Connectbase

Network Path
API Reference Guide
Revision 02

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Table of Contents

About This Guide

Introduction

This guide describes the Connectbase Application Program Interface (API) Network Path APIs.

Accessing the Portal

Using any standard web browser, you can access the Connectbase API portal by entering the following URL: https://developer.connectbase.com.

- If this is your first time visiting the site, click **Sign up** to register as a new API user.
- If you are already a registered user, sign in using your API login and password.

Related Documentation

Refer to the following documents for detailed information about each of the supported Connectbase API products:

- *Address Autocomplete API Reference Guide*
- *Address Validation API Reference Guide*
- *Advanced CPQ API Reference Guide*
- *Building Competitive Rating API Reference Guide*
- *Connectbase Developer Portal Overview Guide*
- *Connected World Availability API Reference Guide*
- *Connected World Account API Reference Guide*
- *Connected World Building API Reference Guide*
- *Connected World Building Lists API Reference Guide*
- *Connected World Contacts API Reference Guide*
- *Connected World Distributions API Reference Guide*
- *CPQ API Reference Guide*
- *CPQ Components Management API Reference Guide*
- *Demand Engine API Reference Guide*

- *Geocode API Reference Guide*
- *International Processor API Reference Guide*
- *Locations Intelligence API Reference Guide*
- *Network Intelligence API Reference Guide*
- *NNI Management API Reference Guide*
- *Rate Card Management API Reference Guide*
- *Route Management API Reference Guide*
- *Tenant API Reference Guide*

Acronym List

This document uses the following acronyms.

Acronym	Description
API	Application Program Interface
HTTP	Hyper Text Transfer Protocol
JSON	JavaScript Object Notation
N/A	Not applicable
URL	Uniform Resource Locator
USPS	United States Postal Service
WISP	Wireless Internet Service Provider

Customer Support

If you need assistance using the Connectbase APIs, please contact Customer Service by email at support@connectbase.com or by phone at (508) 202-1807 between the hours of 8:00 a.m. and 5:00 p.m. EST.

1.0 Network Path API

Network Path API

The Network Path API enables clients to submit an A and Z location that returns a geojson-formatted response for those two endpoints, inclusive of all paths or a specific company path.

It will assign a Segment ID, calculate distance and latency, and present that information in the response in addition to the geojson data. There is also a secondary endpoint which allows for two different segment ids to be compared and determines if they are diverse from one other.

The APIs include the following:
- [GET Diversity Check](#)
- [GET Path Search](#)

Note: Although the APIs are described in this document in alphabetical order to match how they appear in the developer portal, the proper order of operations is to first run the Get Path Search API and obtain the segment Ids, then run the GET Diversity Check API to determine if the segments are diverse from one another.

GET Diversity Check

Issue this call to get determine diversity between two segments.

Requirements and Special Considerations
This API call requires two segment ids and a subscription key. This API input is dependent upon the response from the GET Path Search.

Request URL
https://api.connected2fiber.com/networkpath/diversitycheck?segment_Id1={segment_Id1}&segment_Id2={segment_Id2}

Request parameters	Characteristic	Description/Requirements
segment_Id1	string	Unique Id assigned in path search
segment_Id2	string	Unique Id assigned in path search **Note:** This Id cannot be the same as the Id used for segment_1

Request headers	Characteristic	Description/Requirements
Ocp-Apim-Subscription-key	string	The subscription key that provides access to this API, which can be found in your Profile.

Success Response Example

```
{

  "status": "success",

  "body": {

    "result": false

  }

}
```

Response Attributes and Data Types

Response Attribute	Attribute Description	Data Type
status	Indicates status of API completion. • Success • Failed	string
body	object wrapper	object
result	True/False	boolean

Error Response Example

```
 {

  "status": "fail",

  "message": "segment id 2 do not exist (Error id: 137964221)"

}
```

GET Path Search

Issue this call to submit an A and Z location that returns a geojson-formatted response for those two endpoints, inclusive of all paths or a specific company path.

Requirements and Special Considerations
This API call requires the Start Address, End Address, and subscription key. All other parameters are optional.

Request URL
https://api.connected2fiber.com/networkpath/pathsearch

Request parameters	Characteristic	Description/Requirements
startAddress	string	Starting address endpoint (A Location)
endAddress	string	Ending address endpoint (Z Location)
startlat	string	The latitude of the start address
startlon	string	The longitude of the start address
endlat	string	The latitude of the end address
endlong	string	The longitude of the end address
startglid	string	The Global Location Id of the start address
endglid	string	The Global Location Id of the end address
supplier	string	The name of the provider

| pathlimit | string | Sets the number of paths returned for each supplier, shortest first. Default is 1. |
| tolerance | string | Sets the search radius from start/end point to look for route data. 0 means use parcel as intersection, max radius in 200 ft. |

Request headers	Characteristic	Description/Requirements
Ocp-Apim-Subscription-key	string	The subscription key that provides access to this API, which can be found in your Profile.

Success Response Example

```
{

  "status": "success",

  "body": {

    "Pathinfor": [

      [{

        "SegmentID": "5664239_5657169_15593456",

        "length": 460240.1593695302,

        "latency": 2256.742960525303,

        "provider_name": "Firstlight Fiber ",

        "geojson": ["{\"type\":\"MultiLineString\",\"coordinates\":[[[-
71.0596796914585,42.3548539066524],[-71.0597072630373,42.3548437043048],[-
71.0597476850129,42.3547883028884],[-71.0597503461914,42.3547771588593]]]}",
..., "{\"type\":\"MultiLineString\",\"coordinates\":[[[-
74.00776773,40.7176511910001],[-74.0077050709999,40.7176609910001]]]}"]

      }]
```

```json
      ],
      "startaddress": {
        "addresskey": "1 SUMMER ST|BOSTON|MA|USA",
        "fullAddressLine": "1 Summer St Boston MA 02110-1010",
        "location": {
          "street": "1 Summer St",
          "city": "Boston",
          "state": "MA",
          "country": "USA",
          "postal": "02110",
          "longitude": -71.06024,
          "latitude": 42.3547
        }
      },
      "endaddress": {
        "addresskey": "60 HUDSON ST|NEW YORK|NY|USA",
        "fullAddressLine": "60 Hudson St New York NY 10013-3315",
        "location": {
          "street": "60 Hudson St",
          "city": "New York",
          "state": "NY",
          "country": "USA",
          "postal": "10013",
          "longitude": -74.008749,
          "latitude": 40.717916
        }
```

```
  }
},
"startLocationEntrances": [{
  "md_entity_name": "Crown Castle",
  "count": 26
}, {
  "md_entity_name": "Verizon",
  "count": 4
}, {
  "md_entity_name": "Firstlight Fiber ",
  "count": 26
}, {
  "md_entity_name": "CenturyLink",
  "count": 5
}, {
  "md_entity_name": "Cambridge Network Solutions",
  "count": 2
}, {
  "md_entity_name": "KCST USA",
  "count": 8
}, {
  "md_entity_name": "Massachusetts Broadband Institute",
  "count": 8
}],
"endLocationEntrances": [{
  "md_entity_name": "Crown Castle",
```

```
      "count": 27
  }, {
    "md_entity_name": "ExteNet Systems",
    "count": 15
  }, {
    "md_entity_name": "Windstream",
    "count": 15
  }, {
    "md_entity_name": "Verizon",
    "count": 3
  }, {
    "md_entity_name": "Optical Communications Grp",
    "count": 3
  }, {
    "md_entity_name": "Firstlight Fiber ",
    "count": 4
  }, {
    "md_entity_name": "CenturyLink",
    "count": 8
  }, {
    "md_entity_name": "Altice",
    "count": 12
  }]
}
```

Response Attributes and Data Types		
Response Attribute	**Attribute Description**	**Data Type**
status	Indicates status of API completion. • Success • Failed	string
body	object wrapper	object
Pathinfor	array wrapper	array
SegmentID	Unique Id assigned in path search	string
length	The total path distance, unit: meter	float
latency	The round-trip time, unit: microseconds; length/203.94 (optical fiber type = Brand B (G.655), Wavelength = 1625nm, refractive Index=1.47, distance=203.940m/us)	float
provider_name	The name of the provider	string
geojson	The geojson response/coordinates	format
startaddress	Starting address endpoint (A Location)	object
addresskey	Address, stated as, for example, "1 SUMMER ST|BOSTON|MA|USA"	string
fullAddressLine	The full address, stated as, for example "1 Summer St Boston MA 02110-1010	string
location	object wrapper	object
street	The street address, stated as, for example "1 Summer St".	string
city	The city, stated as, for example, "Boston".	string
state	The state abbreviation stated as, for example, "MA"	string

Response Attributes and Data Types		
Response Attribute	**Attribute Description**	**Data Type**
postal	The zip code stated as, for example "02110".	string
country	The country stated as, for example, USA.	string
longitude	The angular distance of a place east or west of the meridian at Greenwich, England, or west of the standard meridian of a celestial object, usually expressed in degrees and minutes.	string
latitude	The angular distance of a place north or south of the earth's equator, or of a celestial object north or south of the celestial equator, usually expressed in degrees and minutes.	string
endaddress	End address endpoint (Z Location)	string
startLocationEntrances	array wrapper	object array
md_entity_name	The provider name as it appears in the Connectbase platform.	string
count	The number of start locations	int
endLocationEntrances	array wrapper	object array
md_entity_name	The provider name as it appears in the Connectbase platform.	string
count	The number of end locations	int

Error Response Example
| ```json
{

  "status": "fail",

  "message": "Unable to get node on the fiber for start address (Error id: 137961752)"

}
``` |

Appendix A – Revision History

Revision	Date	Description
00	September 30, 2020	This is the initial release for supported APIs for Network Path.
	February 01, 2022	Rebranded the document template with a new title page, company name, logo, and updated fonts.
01	September 20, 2022	Incorporated the response attributes and data types for each API call into this guide, which were extracted from the "discontinued" API Data Dictionary Guide.
02	February 16, 2023	Added data type descriptions for attributes length and latency in for the GET Patch Search response.