Portfolio Project

CS 493: Cloud Application Development

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# Data Model

The app stores three kinds of entities in Datastore: Users, Trucks, and Loads. Users and Trucks are related since each Truck has an ‘owner’ property which corresponds to the ‘sub’ property of a User. Users and Trucks have a one-to-many relationship. A single User can own many Trucks, but a Truck can only have one owner. Trucks and Loads are also related via a one-to-many relationship. A Truck can contain many Loads while a Load can only be on a single Truck.

## Users

|  |  |  |  |
| --- | --- | --- | --- |
| **Property** | **Data Type** | **Notes** | **Example** |
| id | Integer | The unique ID of the user (automatically generated by Datastore). |  |
| name | String | The username of the user. | “admin@westerntrucking.com” |
| sub | String | The complete subject claim of the user’s JWT. | “auth0|629b81bdcd1f83006faceb4d” |

**Note**: both the ‘id’ and ‘sub’ properties are unique identifiers, but the ‘id’ property is irrelevant to this application. The ‘sub’ property is used to identify users and it links the Users kind to the Trucks kind.

## Trucks

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Property** | **Data Type** | **Notes** | **Example** | **Required?** | **Valid Request Parameters** |
| id | Integer | The unique ID of the truck. Datastore automatically generates it. | N/A | No | N/A |
| owner | String | The sub of the user that owns the truck. | “auth0|629b81bdcd1f83006faceb4d” | No | N/A |
| truck\_vin | String | The vehicle identification number of the truck. | “1FUJBGAN04HM86987” | Yes | 17-character string (only alphanumeric characters) |
| trailer\_vin | String | The vehicle identification number of trailer. | “1B3ES56C55D137449” | Yes | 17-character string (only alphanumeric characters) |
| truck\_model | String | The model of the truck. | “Kenworth T680” | Yes | Maximum 50 characters (alphanumeric & spaces only) |
| trailer\_type | String | The type of the trailer. | “Flatbed” | Yes | Maximum 20 characters (alphanumeric & spaces only) |
| trailer\_capacity | Integer | The maximum weight (lbs) a trailer can hold. | 45000 | Yes | An integer between 1 and 100,000 |
| loads | Array | A list of the loads on the truck. | [“123”, “456”, “789”] | No | N/A |

## Loads

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Property** | **Data Type** | **Notes** | **Example** | **Required?** | **Valid Request Parameters** |
| id | Integer | The unique ID of the load. Datastore automatically generates it. |  | No | N/A |
| carrier | String or Null | If the load is on a truck, then *carrier* is the id of the truck. Otherwise, it is null. | "5665248644169728" | No | N/A |
| vendor | String | The supplier of the item. | “Driscoll’s” | Yes | Maximum 50 characters (letters, apostrophes, and spaces only) |
| item | String | The items in the load. | “Organic strawberries” | Yes | Maximum 50 characters (letters and spaces only) |
| quantity | Integer | The number of cases of the item. | 240 | Yes | An integer between 1 and 100,000 |
| weight | Floating point number | The weight (lbs) of the load. | 465.75 | Yes | A number between 1 and 100,000 |

# View all Users

List all the users.

|  |
| --- |
| GET /users |

## Protected?

No.

## Request

### Path Parameters

None

### Request Body

None

## Response

### Response Body Format

JSON

### Response Statuses

|  |  |  |
| --- | --- | --- |
| **Outcome** | **Status Code** | **Notes** |
| Success | 200 OK | The response contains a property “data” which is a list of all the users in the database. |
| Failure | 406 Not Acceptable | The client wants a media type other than JSON. |

### Response Examples

#### Success

|  |
| --- |
| Status: 200 OK  {    "data": [      {        "sub": "auth0|629b9c27337c6c00708f13d5",        "name": "admin@cstruckingllc.com",        "id": "5995848483733504"      },      {        "sub": "auth0|629bec02cd1f83006facf42b",        "name": "dev1924@dev1924.com",        "id": "6246730945265664"      },      {        "name": "admin@westerntrucking.com",        "sub": "auth0|629b81bdcd1f83006faceb4d",        "id": "6264616665481216"      }    ]  } |

#### Failure

|  |
| --- |
| Status: 406 Not Acceptable  {    "Error": "This application only supports JSON responses"  } |

# Create a Truck

Allows you to create a new truck.

|  |
| --- |
| POST /trucks |

## Protected?

Yes. The request must be accompanied by a valid bearer token.

## Request

### Path Parameters

None

### Request Body

Required

### Request Body Format

JSON

### Request JSON Attributes

|  |  |  |
| --- | --- | --- |
| **Name** | **Description** | **Required?** |
| truck\_vin | The vehicle identification number of the truck. | Yes |
| trailer\_vin | The vehicle identification number of the trailer. | Yes |
| truck\_model | The model of the truck (E.g. “Kenworth T680”). | Yes |
| trailer\_type | The model of the trailer (E.g. “Flatbed”). | Yes |
| trailer\_capacity | The maximum weight (lbs) a trailer can hold (E.g. 45000). | Yes |

### Request Body Example

|  |
| --- |
| {      "truck\_vin": "1FUJBGAN04HM86987",      "trailer\_vin": "1B3ES56C55D137449",      "truck\_model": "Kenworth T680",      "trailer\_type": "Refrigerated",      "trailer\_capacity": 45000  } |

## Response

### Response Body Format

JSON

### Response Statuses

|  |  |  |
| --- | --- | --- |
| **Outcome** | **Status Code** | **Notes** |
| Success | 201 Created | Extraneous attributes will be ignored. |
| Failure | 400 Bad Request | The request is missing any of the required attributes. |
| Failure | 401 Unauthorized | The bearer token is missing or invalid. |
| Failure | 415 Unsupported Media Type | The request is not JSON. |

### Response Examples

#### Success

|  |
| --- |
| Status: 201 Created  {    "trailer\_capacity": 45000,    "trailer\_vin": "1B3ES56C55D137449",    "loads": [],    "trailer\_type": "Refrigerated",    "truck\_vin": "1FUJBGAN04HM86987",    "owner": "auth0|629b81bdcd1f83006faceb4d",    "truck\_model": "Kenworth T680",    "id": "5284414665785344",    "self": "http://127.0.0.1:8080/trucks/5284414665785344"  } |
|  |

#### Failure

|  |
| --- |
| Status: 400 Bad Request  {    "Error": "The request object is missing at least one of the required attributes"  } |

|  |
| --- |
| Status: 401 Unauthorized Error  {    "Error": "Invalid token."  } |

|  |
| --- |
| Status: 415 Unsupported Media Type  {    "Error": "Server only accepts application/json data."  } |

# View a Truck

Allows you to get an existing truck

|  |
| --- |
| GET /truck/:truck\_id |

## Protected?

Yes. The request must be accompanied by a valid bearer token.

## Request

## Path Parameters

|  |  |
| --- | --- |
| **Name** | **Description** |
| truck\_id | ID of the truck |

### Request Body

None

## Response

### Response Body Format

JSON

### Response Statuses

|  |  |  |
| --- | --- | --- |
| **Outcome** | **Status Code** | **Notes** |
| Success | 200 OK |  |
| Failure | 401 Unauthorized | The bearer token is missing or invalid. |
| Failure | 403 Forbidden | The bearer token is valid but does not correspond to the correct owner of the truck. |
| Failure | 404 Not Found | No truck with this truck\_id exists |
| Failure | 406 Not Acceptable | The client wants a media type other than JSON. |

### Response Examples

#### Success

|  |
| --- |
| Status: 200 OK  {    "truck\_vin": "1FUJBGAN04HM86987",    "loads": [      {        "id": "6523730297618432",        "self": "http://127.0.0.1:8080/loads/6523730297618432"      }    ],    "trailer\_capacity": 45000,    "trailer\_vin": "1B3ES56C55D137449",    "truck\_model": "Kenworth T680",    "trailer\_type": "Refrigerated",    "owner": "auth0|629b81bdcd1f83006faceb4d",    "id": "5284414665785344",    "self": "http://127.0.0.1:8080/trucks/5284414665785344"  } |

#### Failure

|  |
| --- |
| Status: 401 Unauthorized  {    "Error": "Invalid token."  } |

|  |
| --- |
| Status: 403 Forbidden  {    "Error": "You do not have access to this truck”  } |

|  |
| --- |
| Status: 404 Not Found  {    "Error": "No truck with this truck\_id exists"  } |

|  |
| --- |
| Status: 406 Not Acceptable  {    "Error": "This application only supports JSON responses"  } |

# View all Trucks

List all the trucks owned by a particular owner.

|  |
| --- |
| GET /trucks |

## Protected?

Yes. The request must be accompanied by a valid bearer token.

## Request

### Path Parameters

None

### Request Body

None

## Response

### Response Body Format

JSON

### Response Statuses

|  |  |  |
| --- | --- | --- |
| **Outcome** | **Status Code** | **Notes** |
| Success | 200 OK | The response contains a property “data” which is a list of all the trucks owned by the specified owner. |
| Failure | 401 Unauthorized | The bearer token is missing or invalid. |
| Failure | 406 Not Acceptable | The client wants a media type other than JSON. |

### Response Examples

#### Success

|  |
| --- |
| Status: 200 OK  {    "data": [      {        "trailer\_type": "Refrigerated",        "truck\_model": "Freightliner M2 106",        "owner": "auth0|629b81bdcd1f83006faceb4d",        "loads": [],        "truck\_vin": "JH4KA4576KC031014",        "trailer\_vin": "JH4DA3350HS000229",        "trailer\_capacity": 40000,        "id": "4824921112838144",        "self": "http://127.0.0.1:8080/trucks/4824921112838144"      },      {        "trailer\_vin": "1B3ES56C55D137449",        "trailer\_capacity": 45000,        "truck\_model": "Kenworth T680",        "owner": "auth0|629b81bdcd1f83006faceb4d",        "loads": [          {            "id": "6136585972088832",            "self": "http://127.0.0.1:8080/loads/6136585972088832"          }        ],        "truck\_vin": "1FUJBGAN04HM86987",        "trailer\_type": "Refrigerated",        "id": "5010686065246208",        "self": "http://127.0.0.1:8080/trucks/5010686065246208"      },      {        "truck\_vin": "1C3BF66P0GX570598",        "truck\_model": "Peterbilt 389",        "loads": [],        "trailer\_vin": "LM4AC113061105688",        "trailer\_type": "Refrigerated",        "trailer\_capacity": 45000,        "owner": "auth0|629b81bdcd1f83006faceb4d",        "id": "5566276323770368",        "self": "http://127.0.0.1:8080/trucks/5566276323770368"      },      {        "owner": "auth0|629b81bdcd1f83006faceb4d",        "truck\_model": "Kenworth T800",        "trailer\_type": "Flatbed",        "truck\_vin": "1FABP21B4CK165368",        "trailer\_capacity": 45000,        "trailer\_vin": "3N1BC13E99L480541",        "loads": [],        "id": "6101517832552448",        "self": "http://127.0.0.1:8080/trucks/6101517832552448"      },      {        "owner": "auth0|629b81bdcd1f83006faceb4d",        "loads": [],        "truck\_model": "Freightliner Cascadia",        "trailer\_type": "Dry Van",        "trailer\_capacity": 20000,        "trailer\_vin": "1G4HP54KX24151104",        "truck\_vin": "JTJZB1BA8A2400307",        "id": "6129226277191680",        "self": "http://127.0.0.1:8080/trucks/6129226277191680"      },      {        "truck\_vin": "1GCCS1442W8181753",        "trailer\_capacity": 30000,        "loads": [          {            "id": "6732143317221376",            "self": "http://127.0.0.1:8080/loads/6732143317221376"          },          {            "id": "6128839595917312",            "self": "http://127.0.0.1:8080/loads/6128839595917312"          }        ],        "trailer\_vin": "JH4DA9340PS000417",        "owner": "auth0|629b81bdcd1f83006faceb4d",        "trailer\_type": "Flatbed",        "truck\_model": "Mack Anthem",        "id": "6232295996391424",        "self": "http://127.0.0.1:8080/trucks/6232295996391424"      }    ]  } |

#### Failure

|  |
| --- |
| Status: 401 Unauthorized  {    "Error": "Invalid token."  } |

|  |
| --- |
| Status: 406 Not Acceptable  {    "Error": "This application only supports JSON responses"  } |

# Edit a Truck (Put)

Allows you to overwrite all attributes of a truck, except ‘owner’ and loads.’

**Side effect**: ‘loads’ will be reset to an empty array and any load entity that was previously on the truck will no longer have a carrier.

|  |
| --- |
| PUT /trucks/:truck\_id |

## Protected?

Yes. The request must be accompanied by a valid bearer token.

## Request

### Path Parameters

|  |  |
| --- | --- |
| **Name** | **Description** |
| truck\_id | ID of the truck |

### Request Body

Required

### Request Body Format

application/json

### Request JSON Attributes

|  |  |  |
| --- | --- | --- |
| **Name** | **Description** | **Required?** |
| truck\_vin | The vehicle identification number of the truck. | Yes |
| trailer\_vin | The vehicle identification number of the trailer. | Yes |
| truck\_model | The model of the truck (E.g. “Kenworth T680”). | Yes |
| trailer\_type | The model of the trailer (E.g. “Flatbed”). | Yes |
| trailer\_capacity | The maximum weight (lbs) a trailer can hold (E.g. 45000). | Yes |

### Request Body Example

|  |
| --- |
| {    "truck\_vin": "1GCCS1442W8181753",    "trailer\_vin": "JH4DA9340PS000417",    "truck\_model": "Mack Anthem",    "trailer\_type": "Dry Van",    "trailer\_capacity": 28000  } |

## Response

### Response Body Format

application/json

### Response Statuses

|  |  |  |
| --- | --- | --- |
| **Outcome** | **Status Code** | **Notes** |
| Success | 200 OK | The input *can* contain extraneous attributes. Any attributes aside from the required attributes listed above will be ignored. |
| Failure | 400 Bad Request | The request is missing any of the required attributes. |
| Failure | 401 Unauthorized | The bearer token is missing or invalid. |
| Failure | 403 Forbidden | The bearer token is valid but does not correspond to the correct owner of the truck. |
| Failure | 404 Not Found | No truck with this truck\_id exists. |
| Failure | 406 Not Acceptable | The client wants a media type other than JSON. |
| Failure | 415 Unsupported Media Type | The request is not JSON. |

### Response Examples

#### Success

|  |
| --- |
| Status: 200 OK  {    "trailer\_type": "Dry Van",    "truck\_vin": "1GCCS1442W8181753",    "truck\_model": "Mack Anthem",    "loads": [],    "owner": "auth0|629b81bdcd1f83006faceb4d",    "trailer\_vin": "JH4DA9340PS000417",    "trailer\_capacity": 28000,    "id": "6124252570845184",    "self": "http://127.0.0.1:8080/trucks/6124252570845184"  } |

#### Failure

|  |
| --- |
| Status: 400 Bad Request  {    "Error": "The request object is missing at least one of the required attributes"  } |

|  |
| --- |
| Status: 401 Unauthorized  {    "Error": "Invalid token."  } |

|  |
| --- |
| Status: 403 Forbidden  {    "Error": "You do not have access to this truck”  } |

|  |
| --- |
| Status: 404 Not Found  {    "Error": "No truck with this truck\_id exists"  } |

|  |
| --- |
| Status: 406 Not Acceptable  {    "Error": "This application only supports JSON responses"  } |

|  |
| --- |
| Status: 415 Unsupported Media Type  {    "Error": "Server only accepts application/json data."  } |

# Edit a Truck (Patch)

Allows you to overwrite any subset of attributes of a truck, excluding ‘loads’ and ‘owner.’ The attributes that weren’t explicitly overwritten in the request will remain unchanged.

Note: the relationship between a truck and its loads will remain unchanged.

|  |
| --- |
| PATCH /trucks/:truck\_id |

## Protected?

Yes. The request must be accompanied by a valid bearer token.

## Request

### Path Parameters

|  |  |
| --- | --- |
| **Name** | **Description** |
| truck\_id | ID of the truck |

### Request Body

Required

### Request Body Format

application/json

### Request JSON Attributes

|  |  |  |
| --- | --- | --- |
| **Name** | **Description** | **Required?** |
| truck\_vin | The vehicle identification number of the truck. | No |
| trailer\_vin | The vehicle identification number of the trailer. | No |
| truck\_model | The model of the truck (E.g. “Kenworth T680”). | No |
| trailer\_type | The model of the trailer (E.g. “Flatbed”). | No |
| trailer\_capacity | The maximum weight (lbs) a trailer can hold (E.g. 45000). | No |

### Request Body Example

|  |
| --- |
| {    "truck\_vin": "1GTEC14W1YZ246726",    "trailer\_vin": "1J4RR5GT2BC512008"  } |

## Response

### Response Body Format

application/json

### Response Statuses

|  |  |  |
| --- | --- | --- |
| **Outcome** | **Status Code** | **Notes** |
| Success | 200 OK | The input *can* contain extraneous attributes. Any attributes aside from the required attributes listed above will be ignored. |
| Failure | 400 Bad Request | The request doesn’t contain at least one of the required attributes. |
| Failure | 401 Unauthorized | The bearer token is missing or invalid. |
| Failure | 403 Forbidden | The bearer token is valid but does not correspond to the correct owner of the truck. |
| Failure | 404 Not Found | No truck with this truck\_id exists. |
| Failure | 406 Not Acceptable | The client wants a media type other than JSON. |
| Failure | 415 Unsupported Media Type | The request is not JSON. |

### Response Examples

#### Success

|  |
| --- |
| Status: 200 OK  {    "trailer\_type": "Refrigerated",    "owner": "auth0|629b81bdcd1f83006faceb4d",    "loads": [      {        "id": "5563792926703616",        "self": "http://127.0.0.1:8080/loads/5563792926703616"      },      {        "id": "6689692833546240",        "self": "http://127.0.0.1:8080/loads/6689692833546240"      }    ],    "truck\_model": "Kenworth T680",    "trailer\_vin": "1J4RR5GT2BC512008",    "trailer\_capacity": 45000,    "truck\_vin": "1GTEC14W1YZ246726",    "id": "4971907073966080",    "self": "http://127.0.0.1:8080/trucks/4971907073966080"  } |

#### Failure

|  |
| --- |
| Status: 400 Bad Request  {    "Error": "The request object is missing at least one of the required attributes"  } |

|  |
| --- |
| Status: 401 Unauthorized  {    "Error": "Invalid token."  } |

|  |
| --- |
| Status: 403 Forbidden  {    "Error": "You do not have access to this truck”  } |

|  |
| --- |
| Status: 404 Not Found  MIME type: application/json  {    "Error": "No truck with this truck\_id exists"  } |

|  |
| --- |
| Status: 406 Not Acceptable  {    "Error": "This application only supports JSON responses"  } |

|  |
| --- |
| Status: 415 Unsupported Media Type  MIME type: application/json  {    "Error": "Server only accepts application/json data."  } |

# Delete a Truck

Allows you to delete a truck.

**Side effect**: If the truck contains a load, the deletion of the truck will update the load entity so that it no longer belongs to a truck.

|  |
| --- |
| DELETE /trucks/:truck\_id |

## Protected?

Yes. The request must be accompanied by a valid bearer token.

## Request

### Path Parameters

|  |  |
| --- | --- |
| **Name** | **Description** |
| truck\_id | ID of the truck |

### Request Body

None

## Response

No body

### Response Body Format

Success: No body

Failure: JSON

### Response Statuses

|  |  |  |
| --- | --- | --- |
| **Outcome** | **Status Code** | **Notes** |
| Success | 204 No Content |  |
| Failure | 401 Unauthorized | The bearer token is missing or invalid. |
| Failure | 403 Forbidden | The bearer token is valid but does not correspond to the correct owner of the truck. |
| Failure | 404 Not Found | No truck with this truck\_id exists |

### Response Examples

#### Success

|  |
| --- |
| Status: 204 No Content |

#### Failure

|  |
| --- |
| Status: 401 Unauthorized  {    "Error": "Invalid token."  } |

|  |
| --- |
| Status: 403 Forbidden  {    "Error": "You do not have access to this truck”  } |

|  |
| --- |
| Status: 404 Not Found  {    "Error": "No truck with this truck\_id exists"  } |

# Delete All Trucks

*Forbidden endpoint*

|  |
| --- |
| DELETE /trucks |

## Protected?

Yes. The request must be accompanied by a valid bearer token.

## Request

### Path Parameters

None

### Request Body

None

## Response

No body

### Response Body MIME Type

application/json

### Response Statuses

|  |  |  |
| --- | --- | --- |
| **Outcome** | **Status Code** | **Notes** |
| Failure | 401 Unauthorized | The bearer token is missing or invalid. |
| Failure | 405 Not Supported | This endpoint is not supported |

### Response Examples

#### Failure

|  |
| --- |
| Status: 401 Unauthorized  {    "Error": "Invalid token."  } |

|  |
| --- |
| Status: 405 Not Supported  {    "Error": "This endpoint is not supported"  } |

# Create a Load

Allows you to create a new load.

|  |
| --- |
| POST /loads |

## Protected?

No.

## Request

### Path Parameters

None

### Request Body

Required

### Request Body Format

JSON

### Request JSON Attributes

|  |  |  |
| --- | --- | --- |
| **Name** | **Description** | **Required?** |
| item | The supplier of the item | Yes |
| quantity | The items in the load. | Yes |
| vendor | The number of cases of the item | Yes |
| weight | The weight (lbs) of the load | Yes |

### Request Body Example

|  |
| --- |
| {    "item": "Organic strawberries",    "quantity": 240,    "vendor": "Driscoll's",    "weight": 2160  } |

## Response

### Response Body Format

JSON

### Response Statuses

|  |  |  |
| --- | --- | --- |
| **Outcome** | **Status Code** | **Notes** |
| Success | 201 Created | The input *can* contain extraneous attributes. Any attributes aside from the required attributes listed above will be ignored. |
| Failure | 400 Bad Request | The request is missing any of the required attributes. |
| Failure | 406 Not Acceptable | The client wants a media type other than JSON. |
| Failure | 415 Unsupported Media Type | The request is not JSON. |

### Response Examples

#### Success

|  |
| --- |
| Status: 201 Created  {    "id": "6195449035751424",    "item": "Organic strawberries",    "quantity": 240,    "vendor": "Driscoll's",    "weight": 2160,    "carrier": null,    "self": "http://127.0.0.1:8080/loads/6195449035751424"  } |

#### Failure

|  |
| --- |
| Status: 400 Bad Request  {    "Error": "The request object is missing at least one of the required attributes"  } |

|  |
| --- |
| Status: 406 Not Acceptable  {    "Error": "This application only supports JSON responses"  } |

|  |
| --- |
| Status: 415 Unsupported Media Type  {    "Error": "Server only accepts application/json data."  } |

# View a Load

Allows you to get an existing load.

|  |
| --- |
| GET /loads/:load\_id |

## Protected?

No.

## Request

### Path Parameters

|  |  |
| --- | --- |
| **Name** | **Description** |
| load\_id | ID of the load |

### Request Body

None

## Response

### Response Body Format

JSON

### Response Statuses

|  |  |  |
| --- | --- | --- |
| **Outcome** | **Status Code** | **Notes** |
| Success | 200 OK |  |
| Failure | 404 Not Found | No load with this load\_id exists |
| Failure | 406 Not Acceptable | The client wants a media type other than JSON. |

### Response Examples

#### Success

|  |
| --- |
| Status: 200 OK  {    "carrier": {      "id": "6687202524266496",      "self": "http://127.0.0.1:8080/trucks/6687202524266496"    },    "weight": 1454,    "quantity": 288,    "item": "Blueberries",    "vendor": "Driscoll's",    "id": "5847751300481024",    "self": "http://127.0.0.1:8080/loads/5847751300481024"  } |

#### Failure

|  |
| --- |
| Status: 404 Not Found  {    "Error": "No load with this load\_id exists"  } |

|  |
| --- |
| Status: 406 Not Acceptable  {    "Error": "This application only supports JSON responses"  } |

# View all Loads

List all the loads.

|  |
| --- |
| GET /loads |

## Protected?

No.

## Request

### Path Parameters

None

### Request Body

None

## Response

### Response Body Format

JSON

### Response Statuses

|  |  |  |
| --- | --- | --- |
| **Outcome** | **Status Code** | **Notes** |
| Success | 200 OK | The response contains a property “data” which is a list of all the loads in the Load kind. |
| Failure | 406 Not Acceptable | The client wants a media type other than JSON. |

### Response Examples

#### Success

|  |
| --- |
| Status: 200 OK  {    "data": [      {        "carrier": null,        "quantity": 432,        "item": "Raspberries",        "vendor": "Driscoll's",        "weight": 2462.4,        "id": "4870064809443328",        "self": "http://127.0.0.1:8080/loads/4870064809443328"      },      {        "weight": 2160,        "carrier": null,        "vendor": "Driscoll's",        "quantity": 240,        "item": "Organic strawberries",        "id": "5110132711096320",        "self": "http://127.0.0.1:8080/loads/5110132711096320"      },      {        "weight": 880,        "item": "Avocados",        "vendor": "Taylor Farms",        "carrier": null,        "quantity": 160,        "id": "5116145900191744",        "self": "http://127.0.0.1:8080/loads/5116145900191744"      },      {        "carrier": {        "id": "6687202524266496",        "self": "http://127.0.0.1:8080/trucks/6687202524266496"      },        "quantity": 288,        "item": "Blueberries",        "vendor": "Driscoll's",        "weight": 1454,        "id": "5679095853613056",        "self": "http://127.0.0.1:8080/loads/5679095853613056"      },      {        "vendor": "Driscoll's",        "quantity": 360,        "item": "Chocolate caramel apples",        "weight": 3960,        "carrier": null,        "id": "5716561121771520",        "self": "http://127.0.0.1:8080/loads/5716561121771520"      }    ]  } |

#### Failure

|  |
| --- |
| Status: 406 Not Acceptable  {    "Error": "This application only supports JSON responses"  } |

# 

# Edit a Load (Put)

Allows you to overwrite all attributes of a load.

**Side effect**: ‘carrier’ will be reset to null and the truck carrying the load (if applicable) will no longer contain this load in its ‘loads’ property.

|  |
| --- |
| PUT /loads/:load\_id |

## Protected?

No.

## Request

### Path Parameters

|  |  |
| --- | --- |
| **Name** | **Description** |
| load\_id | ID of the load |

### Request Body

Required

### Request Body Format

application/json

### Request JSON Attributes

|  |  |  |
| --- | --- | --- |
| **Name** | **Description** | **Required?** |
| item | The supplier of the item | Yes |
| quantity | The items in the load. | Yes |
| vendor | The number of cases of the item | Yes |
| weight | The weight (lbs) of the load | Yes |

### Request Body Example

|  |
| --- |
| {    "item": "Blueberries",    "quantity": 288,    "vendor": "Hillcrest Produce",    "weight": 1454  } |

## Response

### Response Body Format

application/json

### Response Statuses

|  |  |  |
| --- | --- | --- |
| **Outcome** | **Status Code** | **Notes** |
| Success | 200 OK | The input *can* contain extraneous attributes. Any attributes aside from the required attributes listed above will be ignored. |
| Failure | 400 Bad Request | The request is missing any of the required attributes. |
| Failure | 404 Not Found | No load with this load\_id exists. |
| Failure | 406 Not Acceptable | The client wants a media type other than JSON. |
| Failure | 415 Unsupported Media Type | The request is not JSON. |

### Response Examples

#### Success

|  |
| --- |
| Status: 200 OK  {    "weight": 1450,    "carrier": null,    "vendor": "Hillcrest Produce",    "quantity": 288,    "item": "Blueberries",    "id": "4899245085687808",    "self": "http://127.0.0.1:8080/loads/4899245085687808"  } |

#### Failure

|  |
| --- |
| Status: 400 Bad Request  {    "Error": "The request object is missing at least one of the required attributes"  } |

|  |
| --- |
| Status: 404 Not Found  {    "Error": "No load with this load\_id exists"  } |

|  |
| --- |
| Status: 406 Not Acceptable  {    "Error": "This application only supports JSON responses"  } |

|  |
| --- |
| Status: 415 Unsupported Media Type  {    "Error": "Server only accepts application/json data."  } |

# Edit a Load (Patch)

Allows you to overwrite any subset of attributes of a load, excluding ‘carrier.’ The attributes that weren’t explicitly overwritten in the request will remain unchanged.

**Note**: the relationship between a load and the truck carrying it will remain unchanged.

|  |
| --- |
| PATCH /loads/:load\_id |

## Protected?

No.

## Request

### Path Parameters

|  |  |
| --- | --- |
| **Name** | **Description** |
| load\_id | ID of the load |

### Request Body

Required

### Request Body Format

application/json

### Request JSON Attributes

|  |  |  |
| --- | --- | --- |
| **Name** | **Description** | **Required?** |
| item | The supplier of the item | No |
| quantity | The items in the load. | No |
| vendor | The number of cases of the item | No |
| weight | The weight (lbs) of the load | No |

### Request Body Example

|  |
| --- |
| {    "item": "Kale"  } |

## Response

### Response Body Format

application/json

### Response Statuses

|  |  |  |
| --- | --- | --- |
| **Outcome** | **Status Code** | **Notes** |
| Success | 200 OK | The input *can* contain extraneous attributes. Any attributes aside from the required attributes listed above will be ignored. |
| Failure | 400 Bad Request | The request doesn’t contain at least *one* of the attributes list above. |
| Failure | 404 Not Found | No load with this load\_id exists. |
| Failure | 406 Not Acceptable | The client wants a media type other than JSON. |
| Failure | 415 Unsupported Media Type | The request is not JSON. |

### Response Examples

#### Success

|  |
| --- |
| Status: 200 OK  {    "quantity": 135,   "carrier": {  "id": "6687202524266496",  "self": "http://127.0.0.1:8080/trucks/6687202524266496"  },    "vendor": "Taylor Farms",    "item": "Kale",    "weight": 465.75,    "id": "6225742111178752",    "self": "http://127.0.0.1:8080/loads/6225742111178752"  } |

#### Failure

|  |
| --- |
| Status: 400 Bad Request  {    "Error": "The request object is missing at least one of the required attributes"  } |

|  |
| --- |
| Status: 404 Not Found  MIME type: application/json  {    "Error": "No load with this load\_id exists"  } |

|  |
| --- |
| Status: 406 Not Acceptable  {    "Error": "This application only supports JSON responses"  } |

|  |
| --- |
| Status: 415 Unsupported Media Type  MIME type: application/json  {    "Error": "Server only accepts application/json data."  } |

# Delete a Load

Allows you to delete a load.

**Side effect**: If the load is on a truck, the deletion of the load will update the truck entity so that it no longer contains the load.

|  |
| --- |
| DELETE /loads/:load\_id |

## Protected?

No.

## Request

### Path Parameters

|  |  |
| --- | --- |
| **Name** | **Description** |
| load\_id | ID of the load |

### Request Body

None

## Response

No body

### Response Body Format

Success: No body

Failure: JSON

### Response Statuses

|  |  |  |
| --- | --- | --- |
| **Outcome** | **Status Code** | **Notes** |
| Success | 204 No Content |  |
| Failure | 404 Not Found | No load with this load\_id exists |

### Response Examples

#### Success

|  |
| --- |
| Status: 204 No Content |

#### Failure

|  |
| --- |
| Status: 404 Not Found  {    "Error": "No load with this load\_id exists"  } |

# Delete All Loads

*Forbidden endpoint*

|  |
| --- |
| DELETE /loads |

## Protected?

No.

## Request

### Path Parameters

None

### Request Body

None

## Response

No body

### Response Body MIME Type

application/json

### Response Statuses

|  |  |  |
| --- | --- | --- |
| **Outcome** | **Status Code** | **Notes** |
| Failure | 405 Not Supported | This endpoint is not supported |

### Response Examples

#### Failure

|  |
| --- |
| Status: 405 Not Supported  {    "Error": "This endpoint is not supported"  } |

# Managing Loads: Load Assigned to Truck

A load is assigned to a truck.

**Note**: A load *cannot* be assigned to multiple trucks.

|  |
| --- |
| PUT /trucks/:truck\_id/loads/:load\_id |

## Protected?

Yes. The request must be accompanied by a valid bearer token.

## Request

### Path Parameters

|  |  |
| --- | --- |
| **Name** | **Description** |
| truck\_id | ID of the truck |
| load\_id | ID of the load |

### Request Body

None

## Response

No body

### Response Body Format

Success: No body

Failure: JSON

### Response Statuses

|  |  |  |
| --- | --- | --- |
| **Outcome** | **Status Code** | **Notes** |
| Success | 204 No Content | Succeeds only if a truck exists with this truck\_id, a load exists with this load\_id and the load hasn’t already been assigned to a truck. |
| Failure | 401 Unauthorized | The bearer token is missing or invalid. |
| Failure | 403 Forbidden | The bearer token is valid but does not correspond to the correct owner of the truck or the load has already been assigned to a truck. |
| Failure | 404 Not Found | The specified truck and/or load does not exist. |

### Response Examples

#### Success

|  |
| --- |
| Status: 204 No Content |

#### Failure

|  |
| --- |
| Status: 401 Unauthorized  {    "Error": "Invalid token."  } |

|  |
| --- |
| Status: 403 Forbidden  {    "Error": "You do not have access to this truck"  } |

|  |
| --- |
| Status: 403 Forbidden  {    "Error": "The load is already loaded on another truck"  } |

|  |
| --- |
| Status: 404 Not Found  {    "Error": "The specified truck and/or load does not exist"  } |

# Managing Loads: Load Removed from Truck

A load is removed from a truck.

|  |
| --- |
| DELETE /truck/:truck\_id/loads/:load\_id |

## Protected?

Yes. The request must be accompanied by a valid bearer token.

## Request

### Path Parameters

|  |  |
| --- | --- |
| **Name** | **Description** |
| load\_id | ID of the load |
| truck\_id | ID of the truck |

### Request Body

None

## Response

No body

### Response Body Format

Success: No body

Failure: JSON

### Response Statuses

|  |  |  |
| --- | --- | --- |
| **Outcome** | **Status Code** | **Notes** |
| Success | 204 No Content | Succeeds only if a truck exists with this truck\_id, a load exists with this load\_id and the load is on the truck. |
| Failure | 401 Unauthorized | The bearer token is missing or invalid. |
| Failure | 403 Forbidden | The bearer token is valid but does not correspond to the correct owner of the truck. |
| Failure | 404 Not Found | No truck with this truck\_id is loaded with the load with this load\_id. This could be because no truck with this truck\_id exists, or because no load with load\_id exists, or even if both truck\_id and load\_id are valid, the load with this load\_id is not on this truck with this truck\_id |

### Response Examples

#### Success

|  |
| --- |
| Status: 204 No Content |

#### Failure

|  |
| --- |
| Status: 401 Unauthorized  {    "Error": "Invalid token."  } |

|  |
| --- |
| Status: 403 Forbidden  {    "Error": "You do not have access to this truck”  } |

|  |
| --- |
| Status: 404 Not Found  {    "Error": "No truck with this truck\_id is loaded with the load with this load\_id"  } |