



“Next Bus” arrival time API  
of  
Citybus Limited  
and  
New World First Bus Services Limited

**API Specifications**

Version 1.01  
Aug 2019

## Amendment History

Version Number	Revision Details	Revision Date	Author
1.00	Initial Version	July 2019	DA Division, OGCIOTD & OSD, CTB & NWFB
1.01	Amendment on Section 3 Route API	Aug 2019	DA Division, OGCIOTD & OSD, CTB & NWFB

## Table of Contents

Table of Contents.....	3
1. API Base URL.....	4
2. Company API.....	4
3. Route API .....	6
4. Stop API .....	8
5. Route-Stop API .....	10
6. ETA API .....	17
7. Error Response.....	19

# 1. API Base URL

All APIs described in this document share the following base URL:

<b>Base URL</b>	<code>https://rt.data.gov.hk/</code>
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# 2. Company API

**Description:** This API takes a Citybus/New World First Bus company ID and returns the respective company information.

**HTTP Request:**

<b>Endpoint</b>	<code>/v1/transport/citybus-nwfb/company/{company_id}</code>
<b>HTTP Method</b>	GET

Parameter	Parameter Type	Description	Required
company_id	Path	<p>Company ID under Citybus/New World First Bus.</p> <p>Valid company IDs are:</p> <ul style="list-style-type: none"> <li>NWFB - New World First Bus Service Limited</li> <li>CTB - Citybus Limited</li> </ul>	Y

**Sample Request:**

<code>/v1/transport/citybus-nwfb/company/NWFB</code>
--

## HTTP Response:

<b>Response Format</b>	JSON
------------------------	------

<b>Response Code</b>	<b>Response</b>
200	Success, see sample response below
422	See message in response body
429	Processing too many requests
500	Internal Server Error

## Sample Response:

```
{
  "type": "Company",
  "version": "1.0",
  "generated_timestamp": "2019-05-20T11:40:48+08:00",
  "data": {
    "co": "CTB",
    "name_tc": "城巴有限公司",
    "name_en": "Citybus Limited",
    "name_sc": "城巴有限公司",
    "url": "http://www.citybus.com.hk",
    "data_timestamp": "2019-05-20T11:40:00+08:00"
  }
}
```

**Note:** Refer to the data dictionary on description and specifications on the returned fields.

### 3. Route API

**Description:** This API takes a Citybus/New World First Bus company ID and the company's operating bus route number and returns the respective route information.

#### HTTP Request:

<b>Endpoint</b>	/v1/transport/citybus-nwfb/route/{company_id}/{route}
<b>HTTP Method</b>	GET

Parameter	Parameter Type	Description	Required
company_id	Path	Company ID under Citybus/New World First Bus.  Valid company IDs are: <ul style="list-style-type: none"> <li>NWFB - New World First Bus Service Limited</li> <li>CTB - Citybus Limited</li> </ul>	Y
route	Path	Optional: The route number of the respective bus company specified above.  If the route parameter is not provided, the complete route list of the respective company will be returned.	N

#### Sample Request:

```
/v1/transport/citybus-nwfb/route/CTB/107
```

#### HTTP Response:

<b>Response Format</b>	JSON
------------------------	------

Response Code	Response
200	Success, see sample response below
422	See message in response body
429	Processing too many requests
500	Internal Server Error

Sample Response:

```
{
  "type": "Route",
  "version": "1.0",
  "generated_timestamp": "2019-05-20T11:40:48+08:00",
  "data": {
    "co": "CTB",
    "route": "107",
    "orig_en": "Wah Kwai Estate",
    "orig_tc": "華貴邨",
    "orig_sc": "华贵邨",
    "dest_en": "Kowloon Bay",
    "dest_tc": "九龍灣",
    "dest_sc": "九龙湾",
    "data_timestamp": "2019-05-20T11:40:00+08:00"
  }
}
```

Note: Refer to the data dictionary on description and specifications on the returned fields.

## 4. Stop API

**Description:** This API takes a 6-digit bus stop ID and returns the respective bus stop information.

(Remark: To find the corresponding bus stop ID, user can query the "Route-Stop API")

### HTTP Request:

<b>Endpoint</b>	/v1/transport/citybus-nwfb/stop/{stop_id}
<b>HTTP Method</b>	GET

Parameter	Parameter Type	Description	Required
stop_id	Path	<ul style="list-style-type: none"> <li>6-digit representation of a bus stop</li> </ul>	Y

Sample Request:

```
/v1/transport/citybus-nwfb/stop/002737
```

### HTTP Response:

<b>Response Format</b>	JSON
------------------------	------

Response Code	Response
200	Success, see sample response below
422	See message in response body
429	Processing too many requests
500	Internal Server Error

Sample Response:



```
{
  "type": "Stop",
  "version": "1.0",
  "generated_timestamp": "2019-05-20T11:40:48+08:00",
  "data": {
    "stop": "002737",
    "name_tc": "砵典乍街, 德輔道中",
    "name_en": "Pottinger Street, Des Voeux Road Central",
    "name_sc": "砵典乍街, 德輔道中",
    "lat": 22.283948,
    "long": 114.156309,
    "data_timestamp": "2019-05-20T11:40:00+08:00"
  }
}
```

**Note:** Refer to the data dictionary on description and specifications on the returned fields.

## 5. Route-Stop API

**Description:** This API takes a Citybus/New World First Bus company ID, route direction and the company's operating bus route number and returns the stop information of the respective route.

### HTTP Request:

<b>Endpoint</b>	/v1/transport/citybus-nwfb/route-stop/{company_id}/{route}/{direction}
<b>HTTP Method</b>	GET

Parameter	Parameter Type	Description	Required
company_id	Path	Company ID under Citybus/New World First Bus.  Valid company IDs are: <ul style="list-style-type: none"> <li>NWFB - New World First Bus Service Limited</li> <li>CTB - Citybus Limited</li> </ul>	Y
route	Path	The route number of the respective bus company specified above.	Y
direction	Path	The direction of the route number as specified above.  Valid directions are: <ul style="list-style-type: none"> <li>inbound - direction towards origin</li> <li>outbound - direction towards destination</li> </ul>	Y

### Sample Request:

```
/v1/transport/citybus-nwfb/route-stop/CTB/1/inbound
```

## HTTP Response:

<b>Response Format</b>	JSON
------------------------	------

<b>Response Code</b>	<b>Response</b>
200	Success, see sample response below
422	See message in response body
429	Processing too many requests
500	Internal Server Error

## Sample Response:

```
{
  "type": "Route",
  "version": "1.0",
  "generated_timestamp": "2019-05-20T11:40:48+08:00",
  "data": [
    {
      "co": "CTB",
      "route": "1",
      "dir": "I",
      "seq": 1,
      "stop": "002403",
      "data_timestamp": "2019-05-20T11:40:00+08:00"
    },
    {
      "co": "CTB",
      "route": "1",
      "dir": "I",
      "seq": 2,
      "stop": "002402",
      "data_timestamp": "2019-05-20T11:40:00+08:00"
    },
    {
      "co": "CTB",
      "route": "1",
      "dir": "I",
      "seq": 3,
      "stop": "002492",
      "data_timestamp": "2019-05-20T11:40:00+08:00"
    }
  ]
}
```

```

    },
    {
      "co": "CTB",
      "route": "1",
      "dir": "I",
      "seq": 4,
      "stop": "002493",
      "data_timestamp": "2019-05-20T11:40:00+08:00"
    },
    {
      "co": "CTB",
      "route": "1",
      "dir": "I",
      "seq": 5,
      "stop": "002453",
      "data_timestamp": "2019-05-20T11:40:00+08:00"
    },
    {
      "co": "CTB",
      "route": "1",
      "dir": "I",
      "seq": 6,
      "stop": "002552",
      "data_timestamp": "2019-05-20T11:40:00+08:00"
    },
    {
      "co": "CTB",
      "route": "1",
      "dir": "I",
      "seq": 7,
      "stop": "002553",
      "data_timestamp": "2019-05-20T11:40:00+08:00"
    },
    {
      "co": "CTB",
      "route": "1",
      "dir": "I",
      "seq": 8,
      "stop": "002467",
      "data_timestamp": "2019-05-20T11:40:00+08:00"
    },
    {
      "co": "CTB",
      "route": "1",
      "dir": "I",
      "seq": 9,
      "stop": "002566",
      "data_timestamp": "2019-05-20T11:40:00+08:00"
    },
  ],

```

```
{
  "co": "CTB",
  "route": "1",
  "dir": "I",
  "seq": 10,
  "stop": "002537",
  "data_timestamp": "2019-05-20T11:40:00+08:00"
},
{
  "co": "CTB",
  "route": "1",
  "dir": "I",
  "seq": 11,
  "stop": "002446",
  "data_timestamp": "2019-05-20T11:40:00+08:00"
},
{
  "co": "CTB",
  "route": "1",
  "dir": "I",
  "seq": 12,
  "stop": "002449",
  "data_timestamp": "2019-05-20T11:40:00+08:00"
},
{
  "co": "CTB",
  "route": "1",
  "dir": "I",
  "seq": 13,
  "stop": "001140",
  "data_timestamp": "2019-05-20T11:40:00+08:00"
},
{
  "co": "CTB",
  "route": "1",
  "dir": "I",
  "seq": 14,
  "stop": "001142",
  "data_timestamp": "2019-05-20T11:40:00+08:00"
},
{
  "co": "CTB",
  "route": "1",
  "dir": "I",
  "seq": 15,
  "stop": "001054",
  "data_timestamp": "2019-05-20T11:40:00+08:00"
},
{
```

```

    "co": "CTB",
    "route": "1",
    "dir": "I",
    "seq": 16,
    "stop": "001056",
    "data_timestamp": "2019-05-20T11:40:00+08:00"
  },
  {
    "co": "CTB",
    "route": "1",
    "dir": "I",
    "seq": 17,
    "stop": "001175",
    "data_timestamp": "2019-05-20T11:40:00+08:00"
  },
  {
    "co": "CTB",
    "route": "1",
    "dir": "I",
    "seq": 18,
    "stop": "001040",
    "data_timestamp": "2019-05-20T11:40:00+08:00"
  },
  {
    "co": "CTB",
    "route": "1",
    "dir": "I",
    "seq": 19,
    "stop": "001066",
    "data_timestamp": "2019-05-20T11:40:00+08:00"
  },
  {
    "co": "CTB",
    "route": "1",
    "dir": "I",
    "seq": 20,
    "stop": "001067",
    "data_timestamp": "2019-05-20T11:40:00+08:00"
  },
  {
    "co": "CTB",
    "route": "1",
    "dir": "I",
    "seq": 21,
    "stop": "001068",
    "data_timestamp": "2019-05-20T11:40:00+08:00"
  },
  {
    "co": "CTB",

```

```

    "route": "1",
    "dir": "I",
    "seq": 22,
    "stop": "001069",
    "data_timestamp": "2019-05-20T11:40:00+08:00"
  },
  {
    "co": "CTB",
    "route": "1",
    "dir": "I",
    "seq": 23,
    "stop": "001070",
    "data_timestamp": "2019-05-20T11:40:00+08:00"
  },
  {
    "co": "CTB",
    "route": "1",
    "dir": "I",
    "seq": 24,
    "stop": "001082",
    "data_timestamp": "2019-05-20T11:40:00+08:00"
  },
  {
    "co": "CTB",
    "route": "1",
    "dir": "I",
    "seq": 25,
    "stop": "001083",
    "data_timestamp": "2019-05-20T11:40:00+08:00"
  },
  {
    "co": "CTB",
    "route": "1",
    "dir": "I",
    "seq": 26,
    "stop": "001005",
    "data_timestamp": "2019-05-20T11:40:00+08:00"
  },
  {
    "co": "CTB",
    "route": "1",
    "dir": "I",
    "seq": 27,
    "stop": "001164",
    "data_timestamp": "2019-05-20T11:40:00+08:00"
  },
  {
    "co": "CTB",
    "route": "1",

```

```

    "dir": "I",
    "seq": 28,
    "stop": "001165",
    "data_timestamp": "2019-05-20T11:40:00+08:00"
  },
  {
    "co": "CTB",
    "route": "1",
    "dir": "I",
    "seq": 29,
    "stop": "001166",
    "data_timestamp": "2019-05-20T11:40:00+08:00"
  },
  {
    "co": "CTB",
    "route": "1",
    "dir": "I",
    "seq": 30,
    "stop": "001167",
    "data_timestamp": "2019-05-20T11:40:00+08:00"
  },
  {
    "co": "CTB",
    "route": "1",
    "dir": "I",
    "seq": 31,
    "stop": "001168",
    "data_timestamp": "2019-05-20T11:40:00+08:00"
  },
  {
    "co": "CTB",
    "route": "1",
    "dir": "I",
    "seq": 32,
    "stop": "001186",
    "data_timestamp": "2019-05-20T11:40:00+08:00"
  }
]
}

```

Note: Refer to the data dictionary on description and specifications on the returned fields.



## 6. ETA API

**Description:** This API takes a Citybus/New World First Bus company ID, bus stop ID and the company’s operating bus route number; then it returns the “estimated time of arrival” (ETA) information of the respective route at that stop.

(Remark: May return 1 or 2 ETA data and at most 3 ETA data will be provided.)

### HTTP Request:

<b>Endpoint</b>	/v1/transport/citybus-nwfb/eta/{company_id}/{stop_id}/{route}
<b>HTTP Method</b>	GET

Parameter	Parameter Type	Description	Required
company_id	Path	Company ID under Citybus/New World First Bus.  Valid company IDs are: <ul style="list-style-type: none"> <li>NWFB - New World First Bus Service Limited</li> <li>CTB - Citybus Limited</li> </ul>	Y
stop_id	Path	<ul style="list-style-type: none"> <li>6-digit representation of a bus stop</li> </ul>	Y
route	Path	The route number of the respective bus company specified above.	Y

### Sample Request:

```
/v1/transport/citybus-nwfb/eta/CTB/001145/11
```

### HTTP Response:

<b>Response Format</b>	JSON
------------------------	------

Response Code	Response
200	Success, see sample response below
422	See Error Response below
429	Processing too many requests
500	Internal Server Error

Sample Response:

```
{
  "type": "ETA",
  "version": "1.0",
  "generated_timestamp": "2019-05-20T15:45:00+08:00",
  "data": [
    {
      "co": "CTB",
      "route": "11",
      "dir": "O",
      "seq": 1,
      "stop": "001145",
      "dest_tc": "渣甸山",
      "dest_sc": "渣甸山",
      "dest_en": "Jardine's Lookout",
      "eta_seq": 1,
      "eta": "2019-05-20T15:48:00+08:00",
      "rmk_tc": "",
      "rmk_sc": "",
      "rmk_en": "",
      "data_timestamp": "2019-05-20T15:44:33+08:00"
    },
    {
      "co": "CTB",
      "route": "11",
      "dir": "O",
      "seq": 1,
      "stop": "001145",
      "dest_tc": "渣甸山",
      "dest_sc": "渣甸山",
      "dest_en": "Jardine's Lookout",
      "eta_seq": 2,
      "eta": "2019-05-20T16:00:00+08:00",
      "rmk_tc": "",
      "rmk_sc": ""
    }
  ]
}
```

```
{
  "rmk_en": "",
  "data_timestamp": "2019-05-20T15:44:33+08:00"
},
{
  "co": "CTB",
  "route": "11",
  "dir": "O",
  "seq": 1,
  "stop": "001145",
  "dest_tc": "渣甸山",
  "dest_sc": "渣甸山",
  "dest_en": "Jardine's Lookout",
  "eta_seq": 3,
  "eta": "2019-05-20T16:12:00+08:00",
  "rmk_tc": "",
  "rmk_sc": "",
  "rmk_en": "",
  "data_timestamp": "2019-05-20T15:44:33+08:00"
}
]
```

## 7. Error Response

In case of API execution error, a corresponding HTTP response code will be returned along with the same response code and an error message in the JSON body.

### HTTP Response:

Response Format	JSON
-----------------	------

### Sample Response:

```
{
  "code": "422",
  "message": "Invalid company code"
}
```