

VPS Pre-sale Broadband REST API Specification

Version 1.7

Status

Date

06/04/2018

Privileged and Confidential Page 1 of 29

Table of Contents

Re	evision History	2
1.	evision HistoryDefinition of Terms	3
2.	Introduction	3
	2.1. Background	4
	2.2. Document Intent and Purpose	4
3.	Interface Design Specifications	4
	3.1. Interface Flow	
	3.2. Web Service Clients	4
	3.3. Protocols / Mechanisms	
	3.4. Performance Requirements	
	3.5. Error Handling	
	3.6. Supported Services	
	3.6.1. Verizon VPS Presale Broadband qualification service	
	3.6.1.1 REST APIJSON format request and response information.	
	3.7. Products Supported	
	3.8. Functions Supported	. 25
	3.9. ERROR Responses	. 25
	3.10. Assumptions	. 25
4.	Ownership	
	4.1. Ownership: Development	. 26
	4.2. Ownership: Testing	. 26
	4.3. Ownership: Production	
5.	Appendix A	27

Revision History

Versio n	Date	Change Description	Author
1.2	03/30/2017	Original Version	Verizon IT
1.3	04/28/2017		Verizon IT
1.4	05/02/2017		Verizon IT
1.5	05/13/2017	In request object property name changed from "elevationvalue" to "elevationValue". In response object property name changed from "broadBrandQualifiedproducts" to "broadBandQualifiedProducts"	Verizon IT
1.6	08/07/2017	Added new field estimatedBuildPlanInfo in response JSON object. Note: FTTI Estimated Build Plan (Build plan is an estimate only. Please validate prior to ordering)	Verizon IT
1.7	06/04/2018	Removed ITW reference from specification	Verizon IT

1. Definition of Terms

The terms in the table below are used throughout this document and are defined for clarity.

Term	Definition			
REST	Representational State Transfer			
API	Application Program Interface			
FTTI	Fiber to the internet			
DSL	Digital Subscriber Line			
Rest API	System to System interface. In this case, the system interfaces between the Customer and Verizon using REST API over https.			
Verizon	Throughout the document, "Verizon" refers to "Verizon VPS"			
WS	Web service			
JSON	JavaScript Object Notation			
VPS	Verizon Partner Solution aka VPS			
CLEC	Competitive local exchange carrier			

2. Introduction

This document addresses the Interface specification for VPS Presale REST API for Broadband Service Qualification. Broadband Service Qualification API is One of Pre-sale Management API Family. Broadband Service Qualification API goal is to provide service availability at Customer location by address or working telephone number. Published in VPS digital connect platform- (VPS API Gateway).

Services published by Verizon

 VPS Presale Broadband qualification Service – Verizon will publish this service for customer to validate service address and provide qualified broad band products (FTTI/DSL) information by address or working telephone number. This service will support REST API real time synchronous call.

Privileged and Confidential Page 3 of 29

2.1. Background

Verizon's VPS B2B platform is an End-to-End integrated solution that will support Presale REST API for VPS products.

Verizon's REST API Process:-

- 1. Requests must be encoded
- 2. The http Header must present following two (2) elements
 - a) CC– "Company code" three character Company code as registered in FTTI contract Example CC → "XXX"
 - b) authType- → Authorization type

Example authType → "OAUTH".

2.2. Document Intent and Purpose

This document provides the definition of the REST API that will be used by VPS customers to find out qualified broadband products offerings in Verizon VPS. This document will highlight the following:-

- REST API Service Description and example JSON request and response (section 3.6)
- Product Definitions (sections 3.7 & 3.8)
- Error Codes and Response Codes (section 3.12)

3. Interface Design Specifications

3.1. Interface Flow

VPS client calls the "broadBandServiceQualification" service.

If the message is accepted, response with qualified broad band product info is sent back synchronously.

It the message is rejected, Rejection message is returned back.

It there is an issue with service, an Exception message is returned back.

3.2. REST API Clients

The clients for the REST API described in this document are for VPS customers. Clients should use REST API implementation and follow the standards and protocols.

3.3. Protocols / Mechanisms

Protocol: REST/JSON encoded messages sent via HTTPS

Mechanism: Client sends a JSON message and receives JSON message over https.

3.4. Performance Requirements

Up Time

All the services published by Verizon will be up 24/7 except during scheduled maintenance.

Priv ileged and Confidential Page 4 of 29

Presale Broadband Service Qualification API customers will be notified of all scheduled maintenances.

3.5. Error Handling

If connectivity cannot be established to the Verizon Broadband Service Qualification service, the client will receive an exception message. On successful connectivity to the RESTAPI, clients should check the sync response. The sync response will be consists of product and error information if the message is accepted. The sync response will be an exception if the message is not accepted. The exception should describe the error in detail. Refer to "3.6.1.1" for example success and rejection messages.

3.6. Supported Services

3.6.1. Verizon VPS Presale Broadband qualification service.

REST API:

Method	URI
POST	/broadBandServiceQualification

3.6.1.1. Method: POST

Usage: This method supports the "Sync" way of processing the Broadband Service Qualification request. This method will be used by the VPS clients to send a broad band product availability request by address or working telephone number to Verizon for the products identified in this document. If the Request is accepted, a response with qualified products information is sent back. If the request is rejected, an error message is sent back.

Sequence:

- Client calls the http "post" method of the service.
- Verizon will check FTTI/DSL contract.
- Verizon will check REST API transaction daily limit. 'A daily transaction limit has been set to 5,000 per customer. Requests for increased limits should be made to your account manager...
- Verizon will validate the message for required fields.
- Verizon processes the broadband request.
- Verizon sends response with qualified broad band products details.

The "Products Supported" section lists the Products supported in this interface. Also this section provides more details on the features and specifications for each product.

The "Functions Supported" section details the functions (Transaction types) supported by this interface.

Privileged and Confidential Page 5 of 29

Input Parameters: VPS clients will call the http "Post" method with the following parameters:

Method	URI
POST	/broadBandServiceQualification

JSON Request Format:

HTTP Header

```
CC: XXX
authType: OAUTH
POST/HTTP/1.1
Content-Type: application/json;charset=UTF-8
Host :application.endpoint
Content-Length:
Accept: application/json
Accept-Charset: utf-8
Request Body Syntax
VPS Presale Broadband service qualification
JSON request
 "messageld": "string",
 "interactionDate":"string", "companyCode": "string",
 "stateOrProvince": "string",
  "workingTelephoneNumber": "string",
  "address": {
"addressId":"string",
  "houseNumber": "string",
  "houseNumberSuffix": "string",
  "streetPrefix:"string",
  "streetName": "string", "streetSuffix": "string",
  "thoroughfare": "string",
  "unitType": "string",
  "unitValue": "string",
  "elevationType":"string",
 "elevationValue": "string",
  "structureType": "string,",
  "structureValue": "string",
  "city":"string",
  "zipCode": "string"
```

Privileged and Confidential Page 6 of 29

Input Address JSON representation example:

```
HTTP Header
CC: XXX
authType: OAUTH
 "messageld": "GRT123456",
 "interactionDate": "20170117 09:22:38:545",
 "companyCode": "GRT",
 "stateOrProvince": "MD",
 "address": {
  "addressId":""
  "houseNumber": "1300",
  "houseNumberSuffix":"",
  "streetPrefix:"",
  "streetName": "MERCANTILE",
  "streetSuffix":"",
  "thoroughfare": "LN",
  "unitType": "SUIT",
  "unitValue":"100",
  "elevationType":"",
  "elevationValue":"",
  "structureType":"",
  "structureValue":"",
 "city": "UPPER MARLBORO",
 "zipCode": "20774"
```

Input working telephone number JSON representation example: HTTP Header

```
CC: XXX
authType: OAUTH

{
   "messageId": "GRT123456",
   "interactionDate": 20170117 09:22:38:545",
   "companyCode": "GRT",
   "stateOrProvince": "MD",
   "workingTelephoneNumber": 7038863626"
}
```

Request object

Field Name	Туре	Required/Optional	Description
messageld	String	Required	A string that represents a unique message identifier for the user who made the request. The length of this identifier can vary, but is never more than 40 characters.
interactionDate	String	Required	This field is used to identify the date and time the request was sent. correct date and time format (CCYYMMDD HH:MM:SS:NNN)
companyCode	String	Required	Company code will be used to determine whether CLEC have signed contract for FTTI/DSL product. Three character AECN from FTTI/DSL contract info

Privileged and Confidential Page 7 of 29

Field Name	Туре	Required/Optional	Description
Address		Optional	Need to pass Address or working telephone number
addressId	String	Optional	Uniquely identifies a service location for close match address .Enter addressld for close match address input requests
houseNumber	String	Required	The House Number is the street number for a service location. House Number field maximum length is 10
houseNumberSuffix	String	Optional	The House Number Suffix contains any portion of the street number for a service location having any special characters that are not allowed as part of the House Number.in
streetPrefix	String	Optional	The abbreviated directional prefix for a street. Valid values are N, S, E, W, NE, NW, SE, SW.
streetName	String	Required	The street name, excluding any directional prefixes or suffixes.
streetSuffix	String	Optional	The abbreviated directional suffix for a street. Valid values are N, S, E, W, NE, NW, SE, SW.
Thoroughfare	String	Optional	The abbreviated thoroughfare for a street. Examples of valid values include AV for Avenue, APT for Apartment, HWY for Highway, etc. Refer Appendix A: Table A
unitType	String	Optional	Unit type for a building having multiple apartments. Unit Type: Refer Appendix A :Table B
unitValue	String	Optional	Unit value for a building having multiple apartments.
elevationType	String	Optional	Elevation type for a building having multiple floors. Elevation Type: Refer Appendix A : Table C
elevationValue	String	Optional	Elevation values for a building having multiple floors.
structureType	String	Optional	Structure type for a basic service location having multiple structures, such as an apartment complex. Refer Appendix A :Table D
structureValue	String	Optional	Structure value for a basic service location having multiple structures, such as an apartment complex.
city	String	Optional	Community Name
zipCode	String	Optional	ZipCode Entering a zip code will provide a better search result
workingTelephoneNumber	String	Optional	Working Telephone Number.

Privileged and Confidential Page 8 of 29

Field Name	Type	Required/Optional	Description
			It should be exact 10 characters.
stateOrProvince	String	Required	Abbreviated state name. Valid values are: VA,PA,NJ,DE,MA,NY,DC,CT,RI,MD,NC

```
JSON Response Format
HTTP Header
POST/HTTP/1.1
Content-Type: application/json; charset=UTF-8
Host:
Content-Length:
Accept: application/json
Accept-Charset: utf-8
Response Body Syntax
VPS Presale Broadband service qualification JSON response
 "messageld": "string",
 "interactionDate": "string",
 "companyCode": "string",
 "stateOrProvince": "string",
 "workingTelephoneNumber": "string",
 "exactMatchAddressIndicator": "string",
 "rangeAddressIndicator": "string",
 "fttiCapableIndicator": "string",
 "existingFIOSCustomerIndicator": "string",
 "dslCapableIndicator": "string",
 "addressBuildIndicator": "string",
 "estimatedBuildPlanInfo": "string",
 "errors": [
   "code": "string",
    "detail": "string"
  "address":[{
  "addressId":"string",
  "houseNumber": "string",
  "houseNumberSuffix": "string",
  "streetPrefix:"string",
  "streetName": "string",
  "streetSuffix":"string",
  "thoroughfare": "string",
  "unitType": "string",
  "unitValue":"string",
  "elevationType": "string",
  "elevationValue": "string",
  "structureType":"string',
  "structureValue":"string",
  "city":"string",
  "zipCode": "string".
```

Privileged and Confidential Page 9 of 29

```
"rangeAddress ": [
rangeStartNumber:"string",
rangeEndNumber:"string",
"streetDirectional": "string",
"streetName":"string",
"throughFare": "string",
"streetSuffix": "string",
"rangeSideType":string",
"city":"string",
"stateOrProvince": "string",
"zipCode":"string"
"broadBandQualifiedProducts" : [
        "dsl":[
        "business":{
        " maximum Download Speed ": "string",
        "maximumUploadSpeed":"string"
        },
        "residential":{
        " maximumDownloadSpeed ":"string",
        "maximumUploadSpeed": "string"
        "ftti":[
        "business":{
        " maximumDownloadSpeed ":"string",
        "maximumUploadSpeed": "string"
        },
        "residential":{
        " maximumDownloadSpeed ":"string",
        "maximumUploadSpeed":"string"
       ]
```

Exact match for input address JSON representation example:

```
http status code: 200
```

Content-Type: application/json

```
{
    "messageId": "GRT123456",
    "interactionDate": "20170117 09:22:38:545",
    "companyCode": "GRT",
```

Privileged and Confidential Page 10 of 29

```
"exactMatchAddressIndicator": "Yes",
 "rangeAddressIndicator": "No",
 "fttiCapableIndicator": "Yes",
 "existingFIOSCustomerIndicator": "No"
 "dslCapableIndicator":"Yes",
"addressBuildIndicator": "No",
"estimatedBuildPlanInfo":"",
 "address": {
 "addressId": "10060757.00000000",
 "houseNumber": "1300",
 "houseNumberSuffix":"",
 "streetPrefix:"",
 "streetName": "MERCANTILE",
 "streetSuffix":"",
 "thoroughfare": "LN",
 "unitType": "SUIT",
 "unitValue":"100",
 "elevationType":"",
 "elevationvalue":"",
 "structureType":"",
 "structureValue":"",
```

Privileged and Confidential Page 11 of 29

```
"city": "UPPER MARLBORO",
  "zipCode": "20774"
}
"broadBandQualifiedProducts" : [
       "dsl":[
"business":{
       "maximumDownloadSpeed":"10 Mbps",
       "maximumUploadSpeed":"1 Mbps"
       },
"residential":{
       "maximumDownloadSpeed":"10 Mbps",
        "maximumUploadSpeed":"1 Mbps"
       }
],
       "ftti":[
   "business":{
       "maximumDownloadSpeed":"500 Mbps",
        "maximumUploadSpeed": "500 Mbps"
       },
"residential":{
       "maximumDownloadSpeed":"50 Mbps",
```

Privileged and Confidential Page 12 of 29

```
"maximumUploadSpeed":"50 Mbps"
       }
]
]
}
Close match for input address response JSON representation example:
http status code: 200
Content-Type: application/json
{
 "messageld": "GRT123456",
 "interactionDate": 20170117 09:22:38:545",
  "companyCode": "GRT",
  "exactMatchAddressIndicator": "No",
  "rangeAddressIndicator": "No",
  "fttiCapableIndicator": "No",
  "existingFIOSCustomerIndicator":"No"
  "dslCapableIndicator":"No",
```

"addressBuildIndicator":"Yes",

"estimatedBuildPlanInfo": "",

Privileged and Confidential Page 13 of 29

```
"address": [
{
"addressId": "10060757.00000000",
"houseNumber": "1300",
 "houseNumberSuffix":"",
  "streetPrefix:"",
"streetName": "MERCANTILE",
 "streetSuffix":"",
 "thoroughfare": "LN",
 "unitType": "SUIT",
  "unitValue":"101",
   "elevationType":"",
   "elevationValue":"",
    "structureType":"",
     "structureValue":"",
     "city": "UPPER MARLBORO",
    "stateOrProvince": "MD",
     "zipCode": "20774"
 "addressId": "10060758.00000000",
```

},

{

Priv ileged and Confidential Page 14 of 29

```
"houseNumber": "1300",
 "houseNumberSuffix":"",
 "streetPrefix:"",
 "streetName": "MERCANTILE",
  "streetSuffix":"",
"thoroughfare": "LN",
"unitType":"SUIT",
"unitValue": "102",
"elevationType":"",
"elevationValue":",
"structureType":"",
"structureValue":"",
"city": "UPPER MARLBORO",
"stateOrProvince": "MD",
"zipCode": "20774"
"addressId": "10060759.00000000",
"houseNumber": "1300",
"houseNumberSuffix":"",
```

},

Privileged and Confidential Page 15 of 29

```
"streetPrefix:"",
"streetName": "MERCANTILE",
"streetSuffix":"",
"thoroughfare": "LN",
 "unitType":"SUIT",
  "unitValue": "103",
  "elevationType":"",
  "elevationValue":"",
  "structureType":"",
  "structureValue":"",
  "city": "UPPER MARLBORO",
"stateOrProvince": "MD",
  "zipCode": "20774"
"addressId": "10060760.00000000",
  "houseNumber": "1300",
 "houseNumberSuffix":"",
 "streetPrefix:"",
 "streetName": "MERCANTILE",
 "streetSuffix":"",
```

},

{

Privileged and Confidential Page 16 of 29

"thoroughfare": "LN",

}

1

}

{

```
"unitType": "SUIT",
  "unitValue": "104",
  "elevationType":"",
  "elevationValue":"",
  "structureType":"",
  "structureValue":"",
  "city": "UPPER MARLBORO",
  "stateOrProvince": "MD",
  "zipCode": "20774"
Close match address range for input address response JSON representation example:
http status code: 200
Content-Type: application/json
 "messageld": "GRT123456",
 "interactionDate": 20170117 09:22:38:545",
  "companyCode": "GRT",
  "exactMatchAddressIndicator":"No",
```

Privileged and Confidential Page 17 of 29

```
"rangeAddressIndicator": "Yes",
"fttiCapableIndicator": "No",
"existingFIOSCustomerIndicator": "No"
"dslCapableIndicator":"No",
"estimatedBuildPlanInfo":"",
 "rangeaddress": [
{
"rangeStartNumber": "100",
"rangeEndNumber": "200",
 "rangeSideType":"O",
 "streetPrefix:"",
 "streetName": "MERCANTILE",
 "streetSuffix":"",
 "thoroughfare": "LN",
 "city": "UPPER MARLBORO",
  "stateOrProvince": "MD",
  "zipCode": "20774"
 },
"rangeStartNumber": "10",
 "rangeEndNumber": "14",
```

Priv ileged and Confidential Page 18 of 29

```
"rangeSideType":"O",
  "streetPrefix:"",
  "streetName": "MERCANTILE",
  "streetSuffix":"",
"thoroughfare": "LN",
"city": "UPPER MARLBORO",
 "stateOrProvince":"MD",
  "zipCode": "20774"
  },
{
"rangeStartNumber": "55",
 "rangeEndNumber":"77",
  "streetPrefix:"",
  "streetName": "MERCANTILE",
    "streetSuffix":"",
    "thoroughfare": "LN",
     "city": "UPPER MARLBORO",
       "stateOrProvince": "MD",
       "zipCode": "20774"
  },
```

Privileged and Confidential Page 19 of 29

Specification

Privileged and Confidential Page 20 of 29

"interactionDate": 20170117 09:22:38:545",

"companyCode": "GRT",

```
"errors": [

{
  "code": "100",

  "detail": "FTTI/DSL contract required to access Presale service qualification API interface"
}
]
```

Response object

}

Field Name	Туре	Required/Optional	Description
messageld	String	Required	A string that represents a unique message identifier for the user who made the request. The length of this identifier can vary, but is never more than 40 characters. Return input messageld value in response.
interactionDate	String	Required	This field is used to identify the date and time the request was sent to client correct date and time format (CCYYMMDD HH:MM:SS:NNN)
companyCode	String	Required	Company code will be used to determine whether CLEC have signed contract for FTTI/DSL product. Three character AECN from FTTI/DSL contract info. Return input companyCode value in response.
exactMatchAddressIndicator	String	Optional	Indicates whether the address is an exact match. If not, a close match may be provided. Valid values are: "Yes" or "No".
rangeAddressIndicator	String	Optional	Indicates address validation results has address range . Valid values are :"Yes" or "No"
existingFIOSCustomerIndicator	String	Optional	Identifies location address has existing FIOS service with Verizon. Valid values are :"Yes" or "No".
fttiCapableIndicator	String	Optional	Indicates location address is capable for FTTI or not.

Privileged and Confidential Page 21 of 29

Field Name	Туре	Required/Optional	Description
			Valid values are :"Yes" or "No"
dslCapableIndicator	String	Optional	Indicates location address in capable for DSL or not Valid values are :"Yes" or "No"
addressBuildIndicator	String	Optional	Identifies location address is ready for Engineering analysis for fiber address build. Valid values are :"Yes" or "No"
estimated Build Plan Info	String	Optional	Provide FTTI availability Estimated Build Plan info. Example: FTTI is coming in 15 Days Note: FTTI Estimated Build Plan (Build plan is an estimate only. Please validate prior to ordering)
error	Array	Optional	Identifies application-specific code representing the type of problem encountered
code	String	Optional	Unique code assigned to which is specific to the particular instance of the problem
detail	String	Optional	detail identifies specific to the occurrence of the problem
address	Array	Optional	Return one address if exactMatchIndicator is "Yes" or return one or more addresses if exactMatchIndicator is "No"
addressId	String	Optional	Uniquely identifies a service location. Return addressld for close match addresses when exactMatchIndicator is "No"
houseNumber	String	Optional	The House Number is the street number for a service location. House Number field maximum length is 10
houseNumberSuffix	String	Optional	The House Number Suffix contains any portion of the street number for a service location having any special characters that are not allowed as part of the House Number.in
streetPrefix	String	Optional	The abbreviated directional prefix for a street. Valid values are N, S, E, W, NE, NW, SE, SW.
streetName	String	Optional	The street name, excluding any directional prefixes or suffixes.
streetSuffix	String	Optional	The abbreviated directional suffix for a street. Valid values are N, S, E, W, NE, NW, SE, SW.
thoroughfare	String	Optional	The abbreviated thoroughfare for a street. Examples of valid values include AV for Avenue, APT for Apartment, HWY for Highway, etc.
unitType	String	Optional	Unit type for a building having multiple apartments.

Priv ileged and Confidential Page 22 of 29

Field Name	Туре	Required/Optional	Description
unitValue	String	Optional	Unit value for a building having multiple apartments.
elevationType	String	Optional	Elevation type for a building having multiple floors. Elevation Type:
elevationValue	String	Optional	Elevation values for a building having multiple floors.
structureType	String	Optional	Structure type for a basic service location having multiple structures, such as an apartment complex.
structureValue	String	Optional	Structure value for a basic service location having multiple structures, such as an apartment complex.
city	String	Required	Community Name
zipCode	String	Optional	ZipCode
workingTelephoneNumber	String	Optional	Working Telephone Number
stateOrProvince	String	Optional	Abbreviated state name. Valid values are: VA,PA,NJ,DE,MA,NY,DC,CT,RI,MD,NC
rangeAddress	Array	Optional	Return one or more range address if rangeAddressIndicator is "Yes"
rangeStartNumber	String	Optional	Range start number
rangeEndNumber	String	Optional	Range end Number
rangeSideType	String	Optional	Range Side type. Valid values are :O, E, B "O"> Identify Odd house number addresses in that street. "E"> Identify Even house number addresses in that street. "B"-> Identify bot even and odd house number addresses in that street.
streetPrefix	String	Optional	The abbreviated directional prefix for a street. Valid values are N, S, E, W, NE, NW, SE, SW.
streetName	String	Optional	The street name, excluding any directional prefixes or suffixes.
streetSuffix	String	Optional	The abbreviated directional suffix for a street. Valid values are N, S, E, W, NE, NW, SE, SW.
thoroughfare	String	Optional	The abbreviated thoroughfare for a street. Examples of valid values include AV for Avenue, APT for Apartment, HWY for Highway, etc.

Privileged and Confidential

Page 23 of 29

Field Name	Туре	Required/Optional	Description
city	String	Required	Community Name
zipCode	String	Optional	ZipCode
stateOrProvince	String	Required	Abbreviated state name. Valid values are: VA,PA,NJ,DE,MA,NY,DC,CT,RI,MD,NC
broadBandQualifiedProducts	Array	Optional	Return broad band qualified products
dsl	Array	Optional	Return DSL product speed info for residential and business if dslCapableIndicator is Yes
business		Optional	
maximumDownloadSpeed		Optional	DSL Maximum down load available speed Valid Valid Maximum down load speeds: 15 Mbps,10 Mbps, 5 Mbps,7.1 Mbps,5 Mbps,3 Mbps,3.0 Mbps,1.5 Mbps,1 Mbps,384 Kbps,768 Kbps.
maximumUploadSpeed		Optional	DSL Maximum up load available speed.
			Valid maximum Upload Speeds: 1 Mbps,768 Kbps,384 Kbps ,128 Kbps
residential			
maximumDownloadSpeed		Optional	DSL Maximum down load available speed Valid Maximum down load speeds: 15 Mbps,10 Mbps, 5 Mbps,7.1 Mbps,5 Mbps,3 Mbps,3.0 Mbps,1.5 Mbps,1 Mbps,384 Kbps,768 Kbps.
maximumUploadSpeed		Optional	DSL Maximum upload available speed Valid maximum Upload Speeds: 1 Mbps,768 Kbps,384 Kbps ,128 Kbps
ftti	Array	Optional	Return FTTI product speed info for residential and business if fttiCapableIndicator is Yes
business		Optional	
maximumDownloadSpeed		Optional	FTTI Maximum down load available speed Valid Maximum Download Speed: 25 Mbps,50 Mbps, 75 Mbps ,100 Mbps,150 Mbps,300 Mbps,500 Mbps
maximumUploadSpeed		Optional	FTTI Maximum down available speed Valid maximumDownloadSpeed: 25 Mbps,50 Mbps, 75 Mbps ,100 Mbps,150 Mbps,300 Mbps,500 Mbps
residential			

Privileged and Confidential Page 24 of 29

Field Name	Туре	Required/Optional	Description
maximumDownloadSpeed		Optional	FTTI Maximum down load available speed Valid Maximum Download Speed: 25 Mbps,50 Mbps, 75 Mbps ,100 Mbps,150 Mbps,300 Mbps,500 Mbps
maximumUploadSpeed		Optional	FTTI Maximum down available speed Valid maximumDownloadSpeed: 25 Mbps,50 Mbps, 75 Mbps ,100 Mbps,150 Mbps,300 Mbps,500 Mbps

3.7. Products Supported

3.7.1. Broadband Services:

Local products: FTTI and DSL

3.8. Functions Supported

o Broadband products availability info

3.9. ERROR Responses

NOTE: These are the possible Error Codes /Detail info that will be sent in the Response from VPS Verizon.

REST API error mapping table:

Code	Detail
100	FTTI/DSL contract required to access Presale Broadband service qualification API interface.
101	You have exceeded your daily transaction limit. Please contact your
	account manager for additional information
102	Service not available in state provided.
103	houseNumber, streetName, city and state must be populated.
104	Address not found
105	WorkingTelephoneNumber not found
106	System exception occurred. Please try again later.
107	Missing Company Code.
108	Message ID is not unique or missing
109	Invalid input JSON format.
110	Address ID missing or not found.
111	No valid City, Zip Code provided
112	Invalid workingTelephoneNumber.
113	WorkignTelephoneNumber or Address must be populated

Privileged and Confidential Page 25 of 29

3.10 Assumptions

Prior to gaining access to the VPS Broadband Presale service REST API, Customer must have an executed
 FTTI or DSL contract with Verizon associated with the services.

4 Ownership

Article I. Ownership: Development

Verizon will be responsible for the following:

- Developing and exposing the following RESTAPI's:
- (i) VPS Broadband Presale Service.
 - Interact with VPS teams for questions / answer

REST API clients (customer using the Verizon's Broadband presale services) will be responsible for the following:

- Design, Code and Unit test the capability to call the Verizon Services that the customer would like to use.
- Interact with the Verizon VPS Support team for question / answer about testing

4.10 Ownership: Testing

Verizon will be responsible for the following:

- Non-Prod version of the service available for Testing:
 - Verizon VPS Broadband Presale Service.
- Interact with VPS RESTAPI clients for any issues during the Testing phase

4.11 Ownership: Production

Verizon will be responsible for the following:

- Production version of the service available in production environment
 - Verizon VPS Preorder(Presale) Service .
 - o Monitoring.
 - Issue Resolution.

5.0 Appendix:

A: East Thoroughfare, Unit, Structure and Elevation

Table A: Thoroughfare

Privileged and Confidential Page 26 of 29

	I =
Abbreviation	Description
ALY	ALLEY
ANX	ANNEX
APT	APARTMENT
ARC	ARCADE
AV	AVENUE
BDWK	BOARDWALK
BLDG	BUILDING
BLF	BLUFF
BLK	BLOCK
BLVD	BOULEVARD
BYPSS	BYPASS
CIR	CIRCLE
CLDSC	CUL-DE-SAC
CONC	CONCOURSE
CP	
_	CAMP
CRES	CRESCENT
CRK	CREEK
CRS	CROSSING
CRSE	COURSE
CSWY	CAUSEWAY
CT	COURT
CTHSE	COURTHOUSE
CTR	CENTER
CTS	COURTS
CULDESAC	CULDESAC
CV	COVE
DEP	DEPOT
DIST	DISTRICT
DR	DRIVE
DWY	DRIVEWAY
ESPLND	ESPLANADE
EST	ESTATE
ESI	
EVDWA	
EXPWY	EXPRESSWAY
EXT	EXPRESSWAY EXTENSION
EXT FL	EXPRESSWAY EXTENSION FIELD
EXT FL FLDS	EXPRESSWAY EXTENSION FIELD FIELDS
EXT FL FLDS FLT	EXPRESSWAY EXTENSION FIELD FIELDS FLAT
EXT FL FLDS FLT FLTS	EXPRESSWAY EXTENSION FIELD FIELDS FLAT FLATS
EXT FL FLDS FLT FLTS FRD	EXPRESSWAY EXTENSION FIELD FIELDS FLAT FLATS FORD
EXT FL FLDS FLT FLTS FRD FRG	EXPRESSWAY EXTENSION FIELD FIELDS FLAT FLATS FORD FORGE
EXT FL FLDS FLT FLTS FRD FRG FRK	EXPRESSWAY EXTENSION FIELD FIELDS FLAT FLATS FORD FORGE FORK
EXT FL FLDS FLT FLTS FRD FRG	EXPRESSWAY EXTENSION FIELD FIELDS FLAT FLATS FORD FORGE FORK
EXT FL FLDS FLT FLTS FRD FRG FRK	EXPRESSWAY EXTENSION FIELD FIELDS FLAT FLATS FORD FORGE FORK
EXT FL FLDS FLT FLTS FRD FRG FRK FRKS	EXPRESSWAY EXTENSION FIELD FIELDS FLAT FLATS FORD FORGE FORK
EXT FL FLDS FLT FLTS FRD FRG FRK FRKS FRST	EXPRESSWAY EXTENSION FIELD FIELDS FLAT FLATS FORD FORGE FORK FORKS FOREST
EXT FL FLDS FLT FLTS FRD FRG FRK FRKS FRST FRWY	EXPRESSWAY EXTENSION FIELD FIELDS FLAT FLATS FORD FORGE FORKS FORKS FOREST FREEWAY
EXT FL FLDS FLT FLTS FRD FRG FRK FRKS FRST FRWY FT GDN	EXPRESSWAY EXTENSION FIELD FIELDS FLAT FLATS FORD FORGE FORK FORKS FOREST FREEWAY FORT GARDEN
EXT FL FLDS FLT FLTS FRD FRG FRK FRKS FRST FRWY FT GDN GDNS	EXPRESSWAY EXTENSION FIELD FIELDS FLAT FLATS FORD FORGE FORK FORKS FOREST FREEWAY FORT GARDEN GARDENS
EXT FL FLDS FLT FLTS FRD FRG FRK FRKS FRST FRWY FT GDN GDNS GLN	EXPRESSWAY EXTENSION FIELD FIELDS FLAT FLATS FORD FORGE FORK FORKS FOREST FREEWAY FORT GARDEN GARDENS GLEN
EXT FL FLDS FLT FLTS FRD FRG FRK FRKS FRST FRWY FT GDN GDNS GLN GRN	EXPRESSWAY EXTENSION FIELD FIELDS FLAT FLATS FORD FORGE FORK FORKS FOREST FREEWAY FORT GARDEN GARDENS GLEN GREEN
EXT FL FLDS FLT FLTS FRD FRG FRK FRKS FRST FRWY FT GDN GDNS GLN GRN GRV	EXPRESSWAY EXTENSION FIELD FIELDS FLAT FLATS FORD FORGE FORK FORKS FOREST FREEWAY FORT GARDEN GARDENS GLEN GROVE
EXT FL FLDS FLT FLTS FRD FRG FRK FRKS FRST FRWY FT GDN GDNS GLN GRN GRV GTWY	EXPRESSWAY EXTENSION FIELD FIELDS FLAT FLATS FORD FORGE FORK FORKS FOREST FREEWAY FORT GARDEN GARDENS GLEN GROVE GATEWAY
EXT FL FLDS FLT FLTS FRD FRG FRK FRKS FRST FRWY FT GDN GDNS GLN GRN GRV GTWY HBR	EXPRESSWAY EXTENSION FIELD FIELDS FLAT FLATS FORD FORGE FORK FORKS FOREST FREEWAY FORT GARDEN GARDENS GLEN GROVE GATEWAY HARBOR
EXT FL FLDS FLT FLTS FRD FRG FRK FRKS FRST FRWY FT GDN GDNS GLN GRN GRN GRV GTWY HBR HL	EXPRESSWAY EXTENSION FIELD FIELDS FLAT FLATS FORD FORGE FORK FORKS FOREST FREEWAY FORT GARDEN GARDENS GLEN GREEN GROVE GATEWAY HARBOR HILL
EXT FL FLDS FLT FLTS FRD FRG FRK FRKS FRST FRWY FT GDN GDNS GLN GRN GRV GTWY HBR HL HLS	EXPRESSWAY EXTENSION FIELD FIELDS FLAT FLATS FORD FORGE FORK FORKS FOREST FREEWAY FORT GARDEN GARDENS GLEN GREEN GROVE GATEWAY HARBOR HILL HILLS
EXT FL FLDS FLT FLTS FRD FRG FRK FRKS FRST FRWY FT GDN GDNS GLN GRN GRV GTWY HBR HL HLS HOLW	EXPRESSWAY EXTENSION FIELD FIELDS FLAT FLATS FORD FORGE FORK FORKS FOREST FREEWAY FORT GARDENS GLEN GREEN GROVE GATEWAY HARBOR HILL HILLS HOLLOW
EXT FL FLDS FLT FLTS FRD FRG FRK FRKS FRST FRWY FT GDN GDNS GLN GRN GRV GTWY HBR HL HLS HOLW HSE	EXPRESSWAY EXTENSION FIELD FIELDS FLAT FLATS FORD FORGE FORK FORKS FOREST FREEWAY FORT GARDEN GARDENS GLEN GREEN GROVE GATEWAY HARBOR HILL HILLS HOLLOW HOUSE
EXT FL FLDS FLT FLTS FRD FRG FRK FRKS FRST FRWY FT GDN GDNS GLN GRN GRV GTWY HBR HL HLS HOLW	EXPRESSWAY EXTENSION FIELD FIELDS FLAT FLATS FORD FORGE FORK FORKS FOREST FREEWAY FORT GARDENS GLEN GREEN GROVE GATEWAY HARBOR HILL HILLS HOLLOW

Priv ileged and Confidential Page 27 of 29

HWY	HIGHWAY
INL	INLET
INT	INTERSTATE
ISL	ISLAND
JCTN	JUNCTION
LDG	LODGE
LK	LAKE
LN	LANE
LNDG	LANDING
LOOP	LOOP
MD	MEADOW
MDWS	MEADOWS
MKT	MARKET
MNR	MANOR
NK	NECK
NR	NEAR
PASS	PASS
PD	POND
PIER	PIER
PK	PARK
PKE	PIKE
PKWY	PARKWAY
PL PL	PLACE
PLZ	PLAZA
PR	PRAIRIE
PROM	PROMENADE
PRT	PORT
PT	POINT
RD	ROAD
RDG	RIDGE
RDWY	ROADWAY
RNCH	RANCH
RNCHS	RANCHES
ROW	ROW
RPD	RAPID
RPDS	RAPIDS
RST	REST
RT	ROUTE
RUN	RUN
SHL	SHOAL
SHLS	SHOALS
SPG	SPRING
SPGS	SPRINGS
SQ	SQUARE
ST	STREET
STA	STATION
STRM	STREAM
TERM	TERMINAL
TERR	TERRACE
THRWY	THRUWAY
TR	TRAIL
TRLR	TRAILER
TRNPK	TURNPIKE
VW	VIEW
WAY	WAY
WHF	WHARF
WHSE	WAREHOUSE
WK	WALK
	-

Priv ileged and Confidential Page 28 of 29

YD	YARD

Table B: Unit Type

Abbreviation	Description
APT	APARTMENT
LOT	LOT
RM	ROOM
SLIP	SLIP
SUIT	SUITE
UNIT	UNIT

Table C: Elevation Type

Abbreviation	Description
FLR	FLOOR

Table D: Structure Type

Abbreviation	Description
BLDG	BUILDING
PIER	PIER
WNG	WING

Privileged and Confidential Page 29 of 29