

Wholesale Hosted Communications (WHC) API

Provide Order User Guide

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Issue: v1.0

20 February 2023

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1 Introduction

This guide will help you make your first Wholesale Hosted Communication (WHC) provide order. This guide is aimed at developers however knowledge of WHC product or product specialist guidance is highly recommended for full comprehension and development of WHC API journeys.

We recommend placing a simple order for a company, one site, one number block and one user to get started.

2 Prerequisites

To complete this guide, you will need to be registered with a developer app to get the set of keys and secret required to authenticate your request. You can generate these keys and tokens by following the "Getting started" guide simplified below:

- [Register on the portal](#) and receive approval for a developer account.
- [Create a developer app](#) selecting desired APIs in the developer portal.
- Navigate to your app's consumer "key and secret" page to generate the required credentials. Make sure to save all credentials in a secure location.

3 Step 1: Authorisation Token

There are several different tools, code examples, and libraries that you can use to make an API request, but we are going to use the Postman tool here to simplify the process.

To make a request to the WHC API, you need to verify that you have permission. To do this you must authenticate your request with OAuth 2.0 App-Only. This means exchanging your App credentials for an Access Token by issuing a GET request to [OAuth 2](#).

You must add your App consumer keys and secret to Postman. In Postman input the access token URL, configure the "Authorization" type to "Basic Auth" then input your App consumer key in username and secret in password fields. Click send and upon success you'll be get an access token detailing expiry timescale in milliseconds. This is required each time you issue a request which means generating a new one if it expires.

3.1 Example Request

```
curl --location --request GET 'https://api-
testa.business.bt.com/oauth/accesstoken?grant_type=client_credentials' \
--header 'Content-Type: application/x-www-form-urlencoded' \
--
header 'Authorization: Basic bEF4SmFRZWM4QjM4VzFncWoyVjB5RzFQYjBPU2lqQXE6U1c4N1V6NjRZ
MXhhdG5HSg=='
```

3.2 Example Response

```
200 OK
{
  "accessToken": "KERDyPnmE59MwBPgSkiRqSAY9AVY",
  "tokenType": "BearerToken",
  "expiresIn": 899
}
```

4 Step 2: Verify and Retrieve Asset Details

Prior to creation of an order, you must validate the service provider information and data being used to avoid potential duplicate resulting in order failure. You'll utilise [Verify data](#) API to do the appropriate checks.

The Verify data API can be utilised to check whether key data such as company domain or site name already exist in BT database. It is also used to retrieve data for a Reseller such as sales tag, reseller id and what products you're able to order.

For example, if we want to use the company name The Fun Network, we will use the [Retrieve company details](#) API to check it's not used somewhere else on BT database. You would need to issue a GET request to resource Inventory.

Upon clicking send the desired response you need is '404 Not Found' because this means this company name is not in use however if you get a '200 OK' the company name is registered in BT database and will fail the order if utilised. Please ensure you verify all key data you plan to use in the order.

4.1 Example Request

```
curl --location --request GET 'https://api-testa.business.bt.com/bt-
wholesale/v1/whc/resourceInventory/resellers/CUG5019851064/company?companyName=TheFu
nNetwork' \
--header 'APIGW-Tracking-Header: abc' \
--header 'Authorization: Bearer 9vKmtqLppXMZgjsfQ7i4rticxIS3'
```

4.2 Example Response

```
404 Not Found
{
  "code": "404",
  "message": "No data found"
}
```

4.2.1 Recommendation

Please note a valid CUG ID is required which can be found in Business Zone portal.

5 Step 3: Qualification of Key Data

To enable numbers to be reserved against a company you must qualify and validate key data we previously verified in step 2 such as company name and domain name.

You would need to issue a POST request to [Create Product qualification](#) API. In the request you'll need to include CUG ID, billing Account, company name, company domain and customer group.

If everything is done correctly upon a successful response an entry will be created into BT system reserving your details such as company name, domain and group providing you with a unique qualifier id and service id to be utilised in the create order.

5.1 Example Response

201 Created

```
{
  "id": "QFW103255",
  "productOfferingQualificationItem": [
    {
      "id": "QFW103255-1",
      "qualificationItemResult": "Qualified",
      "product": {
        "servicelid": {
          "value": "WHHCBTWKN1484"
        },
        "place": [],
        "productCharacteristic": [
          {
            "name": "customerName",
            "value": "TheFunNetwork"
          },
          {
            "name": "customerDomain",
            "value": "TheFunNetwork.com"
          },
          {
            "name": "customerGroup",
            "value": "SWAINsTelecom"
          }
        ]
      }
    }
  ]
}
```

```
    },
    {
      "name": "networkType",
      "value": "BT"
    }
  ]
},
"productOffering": {
  "id": "WHCCompany",
  "name": "WHC Hosted Communications"
},
"productOfferingQualificationItem": []
}
],
"relatedParty": [
  {
    "id": "CUG5019851064",
    "role": "customer",
    "@referredType": "BtCug"
  }
]
}
```

5.1.1 Recommendation

Qualifications will expire the same day at 11.59pm BST/ GMT if the details aren't used within the same day of qualification, we recommend qualifying the data again to avoid failure. The billing account is found in business Zone portal and customer group is obtained during the [Retrieve company details](#) API call.

6 Step 4: Ringfence Numbers

After creating product qualification, you can order/ allocate new numbers or allocate ported number ranges to a WHC company which can then be utilised by that company's sites, features and users. This is done through the [RingFence numbers API](#).

To successfully ringfence numbers you'll require CUG id, location area code with number quantity, including serviceID and qualification id from [Create Product qualification](#) API. Upon a successful API call the number will be assigned against your company.

6.1 Example Request

```
curl --location --request POST 'https://api-
testa.business.bt.com/v1/resourceManagement/directoryNumbers/ringFence' \
--header 'APIGW-Tracking-Header: ABC' \
--header 'Content-Type: application/json' \
--header 'Authorization: Bearer 9vKMTqLppXMZgjsfQ7i4rticxIS3' \
--data-raw '{
  "customer": {
    "id": "CUG5019851064",
    "type": "BUSINESS"
  },
  "numbers": {
    "quantity": 1,
    "characteristics": {
      "numberString": "0121"
    }
  },
  "product": {
    "name": "WHC"
  },
  "action": "RingFence",
  "ringFenceId": "WHHCBTWKN1484",
  "qualifierId": "QFW103255"
}'
```

6.2 Example Response

201 Created

```
{  
  "action": "Ringfence",  
  "numberRange": {  
    "startNumber": "01212034822",  
    "endNumber": "01212034822"  
  },  
  "ringFenceId": "WHHCBTWKN1484",  
  "status": "RINGFENCED"  
}
```

7 Step 5: Select Valid Address

In our order we'll need to state which address the services will be registered to. You'll need to send a GET request to [Geographic Address](#) API providing the exact address postcode. Once the request is sent a success response will display a full list of address available for that postcode. Identify your address by taking its id (referred to as NAD key) which we'll use as the id for "relatedPlace" in the create order.

7.1 Example Request

```
curl --
location 'https://api.wholesale.bt.com/common/geographicAddressManagement/v1/geographi
cAddress?postcode=IP5%203RE&addressSource=ROBT' \
--header 'APIGW-Tracking-Header: ABC' \
--header 'Authorization: Bearer zrlBF0b8xJGIWoSjoZXKCogZrCGg'
```

7.2 Example Response

```
201 Created
{
  "id": "X05000455530"
}
```

7.2.1 Recommendation

If your address is not present in the list please use [Create Geographic Address](#) API to create the address for which you'll get a temporary NAD key.

8 Step 6: Create Order

Now we've qualified the company and domain, ringfenced the numbers and acquired address id we can utilise all these details to create an order. You'll need to POST a request to the [Create Order](#) API. Depending on what you want this should include company/ site details, type of products and user(s) information. To get comprehensive list please refer to [Product Characteristics](#).

Once you've included all your order details POST the request and upon success, the response should return an order id which you'll use in the submit order step.

8.1 Example Response

201 Created

```
{
  "id": "BTWKN1485",
  "@referredType": "ProductOrder"
}
```

8.1.1 Recommendation

Currently due to large payload sizes during order creation we've got limitations on how many items can be included in one payload. We suggest limiting the number of users to three at a time to avoid order failing due to timeout. To start with we suggest a simple order of a company, one site, one number block and one user to fully comprehend the journey.

9 Step 7: Submit Order Utilising Order ID

Once you get the order id from the create product response it should be utilised to submit the order. A POST request including the order id should be sent to [Submit Order](#) API. Your order will now be processed.

9.1 Example Request

```
curl --location --request POST 'https://api-testa.business.bt.com/bt-wholesale/v1/order/submit-product-order' \  
--header 'APIGW-Tracking-Header: 3dd57ffe-f884-4f85-ae5c-7f2b4f596ee0' \  
--header 'Content-Type: application/json' \  
--header 'Authorization: Bearer 9vKMTqLppXMZgjsfQ7i4rticxIS3' \  
--data-raw '{  
  "productOrder": {  
    "id": "BTWKN1485",  
    "@referredType": "ProductOrder"  
  }  
}'
```

9.2 Example Response

```
201 Created  
{  
  "id": "BTWKN1485",  
  "productOrder": {  
    "id": "BTWKN1485",  
    "@referredType": "ProductOrder"  
  }  
}
```

9.2.1 Recommendation

Please note the order number can be used to query order.



20 February 2023

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