



# API Developer Portal User Guide

Revision 05

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# About This Guide

## Introduction

This guide provides an overview of the Connectbase Application Program Interface (API) developer portal, Connectbase APIs, and describes how to access and use the portal.

The API developer portal leverages APIs in the company's core platform, *The Connected World*, to provide development teams in the connectivity industry with several core capabilities designed to promote trusted sharing of network information within and across organizations.

## Audience

This reference guide is written for software developers who need to retrieve location intelligence information from, or add location data to, *The Connected World*.

## Related Documentation

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

- *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*
- *Network Path 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
CPQ	Configure, Price, Quote
cURL	Client URL Request Library
HTTP	Hyper Text Transfer Protocol
JAVA	The JAVA programming language
JSON	JavaScript Object Notation
N/A	Not applicable
PHP	Recursive acronym; Hypertext Preprocessor
REST	Representational State Transfer
URL	Uniform Resource Locator
USPS	United States Postal Service
WISP	Wireless Internet Service Provider

## Contact Customer Support

If you require technical assistance or wish to report an issue to the Connectbase Support team, please log into the Connectbase Customer Support portal at <https://support.connectbase.com> and log a ticket.

For other general information, you can contact Customer Support by email at [support@connectbase.com](mailto:support@connectbase.com) or by phone at (508) 202-1807 between the hours of 8:00 a.m. and 5:00 p.m. EST.

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# About the API Developer Portal

The Connectbase Application Program Interface (API) developer portal enables software developers to integrate their “Connected World” data directly into their existing enterprise resource applications.

The API architecture follows HTTP rules and uses the latest REST principles to ensure all APIs are easily consumable. Within the Connectbase API Portal, API publishers can engage directly with their API community, keeping them up to date via the integrated blog. Developers can log and discuss issues and even submit their applications to the application gallery.

In addition to the reference information provided in this document, a subset of API documentation is accessible online through the API portal and code samples are provided in a variety of languages.

## Accessing the Portal

Using any standard web browser, you can access the 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.

## API Authentication

As with most APIs, most endpoints require authentication. To access any of the Connectbase APIs, you must first register for the specific product(s) containing the APIs you wish to use. Upon approval from a Connectbase administrator, the corresponding API keys are provided to you within the portal.

## API User Profiles

Once you are logged into the API as a registered user, you can access your user profile to see a list of your registered APIs along with the corresponding authentication keys.

Additionally, from within your user profile, you can change your personal account information, change your password, register for additional products, or close your account.

# Using the Portal

The Connectbase API Portal allows you to access current data within “The Connected World”, which can be directly integrated into your preferred applications. Through the API portal, following operations can be performed on Connectbase objects. As stated previously, developers must authenticate with the API before issuing requests.

## About Connectbase APIs

Connectbase has developed a series of API products that enable you to access, update, and share data. Using our APIs, you can extract data from The Connected World platform to integrate directly into your system of choice, enabling you to disseminate valuable data into other internal systems.

To sign up, or to access the Connectbase APIs, go to <https://developer.connectbase.com>

At a high-level, the Connectbase API stack includes:

- *Location Engagement APIs* - A set of APIs that enable sellers to communicate out serviceability, availability, and pricing, as well as enable buyers to easily consume that information.
- *Location Intelligence APIs* - A set of APIs that enables users to query location-based network availability and vendor data, as well as tenant data.
- *Location Management APIs* - A set of APIs that enables a Connectbase provider to access and update their own data, including account/user information, building information, contacts, and distributions.
- *Location Cleansing APIs* - A set of APIs that allows for verification, validation, and cleansing of domestic and international addresses.
- *Product Management APIs* - A set of APIs that allows for the management of CPQ components, rate cards, and API translations.

## Connectbase API Products and Descriptions

API Product	Product Description	APIs
Address Processor	The Address Processor product provides a set of APIs used for address validation and formatting of U.S addresses.	<ul style="list-style-type: none"><li>• <b>Address Autocomplete API v2</b> - The Address Autocomplete API v2 enables developers to search the database using a partial address. The resulting return is a list of parsed, autocompleted USPS addresses that match the search criteria provided.</li><li>• <b>Address Validation API v4</b> -The Address Validation API is used to validate a complete USPS address inclusive of a secondary address line (IE Apt, Ste, FL) and to obtain more detailed information about the address location, such as the</li></ul>

API Product	Product Description	APIs
		<p>latitude and longitude, Timezone, UTC Offset, Census Block, Building Location Type, and Global Id. It will also determine the validity and requirement of a secondary address line.</p> <ul style="list-style-type: none"> <li>• <b>Geocode API</b> - The Geocode API enables developers to pass a location in a request body to return the latitude and longitude of the given location. The response also indicates an accuracy rating and accuracy type. Accuracy scores range from a confidence level of 0-1 where the higher value indicates more accurate results. Accuracy type values include the following: country, state, county, city, district, street, intersection, house number.</li> </ul>
Advanced CPQ	The Advanced CPQ product provides a set of APIs that enable users with advanced methods to create deals, configure pricing requirements, return quotes for locations, and create orders.	The Advanced CPQ APIs enable users to create accounts, deals, configure pricing requirements, and return quotes for locations.
Connected World Availability Engine, v5	The Connected World Availability Engine product provides a set of APIs that enable a provider to share information with their partner(s) about their buildings and the products and services they offer at those buildings.	The Connected World Availability APIs enable a provider to share information with their partner(s) about their buildings and the products and services they offer at those buildings.
Connected World Building - Silver	The Connected World Building – Silver product provides a set of APIs that enable developers to access their own building resources.	<ul style="list-style-type: none"> <li>• <b>Connected World Account API</b> - The Connected World Account API enables you to retrieve your company’s Connectbase account information.</li> <li>• <b>Connected World Building APIs</b> - The Connected World Building APIs enable you to create, retrieve, update, or remove buildings or building attributes.</li> <li>• <b>Connected World Building Lists APIs</b> – The Connected World Building List APIs enable you to retrieve building list data.</li> <li>• <b>Connected World Contact APIs</b> – The Connected World Contact</li> </ul>



API Product	Product Description	APIs
		<p>APIs enable you to add, retrieve, or update contact information.</p> <ul style="list-style-type: none"> <li>• <b>Connected World Distribution APIs</b> – The Connected World Distribution APIs enable you to create, get, initiate, or update a distribution report.</li> </ul>
Connected World Intelligence	The Connected World Intelligence product provides a set of APIs that enable users to query location-based network availability, vendor, and tenant data for a specific company or building id.	<ul style="list-style-type: none"> <li>• <b>Building Competitive Rating API</b> – The Building Competitive Rating API enables you to retrieve the competitive rating for a given location. Competitive ratings data helps you to better understand the competitive landscape and, more effectively, price services.</li> <li>• <b>Tenant API v2</b> – The Tenant API enables you to get a tenant list for a specific company and building ID, returned in a JSON array.</li> </ul>
CPQ	The Configure, Price, Quote product provides a set of APIs that enable users to create deals, configure pricing requirements, and return quotes for locations.	<p>The CPQ v2 APIs enable you to create accounts, deals, add locations, create quotes, and get quote prices.</p> <p>Note: This is an older version of CPQ APIs and Connectbase recommends upgrading to the Advanced CPQ.</p>
Demand Engine	The Demand Engine product enables developers to programmatically extract analytics from the Connectbase Demand Engine -- a reporting tool that provides you with insight into the locations your channel and business partners most often search.	The Demand Engine API enables developers to programmatically extract analytics from the Connectbase Demand Engine.
International Address Processor	The International Address Processor product is used for address validation and formatting of international addresses.	The International Address Processor is used for address validation and formatting of international addresses. It supports up to 254 countries. The verification and geocoding levels differ by available precision of data for each country. Geocoding may be rendered as Delivery Point, Premise, Thoroughfare, Locality, or None.
Location Intelligence	The Location Intelligence API is used to collect census data.	The Census Info API enables you to retrieve census block information using latitude and longitude search. Census block data includes such information as population density and median household income, for example.

API Product	Product Description	APIs
Market Data Layer	Market data Layer is used to enable vectortiles format data sharing.	Network Routes Layer API enables vectortiles format data sharing, including hundreds of US and International Shareable Networks for integration into clients' web applications. These vectortiles are securely hosted on the our dedicated server, with the underlying data derived from Connectbase's proprietary Location Truth Shareable Routes datasets.
Network Intelligence	The Network Intelligence product provides a set of APIs that enable users to get network information that is based on a specific address, such as broadband, cableco, NearNet, OnNet, telco, and wisp.	The Network Intelligence v6 API enables you to retrieve network information based on a specific address, such as broadband, cableco, conformed providers, building providers, nearnet, onnet, telco, and wisp.
Network Path	The Network Path product provides a set of APIs that enable users to perform a path search between two locations, inclusive of all paths or a specific company path, and receive a Segment ID, calculated distance, and latency in the response. Additionally, a secondary endpoint enables users to compare two different segment ids to determine if they are diverse from one other.	<p>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.</p> <p>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.</p>
Product Management	The Product Management product provides a set of APIs that allow for the management of components, rate cards, and API product translations.	<ul style="list-style-type: none"> <li>• <b>CPQ Components APIs</b> – The CPQ components APIs enable you to set up “reusable” pricing groups for use in a CPQ quote under the configured conditions.</li> <li>• <b>NNI Management APIs</b> – The NNI Management APIs enable you to create geography rules and create and manage your NNI locations.</li> <li>• <b>Rate Card Management APIs</b> – The Rate Card Management APIs enable you to create and manage your company and supplier rate cards.</li> </ul>
Route Management	The Route Management API enables you to retrieve route data from the	The Shareable Routes API enables customers to retrieve route information from The Connected

API Product	Product Description	APIs
	Connected World platform. You can use the API to find the nearest routes within the defined request parameters.	World platform's US Shareable Routes and International Shareable Routes data points.  The response provides the fiber routes within a radius given as a value (siteDistance) as well as the provider of those routes.

## Alphabetical listing of APIs as listed in Dev Portal

API	Description
Address Autocomplete API v2	Enables developers to search the database using a partial address. The resulting return is a list of parsed, auto-completed USPS addresses that match the search criteria provided.
Address Validation API v4	Used to validate a complete USPS address inclusive of a secondary address line (IE Apt, Ste, FL) and to obtain more detailed information about the address location, such as the latitude and longitude, Timezone, UTC Offset, Census Block, Building Location Type, and Global Id. It will also determine the validity and requirement of a secondary address line.
Advanced CPQ v2	Enables users to create accounts, deals, configure pricing requirements, and return quotes for locations.
Building Competitive Rating API	Enables user to retrieve the competitive rating for a given location. Competitive ratings data helps you to better understand the competitive landscape and more effectively price services.
Connected World Availability API	Enables a provider to share information with their partner(s) about their buildings and the products and services they offer at those buildings.
Connected World Availability API v3	
Connected World Availability API v5	
Connected World Building API v4	Enables users to create, retrieve, update, or remove buildings or building attributes.
Connected World Building API v5	
ConnectedWorld Account API	Enables you to retrieve your company's Connectbase account information.
ConnectedWorld Building API v2	Enables a provider to share information with their partner(s) about their buildings and the products and services they offer at those buildings.
ConnectedWorld Building Lists API	Enable you to retrieve building list data from your instance.
ConnectedWorld Contacts API	Enables you to add, retrieve, or update contact information in your instance.
ConnectedWorld Distributions API	Enables you to create, get, initiate, or update a distribution report.

API	Description
CPQ API v2	<p>Enables you to create accounts, deals, add locations, create quotes, and get quote prices.</p> <p><b>Note:</b> <i>This is an older version of CPQ APIs and Connectbase recommends upgrading to the Advanced CPQ.</i></p>
CPQ Components	Enables you to set up “reusable” pricing groups for use in a CPQ quote under the configured conditions.
Demand Engine	Enables developers to programmatically extract analytics from the Connectbase Demand Engine.
Geocode API – v1	Enables developers to pass a location in a request body to return the latitude and longitude of the given location. The response indicates an accuracy rating and accuracy type. Accuracy scores range from a confidence level of 0-1 where the higher value indicates more accurate results. Accuracy type values include the following: country, state, county, city, district, street, intersection, house number.
International Address Validation API	Used for address validation and formatting of international addresses. It supports up to 254 countries. The verification and geocoding levels differ by available precision of data for each country. The Geocoding may be rendered as Delivery Point, Premise, Thoroughfare, Locality, or None.
Location Intelligence API – v1	Enables you to retrieve census block information using latitude and longitude search. Census block data includes such information as population density and median household income, for example.
Network Intelligence API v6	Enables you to retrieve network information based on a specific address, such as broadband, cableco, conformed providers, building providers, narnet, onnet, telco, and wisp.
Network Path API	<p>Enables you 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.</p> <p>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.</p>
Network Routes Layer API	Network Routes Layer API enables vectortiles format data sharing, including hundreds of US and International Shareable Networks for integration into clients' web applications. These vectortiles are securely hosted on the our dedicated server, with the underlying data derived from Connectbase's proprietary Location Truth Shareable Routes datasets.
NNI Management API	Enables you to create geography rules and create and manage your NNI locations.
Rate Card API	Enables you to create and manage your company and supplier rate cards.
Shareable Routes	Enables you to retrieve route information from The Connected World platform’s US Shareable Routes and International Shareable Routes data points.

API	Description
	The response provides the fiber routes within a radius given as a value (siteDistance) as well as the provider of those routes.
Tenant API v2	Enables you to retrieve a tenant listing for a specific company and building ID, returned in a JSON array.

## Connectbase API Calls

**API calls** represent specific operations that your client applications can invoke to perform tasks. Each API provides API calls that you can invoke to perform the specified operations. All Connectbase supported APIs and corresponding API calls are detailed in the sections that follow.

## Connectbase Code Samples

Within the Connectbase API Portal, code samples are provided per API operation in a variety of languages as listed below.

- Curl
- C#
- Java
- JavaScript
- ObjC
- PHP
- Python
- Ruby

## Defining HTTP Requests

Communication in HTTP centers around a concept called the Request-Response Cycle. To make a valid request, the client needs to include four things:

- *URL (Uniform Resource Locator)*
- *Method*
- *List of Headers*
- *Body*

### URL

URLs become an easy way for the client to tell the server which things it wants to interact with, called resources.

### Request Method

The method request tells the server what kind of action the client wants the server to take in. The most common request methods in API's include:

- **GET**— Asks the server to retrieve a resource. GET requests include all required data in the URL.
- **POST**— Asks the server to create a new resource. POST requests supply additional data from the client to the server in the message body.
- **PUT**— Asks the server to edit/update an existing resource.

- **DELETE**— Asks the server to delete a resource.
- **PATCH** — Asks the server to update a partial resource. For instance, when you only need to update one field of the resource.

## Headers

Headers provide meta-information about a request. The response header contains the date, size, and type of file that the server is sending back to the client.

## Body

The request body contains the data the client wants to send to the server. HTTP Body data is the data bytes transmitted in an HTTP transaction message immediately following the headers, if there is any.

Most HTTP requests are GET requests without bodies. Most HTTP requests with bodies use the POST or PUT request method.

## Receiving HTTP Responses

Once a call is issued, the server responds with a status code. Status code are three-digit numbers.

The following table provides a sample listing of HTTP responses:

Response	Description
200 OK	The request was successful (some API calls may return 201 instead).
201 Created	The request was successful, and a resource was created.
204 No Content	The request was successful but there is no representation to return (i.e., the response is empty).
400 Bad Request	The request could not be understood or was missing required parameters.
401 Unauthorized	Authentication failed, or the user does not have permissions for the requested operation.
403 Forbidden	Access denied.
404 Not Found	Resource was not found.
405 Method Not Allowed	Requested method is not supported for resource.
500 Internal Server Error	The server encountered an internal error.

## Revision History

Revision	Date	Description
00	September 30, 2019	The former Connectbase API Reference Guide has been divided into individual product guides. This document was extracted from the original document to be a standalone introduction to the Connectbase API product suite.
01	October 03, 2019	Changed all references to Network Data APIs to Network Intelligence APIs to reflect name change.
02	September 30, 2020	Reorganized the APIs in alphabetical order as is shown within the developer portal.  Added Network Path API
03	February 08, 2021	Revised the API call limit to 180 calls/min with no weekly limit.
	February 01, 2022	Rebranded the document template with a new title page, company name, logo, and updated fonts.
04	January 25, 2023	Revised the document to reflect the APIs as they are listed in the newly rebranded dev.connectbase.com portal.
05	September 25, 2023	Added a new API to the developer portal named "Network Routes Layer API".