



Real-time “Next Bus” arrival time and related data of Citybus Limited

API Specifications

Version 2.01
July 2023

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
1.02	Amendment on Section 1 API Base URL	Dec 2021	DA Division, OGCIOTD & OSD, CTB & NWFB
2.00	Amendments of base URL and items related to franchise merger	Jun 2023	DA Division, OGCIOTEC, CTB & NWFB
2.01	Update company info	Jul 2023	DA Division, OGCIOTEC, CTB

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1. Important Notes

- (a) Starting from June 2023, the V2 API is now available for public access to real-time "Next Bus" arrival time and related data for Citybus. To ensure uninterrupted data access in the future, it is recommended to transition to the V2 API. Please refer to the API Specification for more details. The V1.0 and V1.1 API versions will be discontinued after 31st December 2023.
- (b) All New World First Bus routes already integrated into Citybus. Users can continue to use the Citybus API for accessing real-time "Next Bus" arrival time and related data for all routes operating by Citybus, including those routes operated by New World First Bus before 1 July 2023. Data of all routes are available under the {company_id} "CTB" in the API.

2. API Base URL

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

Base URL	https://rt.data.gov.hk/
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In all the APIs, data field "generated_timestamp" has different arrangement in v1.0 and v1.1 & V2:

V1.0	
Base URL	https://rt.data.gov.hk/v1/transport/citybus-nwfb/
Arrangement	Data field name is "generated_timestamp " (<u>with</u> trailing space at the end of field name)

V1.1 and V2	
Base URL	https://rt.data.gov.hk/v1.1/transport/citybus-nwfb/ https://rt.data.gov.hk/v2/transport/citybus/
Arrangement	Data field name is "generated_timestamp" (<u>without</u> trailing space at the end of field name)

3. Company API

Description: This API takes a Citybus company ID and returns the respective company information.

HTTP Request:

Endpoint	company/{company_id}
HTTP Method	GET

Parameter	Parameter Type	Description	Required
company_id	Path	Company ID under Citybus Valid company IDs are: <ul style="list-style-type: none">CTB - Citybus Limited	Y

Sample Request:

```
/v2/transport/citybus/company/CTB
```

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": "2.0",
  "generated_timestamp": "2023-07-01T11:40:48+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": "https://www.citybus.com.hk",
    "data_timestamp": "2023-07-01T11:40:00+08:00"
  }
}
```

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

4. Route API

Description: This API takes a Citybus company ID and the company's operating bus route number and returns the respective route information.

Important Note: All New World First Bus routes already integrated into Citybus. Data of all routes are available under the {company_id} "CTB".

HTTP Request:

Endpoint	route/{company_id}/{route}
HTTP Method	GET

Parameter	Parameter Type	Description	Required
company_id	Path	Company ID under Citybus. Valid company IDs are: <ul style="list-style-type: none">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:

```
/v2/transport/citybus /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": "2.0",
  "generated_timestamp": "2023-07-01T11:40:48+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": "2023-07-01T11:40:00+08:00"
  }
}
```

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

5. 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	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:

```
/v2/transport/citybus/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": "2.0",
  "generated_timestamp": "2023-07-01T11:40:48+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": "2023-07-01T11:40:00+08:00"
  }
}
```

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

6. Route-Stop API

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

Important Note: All New World First Bus routes already integrated into Citybus. Data of all routes are available under the {company_id} "CTB".

HTTP Request:

Endpoint	route-stop/{company_id}/{route}/{direction}
HTTP Method	GET

Parameter	Parameter Type	Description	Required
company_id	Path	Company ID under Citybus. Valid company IDs are: <ul style="list-style-type: none">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 originoutbound - direction towards destination	Y

Sample Request:

```
/v2/transport/citybus/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": "2.0",
  "generated_timestamp": "2023-07-01T11:40:48+08:00",
  "data": [
    {
      "co": "CTB",
      "route": "1",
      "dir": "I",
      "seq": 1,
      "stop": "002403",
      "data_timestamp": "2023-07-01T11:40:00+08:00"
    },
    {
      "co": "CTB",
      "route": "1",
      "dir": "I",
      "seq": 2,
      "stop": "002402",
      "data_timestamp": "2023-07-01T11:40:00+08:00"
    },
    {
      "co": "CTB",
```

```
"route": "1",
"dir": "I",
"seq": 3,
"stop": "002492",
"data_timestamp": "2023-07-01T11:40:00+08:00"
},
{
  "co": "CTB",
  "route": "1",
  "dir": "I",
  "seq": 4,
  "stop": "002493",
  "data_timestamp": "2023-07-01T11:40:00+08:00"
},
{
  "co": "CTB",
  "route": "1",
  "dir": "I",
  "seq": 5,
  "stop": "002453",
  "data_timestamp": "2023-07-01T11:40:00+08:00"
},
{
  "co": "CTB",
  "route": "1",
  "dir": "I",
  "seq": 6,
  "stop": "002552",
  "data_timestamp": "2023-07-01T11:40:00+08:00"
},
{
  "co": "CTB",
  "route": "1",
  "dir": "I",
  "seq": 7,
  "stop": "002553",
  "data_timestamp": "2023-07-01T11:40:00+08:00"
},
{
  "co": "CTB",
  "route": "1",
  "dir": "I",
  "seq": 8,
  "stop": "002467",
  "data_timestamp": "2023-07-01T11:40:00+08:00"
```

```
},
{
  "co": "CTB",
  "route": "1",
  "dir": "I",
  "seq": 9,
  "stop": "002566",
  "data_timestamp": "2023-07-01T11:40:00+08:00"
},
{
  "co": "CTB",
  "route": "1",
  "dir": "I",
  "seq": 10,
  "stop": "002537",
  "data_timestamp": "2023-07-01T11:40:00+08:00"
},
{
  "co": "CTB",
  "route": "1",
  "dir": "I",
  "seq": 11,
  "stop": "002446",
  "data_timestamp": "2023-07-01T11:40:00+08:00"
},
{
  "co": "CTB",
  "route": "1",
  "dir": "I",
  "seq": 12,
  "stop": "002449",
  "data_timestamp": "2023-07-01T11:40:00+08:00"
},
{
  "co": "CTB",
  "route": "1",
  "dir": "I",
  "seq": 13,
  "stop": "001140",
  "data_timestamp": "2023-07-01T11:40:00+08:00"
},
{
  "co": "CTB",
  "route": "1",
  "dir": "I",
```

```
"seq": 14,  
"stop": "001142",  
"data_timestamp": "2023-07-01T11:40:00+08:00"  
},  
{  
  "co": "CTB",  
  "route": "1",  
  "dir": "I",  
  "seq": 15,  
  "stop": "001054",  
  "data_timestamp": "2023-07-01T11:40:00+08:00"  
},  
{  
  "co": "CTB",  
  "route": "1",  
  "dir": "I",  
  "seq": 16,  
  "stop": "001056",  
  "data_timestamp": "2023-07-01T11:40:00+08:00"  
},  
{  
  "co": "CTB",  
  "route": "1",  
  "dir": "I",  
  "seq": 17,  
  "stop": "001175",  
  "data_timestamp": "2023-07-01T11:40:00+08:00"  
},  
{  
  "co": "CTB",  
  "route": "1",  
  "dir": "I",  
  "seq": 18,  
  "stop": "001040",  
  "data_timestamp": "2023-07-01T11:40:00+08:00"  
},  
{  
  "co": "CTB",  
  "route": "1",  
  "dir": "I",  
  "seq": 19,  
  "stop": "001066",  
  "data_timestamp": "2023-07-01T11:40:00+08:00"  
},  
{
```

```
"co": "CTB",
"route": "1",
"dir": "I",
"seq": 20,
"stop": "001067",
"data_timestamp": "2023-07-01T11:40:00+08:00"
},
{
  "co": "CTB",
  "route": "1",
  "dir": "I",
  "seq": 21,
  "stop": "001068",
  "data_timestamp": "2023-07-01T11:40:00+08:00"
},
{
  "co": "CTB",
  "route": "1",
  "dir": "I",
  "seq": 22,
  "stop": "001069",
  "data_timestamp": "2023-07-01T11:40:00+08:00"
},
{
  "co": "CTB",
  "route": "1",
  "dir": "I",
  "seq": 23,
  "stop": "001070",
  "data_timestamp": "2023-07-01T11:40:00+08:00"
},
{
  "co": "CTB",
  "route": "1",
  "dir": "I",
  "seq": 24,
  "stop": "001082",
  "data_timestamp": "2023-07-01T11:40:00+08:00"
},
{
  "co": "CTB",
  "route": "1",
  "dir": "I",
  "seq": 25,
  "stop": "001083",
```



```
"data_timestamp": "2023-07-01T11:40:00+08:00"
},
{
  "co": "CTB",
  "route": "1",
  "dir": "I",
  "seq": 26,
  "stop": "001005",
  "data_timestamp": "2023-07-01T11:40:00+08:00"
},
{
  "co": "CTB",
  "route": "1",
  "dir": "I",
  "seq": 27,
  "stop": "001164",
  "data_timestamp": "2023-07-01T11:40:00+08:00"
},
{
  "co": "CTB",
  "route": "1",
  "dir": "I",
  "seq": 28,
  "stop": "001165",
  "data_timestamp": "2023-07-01T11:40:00+08:00"
},
{
  "co": "CTB",
  "route": "1",
  "dir": "I",
  "seq": 29,
  "stop": "001166",
  "data_timestamp": "2023-07-01T11:40:00+08:00"
},
{
  "co": "CTB",
  "route": "1",
  "dir": "I",
  "seq": 30,
  "stop": "001167",
  "data_timestamp": "2023-07-01T11:40:00+08:00"
},
{
  "co": "CTB",
  "route": "1",
```

```
{
  "dir": "I",
  "seq": 31,
  "stop": "001168",
  "data_timestamp": "2023-07-01T11:40:00+08:00"
},
{
  "co": "CTB",
  "route": "1",
  "dir": "I",
  "seq": 32,
  "stop": "001186",
  "data_timestamp": "2023-07-01T11:40:00+08:00"
}
]
```

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

7. ETA API

Description: This API takes a Citybus 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.)

Important Note: All New World First Bus routes already integrated into Citybus. Data of all routes are available under the {company_id} "CTB".

HTTP Request:

Endpoint	eta/{company_id}/{stop_id}/{route}
HTTP Method	GET

Parameter	Parameter Type	Description	Required
company_id	Path	Company ID under Citybus. Valid company IDs are: <ul style="list-style-type: none"> 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:

```
/v2/transport/citybus/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": "2.0",
  "generated_timestamp": "2023-07-01T15:45:00+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": "2023-07-01T15:48:00+08:00",
      "rmk_tc": "",
      "rmk_sc": "",
      "rmk_en": "",
      "data_timestamp": "2023-07-01T15:44:33+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": "2023-07-01T16:00:00+08:00",
"rmk_tc": "",
"rmk_sc": "",
"rmk_en": "",
"data_timestamp": "2023-07-01T15:44:33+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": "2023-07-01T16:12:00+08:00",
  "rmk_tc": "",
  "rmk_sc": "",
  "rmk_en": "",
  "data_timestamp": "2023-07-01T15:44:33+08:00"
}
]
}
```

8. 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"  
}
```