Nearest Neighbor Service

REST API · https://www.easyterritory.com/documentation/easyterritory-rest-api/nearest-neighbor-rest-call-v3-70-00/

The **Nearest Neighbor Lookup REST API** returns the closest point features from an EasyTerritory project by supplying a latitude, longitude, and an authenticated request using an **oitoken**, making it easy to locate the nearest store, customer, asset, or other mapped entity. It supports optional filtering (layer, result count, attribute match) and responds with detailed information about each nearby feature, including distance, address data, and custom project fields.

Initial Setup

1. **Build Project**
   - Create an EasyTerritory project in the Territory Designer containing **point location data.**
   - Configure the **Project Points Plugin**.
2. **Authenticate**
   - Retrieve an `oitoken` by following the Authentication Guide.

Nearest Neighbor Endpoint

```
GET
https://apps.easyterritory.com/{InstanceGuid}/{InstanceType}/REST/ProjectPointLayer/{projectId}/nearest
```

Notes:

- {YourGuid} → Your EasyTerritory GUID.
- {YourEZTInstanceType} → One of [DEV], [TEST], or [APP] (APP = Production).
- {ProjectId} → The target EasyTerritory project.

Request Headers

- **Media Types**: “application/json”
- **Cookie**: “oitoken={oiToken}”

URI Parameters

Name	Required	Type	Description
lat	Yes	Number	Latitude of the location to search from.
lon	Yes	Number	Longitude of the location to search from.
layerId	No	String	Specific layer ID to query. Defaults to **all custom point layers**.
top	No	Number	Number of nearest features to return. Defaults to **1**.
whereCol	No	String	Column name to filter results by.
whereVal	No	String	Value to match in the whereCol column. Uses equivalence test.
oiToken	No	String	Authentication token. Can also be passed as a **cookie**.

Response Body

```
[
  {
    distance: number; // straight-line meters (Web Mercator SRID 3857); miles ≈ meters / 1609.344
    primaryKey: number;
    wkt: string;
    projectId: string;
    layerId: string;
    itemId: string;
    name: string;
    fullAddress: string;
    markupTag: string;
    geoStreet: string;
    geoCity: string;
    geoState: string;
    geoPostal: string;
```

```
    geoCountry: string;
    geoQuality: string;
    geoLatitude: number;
    geoLongitude: number;
    stat1: number;
    stat2: number;
    stat3: number;
    stat4: number;
    stat5: number;
    stat6: number;
    stat7: number;
    stat8: number;
  }
]
```

Sample Request

```
GET /12345678-1234-1234-1234-
123456789abc/APP/REST/ProjectPointLayer/RetailStores/nearest?lat=30.4383&lon=-
84.2807&top=3&layerId=Stores HTTP/1.1
Host: apps.easyterritory.com
Content-Type: application/json
Cookie: oitoken=abcdeabcdeabcdeabcde
```

Sample Response


```
[
  {
    "distance": 185.42,
    "primaryKey": 100245,
    "wkt": "POINT(-84.2798 30.4388)",
    "projectId": "RetailStores",
    "layerId": "Stores",
    "itemId": "STORE-00427",
    "name": "Downtown Tallahassee Store",
    "fullAddress": "200 S Adams St, Tallahassee, FL 32301, USA",
    "markupTag": "Tallahassee District | Downtown Tallahassee Store",
    "geoStreet": "200 S Adams St",
```

```
    "geoCity": "Tallahassee",
    "geoState": "FL",
    "geoPostal": "32301",
    "geoCountry": "USA",
    "geoQuality": "Optimal",
    "geoLatitude": 30.4388,
    "geoLongitude": -84.2798,
    "stat1": 1250000,
    "stat2": 2800,
    "stat3": 4.5,
    "stat4": 10,
    "stat5": 0,
    "stat6": 0,
    "stat7": 0,
    "stat8": 0
  }
]
```