### Add:

#### add device:

- Parameters:
  - o (String) device: d\_name
- ENDPOINT:
  - o add device?device=d\_name
- Return Values:
  - (Message string) 'ITEM\_ADDED'
    - Status: SUCCESS
    - **Action**: None
  - (Message string) 'MISSING\_DEVICE'
    - Status: ERROR
    - Action: None
    - Cause: d\_name was not set
  - (Message string) 'INVALID\_DEVICE'
    - Status: ERROR
    - Action: None
    - Cause: d\_name contained invalid characters or exceeded 64 characters
  - (Message string) 'ITEM\_EXISTS'
    - Status: ERROR
    - Action: list\_devices
    - Cause: A device with d\_name is already present in the database
  - o (Message string) 'QUERY FAILED: \$message.'
    - Status: ERROR
    - Action: None
    - Cause: SQL query failed

#### add\_manufacturer:

- Parameters:
  - (String) manufacturer: m\_name
- ENDPOINT:
  - add manufacturer?manufacturer=m\_name
- Return Values:
  - (Message string) 'ITEM ADDED'
    - Status: SUCCESS
    - Action: None
  - (Message string) 'MISSING MANUFACTURER'
    - Status: ERROR
    - Action: None
    - Cause: m\_name was not set
  - (Message string) 'INVALID\_MANUFACTURER'
    - Status: ERROR

- Action: None
- Cause: m\_name contained invalid characters or exceeded 64 characters
- (Message string) 'ITEM\_EXISTS'
  - Status: ERROR
  - Action: list manufacturers
  - Cause: A manufacturer with m\_name is already present in the database
- o (Message string) 'QUERY FAILED: \$message.'
  - Status: ERRORAction: None
  - Cause: SQL query failed

#### add\_equipment:

- Parameters:
  - o (Int) did: device\_id
  - o (Int) mid: manufacturer\_id
  - (String) sn: serial\_number
- ENDPOINT:
  - add\_equipment?did=device\_id&mid=manufacturer\_id&sn=serial\_number
- Return Values:
  - (Message string) 'ITEM\_ADDED'
    - Status: SUCCESS
    - Action: None
  - (Message string) 'MISSING\_DEVICE\_ID'
    - Status: ERROR
    - Action: None
    - Cause: device\_id was not set
  - (Message string) 'MISSING MANUFACTURER ID'
    - Status: ERROR
    - Action: None
    - Cause: manufacturer\_id was not set
  - (Message string) 'MISSING\_SERIAL'
    - Status: ERROR
    - Action: None
    - Cause: serial\_number was not set
  - (Message string) 'INVALID\_DEVICE\_ID.'
    - Status: ERROR
    - Action: query device
    - Cause: device\_id was set but not an integer
  - (Message string) 'INVALID MANUFACTURER ID'
    - Status: ERROR
    - Action: None
    - Cause: manufacturer\_id was set but not an integer
  - (Message string) 'ITEM\_EXISTS'
    - Status: ERROR
    - Action: query\_serial

- Cause: Equipment with serial\_number is already present in the database
- (Message string) 'INVALID\_SERIAL'

Status: ERRORAction: None

- Cause: serial\_number contained invalid characters or exceeded 64 characters
- (Message string) 'DEVICE\_TYPE\_INACTIVE'

Status: ERRORAction: None

- Cause: Cannot add equipment with an inactive device
- (Message string) 'MANUFACTURER\_INACTIVE'

Status: ERRORAction: None

- Cause: Cannot add equipment with an inactive manufacturer
- (Message string) 'QUERY\_FAILED: \$message.'

Status: ERRORAction: None

■ Cause: SQL query failed

### List:

list\_devices:

- Parameters:
  - (Optional string) include\_inactive: include\_inactive ('yes')
- ENDPOINT:
  - list\_devices?include\_inactive=include\_inactive
- Return Values:
  - (JSON) Array [device\_id, device\_name, status]

■ Status: SUCCESS

Action: None

(Message string) 'NO RESULTS'

■ Status: SUCCESS

■ Action: None

- Cause: Query was successful but returned no results
- (Message string) 'QUERY\_FAILED: \$message.'

Status: ERRORAction: None

■ Cause: SQL query failed

list\_manufacturers:

- Parameters:
  - (Optional string) include\_inactive: include\_inactive ('yes')
- ENDPOINT:
  - o list\_manufacturers?include\_inactive=include\_inactive

- Return Values:
  - (JSON) Array [manufacturer\_id, manufacturer\_name, status]

■ Status: SUCCESS

■ Action: None

(Message string) 'NO\_RESULTS'

■ Status: SUCCESS

■ Action: None

- Cause: Query was successful but returned no results
- o (Message string) 'QUERY\_FAILED: \$message.'

Status: ERRORAction: None

■ Cause: SQL query failed

## Modify:

modify\_device:

- Parameters:
  - o (Int) did: device\_id
  - (String) device: d\_name
  - o (String) status: status
- ENDPOINT:
  - modify\_device?did=device\_id&device=d\_name&status=status
- Return Values:
  - (Message string) 'ITEM\_MODIFIED'

■ Status: SUCCESS

■ Action: None

(Message string) 'MISSING\_DEVICE\_ID'

■ Status: ERROR

■ Action: None

■ Cause: device\_id was not set

(Message string) 'MISSING\_DEVICE'

■ Status: ERROR

Action: None

■ Cause: d\_name was not set

(Message string) 'MISSING\_STATUS'

■ Status: ERROR

Action: None

■ Cause: status was not set

(Message string) 'INVALID\_DEVICE\_ID'

- Status: ERROR
- Action: query\_device
- Cause: device\_id was set but not an integer
- (Message string) 'INVALID\_DEVICE'
  - Status: ERRORAction: None
  - Cause: d name contained invalid characters or exceeded 64 characters
- (Message string) 'INVALID\_DEVICE'
  - Status: ERRORAction: None
  - Cause: status contained invalid characters or exceeded 64 characters
- (Message string) 'ITEM\_EXISTS'
  - Status: ERRORAction: list devices
  - Cause: a device with d\_name is already present in the database
- o (Message string) 'QUERY\_FAILED: \$message.'
  - Status: ERRORAction: None
  - Cause: SQL query failed

#### modify manufacturer:

- Parameters:
  - o (Int) mid: manufacturer\_id
  - (String) manufacturer: m\_name
  - (String) status: status
- ENDPOINT:
  - o modify device?mid=manufacturer\_id&manufacturer=m\_name&status=status
- Return Values:
  - (Message string) 'ITEM\_MODIFIED'
    - Status: SUCCESS
    - Action: None
  - (Message string) 'MISSING\_MANUFACTURER\_ID'
    - Status: ERROR
    - Action: None
    - Cause: manufacturer\_id was not set
  - (Message string) 'MISSING\_MANUFACTURER'
    - Status: ERROR
    - Action: None
    - Cause: m\_name was not set
  - (Message string) 'MISSING\_STATUS'
    - Status: ERROR
    - Action: None
    - Cause: status was not set
  - (Message string) 'INVALID\_MANUFACTURER\_ID'
    - Status: ERROR

- **Action**: query\_manufacturer
- Cause: manufacturer\_id was set but not an integer
- (Message string) 'INVALID MANUFACTURER'
  - Status: ERRORAction: None
  - Cause: m\_name contained invalid characters or exceeded 64 characters
- (Message string) 'INVALID STATUS'
  - Status: ERRORAction: None
  - Cause: status contained invalid characters or exceeded 64 characters
- (Message string) 'ITEM\_EXISTS'
  - Status: ERROR
  - Action: list manufacturers
  - Cause: a manufacturer with m\_name is already present in the database
- (Message string) 'QUERY FAILED: \$message.'
  - Status: ERRORAction: None
  - Cause: SQL query failed

#### modify\_equipment:

- Parameters:
  - (Int) eid: equipment\_id
  - o (Int) did: device\_id
  - (Int) mid: manufacturer\_id
  - (String) sn: serial\_number
  - o (String) status: status
- ENDPOINT:
  - modify\_device?eid=equipment\_id&did=device\_id&mid=manufacturer\_id&sn =serial\_number&status=status
- Return Values:
  - (Message string) 'ITEM\_MODIFIED'
    - Status: SUCCESS
    - Action: None
  - (Message string) 'MISSING\_EQUIPMENT\_ID'
    - Status: ERROR
    - Action: None
    - Cause: equipment\_id was not set
  - (Message string) 'MISSING\_DEVICE\_ID'
    - Status: ERROR
    - Action: None
    - Cause: device\_id was not set
  - (Message string) 'MISSING\_MANUFACTURER\_ID'
    - Status: ERROR
    - Action: None
    - Cause: manufacturer\_id was not set

- (Message string) 'MISSING\_SERIAL\_NUMBER'
  - Status: ERROR
  - Action: None
  - Cause: serial\_number was not set
- (Message string) 'MISSING\_STATUS'
  - Status: ERROR
  - Action: None
  - Cause: status was not set
- (Message string) 'INVALID\_EQUIPMENT\_ID'
  - Status: ERROR
  - Action: query\_id
  - Cause: equipment\_id was set but not an integer
- (Message string) 'INVALID DEVICE ID'
  - Status: ERROR
  - Action: query\_device
  - Cause: device\_id was set but not an integer
- (Message string) 'INVALID\_MANUFACTURER\_ID'
  - Status: ERROR
  - Action: query\_manufacturer
  - Cause: manufacturer\_id was set but not an integer
- (Message string) 'INVALID\_SERIAL'
  - Status: ERROR
  - Action: None
  - Cause: serial\_number contained invalid characters or exceeded 64 characters
- (Message string) 'INVALID STATUS'
  - Status: ERROR
  - Action: None
  - Cause: status contained invalid characters or exceeded 64 characters
- (Message string) 'ITEM\_EXISTS'
  - Status: ERROR
  - Action: query serial
  - Cause: equipment with serial\_number is already present in the database
- (Message string) 'QUERY\_FAILED: \$message.'
  - Status: ERROR
  - Action: None
  - Cause: SQL query failed

# Query:

query\_device:

Parameters:

- o (Int) did: device id
- ENDPOINT:
  - query device?did=device\_id
- Return Values:
  - (JSON) Single {device id, device name, status}
    - Status: SUCCESS
    - Action: None
  - (Message string) 'DEVICE\_NOT\_FOUND'
    - Status: SUCCESS
    - Action: None
    - Cause: Query was successful but returned no results
  - (Message string) 'MISSING\_DEVICE\_ID'
    - Status: ERROR
    - Action: None
    - Cause: device\_id was not set
  - (Message string) 'INVALID\_DEVICE\_ID'
    - Status: ERROR
    - Action: None
    - Cause: device\_id was set but not an integer
  - (Message string) 'QUERY\_FAILED: \$message.'
    - Status: ERROR
    - Action: None
    - Cause: SQL query failed

#### query manufacturer:

- Parameters:
  - o (Int) mid: manufacturer\_id
- ENDPOINT:
  - query\_manufacturer?mid=manufacturer\_id
- Return Values:
  - (JSON) Single {manufacturer\_id, manufacturer\_name, status}
    - Status: SUCCESS
    - Action: None
  - (Message string) 'MANUFACTURER\_NOT\_FOUND'
    - Status: SUCCESS
    - Action: None
    - Cause: Query was successful but returned no results
  - (Message string) 'MISSING\_MANUFACTURER\_ID'
    - Status: ERROR
    - Action: None
    - Cause: manufacturer\_id was not set
  - (Message string) 'INVALID\_MANUFACTURER\_ID'
    - Status: ERROR
    - Action: None
    - Cause: manufacturer\_id was set but not an integer

- (Message string) 'QUERY\_FAILED: \$message.'
  - Status: ERROR
  - Action: None
  - Cause: SQL query failed

#### query\_id:

- Parameters:
  - o (Int) eid: equipment id
- ENDPOINT:
  - o query\_id?eid=equipment\_id
- Return Values:
  - (JSON) Single {equipment\_id, device\_id, manufacturer\_id, serial\_number, status}
    - Status: SUCCESS
    - Action: None
  - (Message string) 'EQUIPMENT\_NOT\_FOUND'
    - Status: SUCCESS
    - Action: None
    - Cause: Query was successful but returned no results
  - (Message string) 'MISSING\_EQUIPMENT\_ID'
    - Status: ERROR
    - Action: None
    - Cause: equipment\_id was not set
  - (Message string) 'INVALID\_EQUIPMENT\_ID'
    - Status: ERROR
    - Action: None
    - Cause: equipment\_id was set but not an integer
  - (Message string) 'QUERY FAILED: \$message.'
    - Status: ERROR
    - Action: None
    - Cause: SQL query failed

#### query\_serial:

- Parameters:
  - o (Int) sn: serial number
- ENDPOINT:
  - query\_id?sn=serial\_number
- Return Values:
  - (JSON) Single {equipment\_id, device\_id, manufacturer\_id, serial\_number, status}
    - Status: SUCCESS
    - Action: None
  - (Message string) 'EQUIPMENT\_NOT\_FOUND'
    - Status: SUCCESS
    - Action: None
    - Cause: Query was successful but returned no results
  - (Message string) 'MISSING SERIAL'
    - Status: ERROR

■ Action: None

■ Cause: serial\_number was not set

(Message string) 'INVALID\_sERIAL'

Status: ERRORAction: None

- Cause: serial\_number contained invalid characters or exceeded 64 characters
- (Message string) 'QUERY\_FAILED: \$message.'

Status: ERRORAction: None

■ Cause: SQL query failed

## Search:

#### search devices:

- Parameters:
  - (Optional int) did: device\_id
  - (Optional int) mid: manufacturer\_id
  - (Optional string) sn: serial\_number
  - (Optional string) include\_inactive: include\_inactive
  - ENDPOINT:
    - add\_equipment?did=device\_id&mid=manufacturer\_id&sn=serial\_number&in clude\_inactive=include\_inactive
  - Return Values:
    - (JSON) Array [equipment id, device id, manufacturer id, serial number, status]

■ Status: SUCCESS

Action: None

(Message string) 'NO RESULTS'

■ Status: SUCCESS

Action: None

- Cause: Query was successful but returned no results
- (Message string) 'INVALID\_DEVICE\_ID'

■ Status: ERROR

■ Action: query\_device

■ Cause: device\_id was set but not an integer

(Message string) 'INVALID MANUFACTURER ID'

Status: ERROR

■ Action: None

- Cause: manufacturer\_id was set but not an integer
- (Message string) 'INVALID\_SERIAL'

■ Status: ERROR

■ Action: None

■ Cause: serial\_number contained invalid characters or exceeded 64 characters

o (Message string) 'QUERY\_FAILED: \$message.'

Status: ERRORAction: None

■ Cause: SQL query failed