2, "name": "Nuki_00000011", "rssi": -93, "paired": false } ]<br>} |

## /callback

The following endpoints provide methods to register up to 3 http (no https) url callbacks, which will be triggered once the lock state of one of the known Nuki devices changes.

The new lock state will be sent to the callback url by executing a POST request and posting a JSON list in the following format:

```
{"nukiId": 11, "deviceType": 0, "mode": 2, "state": 1, "stateName":
"locked", "batteryCritical": false, "batteryCharging": false,
"batteryChargeState": 85, "keypadBatteryCritical": false}
```

Nuki device with door sensor capabilities:

```
{"nukiId": 11, "deviceType": 0, "mode": 2, "state": 1, "stateName":
"locked", "batteryCritical": false, "batteryCharging": false,
"batteryChargeState": 85, "doorsensorState": 2,
"doorsensorStateName": "door closed"}
```

Opener (with ring action capabilities):

```
{"nukiId": 11, "deviceType": 2, "mode": 3, "state": 3, "stateName":
"rto active", "batteryCritical": false, "ringactionTimestamp":
"2020-04-27T16:13:00+00:00", "ringactionState": false}
```

### /callback/add

| | | |
|---|---|---|
| **URL** | http://192.168.1.50:8080/callback/add | |
| **Usage** | Registers a new callback url | |
| **URL-Parameters** | **url** | The callback url to be added (no https, url encoded, max. 254 chars) |
| | **token** | The api token configured via the Nuki app when enabling the API |
| **Response** | JSON list containing the result | |
| | **success** | Flag indicating if the url has been added successfully |

| | | |
|---|---|---|
| | **message** | Contains the reason for the failure if **success** is false |
| **Errors** | **HTTP 400** | Returned if the given **URL** is invalid or too long |
| | **HTTP 401** | Returned if the given **token** is invalid or a **hashed token** parameter is missing. |
| **Example-Calls** | http://192.168.1.50:8080/callback/add?url=http%3A%2F%2F192.168.0.20%3A8000%2Fnuki&token=123456<br>http://192.168.1.50:8080/callback/add?url=http%3A%2F%2F192.168.0.20%3A8000%2Fnuki&ts=2019-03-05T01:06:53Z&rnr=4711&hash=f52eb5ce382e356c4239f8fb4d0a87402bb95b7b3124f0762b806ad7d0d01cb6 | |
| **Example-Response** | {<br>"success": true<br>} | |

/callback/list

| | | | |
|---|---|---|---|
| **URL** | http://192.168.1.50:8080/callback/list | | |
| **Usage** | Returns all registered url callbacks | | |
| **URL-Parameters** | **token** | The api token configured via the Nuki app when enabling the API | |
| **Response** | JSON list with the result | | |
| | **callbacks** | JSON array. One item of the following per callback | |
| | | **id** | ID of the callback |
| | | **url** | URL of the callback |
| **Errors** | **HTTP 401** | Returned if the given **token** is invalid or a **hashed token** parameter is missing. | |
| **Example-Calls** | http://192.168.1.50:8080/callback/list?token=123456 | | |

| | |
|---|---|
| | http://192.168.1.50:8080/callback/list?ts=2019-03-05T01:06:53Z&rnr=4711&hash=f52eb5ce382e356c4239f8fb4d0a87402bb95b7b3124f0762b806ad7d0d01cb6 |
| **Example-Response** | {<br>"callbacks": [<br>{<br>“id”: 0,<br>"url": "http://192.168.0.20:8000/nuki"<br>},{<br>“id”: 1,<br>"url": "http://192.168.0.21/test"<br>}<br>]<br>} |

/callback/remove

| | | |
|---|---|---|
| **URL** | http://192.168.1.50:8080/callback/remove | |
| **Usage** | Removes a previously added callback | |
| **URL-Parameters** | **id** | The id of the callback to be removed |
| | **token** | The api token configured via the Nuki app when enabling the API |
| **Response** | JSON list containing the result | |
| | **success** | Flag indicating if the url has been added successfully |
| | **message** | Contains the reason for the failure if **success** is false |
| **Errors** | **HTTP 400** | Returned if the given **url** is invalid or too long |
| | **HTTP 401** | Returned if the given **token** is invalid or a |

| | | |
|---|---|---|
| | | **hashed token** parameter is missing. |
| **Example-Calls** | http://192.168.1.50:8080/callback/remove?id=0&token=123456<br>http://192.168.1.50:8080/callback/remove?id=0&ts=2019-03-05T01:06:53Z&rnr=4711&hash=f52eb5ce382e356c4239f8fb4d0a87402bb95b7b3124f0762b806ad7d0d01cb6 | |
| **Example-Response** | <pre>{<br>  "success": true<br>}</pre> | |

# 6. Maintenance endpoints

The following endpoints are available for maintenance purposes of the hardware bridge. Therefore they are not available on the software bridge.

## /log

| | | |
|---|---|---|
| URL | http://192.168.1.50:8080/log | |
| **Usage** | Retrieves the log of the bridge | |
| **URL-Parameters** | **offset** | Offset position where to start retrieving log entries *(optional; defaults to 0)* |
| | **count** | How many log entries to retrieve *(optional; defaults to 100)* |
| | **token** | The api token configured via the Nuki app when enabling the API |
| **Response** | JSON array. One item of the following per log entry | |
| | **timestamp** | Timestamp of the log entry |
| | **type** | Type of the log entry |
| | some more optional parameters | |
| **Errors** | **HTTP 401** | Returned if the given **token** is invalid or a **hashed token** parameter is missing. |
| **Example-Calls** | http://192.168.1.50:8080/log?token=123456<br>http://192.168.1.50:8080/log?ts=2019-03-05T01:06:53Z&rnr=4711&hash=f52eb5ce382e356c4239f8fb4d0a87402bb95b7b3124f0762b806ad7d0d01cb6 | |
| **Example-Response** | [<br>{"timestamp": "2018-10-06T16:46:05+00:00", "deviceType": "..."<br>}, | |

| | |
|---|---|
| | {"timestamp": "2018-10-06T16:46:05+00:00", "deviceType": "..." }, …<br>] |

## /clearlog

| | | |
|---|---|---|
| **URL** | http://192.168.1.50:8080/clearlog | |
| **Usage** | Clears the log of the bridge | |
| **URL-Parameters** | **token** | The api token configured via the Nuki app when enabling the API |
| **Response** | No response | |
| **Errors** | **HTTP 401** | Returned if the given **token** is invalid or a **hashed token** parameter is missing. |
| **Example-Calls** | http://192.168.1.50:8080/clearlog?token=123456<br>http://192.168.1.50:8080/clearlog?ts=2019-03-05T01:06:53Z&nr=4711&hash=f52eb5ce382e356c4239f8fb4d0a87402bb95b7b3124f0762b806ad7d0d01cb6 | |
| **Example-Response** | None | |

## /fwupdate

| | | |
|---|---|---|
| **URL** | http://192.168.1.50:8080/fwupdate | |
| **Usage** | Immediately checks for a new firmware update and installs it | |
| **URL-Parameters** | **scope**<br>(optional) | Flag indicating which devices shall be updated to the latest firmware version (if available and applicable).<br><br>Allowed values:<br>0 … all devices (Bridge and all connected |

| | | |
|---|---|---|
| | | devices)<br>1 … Bridge only<br>2 … connected devices only<br>(defaults to 0) |
| | **nukiId**<br>(optional) | The ID of the Nuki device which should be updated to the latest firmware version (if available and applicable). |
| | **deviceType**<br>(optional) | Nuki device type (see Device Types; *defaults to 0)* |
| | **token** | The api token configured via the Nuki app when enabling the API |
| **Response** | No response | |
| **Errors** | **HTTP 401** | Returned if the given **token** is invalid or a **hashed token** parameter is missing. |
| **Example-Calls** | http://192.168.1.50:8080/fwupdate?token=123456<br>http://192.168.1.50:8080/fwupdate?ts=2019-03-05T01:06:53Z&nr=4711&hash=f52eb5ce382e356c4239f8fb4d0a87402bb95b7b3124f0762b806ad7d0d01cb6 | |
| **Example-Response** | None | |

## /reboot

| | | |
|---|---|---|
| **URL** | http://192.168.1.50:8080/reboot | |
| **Usage** | Reboots the bridge | |
| **URL-Parameters** | **token** | The api token configured via the Nuki app when enabling the API |
| **Response** | No response | |
| **Errors** | **HTTP 401** | Returned if the given **token** is invalid or a |

| | | |
|---|---|---|
| | | **hashed token** parameter is missing. |
| **Example-Calls** | http://192.168.1.50:8080/reboot?token=123456<br>http://192.168.1.50:8080/reboot?ts=2019-03-05T01:06:53Z&rnr=4711&hash=f52eb5ce382e356c4239f8fb4d0a87402bb95b7b3124f0762b806ad7d0d01cb6 | |
| **Example-Response** | None | |

## /factoryReset

| | | |
|---|---|---|
| **URL** | http://192.168.1.50:8080/factoryReset | |
| **Usage** | Performs a factory reset | |
| **URL-Parameters** | **token** | The api token configured via the Nuki app when enabling the API |
| **Response** | No response | |
| **Errors** | **HTTP 401** | Returned if the given **token** is invalid or a **hashed token** parameter is missing. |
| **Example-Calls** | http://192.168.1.50:8080/factoryReset?token=123456<br>http://192.168.1.50:8080/factoryReset?ts=2019-03-05T01:06:53Z&rnr=4711&hash=f52eb5ce382e356c4239f8fb4d0a87402bb95b7b3124f0762b806ad7d0d01cb6 | |
| **Example-Response** | None | |

# 7. Error codes/handling

Specifiфc errors for endpoints are documented in the respective section. This is an overview of general and specific errors that may occur when using the Bridge API:

| Error code | Type | Description | Solution |
|---|---|---|---|
| 400 | Bad Request | Wrong/missing parameter | Check endpoint documentation for details on expected paramaters and format. |
| 401 | Unauthorized | Invalid token or missing hashed token parameter | Recheck if the token is correct or parameters are correctly set. |
| 403 | Forbidden | Authentication is disabled | Activate the Bridge API (see 3. Bridge discovery & API activation). |
| 404 | Not Found | Unknown Nuki device ID | Recheck the connected device IDs on the Bridge and the device ID used in the request. |
| 503 | Service Unavailable | Another request already running on the device | Increase intervals between API calls sent to the Bridge as it can only handle one request at a time. |
| Failed to connect | Connection refused | Bridge not available at given URL | Check if the Bridge is powered and connected to the Wifi and if IP and Port are correctly set in your request. |

# 8. Frequently Asked Questions

## Why are the batteries of my Smart Lock draining so fast when I use the Bridge API?

Most likely you are repeatadly calling /lockAction to get the current state directly from the device, but this should not be used for constant polling to avoid draining the batteries too fast. /list can be used instead to get regular updates on the state, as is it cached on the bridge.

## Why do i repeatdly get an Error 503 when calling the Bridge API

The Bridge can only handle one incoming request at a time and you therefore have to serialize repeated requests to the Bridge API. See also: 7. Error codes/handling

## Why do API commands sometimes take very long or time out?

The Bridge can only handle one outgoing command at a time and may also have to wait for the reponse of a Nuki actuator. So using several clients (Bridge API, Nuki Apps, Nuki Web) at the same time may lead to delays or timeouts.

# 9. Changelog

## Changelog v 1.13.3

24.10.2024

- Added new subchapter Calculation Parameters to outline parameters for the encrypted token calculation more explicitly

## Changelog v 1.13.2

17.06.2022

- Extended /fwupdate by automatic update capabilities for connected Nuki devices
- Added description for new crypted API token

## Changelog v 1.13.1

14.12.2021

- Added new Doorsensor states introduced with the new external door sensor

## Changelog v 1.13.0

30.11.2021

- Added Smart Door and Smart Lock 3.0 (Pro) to Device Types.

## Changelog v 1.12.3

22.06.2021

- Added error code overview and handling section
- Added a Frequently Asked Questions section.

## Changelog v 1.12.2

11.06.2021

- Fixed missing values for battery state.

## Changelog v 1.12.1

07.05.2021

- Added information on how to activate the API alternatively via Nuki App.

## Changelog v 1.12

02.09.2020

- Updated **/lockState** to include the keypadBatteryCritical flag, ringactionState and ringactionTimestamp.
- Updated **/list** to include the keypadBatteryCritical flag, ringactionState and ringactionTimestamp.
- Expanded POST request example for a **/callback** with the keypadBattery flag, ringactionState and ringactionTimestamp.

## Changelog v 1.11

08.07.2020

- Introduced **Dorsensor States** for all supported devices.
- Updated **/lockState** to include doorsensorState and doorsensorStateName in the response.
- Updated **/list** to include doorsensorState and doorsensorStateName in the response.
- Added a POST request example for a device with door sensor capabilities to **/callback**.

## Changelog v 1.10

07.01.2020

- Introduced **Simple lock actions** for all usecases where the logic should be handled by the device itself.
- Made wording for Nuki devices more general.

## Changelog v 1.9

06.05.2019

- Introduced **Device Types** and **Modes** to be able to distinguish between Smart Locks and Nuki Openers and their operating modes.
- Updated **Lock States** to reflect matching and new states for the Nuki Opener.
- Updated **Lock Actions** to reflect matching and new actions for the Nuki Opener and add deviceType parameter.
- Added Opener support to /list and /info endpoints.
- Expanded Callbacks to Nuki Openers and added **deviceType** and **mode**.
- Expanded Callbacks to Nuki Openers and added **deviceType** and **mode**.
- Added deviceType parameter to /unpair.

## Changelog v 1.8

07.03.2019

- Introducing the hashed token as a more secure alternative to sending the plain token

## Changelog v 1.7

30.03.2018

- Small changes in bridge discovery information

## Changelog v 1.6

21.06.2017

- Added bridge discovery