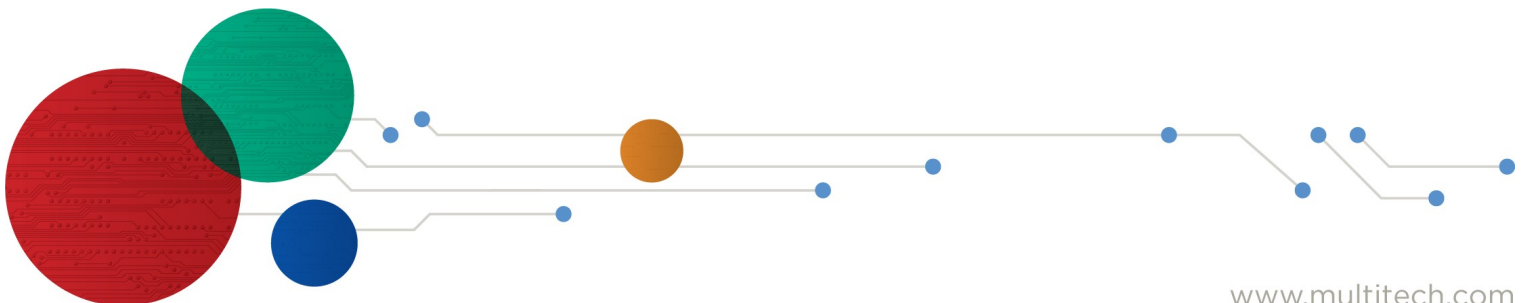




LENS[®]

API Guide



LENS User Guide

Part Number: S000757, Version 1.0

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LENS API v1.0

Site

Site is the domain or base part of URL.

Example site:

`https://lens-dev.devicehq.com/`

Versioning

Get the version of LENS API.

GET `api/v2/status`

Data is a required parameter and should be defined, even if it is empty. This is the only API that does not require the `x-auth-token` to be defined in the header.

```
method: 'get',
url: site + 'api/v2/status',
data: {},
headers: {
  'content-type': 'application/vnd.api+json',
  'accept': 'application/vnd.api+json',
}
```

Response Code: 200

Response Payload example

```
{
  "meta": {
    "versions": {
      "frontend": "v1.2.0-20-gf8b694e",
      "api": "v1.2.10-70-g22a8ac4",
      "cloud": "207f027f31f8137b",
      "join_server": "v1.0.0-27-ge7b456e"
    },
    "environment": "aws-dev",
    "deployed_at": "2019-10-18T18:18:35Z",
    "status": "OK"
  }
}
```

Error: "Network Error"

Cross-Origin Request Blocked: The Same Origin Policy disallows reading the remote resource at https://lens-test.devicehq.com/api/v2/status. (Reason: CORS request did not succeed). The LENS site must be enabled for CORS for the API call.

Sessions

Log in to Lens. Create a session with user name and password (optionally mfa_code for 2 Factor Authentication) to retrieve an x-auth-token, which in turn is a header requirement for subsequent LENS API calls.

Attributes

expires_at

Type: String

Format: Timestamp

Permissions: System-ReadOnly

Restrictions: N/A

Description: Tbd

auth_token

Type: String

Format: None

Permissions: System-ReadOnly

Restrictions: None

Description: Tbd

user_id

Type: String

Format: UUID

Permissions: System-ReadOnly

Restrictions: Unique to System

Description: Reference to user URI

organization_id

Type: String

Format: UUID

Permissions: System-ReadOnly

Restrictions: Unique to System / Organization

Description: Reference to organization URI

password_expiration

Type: String

Format: Timestamp

Permissions: System-ReadOnly

Restrictions: None

Description: Tbd

POST api/v2/sessions

```
method: 'post',
url: site + 'api/v2/sessions',
data: {
meta: {
  email: username,    * Required *
  password: password, * Required *
  mfa_code: null
}
},
headers: {
  'content-type': 'application/vnd.api+json',
  'accept': 'application/vnd.api+json',
}
```

Response Code: 200

Use the auth_token response for subsequent LENS API headers.

Response payload example

```
{
  "meta": {
    "expires_at": "2019-10-22T20:58:14.755Z",
    "auth_token": "rBp1y6t-5goSA2vFtpHQ",
    "user_id": "c024ca26-91a4-492b-9f10-447a4263cbad",
    "organization_id": "7786651b-3f20-4214-b077-ebe010688f12",
    "password_expiration": "2019-12-11T18:57:29.823Z"
  }
}
```

Response Code: 202

Resend with Multi-Factor code included as mfa_code parameter.

Response Code: 400

- User password invalid.
- User not found.

DELETE api/v2/sessions

Logout and end user session from Lens. Data is a required parameter and should be defined, even if it is empty. Use the `auth_token` from the login session

```
method: 'delete',
url: site + 'api/v2/sessions',
data: {
  data: {}
},
headers: {
  'content-type': 'application/vnd.api+json',
  'accept': 'application/vnd.api+json',
  'x-auth-token': auth_token
}
```

Response Code: 200

Response payload example:

```
{
  "meta": {
    "message": "Session closed at 2019-10-22 15:12:46 -0500"
  }
}
```

Application Networks

Since LENS provides a central Join Server for all provisioned End-Devices, Application Networks are used to map which End-Devices are allowed to join through which Gateways. Application Networks are necessary (even though optional) parameters for End-Devices and Gateways in order to create a successful Join Request. Application Networks are not required parameters for provisioning, so these parameters need to be updated at a later time, if not provided at the time of provisioning.

Application Networks also provide URL, Container Names and IDs, which can be used for applications running in the cloud. The Conduit LoRa Network Server attaches the Application Network identifier to the Uplink Packets sent to the LoRa Application Server so that the custom application may use this identifier to query for the URL, Container Names and IDs.

Relationships

Relationship to End-Devices

An Application Network has many End-Devices. Both must belong to same Organization.

Relationship to Gateways

An Application Network has many Gateways. Both must belong to same Organization.

Network Attributes

name

Type: String

Format: None

Permissions: Required Updateable

Restrictions: Unique to System

Description: Application network name. Up to 60 characters.

description

Type: String

Format: None

Permissions: Optional Updateable

Restrictions: None

Description: Brief description of this network.

url

Type: String

Format: URL

Permissions: Optional Updateable

Restrictions: None

Description: If applicable, enter the application network's URL.

created_at

Type: String

Format: Timestamp

Permissions: System-ReadOnly

Restrictions: N/A

Description: Tbd

updated_at

Type: String

Format: Timestamp

Permissions: System-ReadOnly

Restrictions: N/A

Description: Tbd

eui

Type: String

Format: EUI

Permissions: Required / Optional [*NOTE: Generated if not provided*] WriteOnce

Restrictions: Unique to System

Description: AppEUI, a unique 64-bit EUI (8 hex digits), or leave blank to have an AppEUI automatically assigned.

Note: The value will be sent to the Conduit in a join response to use in received uplink packets as the application identifier. For example, an AppEUI such as 16-ea-76-f6-ab-66-3d-80 can be created randomly, or use the mDot AT interface to generate one.

organization_id

Type: String

Format: UUID

Permissions: System-ReadOnly

Restrictions: Exists in System

Description: Reference to organization URI

network_profile_id

Type: String

Format: UUID

Permissions: Optional Updateable

Restrictions: Exists in System

Description: Reference to network profile URI

container_id

Type: String

Format: None

Permissions: Optional Updateable

Restrictions: None

Description: Docker container ID

container_name

Type: String

Format: None

Permissions: Optional Updateable

Restrictions: None

Description: Docker container name

organization_name

Type: String

Format: None

Permissions: System-ReadOnly

Restrictions: Exists in System

Description: Organization name provided when list extends beyond one organization (System Admin usage)

GET api/v2/application_networks

Collections can be paginated with *skip* and *limit* parameters. Defaults: skip: 0, limit: 25

```
method: 'get',
url: site + 'api/v2/application_networks',
params: {
  skip: skip,
  limit: limit,
  sort: 'eui'
},
headers: {
  'content-type': 'application/vnd.api+json',
  'accept': 'application/vnd.api+json',
  'x-auth-token': auth_token
}
```

Response Code: 200

Data provides an array of Application Network Json objects. The meta pagination collection_count indicates the total number of Application Networks available for this request; while the count indicates how many are returned in this pagination. For additional Application Network Json objects, increase the skip in the GET request.

Example payload response with an array of 1 data element:

```
{
  "data": [
    {
      "id": "bcbb30a9-3f37-413c-a2c8-e0589ccdb200",
      "type": "application_networks",
      "attributes": {
        "id": "bcbb30a9-3f37-413c-a2c8-e0589ccdb200",
        "name": "Reliable AppNet",
        "description": "reliable app net description",
        "url": "http://www.reliable.com",
        "created_at": "2019-10-14T19:53:02.694Z",
        "updated_at": "2019-10-14T19:53:02.694Z",
        "eui": "2b-b9-d4-e5-9d-e6-9a-b8",
        "organization_id": "7786651b-3f20-4214-b077-ebe010688f12",
        "network_profile_id": null,
        "container_id": "reliable container id",
        "container_name": "reliable container name",
        "organization_name": null
      },
      "meta": {
        "gateways_count": 2,
        "end_devices_count": 100
      }
    }
  ],
  "meta": {
    "pagination": {
      "skip": 0,
      "limit": 100,
      "count": 1,
      "collection_count": 1
    }
  }
}
```

POST api/v2/application_networks

Create an Application Network. Name and EUI must be unique to the site.

```

method: 'post',
  url: site + 'api/v2/application_networks',
  data: {
    data: {
      type: 'application_networks',
    attributes: {
      eui: item.attributes.eui,           * Generated if not provided *
      name: item.attributes.name,       * Required *
      container_id: item.attributes.container_id,
      container_name: item.attributes.container_name,
      url: item.attributes.url
    }
  },
  headers: {
    'content-type': 'application/vnd.api+json',
    'accept': 'application/vnd.api+json',
    'x-auth-token': auth_token
  }

```

Example Parameters:

```

{
  "data": {
    "attributes": {
      "container_id": "reliable container id",
      "container_name": "reliable container name",
      "eui": "2b-b9-d4-e5-9d-e6-9a-b8",
      "name": "Reliable AppNet",
      "url": "http://www.reliable.com"
    },
    "type": "application_networks"
  }
}

```

Response Code: 200

Example payload response:

```
{
  "data": {
    "id": "bfd809b2-fe80-473b-97ba-8d7b7e059703",
    "type": "application_networks",
    "attributes": {
      "id": "bfd809b2-fe80-473b-97ba-8d7b7e059703",
      "name": "New Reliable AppNet",
      "description": null,
      "url": null,
      "created_at": "2019-10-22T21:59:30.202Z",
      "updated_at": "2019-10-22T21:59:30.202Z",
      "eui": "2b-b9-d4-e5-9d-e6-9a-b9",
      "organization_id": "408aaa46-b10f-4943-8070-3527a604843a",
      "network_profile_id": null,
      "container_id": null,
      "container_name": null,
      "organization_name": null
    },
    "relationships": {
      "organization": {
        "data": {
          "id": "408aaa46-b10f-4943-8070-3527a604843a",
          "type": "organizations"
        }
      },
      "gateways": {
        "data": []
      },
      "end_devices": {
        "data": []
      }
    },
    "meta": {
      "gateways_count": 0,
      "end_devices_count": 0
    }
  }
}
```

Response Code: 400

Provides an array of errors that occurred

Example payload response:

```
{
  "errors": [
    {
      "detail": "Eui has already been taken",
      "id": null
    },
    {
      "detail": "Name has already been taken",
      "id": null
    }
  ]
}
```

PATCH api/v2/application_networks/:id

Update a given application network with updated attributes.

Example of updating the description attribute:

```
method: 'patch',
url: site + 'api/v2/application_networks/' + item.id,
data: {
  data: {
    type: 'application_networks',
    attributes: {
      description: 'update description'
    }
  }
},
headers: {
  'content-type': 'application/vnd.api+json',
  'accept': 'application/vnd.api+json',
  'x-auth-token': auth_token
}
```

Response Code: 200

Example Response body:

```
{
  "data": {
    "id": "0bbbc70a-88b9-4f4a-8a62-807fbf63ffcc",
    "type": "application_networks",
    "attributes": {
      "id": "0bbbc70a-88b9-4f4a-8a62-807fbf63ffcc",
      "name": "Reliable AppNet",
      "description": "update description",
      "url": "http://www.reliable.com",
      "created_at": "2019-10-18T15:58:49.521Z",
      "updated_at": "2019-10-22T21:52:40.572Z",
      "eui": "2b-b9-d4-e5-9d-e6-9a-b8",
      "organization_id": "408aaa46-b10f-4943-8070-3527a604843a",
      "network_profile_id": null,
      "container_id": "reliable container id",
      "container_name": "reliable container name",
      "organization_name": null
    },
    "relationships": {
      "organization": {
        "data": {
          "id": "408aaa46-b10f-4943-8070-3527a604843a",
          "type": "organizations"
        }
      },
      "gateways": {
        "data": [
          {
            "id": "27d0b89d-23b5-4179-985d-18c0af9c2865",
            "type": "gateways"
          }
        ]
      },
      "end_devices": {
        "data": [
          {
            "id": "1329f9e0-35b7-40c2-9f0a-9b55aab95cc8",
            "type": "end_devices"
          }
        ]
      }
    }
  }
}
```

```
    {
      "id": "f8ae581e-443f-4181-abfd-4898304a1964",
      "type": "end_devices"
    },
    {
      "id": "e5004c5c-3e4a-46f5-ab31-d8c2b34f141b",
      "type": "end_devices"
    }
  ]
}
},
"meta": {
  "gateways_count": 1,
  "end_devices_count": 3
}
}
}
```

Response Code: 400

Provides an array of errors that occurred

Example payload response:

```
{
  "errors": [
    {
      "detail": "Eui has already been taken",
      "id": null
    },
    {
      "detail": "Name has already been taken",
      "id": null
    }
  ]
}
```

DELETE api/v2/application_networks/:id

Delete Application Network for a given ID.

```
method: 'delete',
url: site + 'api/v2/application_networks/' + item.id,
headers: {
  'accept': 'application/vnd.api+json',
  'x-auth-token': auth_token
}
```

Response Code: 200

TBD

Response Code: 400

Provides an array of errors that occurred

Example payload response:

```
{
  "errors": [
    {
      "detail": "Eui has already been taken",
      "id": null
    },
    {
      "detail": "Name has already been taken",
      "id": null
    }
  ]
}
```

End-Devices

Relationships

Relationship to Application Networks

An End-Device belongs to one and only one Application Network. Both must belong to same Organization.

Attributes

app_key

Type: String

Format: 32 Hex characters with optional decimal separation for readability

E.g.: aa.aa.aa.aa.aa.aa.aa.aa.aa.aa.aa.aa.aa.aa.aa.aa

Permissions: Required NonReadable Updateable

Restrictions: 32 hex characters

Description: TBD

conduit_serial

Type: String

Format: None

Permissions: System-ReadOnly

Restrictions: None

Description: TBD

organization_id

Type: String

Format: UUID

Permissions: System-ReadOnly

Restrictions: Exists in System

Description: Reference to organization URI

eui

Type: String

Format: EUI

Permissions: Required WriteOnce

Restrictions: Unique to System

Description: End device's extended unique identifier. This is a hexadecimal string, 16 characters long. Valid characters are 0-9, A-F, a-f. Case does not matter.

name

Type: String

Format: None

Permissions: Optional Updateable

Restrictions: None

Description: Assigned name

serial_number

Type: String

Format: None

Permissions: Required WriteOnce

Restrictions: None

Description: End device's serial number.

product_id

Type: String

Format: None

Permissions: Optional Updateable

Restrictions: None

Description: User defined product ID

hardware_version

Type: String

Format: None

Permissions: Optional Updateable

Restrictions: None

Description: End device's hardware version number.

firmware_version

Type: String

Format: None

Permissions: Optional Updateable

Restrictions: None

Description: Version number of firmware installed on the end device.

rejoin_count

Type: Numeric

Format: Cardinal

Permissions: System-ReadOnly

Restrictions: N/A

Description: Number of times the end device has rejoined the network.

created_at

Type: String

Format: Timestamp

Permissions: System-ReadOnly

Restrictions: None

Description: Tbd

updated_at

Type: String

Format: Timestamp

Permissions: System-ReadOnly

Restrictions: None

Description: Tbd

application_network_id

Type: String

Format: UUID

Permissions: Optional Updateable

Restrictions: Exists in System

Description: Reference to application network URI

uplink_counter

Type: Numeric

Format: Cardinal

Permissions: System-ReadOnly

Restrictions: N/A

Description: Last reported 32-bit uplink counter value. Appears on the End Device list only.

downlink_counter

Type: Numeric

Format: Cardinal

Permissions: System-ReadOnly

Restrictions: N/A

Description: Last reported 32-bit downlink counter value. Appears on the End Device list only.

last_seen

Type: String

Format: Timestamp

Permissions: System-ReadOnly

Restrictions: N/A

Description: Time that a gateway last received an uplink packet from this end device. Appears on the End Device list only.

device_profile_id

Type: String

Format: UUID

Permissions: Optional Updateable

Restrictions: Exists in System

Description: Reference to device profile URI

network_profile_id

Type: String

Format: UUID

Permissions: Optional Updateable

Restrictions: Exists in System

Description: Reference to network profile URI

organization_name

Type: String

Format: None

Permissions: System-ReadOnly

Restrictions: N/A

Description: Organization name provided when list extends beyond one organization (System Admin usage)

GET api/v2/end_devices

Collections can be paginated with **skip** and **limit** parameters. Defaults: skip: 0, limit: 25

```
method: 'get',
url: site + 'api/v2/end_devices',
params: {
  skip: skip,
  limit: limit,
  sort: 'eui'
},
headers: {
  'content-type': 'application/vnd.api+json',
  'accept': 'application/vnd.api+json',
  'x-auth-token': auth_token
}
```

Response Code: 200

Example response body of 1 end-device element in data array:

```
{
  "data": [
    {
      "id": "03fcfc80-b5e7-4072-8c28-051ee9cae4b3",
      "type": "end_devices",
      "attributes": {
        "id": "03fcfc80-b5e7-4072-8c28-051ee9cae4b3",
        "conduit_serial": null,
        "organization_id": "408aaa46-b10f-4943-8070-3527a604843a",
        "eui": "01-11-22-11-22-11-22-99",
        "name": "Reliable Seq:99",
        "serial_number": "sn001001005",
        "product_id": "MTXDOT-NA1-A00-TG-200",
        "hardware_version": "1.0",
        "firmware_version": "3.0.2",
        "rejoin_count": 0,
        "created_at": "2019-10-18T16:00:42.128Z",
        "updated_at": "2019-10-21T17:10:05.922Z",
        "application_network_id": "0bbbc70a-88b9-4f4a-8a62-807fbf63ffcc",
        "uplink_counter": null,
        "downlink_counter": null,
        "last_seen": null,
        "device_profile_id": null,
        "network_profile_id": null,
      }
    }
  ]
}
```

```
        "organization_name": null
    }
}
]
```

Response Code: 400

Provides an array of errors that occurred

Example payload response:

```
{
  "errors": [
    {
      "detail": "Eui has already been taken",
      "id": null
    },
    {
      "detail": "Name has already been taken",
      "id": null
    }
  ]
}
```

POST api/v2/end_devices

```
method: 'post',
url: site + 'api/v2/end_devices',
data: {
  data: {
    type: 'end_devices',
    attributes: {
      eui: item.attributes.eui,           * Required *
      app_key: item.attributes.app_key || "aa. aa. aa. aa. aa. aa. aa. aa. aa. aa. aa. aa. aa. aa. aa. aa", *
      name: item.attributes.name,
      serial_number: item.attributes.serial_number,
      product_id: item.attributes.product_id,
      firmware_version: item.attributes.firmware_version,
      hardware_version: item.attributes.hardware_version
    }
  }
},
headers: {
  'content-type': 'application/vnd.api+json',
  'accept': 'application/vnd.api+json',
```

```
'x-auth-token': auth_token
}
```

Example Post Parameters:

```
{
  "data": {
    "attributes": {
      "app_key": "aa. aa. aa. aa. aa. aa. aa. aa. aa. aa. aa. aa. aa. aa",
      "application_network_id": "bfd809b2-fe80-473b-97ba-8d7b7e059703",
      "eui": "ab-ab-ab-0a-0a-0a-0a",
      "firmware_version": "fv01",
      "hardware_version": "hw01",
      "name": "Reliable End Device Create",
      "product_id": "pr01",
      "serial_number": "sn01"
    },
    "type": "end_devices"
  }
}
```

Response Code: 200

Example Response body:

```
{
  "data": {
    "id": "4231d706-9217-4cba-9cb2-aa18146dcf6e",
    "type": "end_devices",
    "attributes": {
      "id": "4231d706-9217-4cba-9cb2-aa18146dcf6e",
      "conduit_serial": null,
      "organization_id": "408aaa46-b10f-4943-8070-3527a604843a",
      "eui": "ab-ab-ab-0a-0a-0a-0a",
      "name": "Reliable End Device Create",
      "serial_number": "sn01",
      "product_id": "pr01",
      "hardware_version": "hw01",
      "firmware_version": "fv01",
      "rejoin_count": 0,
      "created_at": "2019-10-23T20:09:57.752Z",
      "updated_at": "2019-10-23T20:09:57.752Z",
      "application_network_id": "bfd809b2-fe80-473b-97ba-8d7b7e059703",
      "uplink_counter": null,
      "downlink_counter": null,
      "last_seen": null,
    }
  }
}
```

```
    "device_profile_id": null,
    "network_profile_id": null,
    "organization_name": null
  },
  "relationships": {
    "application_network": {
      "data": {
        "id": "bfd809b2-fe80-473b-97ba-8d7b7e059703",
        "type": "application_networks"
      }
    },
    "organization": {
      "data": {
        "id": "408aaa46-b10f-4943-8070-3527a604843a",
        "type": "organizations"
      }
    },
    "gateways": {
      "data": []
    }
  }
}
```

Response Code: 400

Provides an array of errors that occurred

Example payload response:

```
{
  "errors": [
    {
      "detail": "Eui has already been taken",
      "id": null
    },
    {
      "detail": "Name has already been taken",
      "id": null
    }
  ]
}
```

PATCH api/v2/end_devices/:id

method: 'patch',

```

url: site + 'api/v2/end_devices/' + item_id,
data: {
  data: {
    type: 'end_devices',
    attributes: {
      application_network_id: application_network_id
    }
  }
},
headers: {
  'content-type': 'application/vnd.api+json',
  'accept': 'application/vnd.api+json',
  'x-auth-token': auth_token
}

```

Example Parameters for updating App Key:

```

{
  "data": {
    "attributes": {
      "app_key": "aa. aa. aa. aa. aa. aa. aa. aa. aa. aa. aa. aa. aa. 99"
    },
    "type": "end_devices"
  }
}

```

Response Code: 200

Example response body:

```

{
  "data": {
    "id": "4231d706-9217-4cba-9cb2-aa18146dcf6e",
    "type": "end_devices",
    "attributes": {
      "id": "4231d706-9217-4cba-9cb2-aa18146dcf6e",
      "conduit_serial": null,
      "organization_id": "408aaa46-b10f-4943-8070-3527a604843a",
      "eui": "ab-ab-ab-0a-0a-0a-0a",
      "name": "Reliable End Device Create",
      "serial_number": "sn01",
      "product_id": "pr01",
      "hardware_version": "hw01",
      "firmware_version": "fv01",
      "rejoin_count": 0,
      "created_at": "2019-10-23T20:09:57.752Z",

```

```
    "updated_at": "2019-10-23T20:09:57.752Z",
    "application_network_id": "bfd809b2-fe80-473b-97ba-8d7b7e059703",
    "uplink_counter": null,
    "downlink_counter": null,
    "last_seen": null,
    "device_profile_id": null,
    "network_profile_id": null,
    "organization_name": null
  },
  "relationships": {
    "application_network": {
      "data": {
        "id": "bfd809b2-fe80-473b-97ba-8d7b7e059703",
        "type": "application_networks"
      }
    },
    "organization": {
      "data": {
        "id": "408aaa46-b10f-4943-8070-3527a604843a",
        "type": "organizations"
      }
    }
  },
  "gateways": {
    "data": []
  }
}
}
```

Response Code: 400

Example payload response:

```
{
  "errors": [
    {
      "detail": "Eui has already been taken",
      "id": null
    },
    {
      "detail": "Name has already been taken",
      "id": null
    }
  ]
}
```

DELETE api/v2/end_devices/:id

Deletion may also delete related join requests and packets with the `preserve_children` option. By default the action is false, so the `preserve_children` option only needs to be set when action is true.

Example preserve children deletion

`https://lens-dev.devicehq.com/api/v2/end_devices/d6e5f88d-2790-4efd-ad93-00d42243111c?preserve_children=true`

```
method: 'delete',
url: site + 'api/v2/end_devices/' + item.id,
headers: {
  'accept': 'application/vnd.api+json',
  'x-auth-token': auth_token
}
```

Response Code: 200

TBD

Response Code: 400

Provides an array of errors that occurred

Example payload response:

```
{
  "errors": [
    {
      "detail": "Eui has already been taken",
      "id": null
    },
    {
      "detail": "Name has already been taken",
      "id": null
    }
  ]
}
```

Gateways

Relationships

Relationship to Application Networks

A Gateway belongs to one or more Application Networks. Both must belong to same Organization.

Attributes

conduit_serial

Type: String

Format: None

Permissions: Required WriteOnce

Restrictions: None

Description: Serial number assigned to the gateway.

eui

Type: String

Format: EUI

Permissions: Required WriteOnce

Restrictions: Unique to System

Description: Gateway EUI

name

Type: String

Format: None

Permissions: Optional Updateable

Restrictions: None

Description: User defined name of gateway

last_seen

Type: String

Format: Timestamp

Permissions: System-ReadOnly

Restrictions: N/A

Description: Time of last report from the gateway.

latitude

Type: Numeric

Format: floating point

Permissions: Optional Updateable [NOTE: System updated by some Conduit AEP versions]

Restrictions: None

Description: Location data of the gateway; can be reported by gateway if GPS is available.

longitude

Type: Numeric

Format: floating point

Permissions: Optional Updateable [NOTE: System updated by some Conduit AEP versions]

Restrictions: None

Description: Location data of the gateway; can be reported by gateway if GPS is available.

altitude

Type: Numeric

Format: floating point

Permissions: Optional Updateable [NOTE: System updated by some Conduit AEP versions]

Restrictions: None

Description: Location data of the gateway; can be reported by gateway if GPS is available.

created_at

Type: String

Format: Timestamp

Permissions: System-ReadOnly

Restrictions: N/A

Description: Tbd

updated_at

Type: String

Format: Timestamp

Permissions: System-ReadOnly

Restrictions: None

Description: Tbd

organization_id

Type: String

Format: UUID

Permissions: System-ReadOnly

Restrictions: N/A

Description: ID of the organization to which the gateway belongs

protocol_version

Type: String

Format: None

Permissions: System-ReadOnly

Restrictions: N/A

Description: Protocol version of the gateway. Provided by the gateway when it checks in.

ip_address

Type: String

Format: IPv4 Format

Permissions: System-ReadOnly

Restrictions: N/A

Description: Address of the packet forwarder. Provided by the gateway when it checks in.

ip_port

Type: Numeric

Format: Cardinal

Permissions: System-ReadOnly

Restrictions: N/A

Description: UDP port of the packet forwarder. Provided by the gateway when it checks in.

uuid

Type: String

Format: UUID

Permissions: Required WriteOnce

Restrictions: None

Description: Gateway UUID

lora_gateway_utils

Type: String

Format: None

Permissions: System-ReadOnly

Restrictions: N/A

Description: Tbd

lora_lens_server_bin

Type: String

Format: None

Permissions: System-ReadOnly

Restrictions: N/A

Description: Tbd

lora_network_server

Type: String

Format: None

Permissions: System-ReadOnly

Restrictions: N/A

Description: Tbd

lora_network_server_bin

Type: String

Format: None

Permissions: System-ReadOnly

Restrictions: N/A

Description: Tbd

lora_packet_forwarder

Type: String

Format: None

Permissions: System-ReadOnly

Restrictions: N/A

Description: Tbd

lora_query

Type: String

Format: None

Permissions: System-ReadOnly

Restrictions: N/A

Description: Tbd

aep_version

Type: String

Format: None

Permissions: System-ReadOnly

Restrictions: N/A

Description: Gateway firmware version

dhq_data

Type: JSON Object

Format: JSON

Permissions: System-ReadOnly

Restrictions: N/A

Description: Tbd

device_management_enabled

Type: boolean

Format: string

Permissions: System-ReadOnly

Restrictions: N/A

Description: Enables DeviceHQ. This allows LENS to display data from DeviceHQ on the gateway details tab.

recompute_filters_needed

Type: String

Format: None

Permissions: System-ReadOnly

Restrictions: N/A

Description: Tbd

organization_name

Type: String

Format: None

Permissions: System-ReadOnly

Restrictions: N/A

Description: The organization's name.

dhq_account_api_key

Type: boolean

Format: N/A

Permissions: Required Optional NonReadable Updateable System-ReadOnly WriteOnce

Restrictions: Unique to System / Organization

Description: Tbd

GET api/v2/gateways

Collections can be paginated with **skip** and **limit** parameters. Defaults: skip: 0, limit: 25

```
method: 'get',
url: site + 'api/v2/gateways',
params: {
  skip: skip,
  limit: limit,
  sort: 'eui'
},
headers: {
  'content-type': 'application/vnd.api+json',
  'accept': 'application/vnd.api+json',
  'x-auth-token': auth_token
}
```

Response Code: 200

Example payload response:

```
{
  "data": [
    {
      "id": "5c09f6cb-3295-4d74-891b-ea42310ccc33",
      "type": "gateways",
      "attributes": {
        "id": "5c09f6cb-3295-4d74-891b-ea42310ccc33",
        "conduit_serial": "18062240",
        "eui": "00-80-00-00-a0-00-0f-52",
```

```
    "name": "Reliable Workstation Gateway",
    "last_seen": "2019-10-24T17:14:49.919Z",
    "latitude": 45.0563308,
    "longitude": -93.1439917,
    "altitude": 10,
    "created_at": "2019-10-14T20:00:12.312Z",
    "updated_at": "2019-10-24T17:14:49.923Z",
    "organization_id": "7786651b-3f20-4214-b077-ebe010688f12",
    "protocol_version": null,
    "ip_address": null,
    "ip_port": null,
    "uuid": "116c209c-14e9-4eb6-8660-835cf3e70c92",
    "lora_gateway_utils": null,
    "lora_lens_server_bin": null,
    "lora_network_server": null,
    "lora_network_server_bin": null,
    "lora_packet_forwarder": null,
    "lora_query": null,
    "aep_version": null,
    "dhq_data": {},
    "device_management_enabled": false,
    "recompute_filters_needed": false,
    "organization_name": null
  }
},
{
  "id": "595d8a2f-4b58-4262-9d90-26f7d8947df2",
  "type": "gateways",
  "attributes": {
    "id": "595d8a2f-4b58-4262-9d90-26f7d8947df2",
    "conduit_serial": "sn01",
    "eui": "dd-ff-cc-cc-a0-00-00-00",
    "name": null,
    "last_seen": "2019-10-18T14:50:15.829Z",
    "latitude": null,
    "longitude": null,
    "altitude": null,
    "created_at": "2019-10-18T14:50:15.830Z",
    "updated_at": "2019-10-18T14:50:15.830Z",
    "organization_id": "7786651b-3f20-4214-b077-ebe010688f12",
    "protocol_version": null,
    "ip_address": null,
    "ip_port": null,
```

```

        "uuid": "ddddddd-dddd-dccc-cccc-ffffffffffff",
        "lora_gateway_utils": null,
        "lora_lens_server_bin": null,
        "lora_network_server": null,
        "lora_network_server_bin": null,
        "lora_packet_forwarder": null,
        "lora_query": null,
        "aep_version": null,
        "dhq_data": {},
        "device_management_enabled": false,
        "recompute_filters_needed": true,
        "organization_name": null
    }
}
],
"meta": {
    "pagination": {
        "skip": 0,
        "limit": 100,
        "count": 2,
        "collection_count": 2
    }
}
}
}

```

Response Code: 400

Provides an array of errors that occurred

Example payload response:

```

{
    "errors": [
        {
            "detail": "Eui has already been taken",
            "id": null
        },
        {
            "detail": "Name has already been taken",
            "id": null
        }
    ]
}

```

POST api/v2/gateways

```
method: 'post',
url: site + 'api/v2/gateways',
data: {
  data: {
    type: 'gateways',
    attributes: {
      conduit_serial: item.attributes.conduit_serial,
      eui: item.attributes.eui,
      uuid: item.attributes.uuid,
      name: item.attributes.name,
      latitude: item.attributes.latitude,
      longitude: item.attributes.longitude,
      altitude: item.attributes.altitude,
    }
  }
},
headers: {
  'content-type': 'application/vnd.api+json',
  'accept': 'application/vnd.api+json',
  'x-auth-token': auth_token
}
```

Example Parameters

```
{
  "data": {
    "attributes": {
      "altitude": "",
      "conduit_serial": "sn01",
      "eui": "a1-a2-a3-a4-a5-a6-a7-a8",
      "latitude": "",
      "longitude": "",
      "name": "New Reliable Gateway",
      "uuid": "bbbbbbbb-bbbb-bbbb-bbbb-bbbbbbbbbbbb"
    },
    "relationships": {
      "application_networks": {
        "data": [
          {
            "id": "bcbb30a9-3f37-413c-a2c8-e0589ccdb200",
            "type": "application_networks"
          }
        ]
      }
    }
  }
}
```

```
    }
  },
  "type": "gateway"
}
}
```

Response Code: 200

Example payload response:

```
{
  "data": {
    "id": "607ee818-c421-4bad-9f39-22da5171981a",
    "type": "gateways",
    "attributes": {
      "id": "607ee818-c421-4bad-9f39-22da5171981a",
      "conduit_serial": "sn01",
      "eui": "a1-a2-a3-a4-a5-a6-a7-a8",
      "name": "New Reliable Gateway",
      "last_seen": "2019-10-24T17:19:17.254Z",
      "latitude": null,
      "longitude": null,
      "altitude": null,
      "created_at": "2019-10-24T17:19:17.262Z",
      "updated_at": "2019-10-24T17:19:17.262Z",
      "organization_id": "7786651b-3f20-4214-b077-ebe010688f12",
      "protocol_version": null,
      "ip_address": null,
      "ip_port": null,
      "uuid": "bbbbbbbb-bbbb-bbbb-bbbb-bbbbbbbbbbbb",
      "lora_gateway_utils": null,
      "lora_lens_server_bin": null,
      "lora_network_server": null,
      "lora_network_server_bin": null,
      "lora_packet_forwarder": null,
      "lora_query": null,
      "aep_version": null,
      "dhq_data": {},
      "device_management_enabled": false,
      "recompute_filters_needed": true,
      "organization_name": null,
      "dhq_account_api_key": false
    },
    "relationships": {
```

```
    "organization": {
      "data": {
        "id": "7786651b-3f20-4214-b077-ebe010688f12",
        "type": "organizations"
      }
    },
    "application_networks": {
      "data": [
        {
          "id": "bcbb30a9-3f37-413c-a2c8-e0589ccdb200",
          "type": "application_networks"
        }
      ]
    }
  }
}
```

Response Code: 400

Provides an array of errors that occurred

Example payload response:

```
{
  "errors": [
    {
      "detail": "Eui has already been taken",
      "id": null
    },
    {
      "detail": "Name has already been taken",
      "id": null
    }
  ]
}
```

PATCH api/v2/gateways/:id

```
method: 'patch',
url: site + 'api/v2/gateways/' + item.id,
data: {
  data: {
    type: 'gateways',
    relationships: {
      application_networks: {
        data: [
          {
            id: application_network_id,
            type: "application_networks"
          }
        ]
      }
    }
  }
},
headers: {
  'content-type': 'application/vnd.api+json',
  'accept': 'application/vnd.api+json',
  'x-auth-token': auth_token
}
```

Example Parameters

```
{
  "data": {
    "attributes": {
      "altitude": "10.0",
      "latitude": "45.0563308",
      "longitude": "-93.1439917"
    },
    "type": "gateway"
  }
}
```

Response Code: 200

Example payload response:

```
{
  "data": {
    "id": "5c09f6cb-3295-4d74-891b-ea42310ccc33",
    "type": "gateways",
    "attributes": {
      "id": "5c09f6cb-3295-4d74-891b-ea42310ccc33",
      "conduit_serial": "18062240",
      "eui": "00-80-00-00-a0-00-0f-52",
      "name": "Reliable Workstation Gateway",
      "last_seen": "2019-10-24T17:01:28.429Z",
      "latitude": 45.0563308,
      "longitude": -93.1439917,
      "altitude": 10,
      "created_at": "2019-10-14T20:00:12.312Z",
      "updated_at": "2019-10-24T17:03:55.209Z",
      "organization_id": "7786651b-3f20-4214-b077-ebe010688f12",
      "protocol_version": null,
      "ip_address": null,
      "ip_port": null,
      "uuid": "116c209c-14e9-4eb6-8660-835cf3e70c92",
      "lora_gateway_utils": null,
      "lora_lens_server_bin": null,
      "lora_network_server": null,
      "lora_network_server_bin": null,
      "lora_packet_forwarder": null,
      "lora_query": null,
      "aep_version": null,
      "dhq_data": {},
      "device_management_enabled": false,
      "recompute_filters_needed": false,
      "organization_name": null,
      "dhq_account_api_key": false
    },
    "relationships": {
      "organization": {
        "data": {
          "id": "7786651b-3f20-4214-b077-ebe010688f12",
          "type": "organizations"
        }
      }
    }
  },
}
```

```
"application_networks": {
  "data": [
    {
      "id": "bcbb30a9-3f37-413c-a2c8-e0589ccdb200",
      "type": "application_networks"
    }
  ]
}
},
"included": [
  {
    "id": "bcbb30a9-3f37-413c-a2c8-e0589ccdb200",
    "type": "application_networks",
    "attributes": {
      "id": "bcbb30a9-3f37-413c-a2c8-e0589ccdb200",
      "name": "Reliable AppNet1",
      "description": "reliable app net description",
      "url": "http://www.reliable.com",
      "created_at": "2019-10-14T19:53:02.694Z",
      "updated_at": "2019-10-23T19:31:19.138Z",
      "eui": "2b-b9-d4-e5-9d-e6-9a-b8",
      "organization_id": "7786651b-3f20-4214-b077-ebe010688f12",
      "network_profile_id": null,
      "container_id": "reliable container id",
      "container_name": "reliable container name",
      "organization_name": null
    },
  },
  "relationships": {
    "organization": {
      "data": {
        "id": "7786651b-3f20-4214-b077-ebe010688f12",
        "type": "organizations"
      }
    },
  },
  "gateways": {
    "data": [
      {
        "id": "5c09f6cb-3295-4d74-891b-ea42310ccc33",
        "type": "gateways"
      },
      {

```

```
        "id": "595d8a2f-4b58-4262-9d90-26f7d8947df2",
        "type": "gateways"
    }
]
},
"end_devices": {
    "data": [
        {
            "id": "a3a961bc-d502-4724-adba-a94755410705",
            "type": "end_devices"
        },
        {
            "id": "3e3d3676-4dc5-4c8f-b2a1-24d6bca2e5ef",
            "type": "end_devices"
        },
        * Repeated list of device object *
        {
            "id": "4db9f752-049e-4ca6-a36f-9208704d49a4",
            "type": "end_devices"
        }
    ]
}
},
"meta": {
    "gateways_count": 2,
    "end_devices_count": 100
}
}
]
```

Response Code: 400

Example payload response:

```
{
  "errors": [
    {
      "detail": "Eui has already been taken",
      "id": null
    },
    {
      "detail": "Name has already been taken",
      "id": null
    }
  ]
}
```

DELETE `api/v2/gateways/:id`

```
method: 'delete',
url: site + 'api/v2/gateways/' + item.id,
headers: {
  'accept': 'application/vnd.api+json',
  'x-auth-token': auth_token
}
```

Response Code: 200

TBD

Response Code: 400

Provides an array of errors that occurred

Example payload response:

```
{
  "errors": [
    {
      "detail": "Eui has already been taken",
      "id": null
    },
    {
      "detail": "Name has already been taken",
      "id": null
    }
  ]
}
```