

Boats and Slips API Design

All response bodies are to be sent as 'application/json', which is to say the body is to be written in JSON format.

IMPORTANT NOTE:

When running the POSTMAN test runner collection, make sure that there is a 100ms delay between each API call. This is to deal with eventual consistency for the data on the server.

Get all boats

GET /boats

Response

Status: 200 OK

```
[
  {
    "type": "houseboat",
    "name": "boatname1",
    "length": 7,
    "at_sea": true,
    "id": "aghkZXZ-Tm9uZXIRCxIEQm9hd8iAgICAgOCXCQw"
  },
  {
    "type": "motorboat",
    "name": "boatname2",
    "length": 17,
    "at_sea": true,
    "id": "aghkZXZ-Tm9uZXIRCxIEQm9hd8iAgICAgOCXCgw"
  },
  {
    "type": "Fisher boat",
    "name": "Toasty",
    "length": 40,
    "at_sea": true,
    "id": "aghkZXZ-Tm9uZXIRCxIEQm9hd8iAgICAgOCXCww"
  },
  {
    "type": "Jet Ski",
    "name": "Mr. Bob",
    "length": 24,
    "at_sea": true,
    "id": "aghkZXZ-Tm9uZXIRCxIEQm9hd8iAgICAgNC7Cww"
  }
]
```

Get a single boat

GET /boats/{boatId}

Responses

Status: 200 Ok

```
{  
  "type": "Bulldog",  
  "name": "Ciel",  
  "at_sea": false,  
  "length": 14,  
  "id": "aghkZXZ-Tm9uZXIRCxIEQm9hdBiAgICAgLCcCAw"  
}
```

Status: 404 Not Found

Occurs when an invalid boat ID is provided

Creating a boat

POST /boats

Body Request Data

name (string) – required

length (number) – required

type (string) – required

Responses

Status: 201 Created

```
{
  "type": "Jet Ski",
  "name": "Mr. Bob",
  "length": 24,
  "at_sea": true,
  "id": "aghkZXZ-Tm9uZXIRCxIEQm9hdBiAgICAgNC7Cww"
}
```

Status: 400 Bad Request

Occurs when one or more of the following is true:

- One or more of the required fields is not provided
- One or more of the required fields uses the wrong data type

Notes

All created boats start at sea and are given an automatically generated ID

Modifying a Boat

PATCH /boats/{boatId}

Body Request Data

name (string) – optional

type (string) – optional

length (number) – optional

Responses

Status: 204 No Content

Status: 400 Bad Request

Occurs when one or more of the following is true:

- No request body is provided
- One or more of the parameters uses the wrong data type

Notes

Other boat properties such as at_sea can only be modified through other actions.

Replacing a Boat

PUT /boats/{boatId}

Body Request Data

name (string) – required

type (string) – required

length (number) – required

Responses

Status: 204 No Content

Status: 400 Bad Request

Occurs when one or more of the following occurs:

- One or more of the required fields is not provided
- One or more of the parameters uses the incorrect data type

Notes

Replacing a boat that is docked at a slip does not change the boat ID or any of the slip's properties. This is because we assume the boat has been "upgraded".

Deleting a Boat

DELETE /boats/{boatId}

Responses

Status: 204 No Content

Status: 400 Bad Request

Occurs when an invalid boat ID is provided

Notes

If the deleted boat was docked at a slip, the following will happen to the previously occupied slip:

- The departure history will be updated an entry of a blank departure date and the correct boat ID
- The current_boat property will be set to null
- The arrival_date will be set to null

Get all Slips

GET /slips

Response

Status: 200 Ok

```
{
  "number": 9999,
  "current_boat": "aghkZXZ-Tm9uZXIRCxIEQm9hdBiAgICAgLCMCgw",
  "departure_history": null,
  "arrival_date": "1/31/2010",
  "id": "aghkZXZ-Tm9uZXIRCxIEU2xpcBiAgICAgLCMCQw"
},
{
  "number": 1234,
  "current_boat": null,
  "departure_history": [
    {
      "departed_boat": "aghkZXZ-Tm9uZXIRCxIEQm9hdBiAgICAgLC0Cww",
      "departure_date": "4/1/2011"
    },
    {
      "departed_boat": "aghkZXZ-Tm9uZXIRCxIEQm9hdBiAgICAgLD0CQw",
      "departure_date": "2/15/93"
    }
  ],
  "arrival_date": null,
  "id": "aghkZXZ-Tm9uZXIRCxIEU2xpcBiAgICAgLC0CQw"
},
```

Get a single slip

GET /slips/{slipId}

Responses

Status: 200 Ok

```
{
  "number": 1234,
  "departure_history": [
    {
      "departed_boat": "aghkZXZ-Tm9uZXIRCxIEQm9hdBiAgICAgLCSCww",
      "departure_date": "4/1/2011"
    },
    {
      "departed_boat": "aghkZXZ-Tm9uZXIRCxIEQm9hdBiAgICAgLDSCQw",
      "departure_date": "2/15/93"
    }
  ],
  "arrival_date": null,
  "current_boat": null,
  "id": "aghkZXZ-Tm9uZXIRCxIEU2xpcBiAgICAgLCSCQw"
}
```

Status: 404 Not Found

Occurs when the supplied slip ID is invalid

Creating a slip

POST /slip

Body Request Data

number (number) – required, must be unique

Responses

Status: 201 Created

```
{
  "number": 405,
  "departure_history": null,
  "arrival_date": null,
  "current_boat": null,
  "id": "aghkZXZ-Tm9uZXIRCxIEU2xpc8iAgICAgLCMCww"
}
```

Status: 403 Forbidden

Occurs when a number was passed in the body request data that is already in use

Status: 400 Bad Request

Occurs when the body request data is not provided or the number is not a number data type

Modifying a Slip

PATCH /slips/{slipId}

Body Request Data

number (number) – optional

arrival_date (string) – optional, only modified if a boat is currently docked

Responses

Status: 204 No Content

Status: 403 Forbidden

Occurs when the number supplied is already taken

Status: 400 Bad Request

Occurs when one or more of the following is true:

- No request body is passed
- The slip ID is invalid
- One or more of the parameters uses an incorrect data type

Notes

All other properties of the slip can only be modified through other actions.

Replacing a Slip

PUT /slips/{slipId}

Body Request Data

number (number) – required

Responses

Status: 204 No Content

Status: 400 Bad Request

Occurs when one or more of the following is true:

- A number is not provided
- The number provided is already taken
- The number provided uses an incorrect data type

Notes

When replacing a slip, if there was a boat docked at the slip, that boat becomes docked at the new slip. This also erases the departure history of the slip.

Deleting a Slip

DELETE /slips/{slipId}

Responses

Status: 204 No Content

Status: 400 Bad Request

Occurs when an invalid slip ID is provided

Notes

If there was a boat previously docked at this slip, the boat will be put out to sea.

Docking a boat at a slip

PUT /slip/{slipID}/boat/{boatId}

Body Request Data

arrival_date (string) - required

Responses

Status: 204 No Content

Status: 403 Forbidden

Occurs if one or more of the following is true:

- The boat is already at sea
- The slip is already occupied

Status: 400 Bad Request

Occurs if one or more of the following is true:

- The arrival_date is not provided in the request body or uses the incorrect data type
- Either the boat ID or slip ID is invalid

Sending a boat to sea

PUT /boats/{boatId}/depart

Body Request Data

departure_date (string) – required

Responses

Status: 204 No Content

Adds the boat ID and departure date to the slip's departure history

Status: 403 Forbidden

Occurs if the boat is already at sea

Status: 400 Bad Request

Occurs if one or more of the following is true:

- departure_date is not provided in the request body
- departure_date is not a string
- Boat ID provided is not valid

Look up docked boat information from a slip

GET /slip/{slipId}/boat

Responses

Status: 200 Ok

```
{  
  "type": "houseboat",  
  "at_sea": false,  
  "name": "boatname1",  
  "length": 7,  
  "id": "aghkZXZ-Tm9uZXIRCxIEQm9hdBiAgICAgMirCgw"  
}
```

Status: 404 Not Found

Occurs if the slip does not have a boat that is not occupied

Status: 400 Bad Request

Occurs if the slip ID is invalid

Look up which slip a boat is docked at

GET /boat/{boatId}/slip

Responses

Status: 200 Ok

```
{
  "arrival_date": "3/2/01",
  "number": 22,
  "current_boat": "aghkZXZ-Tm9uZXIRCxIEQm9hdBiAgICAgMjLCgw",
  "departure_history": null,
  "id": "aghkZXZ-Tm9uZXIRCxIEU2xpcBiAgICAgMjzCgw"
}
```

Status: 404 Not Found

Occurs if the boat is not docked at a slip

Status: 400 Bad Request

Occurs if the supplied boat ID is invalid