



“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, OGCIO ITD & OSD, CTB & NWFB
1.01	Amendment on Section 3 Route API	Aug 2019	DA Division, OGCIO ITD & OSD, CTB & NWFB

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1. API Base URL

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

Base URL	<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:

Endpoint	<code>/v1/transport/citybus-nwfb/company/{company_id}</code>
HTTP Method	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"> NWFB - New World First Bus Service Limited CTB - Citybus Limited 	Y

Sample Request:

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

HTTP Response:

Response Format	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": "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:

Endpoint	/v1/transport/citybus-nwfb/route/{company_id}/{route}
HTTP Method	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"> NWFB - New World First Bus Service Limited CTB - Citybus Limited 	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:

Response Format	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:

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

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

Sample Request:

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

HTTP Response:

Response Format	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:

Endpoint	/v1/transport/citybus-nwfb/route-stop/{company_id}/{route}/{direction}
HTTP Method	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"> NWFB - New World First Bus Service Limited CTB - Citybus Limited 	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"> inbound - direction towards origin outbound - direction towards destination 	Y

Sample Request:

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

HTTP Response:

Response Format	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": "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:

Endpoint	/v1/transport/citybus-nwfb/eta/{company_id}/{stop_id}/{route}
HTTP Method	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"> NWFB - New World First Bus Service Limited CTB - Citybus Limited 	Y
stop_id	Path	<ul style="list-style-type: none"> 6-digit representation of a bus stop 	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:

Response Format	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"
}
```