

Reading Buses API

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1 Reading Buses API	1
1.1 Reading Buses API	1
1.1.1 Examples	1
1.1.2 Source Code (GitHub)	1
1.1.3 Download & Installation	1
1.2 Very Quick Start	1
1.2.0.1 Get a List of Bus Services	2
1.2.0.2 Get a List of Locations (Bus Stops)	2
1.2.0.3 Get GPS Data	2
2 Namespace Index	3
2.1 Package List	3
3 Hierarchical Index	5
3.1 Class Hierarchy	5
4 Class Index	7
4.1 Class List	7
5 File Index	9
5.1 File List	9
6 Namespace Documentation	11
6.1 ReadingBusesAPI Namespace Reference	11
6.2 ReadingBusesAPI.BusServices Namespace Reference	11
6.3 ReadingBusesAPI.BusStops Namespace Reference	12
6.4 ReadingBusesAPI.Common Namespace Reference	12
6.4.1 Enumeration Type Documentation	12
6.4.1.1 Company	12
6.4.1.2 Direction	13
6.5 ReadingBusesAPI.ErrorManagement Namespace Reference	13
6.6 ReadingBusesAPI.JourneyDetails Namespace Reference	13
6.7 ReadingBusesAPI.TimeTable Namespace Reference	14
6.8 ReadingBusesAPI.VehiclePositions Namespace Reference	14
7 Class Documentation	15
7.1 ReadingBusesAPI.BusServices.BusService Class Reference	15
7.1.1 Detailed Description	16
7.1.2 Constructor & Destructor Documentation	16
7.1.2.1 BusService() [1/3]	16
7.1.2.2 BusService() [2/3]	16
7.1.2.3 BusService() [3/3]	17
7.1.3 Member Function Documentation	17
7.1.3.1 Equals()	17

7.1.3.2 GetArchivedTimeTable() [1/2]	17
7.1.3.3 GetArchivedTimeTable() [2/2]	18
7.1.3.4 GetHashCode()	19
7.1.3.5 GetLiveJourneyData()	19
7.1.3.6 GetLivePositions()	19
7.1.3.7 GetLocations() [1/2]	19
7.1.3.8 GetLocations() [2/2]	19
7.1.3.9 GetLocationsActo() [1/2]	20
7.1.3.10 GetLocationsActo() [2/2]	20
7.1.3.11 GetTimeTable() [1/2]	20
7.1.3.12 GetTimeTable() [2/2]	21
7.1.4 Property Documentation	21
7.1.4.1 BrandName	22
7.1.4.2 Company	22
7.1.4.3 ServiceId	22
7.2 ReadingBusesAPI.BusStops.BusStop Class Reference	22
7.2.1 Detailed Description	23
7.2.2 Constructor & Destructor Documentation	23
7.2.2.1 BusStop() [1/3]	23
7.2.2.2 BusStop() [2/3]	23
7.2.2.3 BusStop() [3/3]	24
7.2.3 Member Function Documentation	24
7.2.3.1 Equals()	24
7.2.3.2 GetArchivedTimeTable() [1/2]	24
7.2.3.3 GetArchivedTimeTable() [2/2]	25
7.2.3.4 GetHashCode()	25
7.2.3.5 GetLiveData()	25
7.2.3.6 GetPoint()	26
7.2.3.7 GetServices()	26
7.2.3.8 GetTimeTable() [1/2]	26
7.2.3.9 GetTimeTable() [2/2]	27
7.2.3.10 Merge()	27
7.2.4 Property Documentation	27
7.2.4.1 ActoCode	27
7.2.4.2 BayNumber	28
7.2.4.3 Bearing	28
7.2.4.4 CommonName	28
7.2.4.5 Latitude	28
7.2.4.6 Longitude	28
7.2.4.7 ServiceObjects	29
7.3 ReadingBusesAPI.BusStops.BusStopIntermediary Class Reference	29
7.3.1 Detailed Description	29

7.3.2 Constructor & Destructor Documentation	30
7.3.2.1 BusStopIntermediary()	30
7.3.3 Member Function Documentation	30
7.3.3.1 GetService()	30
7.3.4 Property Documentation	30
7.3.4.1 ActoCode	30
7.3.4.2 Bearing	30
7.3.4.3 CommonName	31
7.3.4.4 Latitude	31
7.3.4.5 Longitude	31
7.3.4.6 OperatorCode	31
7.3.4.7 RouteCode	31
7.4 ReadingBusesAPI.Common.CacheWriter Class Reference	31
7.4.1 Detailed Description	32
7.4.2 Member Function Documentation	32
7.4.2.1 CreateCacheDirectory()	32
7.4.2.2 ReadOrCreateCache< T >()	32
7.4.2.3 TimetabledJourneys()	33
7.4.2.4 TrackingHistory()	33
7.4.2.5 VehiclePositionHistory()	34
7.4.3 Member Data Documentation	34
7.4.3.1 ARCHIVED_CACHE_FOLDER	34
7.4.3.2 CACHE_FOLDER	34
7.5 ReadingBusesAPI.Common.DateTimeOffsetConverter Class Reference	35
7.5.1 Detailed Description	35
7.5.2 Member Function Documentation	35
7.5.2.1 Read()	35
7.5.2.2 Write()	35
7.6 ReadingBusesAPI.ErrorManagement.ErrorFormat Class Reference	36
7.6.1 Detailed Description	36
7.6.2 Property Documentation	36
7.6.2.1 Code	36
7.6.2.2 Message	36
7.6.2.3 Status	36
7.7 ReadingBusesAPI.ErrorManagement.ErrorManager Class Reference	37
7.7.1 Detailed Description	37
7.7.2 Member Function Documentation	37
7.7.2.1 TryErrorMessageRetrieval()	37
7.8 ReadingBusesAPI.VehiclePositions.GpsController Class Reference	37
7.8.1 Detailed Description	38
7.8.2 Constructor & Destructor Documentation	38
7.8.2.1 GpsController()	38

7.8.3 Member Function Documentation	38
7.8.3.1 GetArchivedVehiclePositions() [1/2]	38
7.8.3.2 GetArchivedVehiclePositions() [2/2]	39
7.8.3.3 GetLiveVehiclePosition()	40
7.8.3.4 GetLiveVehiclePositions()	40
7.8.3.5 IsVehicle()	41
7.9 ReadingBusesAPI.TimeTable.HistoricJourney Class Reference	41
7.9.1 Detailed Description	41
7.9.2 Constructor & Destructor Documentation	42
7.9.2.1 HistoricJourney()	42
7.9.3 Property Documentation	42
7.9.3.1 VehicleCode	42
7.9.3.2 Visits	42
7.10 ReadingBusesAPI.TimeTable.HistoricVisit Class Reference	42
7.10.1 Detailed Description	43
7.10.2 Constructor & Destructor Documentation	43
7.10.2.1 HistoricVisit()	43
7.10.3 Member Function Documentation	43
7.10.3.1 ArrivalLateness()	43
7.10.3.2 DepartureLateness()	44
7.10.4 Property Documentation	44
7.10.4.1 ActualArrival	44
7.10.4.2 ActualDeparture	44
7.10.4.3 ArrivalStatus	44
7.10.4.4 DepartureStatus	44
7.11 ReadingBusesAPI.TimeTable.Journey Class Reference	45
7.11.1 Detailed Description	45
7.11.2 Constructor & Destructor Documentation	46
7.11.2.1 Journey()	46
7.11.3 Member Function Documentation	46
7.11.3.1 GetService()	46
7.11.4 Property Documentation	46
7.11.4.1 Company	46
7.11.4.2 Duty	46
7.11.4.3 Id	47
7.11.4.4 JourneyCode	47
7.11.4.5 JourneyPattern	47
7.11.4.6 RunningBoard	47
7.11.4.7 ScheduledStart	47
7.11.4.8 ServiceId	47
7.11.4.9 Visits	48
7.12 ReadingBusesAPI.JourneyDetails.LiveJourneyDetailsApi Class Reference	48

7.12.1 Detailed Description	48
7.12.2 Member Function Documentation	48
7.12.2.1 GetLiveJourney()	48
7.13 ReadingBusesAPI.JourneyDetails.LiveRecord Class Reference	49
7.13.1 Detailed Description	50
7.13.2 Constructor & Destructor Documentation	50
7.13.2.1 LiveRecord()	50
7.13.3 Member Function Documentation	50
7.13.3.1 ArrivalMin()	50
7.13.3.2 DisplayTime()	51
7.13.3.3 GetDestinationStop()	51
7.13.3.4 GetLiveData()	51
7.13.3.5 GetLiveJourneyData()	52
7.13.3.6 GetOriginStop()	52
7.13.3.7 Service()	52
7.13.4 Member Data Documentation	52
7.13.4.1 _destination	52
7.13.4.2 _origin	53
7.13.5 Property Documentation	53
7.13.5.1 DestinationName	53
7.13.5.2 ExpectedArrival	53
7.13.5.3 ExpectedDeparture	53
7.13.5.4 OperatorCode	53
7.13.5.5 ScheduledArrival	54
7.13.5.6 ScheduledDeparture	54
7.13.5.7 ServiceNumber	54
7.13.5.8 VehicleRef	54
7.14 ReadingBusesAPI.VehiclePositions.LiveVehiclePosition Class Reference	54
7.14.1 Detailed Description	55
7.14.2 Constructor & Destructor Documentation	55
7.14.2.1 LiveVehiclePosition()	55
7.14.3 Member Function Documentation	55
7.14.3.1 GetLiveJourneyData()	55
7.14.3.2 GetService()	56
7.14.4 Property Documentation	56
7.14.4.1 ServiceId	56
7.15 ReadingBusesAPI.BusStops.Locations Class Reference	56
7.15.1 Detailed Description	56
7.15.2 Member Function Documentation	56
7.15.2.1 FindLocations()	56
7.16 ReadingBusesAPI.Common.ParseBoolConverter Class Reference	57
7.16.1 Detailed Description	57

7.16.2 Member Function Documentation	57
7.16.2.1 Read()	57
7.16.2.2 Write()	58
7.17 ReadingBusesAPI.Common.ParseOperatorConverter Class Reference	58
7.17.1 Detailed Description	58
7.17.2 Member Function Documentation	58
7.17.2.1 Read()	58
7.17.2.2 Write()	59
7.18 ReadingBusesAPI.Common.ParseOperatorTimetableConverter Class Reference	59
7.18.1 Detailed Description	59
7.18.2 Member Function Documentation	59
7.18.2.1 Read()	59
7.18.2.2 Write()	60
7.19 ReadingBusesAPI.Common.ParseServiceObjects Class Reference	60
7.19.1 Detailed Description	60
7.19.2 Member Function Documentation	60
7.19.2.1 Read()	60
7.19.2.2 Write()	61
7.20 ReadingBusesAPI.Common.ParseStringConverter Class Reference	61
7.20.1 Detailed Description	61
7.20.2 Member Function Documentation	61
7.20.2.1 Read()	61
7.20.2.2 Write()	62
7.21 ReadingBusesAPI.Common.Point Struct Reference	62
7.21.1 Detailed Description	63
7.21.2 Constructor & Destructor Documentation	63
7.21.2.1 Point()	63
7.21.3 Member Function Documentation	63
7.21.3.1 Equals() [1/2]	63
7.21.3.2 Equals() [2/2]	63
7.21.3.3 GetHashCode()	65
7.21.3.4 operator!=(())	65
7.21.3.5 operator==(())	65
7.21.3.6 ToString()	66
7.21.4 Property Documentation	66
7.21.4.1 X	66
7.21.4.2 Y	66
7.22 ReadingBusesAPI.ReadingBuses Class Reference	66
7.22.1 Detailed Description	68
7.22.2 Member Function Documentation	69
7.22.2.1 GetInstance()	69
7.22.2.2 GetLocation()	69

7.22.2.3 GetLocations()	69
7.22.2.4 GetOperatorE()	70
7.22.2.5 GetService() [1/2]	70
7.22.2.6 GetService() [2/2]	71
7.22.2.7 GetServices() [1/3]	71
7.22.2.8 GetServices() [2/3]	71
7.22.2.9 GetServices() [3/3]	72
7.22.2.10 GetVehicleTrackingHistory()	72
7.22.2.11 Initialise()	73
7.22.2.12 InvalidateArchiveCache()	73
7.22.2.13 InvalidateCache()	73
7.22.2.14 IsLocation()	73
7.22.2.15 IsService() [1/2]	74
7.22.2.16 IsService() [2/2]	74
7.22.2.17 PrintFullErrorLogs()	75
7.22.2.18 PrintWarning()	75
7.22.2.19 SetArchiveCache()	75
7.22.2.20 SetCache()	76
7.22.2.21 SetCacheValidityLength()	76
7.22.2.22 SetDebugging()	76
7.22.2.23 SetFullError()	76
7.22.2.24 SetWarning()	77
7.22.3 Property Documentation	77
7.22.3.1 ApiKey	77
7.22.3.2 ArchiveCache	77
7.22.3.3 Cache	77
7.22.3.4 CacheValidityLength	78
7.22.3.5 Debugging	78
7.22.3.6 FullError	78
7.22.3.7 GpsController	78
7.22.3.8 Warning	78
7.23 ReadingBusesAPI.ErrorManagement.ReadingBusesApiException Class Reference	78
7.23.1 Detailed Description	79
7.23.2 Constructor & Destructor Documentation	79
7.23.2.1 ReadingBusesApiException() [1/3]	79
7.23.2.2 ReadingBusesApiException() [2/3]	79
7.23.2.3 ReadingBusesApiException() [3/3]	79
7.24 ReadingBusesAPI.ErrorManagement.ReadingBusesApiExceptionBadQuery Class Reference	79
7.24.1 Detailed Description	80
7.24.2 Constructor & Destructor Documentation	80
7.24.2.1 ReadingBusesApiExceptionBadQuery() [1/3]	80
7.24.2.2 ReadingBusesApiExceptionBadQuery() [2/3]	80

7.24.2.3 ReadingBusesApiExceptionBadQuery() [3/3]	80
7.25 ReadingBusesAPI.ErrorManagement.ReadingBusesApiExceptionCritical Class Reference	81
7.25.1 Detailed Description	81
7.25.2 Constructor & Destructor Documentation	81
7.25.2.1 ReadingBusesApiExceptionCritical() [1/3]	81
7.25.2.2 ReadingBusesApiExceptionCritical() [2/3]	81
7.25.2.3 ReadingBusesApiExceptionCritical() [3/3]	82
7.26 ReadingBusesAPI.ErrorManagement.ReadingBusesApiExceptionMalformedQuery Class Reference	82
7.26.1 Detailed Description	82
7.26.2 Constructor & Destructor Documentation	82
7.26.2.1 ReadingBusesApiExceptionMalformedQuery() [1/2]	83
7.26.2.2 ReadingBusesApiExceptionMalformedQuery() [2/2]	83
7.27 ReadingBusesAPI.TimeTable.ScheduledJourneysApi Class Reference	83
7.27.1 Detailed Description	83
7.27.2 Member Function Documentation	83
7.27.2.1 GetTimeTable()	83
7.28 ReadingBusesAPI.BusServices.Services Class Reference	84
7.28.1 Detailed Description	84
7.28.2 Member Function Documentation	84
7.28.2.1 FindServices()	84
7.29 ReadingBusesAPI.BusStops.StopPattern Class Reference	85
7.29.1 Detailed Description	85
7.29.2 Member Function Documentation	85
7.29.2.1 IsOutbound()	85
7.29.3 Property Documentation	86
7.29.3.1 _direction	86
7.29.3.2 ActoCode	86
7.29.3.3 CommonName	86
7.29.3.4 OperatorCode	86
7.29.3.5 Order	86
7.30 ReadingBusesAPI.TimeTable.TrackingHistoryApi Class Reference	87
7.30.1 Detailed Description	87
7.30.2 Member Function Documentation	87
7.30.2.1 GetTimeTable()	87
7.31 ReadingBusesAPI.Common.UrlConstructor Class Reference	88
7.31.1 Detailed Description	88
7.31.2 Member Function Documentation	88
7.31.2.1 LinePatterns()	88
7.31.2.2 ListOfBusStops()	89
7.31.2.3 ListOfServices()	89
7.31.2.4 LiveJourneyDetails()	89
7.31.2.5 LiveVehiclePositions()	90

7.31.2.6 StopPredictions()	90
7.31.2.7 TimetabledJourneys()	90
7.31.2.8 TrackingHistory()	91
7.31.2.9 VehiclePositionHistory()	91
7.32 ReadingBusesAPI.VehiclePositions.VehiclePosition Class Reference	92
7.32.1 Detailed Description	92
7.32.2 Constructor & Destructor Documentation	92
7.32.2.1 VehiclePosition()	92
7.32.3 Member Function Documentation	93
7.32.3.1 GetPoint()	93
7.32.4 Property Documentation	93
7.32.4.1 Company	93
7.32.4.2 Latitude	93
7.32.4.3 Longitude	93
7.32.4.4 Observed	93
7.32.4.5 Vehicle	94
7.33 ReadingBusesAPI.TimeTable.Visit Class Reference	94
7.33.1 Detailed Description	94
7.33.2 Constructor & Destructor Documentation	95
7.33.2.1 Visit()	95
7.33.3 Property Documentation	95
7.33.3.1 AtcoCode	95
7.33.3.2 LocationName	95
7.33.3.3 ScheduledArrival	95
7.33.3.4 ScheduledDeparture	95
7.33.3.5 Sequence	96
7.33.3.6 TimingPoint	96
8 File Documentation	97
8.1 ReadingBusesAPI/BusServices/BusService.cs File Reference	97
8.2 ReadingBusesAPI/BusServices/Services.cs File Reference	97
8.3 ReadingBusesAPI/BusStops/BusStop.cs File Reference	97
8.4 ReadingBusesAPI/BusStops/BusStopIntermediary.cs File Reference	98
8.5 ReadingBusesAPI/BusStops/Locations.cs File Reference	98
8.6 ReadingBusesAPI/BusStops/StopPattern.cs File Reference	98
8.7 ReadingBusesAPI/Common/CacheWriter.cs File Reference	99
8.8 ReadingBusesAPI/Common/Company.cs File Reference	99
8.9 ReadingBusesAPI/Common/Direction.cs File Reference	99
8.10 ReadingBusesAPI/Common/JSONConverters.cs File Reference	100
8.11 ReadingBusesAPI/Common/Point.cs File Reference	100
8.12 ReadingBusesAPI/Common/URLConstructor.cs File Reference	100
8.13 ReadingBusesAPI/ErrorManagement/ErrorFormat.cs File Reference	101

8.14 ReadingBusesAPI/ErrorManagement/EventManager.cs File Reference	101
8.15 ReadingBusesAPI/ErrorManagement/ReadingBusesAPIException.cs File Reference	101
8.16 ReadingBusesAPI/ErrorManagement/ReadingBusesApiExceptionBadQuery.cs File Reference . . .	101
8.17 ReadingBusesAPI/ErrorManagement/ReadingBusesApiExceptionCritical.cs File Reference	102
8.18 ReadingBusesAPI/ErrorManagement/ReadingBusesApiExceptionMalformedQuery.cs File Reference	102
8.19 ReadingBusesAPI/JourneyDetails/LiveJourneyDetailsApi.cs File Reference	102
8.20 ReadingBusesAPI/JourneyDetails/LiveRecord.cs File Reference	103
8.21 ReadingBusesAPI/ReadingBuses.cs File Reference	103
8.22 ReadingBusesAPI/README.md File Reference	103
8.23 ReadingBusesAPI/TimeTable/HistoricJourney.cs File Reference	103
8.24 ReadingBusesAPI/TimeTable/HistoricVisit.cs File Reference	103
8.25 ReadingBusesAPI/TimeTable/Journey.cs File Reference	104
8.26 ReadingBusesAPI/TimeTable/ScheduledJourneysApi.cs File Reference	104
8.27 ReadingBusesAPI/TimeTable/TrackingHistoryAPI.cs File Reference	104
8.28 ReadingBusesAPI/TimeTable/Visit.cs File Reference	105
8.29 ReadingBusesAPI/VehiclePositions/GPSController.cs File Reference	105
8.30 ReadingBusesAPI/VehiclePositions/LiveVehiclePosition.cs File Reference	105
8.31 ReadingBusesAPI/VehiclePositions/VehiclePosition.cs File Reference	105
Index	107

Chapter 1

Reading Buses API

1.1 Reading Buses API

A C#, .net Standard Library for the new [Reading Buses API](#), available to use in your C# console, UWP, WPF or Win Form Applications.

This includes bus services operated by Reading Buses and subsidiaries such as, Thames Valley Buses and Newbury & District Buses.

The library supports the List of Bus Stops, Live Vehicle Positions, Live Journey Details, Stop Predictions, List of Lines, Line Patterns, Timetabled Journeys, Tracking History and the Vehicle Position History API..

Get your own API Keys from: <https://reading-opendata.r2p.com/api-service>

1.1.1 Examples

Examples code can be found on the [Examples Repository here](#)

1.1.2 Source Code (GitHub)

The library source code can be found on [GitHub here](#).

1.1.3 Download & Installation

Get the package from the [nuget store here](#)

1.2 Very Quick Start

First you need to initialise the library by providing your API key:

```
ReadingBuses Controller = await ReadingBuses.Initialise("APIKEY");
```

Once Initialised all future reference can be got using:

```
ReadingBuses Controller = ReadingBuses.GetInstance();
```

1.2.0.1 Get a List of Bus Services

To get a list of bus services operated by Reading Buses and the information about them you can do any of the following:

To get all Services:

```
BusService[] Services = Controller.GetServices();
```

To get all Services from a company:

```
BusService[] RBServices = Controller.GetServices(Company.ReadingBuses);  
BusService[] TVServices = Controller.GetServices(Company.ThamesValley);
```

To get specific Services based on their brand:

```
BusService[] Services = Controller.GetServices("pink");
```

To get specific Service by Service Number and Company Operator:

Note that the API has data for Reading Buses, Thames Valley Buses and Newbury & District Buses, as such, service id might not be unique. For example, Reading Buses and Newbury & District both operate a service number "1", so operator is needed to specify which one.

```
BusService purple17 = Controller.GetService("17", Company.ReadingBuses);
```

To get a service's timetable

```
Journey[] timetable = await purple17.GetTimeTable(DateTime.Now);
```

To get a service's historical journeys

```
HistoricJourney[] timetable = await purple17.GetArchivedTimeTable(DateTime.Now.AddDays(-5));
```

To get a service's route

```
BusStop[] outbound = await purple17.GetLocations(Direction.Outbound);  
BusStop[] inbound = await purple17.GetLocations(Direction.Inbound);
```

1.2.0.2 Get a List of Locations (Bus Stops)

To get all locations

```
BusStop[] Locations = Controller.GetLocations();
```

To get location based on Acto-Code (Bus Stop ID)

```
BusStop stop = Controller.GetLocation("039028150002");
```

To get live stop departure information

```
LiveRecord[] departures = await stop.GetLiveData();
```

1.2.0.3 Get GPS Data

To get Live GPS Data

```
LiveVehiclePosition[] Positions = await Controller.GpsController.GetLiveVehiclePositions();
```

To get Archived GPS Data

```
VehiclePosition[] Positions = await  
    Controller.GpsController.GetArchivedVehiclePositions(DateTime.Now.AddDays(-1), new TimeSpan(3, 0, 0));
```

Once you have the bus service or location you want to inspect, they have various properties to let you get further data about them. Such as live bus stop data, GPS data, bus service routes. For more examples, please see the repository linked above.

Chapter 2

Namespace Index

2.1 Package List

Here are the packages with brief descriptions (if available):

ReadingBusesAPI	11
ReadingBusesAPI.BusServices	11
ReadingBusesAPI.BusStops	12
ReadingBusesAPI.Common	12
ReadingBusesAPI.ErrorManagement	13
ReadingBusesAPI.JourneyDetails	13
ReadingBusesAPI.TimeTable	14
ReadingBusesAPI.VehiclePositions	14

Chapter 3

Hierarchical Index

3.1 Class Hierarchy

This inheritance list is sorted roughly, but not completely, alphabetically:

ReadingBusesAPI.BusServices.BusService	15
ReadingBusesAPI.BusStops.BusStop	22
ReadingBusesAPI.BusStops.BusStopIntermediary	29
ReadingBusesAPI.Common.CacheWriter	31
ReadingBusesAPI.ErrorManagement.ErrorFormat	36
ReadingBusesAPI.ErrorManagement.ErrorManager	37
Exception	
ReadingBusesAPI.ErrorManagement.ReadingBusesApiException	78
ReadingBusesAPI.ErrorManagement.ReadingBusesApiExceptionBadQuery	79
ReadingBusesAPI.ErrorManagement.ReadingBusesApiExceptionCritical	81
ReadingBusesAPI.ErrorManagement.ReadingBusesApiExceptionMalformedQuery	82
ReadingBusesAPI.VehiclePositions.GpsController	37
IEquatable	
ReadingBusesAPI.Common.Point	62
ReadingBusesAPI.TimeTable.Journey	45
ReadingBusesAPI.TimeTable.HistoricJourney	41
JsonConverter	
ReadingBusesAPI.Common.DateTimeOffsetConverter	35
ReadingBusesAPI.Common.ParseBoolConverter	57
ReadingBusesAPI.Common.ParseOperatorConverter	58
ReadingBusesAPI.Common.ParseOperatorTimetableConverter	59
ReadingBusesAPI.Common.ParseServiceObjects	60
ReadingBusesAPI.Common.ParseStringConverter	61
ReadingBusesAPI.JourneyDetails.LiveJourneyDetailsApi	48
ReadingBusesAPI.JourneyDetails.LiveRecord	49
ReadingBusesAPI.BusStops.Locations	56
ReadingBusesAPI.ReadingBuses	66
ReadingBusesAPI.TimeTable.ScheduledJourneysApi	83
ReadingBusesAPI.BusServices.Services	84
ReadingBusesAPI.BusStops.StopPattern	85
ReadingBusesAPI.TimeTable.TrackingHistoryApi	87
ReadingBusesAPI.Common.UrlConstructor	88
ReadingBusesAPI.VehiclePositions.VehiclePosition	92
ReadingBusesAPI.VehiclePositions.LiveVehiclePosition	54
ReadingBusesAPI.TimeTable.Visit	94
ReadingBusesAPI.TimeTable.HistoricVisit	42

Chapter 4

Class Index

4.1 Class List

Here are the classes, structs, unions and interfaces with brief descriptions:

ReadingBusesAPI.BusServices.BusService	Stores information about an individual bus services. Related to the "List Of Lines" API.	15
ReadingBusesAPI.BusStops.BusStop	Stores information about a single bus stop. Related to the "List Of Bus Stops" API.	22
ReadingBusesAPI.BusStops.BusStopIntermediary	Stores information about a single bus stop and single service. Related to the raw output of the "List Of Bus Stops" API. This API returns the same stop multiple times with each service that visits it treated as a new stop?	29
ReadingBusesAPI.Common.CacheWriter	Used to write a cache files to the disk.	31
ReadingBusesAPI.Common.DateTimeOffsetConverter	Converts a datetime value between its JSON representation and the object.	35
ReadingBusesAPI.ErrorManagement.ErrorFormat	Represents an error message object returned by all JSON feeds of the API.	36
ReadingBusesAPI.ErrorManagement.ErrorManager	Responsible for extracting and producing an error message from an API result. To the end user.	37
ReadingBusesAPI.VehiclePositions.GpsController	Helps get live and historical GPS data on vehicles by accessing the "Live Vehicle Positions" API.	37
ReadingBusesAPI.TimeTable.HistoricJourney	A historical journey, one that has happened in the past.	41
ReadingBusesAPI.TimeTable.HistoricVisit	Represents a single instance of a bus visiting at a specific bus stop in the past.	42
ReadingBusesAPI.TimeTable.Journey	Represents a journey, which is a grouping of Visit objects, or a specific service doing one single direction of the route. A timetable for a service is made up of multiple journeys.	45
ReadingBusesAPI.JourneyDetails.LiveJourneyDetailsApi	Contains the logic to call upon the Live Journey Details API.	48
ReadingBusesAPI.JourneyDetails.LiveRecord	Used to store information about a buses arrival at a bus stop. Mainly related to the "Stop Predictions" API.	49
ReadingBusesAPI.VehiclePositions.LiveVehiclePosition	A live GPS vehicle position record.	54
ReadingBusesAPI.BusStops.Locations	This classes simply gets all the buses stops visited by Reading Buses, by interfacing with the "List Of Bus Stops" API.	56

ReadingBusesAPI.Common.ParseBoolConverter	57
Converts a datetime value between its JSON representation and the object.	
ReadingBusesAPI.Common.ParseOperatorConverter	58
Converts a string short code for an Operator into an Operator Enum and back again for the JSON converter.	
ReadingBusesAPI.Common.ParseOperatorTimetableConverter	59
Converts a string short code for an Operator into an Operator Enum and back again for the JSON converter.	
ReadingBusesAPI.Common.ParseServiceObjects	60
Converts a string short code for an Operator into an Operator Enum and back again for the JSON converter.	
ReadingBusesAPI.Common.ParseStringConverter	61
Converts a string into a long and back again for the JSON converter.	
ReadingBusesAPI.Common.Point	62
Stores an X and Y Position simply.	
ReadingBusesAPI.ReadingBuses	66
This is the main class for the library, here you can initialise a singleton instance and then query and use the Reading Buses API.	
ReadingBusesAPI.ErrorManagement.ReadingBusesApiException	78
Stores the basic/base type of Exception which can be thrown by the API.	
ReadingBusesAPI.ErrorManagement.ReadingBusesApiExceptionBadQuery	79
An exception type which is used when the API returns back an error message. Most likely due to an invalid request such as asking for data that does not exist.	
ReadingBusesAPI.ErrorManagement.ReadingBusesApiExceptionCritical	81
An exception type which is thrown when the cause of the error is unknown.	
ReadingBusesAPI.ErrorManagement.ReadingBusesApiExceptionMalformedQuery	82
An exception type which is used when the user asks to make a invalid API call This is would be thrown during checks done before even directly calling upon the web API. For example if you have not filtered by at least one property when required too.	
ReadingBusesAPI.TimeTable.ScheduledJourneysApi	83
Contains the logic to call upon the Scheduled Journeys API.	
ReadingBusesAPI.BusServices.Services	84
This classes simply gets all the bus services operated by Reading Buses, by interfacing with the "List Of Services" API.	
ReadingBusesAPI.BusStops.StopPattern	85
An intermediary class used for the "Line Pattern" API, to get the route of a service.	
ReadingBusesAPI.TimeTable.TrackingHistoryApi	87
Contains the logic to call upon the Tracking History API.	
ReadingBusesAPI.Common.UrlConstructor	88
Returns back the URL needed to make a get command to the Reading Buses Open Data API. You can use this for testing purposes to check the API is returning what you were expecting.	
ReadingBusesAPI.VehiclePositions.VehiclePosition	92
Stores information about historical GPS data on a vehicle.	
ReadingBusesAPI.TimeTable.Visit	94
Represents a single instance of a bus visiting at a specific bus stop.	

Chapter 5

File Index

5.1 File List

Here is a list of all files with brief descriptions:

ReadingBusesAPI/ ReadingBuses.cs	103
ReadingBusesAPI/BusServices/ BusService.cs	97
ReadingBusesAPI/BusServices/ Services.cs	97
ReadingBusesAPI/BusStops/ BusStop.cs	97
ReadingBusesAPI/BusStops/ BusStopIntermediary.cs	98
ReadingBusesAPI/BusStops/ Locations.cs	98
ReadingBusesAPI/BusStops/ StopPattern.cs	98
ReadingBusesAPI/Common/ CacheWriter.cs	99
ReadingBusesAPI/Common/ Company.cs	99
ReadingBusesAPI/Common/ Direction.cs	99
ReadingBusesAPI/Common/ JSONConverters.cs	100
ReadingBusesAPI/Common/ Point.cs	100
ReadingBusesAPI/Common/ URLConstructor.cs	100
ReadingBusesAPI/ErrorMessage/ ErrorFormat.cs	101
ReadingBusesAPI/ErrorMessage/ ErrorManager.cs	101
ReadingBusesAPI/ErrorMessage/ ReadingBusesAPIException.cs	101
ReadingBusesAPI/ErrorMessage/ ReadingBusesApiExceptionBadQuery.cs	101
ReadingBusesAPI/ErrorMessage/ ReadingBusesApiExceptionCritical.cs	102
ReadingBusesAPI/ErrorMessage/ ReadingBusesApiExceptionMalformedQuery.cs	102
ReadingBusesAPI/JourneyDetails/ LiveJourneyDetailsApi.cs	102
ReadingBusesAPI/JourneyDetails/ LiveRecord.cs	103
ReadingBusesAPI/TimeTable/ HistoricJourney.cs	103
ReadingBusesAPI/TimeTable/ HistoricVisit.cs	103
ReadingBusesAPI/TimeTable/ Journey.cs	104
ReadingBusesAPI/TimeTable/ ScheduledJourneysApi.cs	104
ReadingBusesAPI/TimeTable/ TrackingHistoryAPI.cs	104
ReadingBusesAPI/TimeTable/ Visit.cs	105
ReadingBusesAPI/VehiclePositions/ GPSController.cs	105
ReadingBusesAPI/VehiclePositions/ LiveVehiclePosition.cs	105
ReadingBusesAPI/VehiclePositions/ VehiclePosition.cs	105

Chapter 6

Namespace Documentation

6.1 ReadingBusesAPI Namespace Reference

Namespaces

- namespace [BusServices](#)
- namespace [BusStops](#)
- namespace [Common](#)
- namespace [ErrorManagement](#)
- namespace [JourneyDetails](#)
- namespace [TimeTable](#)
- namespace [VehiclePositions](#)

Classes

- class [ReadingBuses](#)

This is the main class for the library, here you can initialise a singleton instance and then query and use the Reading Buses API.

6.2 ReadingBusesAPI.BusServices Namespace Reference

Classes

- class [BusService](#)

Stores information about an individual bus services. Related to the "List Of Lines" API.

- class [Services](#)

This classes simply gets all the bus services operated by Reading Buses, by interfacing with the "List Of Services" API.

6.3 ReadingBusesAPI.BusStops Namespace Reference

Classes

- class [BusStop](#)
Stores information about a single bus stop. Related to the "List Of Bus Stops" API.
- class [BusStopIntermediary](#)
Stores information about a single bus stop and single service. Related to the raw output of the "List Of Bus Stops" API. This API returns the same stop multiple times with each service that visits it treated as a new stop?
- class [Locations](#)
This classes simply gets all the buses stops visited by Reading Buses, by interfacing with the "List Of Bus Stops" API.
- class [StopPattern](#)
An intermediary class used for the "Line Pattern" API, to get the route of a service.

6.4 ReadingBusesAPI.Common Namespace Reference

Classes

- class [CacheWriter](#)
Used to write a cache files to the disk.
- class [DateTimeOffsetConverter](#)
Converts a datetime value between its JSON representation and the object.
- class [ParseBoolConverter](#)
Converts a datetime value between its JSON representation and the object.
- class [ParseOperatorConverter](#)
Converts a string short code for an Operator into an Operator Enum and back again for the JSON converter.
- class [ParseOperatorTimetableConverter](#)
Converts a string short code for an Operator into an Operator Enum and back again for the JSON converter.
- class [ParseServiceObjects](#)
Converts a string short code for an Operator into an Operator Enum and back again for the JSON converter.
- class [ParseStringConverter](#)
Converts a string into a long and back again for the JSON converter.
- struct [Point](#)
Stores an X and Y Position simply.
- class [UrlConstructor](#)
Returns back the URL needed to make a get command to the Reading Buses Open Data API. You can use this for testing purposes to check the API is returning what you were expecting.

Enumerations

- enum [Company](#) { [ReadingBuses](#) , [NewburyAndDistrict](#) , [ThamesValley](#) , [Other](#) }
An Enum of the Operators Reading Buses owns or manages in their API.
- enum [Direction](#) { [Inbound](#) , [Outbound](#) }
The direction in which a bus is traveling.

6.4.1 Enumeration Type Documentation

6.4.1.1 Company

enum [ReadingBusesAPI.Common.Company](#)

An Enum of the Operators Reading Buses owns or manages in their API.

Enumerator

ReadingBuses	For Reading Buses services
NewburyAndDistrict	For Newbury And District services
ThamesValley	Thames Valley Buses (formerly known as Courtney Buses)
Other	For any other operator which is new in the API and has not yet been officially supported in this library.

6.4.1.2 Direction

enum [ReadingBusesAPI.Common.Direction](#)

The direction in which a bus is traveling.

Enumerator

Inbound	For buses traveling inbound.
Outbound	For buses traveling outbound.

6.5 ReadingBusesAPI.ErrorManagement Namespace Reference

Classes

- class [ErrorFormat](#)
Represents an error message object returned by all JSON feeds of the API.
- class [ErrorManager](#)
Responsible for extracting and producing an error message from an API result. To the end user.
- class [ReadingBusesApiException](#)
Stores the basic/base type of Exception which can be thrown by the API.
- class [ReadingBusesApiExceptionBadQuery](#)
An exception type which is used when the API returns back an error message. Most likely due to an invalid request such as asking for data that does not exist.
- class [ReadingBusesApiExceptionCritical](#)
An exception type which is thrown when the cause of the error is unknown.
- class [ReadingBusesApiExceptionMalformedQuery](#)
An exception type which is used when the user asks to make a invalid API call This is would be thrown during checks done before even directly calling upon the web API. For example if you have not filtered by at least one property when required too.

6.6 ReadingBusesAPI.JourneyDetails Namespace Reference

Classes

- class [LiveJourneyDetailsApi](#)
Contains the logic to call upon the Live Journey Details API.
- class [LiveRecord](#)
Used to store information about a buses arrival at a bus stop. Mainly related to the "Stop Predictions" API.

6.7 ReadingBusesAPI.TimeTable Namespace Reference

Classes

- class [HistoricJourney](#)
A historical journey, one that has happened in the past.
- class [HistoricVisit](#)
Represents a single instance of a bus visiting at a specific bus stop in the past.
- class [Journey](#)
Represents a journey, which is a grouping of [Visit](#) objects, or a specific service doing one single direction of the route. A timetable for a service is made up of multiple journeys.
- class [ScheduledJourneysApi](#)
Contains the logic to call upon the Scheduled Journeys API.
- class [TrackingHistoryApi](#)
Contains the logic to call upon the Tracking History API.
- class [Visit](#)
Represents a single instance of a bus visiting at a specific bus stop.

6.8 ReadingBusesAPI.VehiclePositions Namespace Reference

Classes

- class [GpsController](#)
Helps get live and historical GPS data on vehicles by accessing the "Live Vehicle Positions" API.
- class [LiveVehiclePosition](#)
A live GPS vehicle position record.
- class [VehiclePosition](#)
Stores information about historical GPS data on a vehicle.

Chapter 7

Class Documentation

7.1 ReadingBusesAPI.BusServices.BusService Class Reference

Stores information about an individual bus services. Related to the "List Of Lines" API.

Public Member Functions

- [BusService](#) ()
The default constructor, used only for JSON Parsing. Will be made internal when System.Text.Json add support for internal constructors in a future update.
- [BusService](#) (string serviceNumber)
Used to create a snub/ fake object for passing to function calls, if all you need to pass is an service number to the function. Makes operator code, "other" by default.
- [BusService](#) (string serviceNumber, [Company](#) operators)
Used to create a snub/ fake object for passing to function calls, if all you need to pass is an service number to the function.
- async Task< string[]> [GetLocationsActo](#) ()
Gets an array of acto-codes for the bus stops that the services visits. The first set of results are the outbound, the final set are the inbound.
- async Task< string[]> [GetLocationsActo](#) ([Direction](#) direction)
Gets an array of acto-codes for the bus stops that the services visits.
- async Task< [BusStop](#)[]> [GetLocations](#) ()
Gets an array of 'BusStop' objects the bus service travels too as an array of BusStop objects. If the API is invalid and links to a Bus Stop not in the list of locations it will simply be ignored. Ordered on all the outbound stops first and then all the inbound stops.
- async Task< [BusStop](#)[]> [GetLocations](#) ([Direction](#) direction)
Gets an array of 'BusStop' objects the bus service travels too as an array of BusStop objects. If the API is invalid and links to a Bus Stop not in the list of locations it will simply be ignored.
- async Task< [LiveVehiclePosition](#)[]> [GetLivePositions](#) ()
Gets the Live GPS positions for all Vehicles operating on this service.
- async Task< [HistoricJourney](#)[]> [GetLiveJourneyData](#) ()
Gets live journey tracking information for this service.
- async Task< [Journey](#)[]> [GetTimeTable](#) (DateTime date)
Gets the full bus time table, for a specific date.
- async Task< [Journey](#)[]> [GetTimeTable](#) (DateTime date, [BusStop](#) location)
Gets the full bus time table, for a specific date.

- async Task< [HistoricJourney](#)[]> [GetArchivedTimeTable](#) (DateTime date)
Gets the archived real bus departure and arrival times along with their time table history for this service on a specific date.
- async Task< [HistoricJourney](#)[]> [GetArchivedTimeTable](#) (DateTime date, [BusStop](#) location)
Gets the archived real bus departure and arrival times along with their time table history for this service on a specific date.
- override bool [Equals](#) (object obj)
States if two objects are the same as each other or not.
- override int [GetHashCode](#) ()
HashCode of the object is based on the service id and the operating company as this uniquely identifies the service.

Properties

- string [ServiceId](#) [get, set]
- string [BrandName](#) [get, set]
The brand name for the service, used mainly for Reading Buses services, such as Lion, Purple or Orange.
- [Company](#) [Company](#) [get, set]
The operator of the service enum value.

7.1.1 Detailed Description

Stores information about an individual bus services. Related to the "List Of Lines" API.

7.1.2 Constructor & Destructor Documentation

7.1.2.1 [BusService](#)() [1/3]

```
ReadingBusesAPI.BusServices.BusService.BusService ( )
```

The default constructor, used only for JSON Parsing. Will be made internal when System.Text.Json add support for internal constructors in a future update.

7.1.2.2 [BusService](#)() [2/3]

```
ReadingBusesAPI.BusServices.BusService.BusService (
    string serviceNumber )
```

Used to create a snub/ fake object for passing to function calls, if all you need to pass is an service number to the function. Makes operator code, "other" by default.

Parameters

<i>serviceNumber</i>	ID of the bus service.
----------------------	------------------------

Unless you are doing something very strange, you probably should not need to use this, it is more for testing purposes.

7.1.2.3 BusService() [3/3]

```
ReadingBusesAPI.BusServices.BusService.BusService (
    string serviceName,
    Company operators )
```

Used to create a snub/ fake object for passing to function calls, if all you need to pass is an service number to the function.

Parameters

<i>serviceName</i>	ID of the bus service.
<i>operators</i>	The operator who runs the service.

Unless you are doing something very strange, you probably should not need to use this, it is more for testing purposes.

7.1.3 Member Function Documentation

7.1.3.1 Equals()

```
override bool ReadingBusesAPI.BusServices.BusService.Equals (
    object obj )
```

States if two objects are the same as each other or not.

Parameters

<i>obj</i>	Other bus service object.
------------	---------------------------

Returns

True if service id and bus operator match.

7.1.3.2 GetArchivedTimeTable() [1/2]

```
async Task< HistoricJourney[ ] > ReadingBusesAPI.BusServices.BusService.GetArchivedTimeTable (
    DateTime date )
```

Gets the archived real bus departure and arrival times along with their time table history for this service on a specific date.

Parameters

<i>date</i>	the date on which you want a archived timetable data for. This should be a date in the past.
-------------	--

Returns

An array of time table records, containing the scheduled and actual arrival and departure times of buses.

Exceptions

<i>ReadingBusesApiExceptionMalformedQuery</i>	If you have tried to get data for a date in the future. Or if you have not provided any date, and/or you have not provided at least either the service or location or vehicle.
<i>ReadingBusesApiExceptionBadQuery</i>	Thrown if the API responds with an error message.
<i>ReadingBusesApiExceptionCritical</i>	Thrown if the API fails, but provides no reason.

7.1.3.3 GetArchivedTimeTable() [2/2]

```
async Task< HistoricJourney[ ]> ReadingBusesAPI.BusServices.BusService.GetArchivedTimeTable (
    DateTime date,
    BusStop location )
```

Gets the archived real bus departure and arrival times along with their time table history for this service on a specific date.

Parameters

<i>date</i>	the date on which you want a archived timetable data for. This should be a date in the past.
<i>location</i>	(optional) a specific bus stop you want archived timetables for, if null it will get a timetable for every bus stop on route.

Returns

An array of time table records, containing the scheduled and actual arrival and departure times of buses.

Exceptions

<i>ReadingBusesApiExceptionMalformedQuery</i>	If you have tried to get data for a date in the future. Or if you have not provided any date, and/or you have not provided at least either the service or location or vehicle.
<i>ReadingBusesApiExceptionBadQuery</i>	Thrown if the API responds with an error message.
<i>ReadingBusesApiExceptionCritical</i>	Thrown if the API fails, but provides no reason.

7.1.3.4 GetHashCode()

```
override int ReadingBusesAPI.BusServices.BusService.GetHashCode ( )
```

Hashcode of the object is based on the service id and the operating company as this uniquely identifies the service.

Returns

7.1.3.5 GetLiveJourneyData()

```
async Task< HistoricJourney[] > ReadingBusesAPI.BusServices.BusService.GetLiveJourneyData ( )
```

Gets live journey tracking information for this service.

Returns

The live journey tracing information for this service.

7.1.3.6 GetLivePositions()

```
async Task< LiveVehiclePosition[] > ReadingBusesAPI.BusServices.BusService.GetLivePositions ( )
```

Gets the Live GPS positions for all Vehicles operating on this service.

Returns

An array of GPS data points for all vehicles currently operating on this service.

7.1.3.7 GetLocations() [1/2]

```
async Task< BusStop[] > ReadingBusesAPI.BusServices.BusService.GetLocations ( )
```

Gets an array of 'BusStop' objects the bus service travels too as an array of BusStop objects. If the API is invalid and links to a Bus Stop not in the list of locations it will simply be ignored. Ordered on all the outbound stops first and then all the inbound stops.

Returns

An array of BusStop objects for the stops visited by this service.

7.1.3.8 GetLocations() [2/2]

```
async Task< BusStop[] > ReadingBusesAPI.BusServices.BusService.GetLocations (
    Direction direction )
```

Gets an array of 'BusStop' objects the bus service travels too as an array of BusStop objects. If the API is invalid and links to a Bus Stop not in the list of locations it will simply be ignored.

Parameters

<i>direction</i>	The direction for stops, outbound or inbound
------------------	--

Returns

returns back all the bus stop objects visited by the service, for the direction of travel specified.

7.1.3.9 GetLocationsActo() [1/2]

```
async Task< string[]> ReadingBusesAPI.BusServices.BusService.GetLocationsActo ( )
```

Gets an array of acto-codes for the bus stops that the services visits. The first set of results are the outbound, the final set are the inbound.

Returns

An array of Acto-Codes for the stops visited by this services.

7.1.3.10 GetLocationsActo() [2/2]

```
async Task< string[]> ReadingBusesAPI.BusServices.BusService.GetLocationsActo (
    Direction direction )
```

Gets an array of acto-codes for the bus stops that the services visits.

Parameters

<i>direction</i>	Do you want outbound acto-codes or inbound.
------------------	---

Returns**7.1.3.11 GetTimeTable() [1/2]**

```
async Task< Journey[]> ReadingBusesAPI.BusServices.BusService.GetTimeTable (
    DateTime date )
```

Gets the full bus time table, for a specific date.

Parameters

<i>date</i>	the date on which you want a timetable for.
-------------	---

Returns

An array for the time table at a particular bus stop.

Exceptions

<i>ReadingBusesApiExceptionMalformedQuery</i>	If you have not provided any date.
<i>ReadingBusesApiExceptionBadQuery</i>	Thrown if the API responds with an error message.
<i>ReadingBusesApiExceptionCritical</i>	Thrown if the API fails, but provides no reason.

7.1.3.12 GetTimeTable() [2/2]

```
async Task< Journey[] > ReadingBusesAPI.BusServices.BusService.GetTimeTable (
    DateTime date,
    BusStop location )
```

Gets the full bus time table, for a specific date.

Parameters

<i>date</i>	the date on which you want a timetable for.
<i>location</i>	(optional) a specific bus stop you want timetables for, if null it will get a timetable for every bus stop on route.

Returns

An array for the time table at a particular bus stop.

Exceptions

<i>ReadingBusesApiExceptionMalformedQuery</i>	If you have not provided any date.
<i>ReadingBusesApiExceptionBadQuery</i>	Thrown if the API responds with an error message.
<i>ReadingBusesApiExceptionCritical</i>	Thrown if the API fails, but provides no reason.

7.1.4 Property Documentation

7.1.4.1 BrandName

```
string ReadingBusesAPI.BusServices.BusService.BrandName [get], [set]
```

The brand name for the service, used mainly for Reading Buses services, such as Lion, Purple or Orange.

7.1.4.2 Company

```
Company ReadingBusesAPI.BusServices.BusService.Company [get], [set]
```

The operator of the service enum value.

7.1.4.3 ServiceId

```
string ReadingBusesAPI.BusServices.BusService.ServiceId [get], [set]
```

The service number for the bus service, this is only guaranteed to be unique per operator, not in the API as a whole. For example Reading Buses and Newbury And District both operate a number '2' service.

The documentation for this class was generated from the following file:

- ReadingBusesAPI/BusServices/[BusService.cs](#)

7.2 ReadingBusesAPI.BusStops.BusStop Class Reference

Stores information about a single bus stop. Related to the "List Of Bus Stops" API.

Public Member Functions

- [BusStop](#) ()
The default constructor, used only for JSON Parsing. Will be made internal when System.Text.Json add support for internal constructors in a future update.
- [BusStop](#) (string actoCode)
Used to create a snub/ fake object for passing to function calls, if all you need to pass is an acto-code to the function.
- async Task< [LiveRecord](#)[]> [GetLiveData](#) ()
Gets live data from a bus stop.
- [BusService](#)[] [GetServices](#) ([Company](#) busOperator)
Finds the 'BusService' object for all of the bus services which visit this stop.
- [Point](#) [GetPoint](#) ()
Gets the geographical position of the bus stop.
- Task< [Journey](#)[]> [GetTimeTable](#) (DateTime date)
Gets time table data at this specific bus stop.
- Task< [Journey](#)[]> [GetTimeTable](#) (DateTime date, [BusService](#) service)
Gets time table data at this specific bus stop.
- Task< [HistoricJourney](#)[]> [GetArchivedTimeTable](#) (DateTime date)
Gets the archived real bus departure and arrival times along with their time table history at this specific bus stop.
- async Task< [HistoricJourney](#)[]> [GetArchivedTimeTable](#) (DateTime date, [BusService](#) service)
Gets the archived real bus departure and arrival times along with their time table history at this specific bus stop.
- override bool [Equals](#) (object obj)
States if two objects are the same as each other or not.
- override int [GetHashCode](#) ()
Hashcode of the object is based on the acto code as this uniquely identifies the stop.

Package Functions

- [BusStop](#) ([BusStopIntermediary](#) intermediary)
Constructs a [BusStop](#) object from an intermediary bus stop object.
- void [Merge](#) ([BusStopIntermediary](#) otherStop)
Combines two bus stops together that are the same, but report different services that stop at the them.

Properties

- string [ActoCode](#) [get, set]
The unique identifier for a bus stop.
- string [CommonName](#) [get, set]
The public, easy to understand stop name.
- string [Latitude](#) [get, set]
The latitude of the bus stop
- string [Longitude](#) [get, set]
The longitude of the bus stop
- string [Bearing](#) [get, set]
The bearing of the bus stop
- string [BayNumber](#) [get, set]
The bus stop bay number, may be null if not applicable.
- List< [BusService](#) > [ServiceObjects](#) = new List<[BusService](#)>() [get, set]
A reference to the bus services at this stop.

7.2.1 Detailed Description

Stores information about a single bus stop. Related to the "List Of Bus Stops" API.

7.2.2 Constructor & Destructor Documentation

7.2.2.1 [BusStop\(\)](#) [1/3]

```
ReadingBusesAPI.BusStops.BusStop.BusStop ( )
```

The default constructor, used only for JSON Parsing. Will be made internal when System.Text.Json add support for internal constructors in a future update.

7.2.2.2 [BusStop\(\)](#) [2/3]

```
ReadingBusesAPI.BusStops.BusStop.BusStop (
    BusStopIntermediary intermediary ) [package]
```

Constructs a [BusStop](#) object from an intermediary bus stop object.

Parameters

<i>intermediary</i>	Intermediary bus stop.
---------------------	------------------------

7.2.2.3 BusStop() [3/3]

```
ReadingBusesAPI.BusStops.BusStop.BusStop (
    string actoCode )
```

Used to create a snub/ fake object for passing to function calls, if all you need to pass is an acto-code to the function.

Parameters

<i>actoCode</i>	ID of the bus stop.
-----------------	---------------------

Unless you are doing something very strange, you probably should not need to use this, it is more for testing purposes.

7.2.3 Member Function Documentation**7.2.3.1 Equals()**

```
override bool ReadingBusesAPI.BusStops.BusStop.Equals (
    object obj )
```

States if two objects are the same as each other or not.

Parameters

<i>obj</i>	Other bus stop object.
------------	------------------------

Returns

True if acto codes match.

7.2.3.2 GetArchivedTimeTable() [1/2]

```
Task< HistoricJourney[ ] > ReadingBusesAPI.BusStops.BusStop.GetArchivedTimeTable (
    DateTime date )
```

Gets the archived real bus departure and arrival times along with their time table history at this specific bus stop.

Parameters

<i>date</i>	The date you want time table data for. This should be a date in the past.
-------------	---

Returns

7.2.3.3 GetArchivedTimeTable() [2/2]

```
async Task< HistoricJourney[] > ReadingBusesAPI.BusStops.BusStop.GetArchivedTimeTable (
    DateTime date,
    BusService service )
```

Gets the archived real bus departure and arrival times along with their time table history at this specific bus stop.

Parameters

<i>date</i>	The date you want time table data for. This should be a date in the past.
<i>service</i>	(optional) the service you want time table data for specifically. If null, you get time table data for all services at this stop.

Returns

7.2.3.4 GetHashCode()

```
override int ReadingBusesAPI.BusStops.BusStop.GetHashCode ( )
```

Hashcode of the object is based on the acto code as this uniquely identifies the stop.

Returns

7.2.3.5 GetLiveData()

```
async Task< LiveRecord[] > ReadingBusesAPI.BusStops.BusStop.GetLiveData ( )
```

Gets live data from a bus stop.

Returns

Returns a list of Live Records, which are individual buses due to arrive at the bus stop.

7.2.3.6 GetPoint()

```
Point ReadingBusesAPI.BusStops.BusStop.GetPoint ( )
```

Gets the geographical position of the bus stop.

Returns

A Point Object for the position of the bus stop.

7.2.3.7 GetServices()

```
BusService[] ReadingBusesAPI.BusStops.BusStop.GetServices (
    Company busOperator )
```

Finds the 'BusService' object for all of the bus services which visit this stop.

Parameters

<i>busOperator</i>	
--------------------	--

Returns

A list of BusService Objects for services which visit this bus stop.

7.2.3.8 GetTimeTable() [1/2]

```
Task< Journey[] > ReadingBusesAPI.BusStops.BusStop.GetTimeTable (
    DateTime date )
```

Gets time table data at this specific bus stop.

Parameters

<i>date</i>	The date you want time table data for.
-------------	--

Returns

An array of time table records for a particular bus stop.

Exceptions

<i>ReadingBusesApiExceptionMalformedQuery</i>	If you have not provided any date.
<i>ReadingBusesApiExceptionBadQuery</i>	Thrown if the API responds with an error message.
<i>ReadingBusesApiExceptionCritical</i>	Thrown if the API fails, but provides no reason.

7.2.3.9 GetTimeTable() [2/2]

```
Task< Journey[] > ReadingBusesAPI.BusStops.BusStop.GetTimeTable (
    DateTime date,
    BusService service )
```

Gets time table data at this specific bus stop.

Parameters

<i>date</i>	The date you want time table data for.
<i>service</i>	(optional) the service you want time table data for specifically. If null, you get time table data for all services at this stop.

Returns

An array of time table records for a particular bus stop.

Exceptions

<i>ReadingBusesApiExceptionMalformedQuery</i>	If you have not provided any date.
<i>ReadingBusesApiExceptionBadQuery</i>	Thrown if the API responds with an error message.
<i>ReadingBusesApiExceptionCritical</i>	Thrown if the API fails, but provides no reason.

7.2.3.10 Merge()

```
void ReadingBusesAPI.BusStops.BusStop.Merge (
    BusStopIntermediary otherStop ) [package]
```

Combines two bus stops together that are the same, but report different services that stop at the them.

Parameters

<i>otherStop</i>	The other stop to merge with this one.
------------------	--

7.2.4 Property Documentation

7.2.4.1 ActoCode

```
string ReadingBusesAPI.BusStops.BusStop.ActoCode [get], [set]
```

The unique identifier for a bus stop.

7.2.4.2 BayNumber

```
string ReadingBusesAPI.BusStops.BusStop.BayNumber [get], [set]
```

The bus stop bay number, may be null if not applicable.

7.2.4.3 Bearing

```
string ReadingBusesAPI.BusStops.BusStop.Bearing [get], [set]
```

The bearing of the bus stop

7.2.4.4 CommonName

```
string ReadingBusesAPI.BusStops.BusStop.CommonName [get], [set]
```

The public, easy to understand stop name.

7.2.4.5 Latitude

```
string ReadingBusesAPI.BusStops.BusStop.Latitude [get], [set]
```

The latitude of the bus stop

7.2.4.6 Longitude

```
string ReadingBusesAPI.BusStops.BusStop.Longitude [get], [set]
```

The longitude of the bus stop

7.2.4.7 ServiceObjects

```
List<BusService> ReadingBusesAPI.BusStops.BusStop.ServiceObjects = new List<BusService>()  
[get], [set]
```

A reference to the bus services at this stop.

The documentation for this class was generated from the following file:

- ReadingBusesAPI/BusStops/[BusStop.cs](#)

7.3 ReadingBusesAPI.BusStops.BusStopIntermediary Class Reference

Stores information about a single bus stop and single service. Related to the raw output of the "List Of Bus Stops" API. This API returns the same stop multiple times with each service that visits it treated as a new stop?

Public Member Functions

- [BusStopIntermediary](#) ()
The default constructor, used only for JSON Parsing. Will be made internal when System.Text.Json add support for internal constructors in a future update.
- [BusService GetService](#) ()
Gets the services mentioned at this stop.

Properties

- string [ActoCode](#) [get, set]
The unique identifier for a bus stop.
- string [CommonName](#) [get, set]
The public, easy to understand stop name.
- string [Latitude](#) [get, set]
The latitude of the bus stop
- string [Longitude](#) [get, set]
The longitude of the bus stop
- string [Bearing](#) [get, set]
The bearing of the bus stop
- [Company OperatorCode](#) [get, set]
The Brand/Group of buses that most frequently visit this stop. Such as Purple, for the Purple 17s.
- string [RouteCode](#) [get, set]
The service ID for a service stopping at the stop.

7.3.1 Detailed Description

Stores information about a single bus stop and single service. Related to the raw output of the "List Of Bus Stops" API. This API returns the same stop multiple times with each service that visits it treated as a new stop?

7.3.2 Constructor & Destructor Documentation

7.3.2.1 BusStopIntermediary()

```
ReadingBusesAPI.BusStops.BusStopIntermediary.BusStopIntermediary ( )
```

The default constructor, used only for JSON Parsing. Will be made internal when System.Text.Json add support for internal constructors in a future update.

7.3.3 Member Function Documentation

7.3.3.1 GetService()

```
BusService ReadingBusesAPI.BusStops.BusStopIntermediary.GetService ( )
```

Gets the services mentioned at this stop.

Returns

Bus Service object connected to the stop. Returns null if invalid API data.

7.3.4 Property Documentation

7.3.4.1 ActoCode

```
string ReadingBusesAPI.BusStops.BusStopIntermediary.ActoCode [get], [set]
```

The unique identifier for a bus stop.

7.3.4.2 Bearing

```
string ReadingBusesAPI.BusStops.BusStopIntermediary.Bearing [get], [set]
```

The bearing of the bus stop

7.3.4.3 CommonName

```
string ReadingBusesAPI.BusStops.BusStopIntermediary.CommonName [get], [set]
```

The public, easy to understand stop name.

7.3.4.4 Latitude

```
string ReadingBusesAPI.BusStops.BusStopIntermediary.Latitude [get], [set]
```

The latitude of the bus stop

7.3.4.5 Longitude

```
string ReadingBusesAPI.BusStops.BusStopIntermediary.Longitude [get], [set]
```

The longitude of the bus stop

7.3.4.6 OperatorCode

```
Company ReadingBusesAPI.BusStops.BusStopIntermediary.OperatorCode [get], [set]
```

The Brand/Group of buses that most frequently visit this stop. Such as Purple, for the Purple 17s.

7.3.4.7 RouteCode

```
string ReadingBusesAPI.BusStops.BusStopIntermediary.RouteCode [get], [set]
```

The service ID for a service stopping at the stop.

The documentation for this class was generated from the following file:

- ReadingBusesAPI/BusStops/[BusStopIntermediary.cs](#)

7.4 ReadingBusesAPI.Common.CacheWriter Class Reference

Used to write a cache files to the disk.

Static Public Member Functions

- static async Task< T > [ReadOrCreateCache< T >](#) (string cacheLocation, string liveURL, bool useCache)
Checks is the data stored within cache, if so read it, else make a request to the live API and cache this result for next time.
- static void [CreateCacheDirectory](#) ()
Creates the two hidden cache folders.
- static string [TrackingHistory](#) ([BusService](#) service, [BusStop](#) location, DateTime date, string vehicle)
The file name for a tracking history cache file.
- static string [TimetabledJourneys](#) ([BusService](#) service, [BusStop](#) location, DateTime date)
The file name for a Timetabled Journey cache file.

Static Public Attributes

- static readonly string [CACHE_FOLDER](#) = "cache"
- static readonly string [ARCHIVED_CACHE_FOLDER](#) = "cache-archive"

Static Package Functions

- static string [VehiclePositionHistory](#) (DateTime dateStartTime, TimeSpan timeSpan, string vehicle)
The file name for a the vehicle position history cache file.

7.4.1 Detailed Description

Used to write a cache files to the disk.

7.4.2 Member Function Documentation

7.4.2.1 CreateCacheDirectory()

```
static void ReadingBusesAPI.Common.CacheWriter.CreateCacheDirectory ( ) [static]
```

Creates the two hidden cache folders.

7.4.2.2 ReadOrCreateCache< T >()

```
static async Task< T > ReadingBusesAPI.Common.CacheWriter.ReadOrCreateCache< T > (
    string cacheLocation,
    string liveURL,
    bool useCache ) [static]
```

Checks is the data stored within cache, if so read it, else make a request to the live API and cache this result for next time.

Template Parameters

<i>T</i>	The type of data we are wanting.
----------	----------------------------------

Parameters

<i>cacheLocation</i>	The location of cache on disk if it exists.
<i>liveURL</i>	The live url to find the data within the API.
<i>useCache</i>	States if we should check and use cache or not.

Returns

7.4.2.3 TimetabledJourneys()

```
static string ReadingBusesAPI.Common.CacheWriter.TimetabledJourneys (  
    BusService service,  
    BusStop location,  
    DateTime date ) [static]
```

The file name for a Timetabled Journey cache file.

Parameters

<i>service</i>	The bus service/
<i>location</i>	The bus stop
<i>date</i>	The date of the request.

Returns

The cache location.

7.4.2.4 TrackingHistory()

```
static string ReadingBusesAPI.Common.CacheWriter.TrackingHistory (  
    BusService service,  
    BusStop location,  
    DateTime date,  
    string vehicle ) [static]
```

The file name for a tracking history cache file.

Parameters

<i>service</i>	The bus service/
<i>location</i>	The bus stop
<i>date</i>	The date of the request.
<i>vehicle</i>	The vehicle id

Returns

The cache location.

7.4.2.5 VehiclePositionHistory()

```
static string ReadingBusesAPI.Common.CacheWriter.VehiclePositionHistory (
    DateTime dateStartTime,
    TimeSpan timeSpan,
    string vehicle ) [static], [package]
```

The file name for a the vehicle position history cache file.

Parameters

<i>dateStartTime</i>	The date of interest
<i>timeSpan</i>	The time length of interest.
<i>vehicle</i>	The vehicle id.

Returns

The cache location.

7.4.3 Member Data Documentation**7.4.3.1 ARCHIVED_CACHE_FOLDER**

```
readonly string ReadingBusesAPI.Common.CacheWriter.ARCHIVED_CACHE_FOLDER = "cache-archive"
[static]
```

7.4.3.2 CACHE_FOLDER

```
readonly string ReadingBusesAPI.Common.CacheWriter.CACHE_FOLDER = "cache" [static]
```

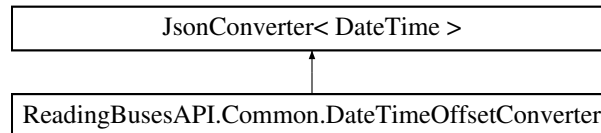
The documentation for this class was generated from the following file:

- ReadingBusesAPI/Common/[CacheWriter.cs](#)

7.5 ReadingBusesAPI.Common.DateTimeOffsetConverter Class Reference

Converts a datetime value between its JSON representation and the object.

Inheritance diagram for ReadingBusesAPI.Common.DateTimeOffsetConverter:



Public Member Functions

- override DateTime [Read](#) (ref Utf8JsonReader reader, Type typeToConvert, JsonSerializerOptions options)
- override void [Write](#) (Utf8JsonWriter writer, DateTime value, JsonSerializerOptions options)

7.5.1 Detailed Description

Converts a datetime value between its JSON representation and the object.

7.5.2 Member Function Documentation

7.5.2.1 Read()

```
override DateTime ReadingBusesAPI.Common.DateTimeOffsetConverter.Read (
    ref Utf8JsonReader reader,
    Type typeToConvert,
    JsonSerializerOptions options )
```

7.5.2.2 Write()

```
override void ReadingBusesAPI.Common.DateTimeOffsetConverter.Write (
    Utf8JsonWriter writer,
    DateTime value,
    JsonSerializerOptions options )
```

The documentation for this class was generated from the following file:

- ReadingBusesAPI/Common/[JSONConverters.cs](#)

7.6 ReadingBusesAPI.ErrorManagement.ErrorFormat Class Reference

Represents an error message object returned by all JSON feeds of the API.

Properties

- bool [Status](#) [get, set]
The status of the request, always false for failed.
- long? [Code](#) [get, set]
The status code of the error
- string [Message](#) [get, set]
The error message/ reason.

7.6.1 Detailed Description

Represents an error message object returned by all JSON feeds of the API.

7.6.2 Property Documentation

7.6.2.1 Code

```
long? ReadingBusesAPI.ErrorManagement.ErrorFormat.Code [get], [set]
```

The status code of the error

7.6.2.2 Message

```
string ReadingBusesAPI.ErrorManagement.ErrorFormat.Message [get], [set]
```

The error message/ reason.

7.6.2.3 Status

```
bool ReadingBusesAPI.ErrorManagement.ErrorFormat.Status [get], [set]
```

The status of the request, always false for failed.

The documentation for this class was generated from the following file:

- ReadingBusesAPI/ErrorManagement/[ErrorFormat.cs](#)

7.7 ReadingBusesAPI.ErrorManagement.ErrorManager Class Reference

Responsible for extracting and producing an error message from an API result. To the end user.

Static Package Functions

- static void [TryErrorMessageRetrieval](#) (string json)

Attempts to extract the error message directly sent from the API. If it can get the error message given send to the user. If the error message can not be extracted then the API has proved no explanation and so throw a generic error.

7.7.1 Detailed Description

Responsible for extracting and producing an error message from an API result. To the end user.

7.7.2 Member Function Documentation

7.7.2.1 TryErrorMessageRetrieval()

```
static void ReadingBusesAPI.ErrorManagement.ErrorManager.TryErrorMessageRetrieval (
    string json ) [static], [package]
```

Attempts to extract the error message directly sent from the API. If it can get the error message given send to the user. If the error message can not be extracted then the API has proved no explanation and so throw a generic error.

Parameters

<i>json</i>	Data returned from the API.
-------------	-----------------------------

The documentation for this class was generated from the following file:

- ReadingBusesAPI/ErrorManagement/[ErrorManager.cs](#)

7.8 ReadingBusesAPI.VehiclePositions.GpsController Class Reference

Helps get live and historical GPS data on vehicles by accessing the "Live Vehicle Positions" API.

Public Member Functions

- async Task< [VehiclePosition](#)[]> [GetArchivedVehiclePositions](#) (DateTime dateStartTime, TimeSpan time↵
Span)

Gets historic/archived GPS data for buses on a specific date, filtered either by vehicle ID, or all buses without a time period or both. GPS data is not stored for as long as other forms of data you may fail to get data older than a few months.

- `async Task< VehiclePosition[]> GetArchivedVehiclePositions (DateTime dateStartTime, TimeSpan timeSpan, string vehicle)`

Gets historic/archived GPS data for buses on a specific date, filtered either by vehicle ID, or all buses without a time period or both. GPS data is not stored for as long as other forms of data you may fail to get data older than a few months.

- `async Task< LiveVehiclePosition[]> GetLiveVehiclePositions ()`
Gets live GPS data for all buses currently operating.
- `async Task< LiveVehiclePosition > GetLiveVehiclePosition (string vehicle)`
Gets live GPS data for a single buses matching Vehicle ID number.
- `async Task< bool > IsVehicle (string vehicle)`
Checks if the Vehicle ID Number is currently in service right now.

Package Functions

- `GpsController ()`
Creates a GPS Controller, you should not need to make your own GPS controller, you can get an instance of one via the main '[ReadingBuses](#)' object.

7.8.1 Detailed Description

Helps get live and historical GPS data on vehicles by accessing the "Live Vehicle Positions" API.

7.8.2 Constructor & Destructor Documentation

7.8.2.1 GpsController()

```
ReadingBusesAPI.VehiclePositions.GpsController.GpsController ( ) [package]
```

Creates a GPS Controller, you should not need to make your own GPS controller, you can get an instance of one via the main '[ReadingBuses](#)' object.

7.8.3 Member Function Documentation

7.8.3.1 GetArchivedVehiclePositions() [1/2]

```
async Task< VehiclePosition[]> ReadingBusesAPI.VehiclePositions.GpsController.GetArchivedVehiclePositions (
    DateTime dateStartTime,
    TimeSpan timeSpan )
```

Gets historic/archived GPS data for buses on a specific date, filtered either by vehicle ID, or all buses without a time period or both. GPS data is not stored for as long as other forms of data you may fail to get data older than a few months.

Parameters

<i>dateStartTime</i>	Vehicle ID Number eg 414
<i>timeSpan</i>	(optional) How long a period do you want data for, you can not get multiple days worth of data. If you ask this your result will be automatically truncated to only the start date to midnight.

Returns

An array of GPS locations at a previous date.

Exceptions

<i>ReadingBusesApiExceptionMalformedQuery</i>	Thrown if, you have not choose a date in the past, or the date is too far in the past and so no data exists. Thrown if you have not filtered by either 'timeSpan' or 'vehicle' ID or both. Thrown if the API key is invalid or expired.
<i>ReadingBusesApiExceptionBadQuery</i>	Thrown if the API responds with an error message.
<i>ReadingBusesApiExceptionCritical</i>	Thrown if the API fails, but provides no reason.

See [GpsController.GetLiveVehiclePositions\(\)](#) to get live data instead.

7.8.3.2 GetArchivedVehiclePositions() [2/2]

```
async Task< VehiclePosition [ ]> ReadingBusesAPI.VehiclePositions.GpsController.GetArchived↵
VehiclePositions (
    DateTime dateStartTime,
    TimeSpan timeSpan,
    string vehicle )
```

Gets historic/archived GPS data for buses on a specific date, filtered either by vehicle ID, or all buses without a time period or both. GPS data is not stored for as long as other forms of data you may fail to get data older than a few months.

Parameters

<i>dateStartTime</i>	Vehicle ID Number eg 414
<i>timeSpan</i>	(optional) How long a period do you want data for, you can not get multiple days worth of data. If you ask this your result will be automatically truncated to only the start date to midnight.
<i>vehicle</i>	(optional) Vehicle ID Number eg 414

Returns

An array of GPS locations at a previous date.

Exceptions

<i>ReadingBusesApiExceptionMalformedQuery</i>	Thrown if, you have not choose a date in the past, or the date is too far in the past and so no data exists. Thrown if you have not filtered by either 'timeSpan' or 'vehicle' ID or both. Thrown if the API key is invalid or expired.
---	---

Exceptions

<i>ReadingBusesApiExceptionBadQuery</i>	Thrown if the API responds with an error message.
<i>ReadingBusesApiExceptionCritical</i>	Thrown if the API fails, but provides no reason.

See [GpsController.GetLiveVehiclePositions\(\)](#) to get live data instead.

7.8.3.3 GetLiveVehiclePosition()

```
async Task< LiveVehiclePosition > ReadingBusesAPI.VehiclePositions.GpsController.GetLive↵
VehiclePosition (
    string vehicle )
```

Gets live GPS data for a single buses matching Vehicle ID number.

Parameters

<i>vehicle</i>	Vehicle ID Number eg 414
----------------	--------------------------

Returns

The GPS point of Vehicle matching your ID provided.

Exceptions

<i>ReadingBusesApiExceptionBadQuery</i>	Thrown if a vehicle of the ID does not exist or is not currently active. You can check by using the 'IsVehicle' function.
---	---

7.8.3.4 GetLiveVehiclePositions()

```
async Task< LiveVehiclePosition[] > ReadingBusesAPI.VehiclePositions.GpsController.GetLive↵
VehiclePositions ( )
```

Gets live GPS data for all buses currently operating.

Returns

An array of GPS locations for all buses operating by Reading Buses currently

Exceptions

<i>ReadingBusesApiExceptionBadQuery</i>	Thrown if the API key is invalid or expired.
<i>ReadingBusesApiExceptionCritical</i>	Thrown if the API fails, but provides no reason.

7.8.3.5 IsVehicle()

```
async Task< bool > ReadingBusesAPI.VehiclePositions.GpsController.IsVehicle (
    string vehicle )
```

Checks if the Vehicle ID Number is currently in service right now.

Parameters

<i>vehicle</i>	Vehicle ID Number eg 414
----------------	--------------------------

Returns

True or False for if the buses GPS can be found or not currently.

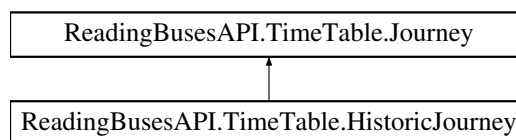
The documentation for this class was generated from the following file:

- ReadingBusesAPI/VehiclePositions/[GPSController.cs](#)

7.9 ReadingBusesAPI.TimeTable.HistoricJourney Class Reference

A historical journey, one that has happened in the past.

Inheritance diagram for ReadingBusesAPI.TimeTable.HistoricJourney:



Public Member Functions

- [HistoricJourney](#) ()

The default constructor, used only for JSON Parsing. Will be made internal when System.Text.Json add support for internal constructors in a future update.

Properties

- string [VehicleCode](#) [get, set]
The vehicle code/id of the bus that operated on this journey.
- new [HistoricVisit](#)[] [Visits](#) [get, set]
An array of timetabled visits contained within this journey.

7.9.1 Detailed Description

A historical journey, one that has happened in the past.

7.9.2 Constructor & Destructor Documentation

7.9.2.1 HistoricJourney()

```
ReadingBusesAPI.TimeTable.HistoricJourney.HistoricJourney ( )
```

The default constructor, used only for JSON Parsing. Will be made internal when System.Text.Json add support for internal constructors in a future update.

7.9.3 Property Documentation

7.9.3.1 VehicleCode

```
string ReadingBusesAPI.TimeTable.HistoricJourney.VehicleCode [get], [set]
```

The vehicle code/id of the bus that operated on this journey.

7.9.3.2 Visits

```
new HistoricVisit [ ] ReadingBusesAPI.TimeTable.HistoricJourney.Visits [get], [set]
```

An array of timetabled visits contained within this journey.

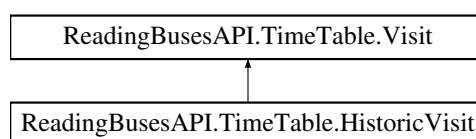
The documentation for this class was generated from the following file:

- ReadingBusesAPI/TimeTable/[HistoricJourney.cs](#)

7.10 ReadingBusesAPI.TimeTable.HistoricVisit Class Reference

Represents a single instance of a bus visiting at a specific bus stop in the past.

Inheritance diagram for ReadingBusesAPI.TimeTable.HistoricVisit:



Public Member Functions

- [HistoricVisit](#) ()
The default constructor, used only for JSON Parsing. Will be made internal when System.Text.Json add support for internal constructors in a future update.
- double [ArrivalLateness](#) ()
How late the bus was to arrive at a bus stop.
- double [DepartureLateness](#) ()
How late the bus was to departure at a bus stop.

Properties

- string [ArrivalStatus](#) [get, set]
- string [DepartureStatus](#) [get, set]
- DateTime? [ActualArrival](#) [get, set]
The Actual Arrival time of the bus at the stop.
- DateTime? [ActualDeparture](#) [get, set]
The Actual Departure time of the bus at the stop.

7.10.1 Detailed Description

Represents a single instance of a bus visiting at a specific bus stop in the past.

7.10.2 Constructor & Destructor Documentation

7.10.2.1 HistoricVisit()

```
ReadingBusesAPI.TimeTable.HistoricVisit.HistoricVisit ( )
```

The default constructor, used only for JSON Parsing. Will be made internal when System.Text.Json add support for internal constructors in a future update.

7.10.3 Member Function Documentation

7.10.3.1 ArrivalLateness()

```
double ReadingBusesAPI.TimeTable.HistoricVisit.ArrivalLateness ( )
```

How late the bus was to arrive at a bus stop.

Returns

The number of seconds the bus was late to arrive by. If no arrival time can be found, 0 is returned.

7.10.3.2 DepartureLateness()

```
double ReadingBusesAPI.TimeTable.HistoricVisit.DepartureLateness ( )
```

How late the bus was to departure at a bus stop.

Returns

The number of seconds the bus was late to departure by. If no departure time can be found, 0 is returned.

7.10.4 Property Documentation

7.10.4.1 ActualArrival

```
DateTime? ReadingBusesAPI.TimeTable.HistoricVisit.ActualArrival [get], [set]
```

The Actual Arrival time of the bus at the stop.

7.10.4.2 ActualDeparture

```
DateTime? ReadingBusesAPI.TimeTable.HistoricVisit.ActualDeparture [get], [set]
```

The Actual Departure time of the bus at the stop.

7.10.4.3 ArrivalStatus

```
string ReadingBusesAPI.TimeTable.HistoricVisit.ArrivalStatus [get], [set]
```

Unsure what these values represent, if you know, please let me know. The Siri Schema states the following classifiers should be present: "onTime" | "early" | "delayed" | "cancelled" | "arrived" | "departed" | "missed" | "noReport" | "notExpected"

7.10.4.4 DepartureStatus

```
string ReadingBusesAPI.TimeTable.HistoricVisit.DepartureStatus [get], [set]
```

Unsure what these values represent, if you know, please let me know. The Siri Schema states the following classifiers should be present: "onTime" | "early" | "delayed" | "cancelled" | "arrived" | "departed" | "missed" | "noReport" | "notExpected"

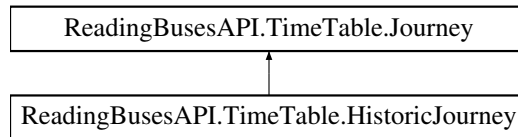
The documentation for this class was generated from the following file:

- ReadingBusesAPI/TimeTable/[HistoricVisit.cs](#)

7.11 ReadingBusesAPI.TimeTable.Journey Class Reference

Represents a journey, which is a grouping of [Visit](#) objects, or a specific service doing one single direction of the route. A timetable for a service is made up of multiple journeys.

Inheritance diagram for ReadingBusesAPI.TimeTable.Journey:



Public Member Functions

- [Journey](#) ()
The default constructor, used only for JSON Parsing. Will be made internal when System.Text.Json add support for internal constructors in a future update.
- [BusService GetService](#) ()
Gets a reference to the service that is associated with this journey.

Properties

- int [Id](#) [get, set]
The unique identifier for a journey.
- [Company Company](#) [get, set]
The bus operator of the service.
- string [ServiceId](#) [get, set]
The name/id for the bus service.
- string [JourneyPattern](#) [get, set]
The JourneyPattern value. This seems unused within the API.
- string [RunningBoard](#) [get, set]
The Running Board ID. A running board refers to the trips that the vehicle will execute that day
- string [Duty](#) [get, set]
The Duty ID, which is a timetable of trips a driver is expected to execute that day.
- string [JourneyCode](#) [get, set]
The Journey Code. Seems to server same purpose as the Id value?
- DateTime [ScheduledStart](#) [get, set]
The Scheduled Start time of the journey. This is normally the time of the first stop visit.
- [Visit\[\] Visits](#) [get, set]
An array of timetabled visits contained within this journey.

7.11.1 Detailed Description

Represents a journey, which is a grouping of [Visit](#) objects, or a specific service doing one single direction of the route. A timetable for a service is made up of multiple journeys.

7.11.2 Constructor & Destructor Documentation

7.11.2.1 Journey()

```
ReadingBusesAPI.TimeTable.Journey.Journey ( )
```

The default constructor, used only for JSON Parsing. Will be made internal when System.Text.Json add support for internal constructors in a future update.

7.11.3 Member Function Documentation

7.11.3.1 GetService()

```
BusService ReadingBusesAPI.TimeTable.Journey.GetService ( )
```

Gets a reference to the service that is associated with this journey.

Returns

Returns a Bus Service object for the associated service. Null if unknown within the API.

7.11.4 Property Documentation

7.11.4.1 Company

```
Company ReadingBusesAPI.TimeTable.Journey.Company [get], [set]
```

The bus operator of the service.

7.11.4.2 Duty

```
string ReadingBusesAPI.TimeTable.Journey.Duty [get], [set]
```

The Duty ID, which is a timetable of trips a driver is expected to execute that day.

7.11.4.3 Id

```
int ReadingBusesAPI.TimeTable.Journey.Id [get], [set]
```

The unique identifier for a journey.

7.11.4.4 JourneyCode

```
string ReadingBusesAPI.TimeTable.Journey.JourneyCode [get], [set]
```

The [Journey](#) Code. Seems to server same purpose as the Id value?

7.11.4.5 JourneyPattern

```
string ReadingBusesAPI.TimeTable.Journey.JourneyPattern [get], [set]
```

The JourneyPattern value. This seems unused within the API.

7.11.4.6 RunningBoard

```
string ReadingBusesAPI.TimeTable.Journey.RunningBoard [get], [set]
```

The Running Board ID. A running board refers to the trips that the vehicle will execute that day

7.11.4.7 ScheduledStart

```
DateTime ReadingBusesAPI.TimeTable.Journey.ScheduledStart [get], [set]
```

The Scheduled Start time of the journey. This is normally the time of the first stop visit.

7.11.4.8 ServiceId

```
string ReadingBusesAPI.TimeTable.Journey.ServiceId [get], [set]
```

The name/id for the bus service.

7.11.4.9 Visits

```
Visit [] ReadingBusesAPI.TimeTable.Journey.Visits [get], [set]
```

An array of timetabled visits contained within this journey.

The documentation for this class was generated from the following file:

- ReadingBusesAPI/TimeTable/[Journey.cs](#)

7.12 ReadingBusesAPI.JourneyDetails.LiveJourneyDetailsApi Class Reference

Contains the logic to call upon the Live Journey Details API.

Static Package Functions

- static async Task< [HistoricJourney](#)[]> [GetLiveJourney](#) ([BusService](#) service, string vehicle)
Calls upon the live journey api, all parameters are optional, null if unknown.

7.12.1 Detailed Description

Contains the logic to call upon the Live Journey Details API.

7.12.2 Member Function Documentation

7.12.2.1 GetLiveJourney()

```
static async Task< HistoricJourney[]> ReadingBusesAPI.JourneyDetails.LiveJourneyDetailsApi.↵
GetLiveJourney (
    BusService service,
    string vehicle ) [static], [package]
```

Calls upon the live journey api, all parameters are optional, null if unknown.

Parameters

<i>service</i>	The bus service to filter by.
<i>vehicle</i>	The vehicle id to filter by.

Returns

The documentation for this class was generated from the following file:

- ReadingBusesAPI/JourneyDetails/[LiveJourneyDetailsApi.cs](#)

7.13 ReadingBusesAPI.JourneyDetails.LiveRecord Class Reference

Used to store information about a buses arrival at a bus stop. Mainly related to the "Stop Predictions" API.

Public Member Functions

- [BusStop GetOriginStop \(\)](#)
Gets the origin bus stop object. Null if unknown.
- [BusStop GetDestinationStop \(\)](#)
Gets the destination bus stop object. Null if unknown.
- [BusService Service \(\)](#)
Returns the related BusService Object for the Bus [LiveRecord](#).
- `async Task< HistoricJourney\[\]> GetLiveJourneyData \(\)`
Gets live journey tracking information for this vehicle.
- `string DisplayTime \(\)`
Returns the number of min till bus is due in a min format.
- `double ArrivalMin \(\)`
Returns the number of min till the bus is due to arrive.

Package Functions

- [LiveRecord \(\)](#)
The default constructor, used for XML parsing.

Static Package Functions

- `static LiveRecord\[\] GetLiveData (string actoCode)`
Gets a list of upcoming arrivals at a specific bus stop. Can throw an exception.

Package Attributes

- `string _destination`
The acto-code for the destination stop.
- `string _origin`
The acto-code for the origin stop.

Properties

- string [ServiceNumber](#) [get, set]
Holds the Service Number for the bus route.
- string [DestinationName](#) [get, set]
Holds the destination for the bus.
- DateTime? [ScheduledDeparture](#) [get, set]
Holds scheduled departure time of the bus at the location.
- DateTime? [ExpectedDeparture](#) [get, set]
Holds the estimated/ expected departure time of the bus, if Null no estimated time exists yet.
- DateTime? [ExpectedArrival](#) [get, set]
Holds the estimated/ expected arrival time of the bus, if Null no estimated time exists yet.
- DateTime? [ScheduledArrival](#) [get, set]
Holds the estimated/ expected arrival time of the bus, if Null no scheduled time exists.
- [Company OperatorCode](#) [get, set]
Holds the operator of the service.
- string [VehicleRef](#) [get, set]
Holds the Vehicles reference ID or number to identify it.

7.13.1 Detailed Description

Used to store information about a buses arrival at a bus stop. Mainly related to the "Stop Predictions" API.

7.13.2 Constructor & Destructor Documentation

7.13.2.1 LiveRecord()

```
ReadingBusesAPI.JourneyDetails.LiveRecord.LiveRecord ( ) [package]
```

The default constructor, used for XML parsing.

7.13.3 Member Function Documentation

7.13.3.1 ArrivalMin()

```
double ReadingBusesAPI.JourneyDetails.LiveRecord.ArrivalMin ( )
```

Returns the number of min till the bus is due to arrive.

Returns

The number of min till the bus is due to arrive.

7.13.3.2 DisplayTime()

```
string ReadingBusesAPI.JourneyDetails.LiveRecord.DisplayTime ( )
```

Returns the number of min till bus is due in a min format.

Returns

The number of min until the bus is due to arrive in string format.

7.13.3.3 GetDestinationStop()

```
BusStop ReadingBusesAPI.JourneyDetails.LiveRecord.GetDestinationStop ( )
```

Gets the destination bus stop object. Null if unknown.

Returns

Bus Stop for where this vehicle is destining.

7.13.3.4 GetLiveData()

```
static LiveRecord[] ReadingBusesAPI.JourneyDetails.LiveRecord.GetLiveData (
    string actoCode ) [static], [package]
```

Gets a list of upcoming arrivals at a specific bus stop. Can throw an exception.

Parameters

<i>actoCode</i>	The Acto-code ID for a specific bus stop.
-----------------	---

Returns

A list of Live Records containing details about upcoming buses.

Exceptions

<i>ReadingBusesApiExceptionMalformedQuery</i>	Thrown if no data is returned from the API.
<i>ReadingBusesApiExceptionBadQuery</i>	Thrown if you have used an invalid or expired API key or an invalid acto-code
<i>ReadingBusesApiExceptionCritical</i>	Thrown if no error message or reasoning for fault is detectable.

7.13.3.5 GetLiveJourneyData()

```
async Task< HistoricJourney[ ]> ReadingBusesAPI.JourneyDetails.LiveRecord.GetLiveJourneyData ( )
```

Gets live journey tracking information for this vehicle.

Returns

The live journey tracing information for this vehicle.

7.13.3.6 GetOriginStop()

```
BusStop ReadingBusesAPI.JourneyDetails.LiveRecord.GetOriginStop ( )
```

Gets the origin bus stop object. Null if unknown.

Returns

Bus Stop for where this vehicle originated from.

7.13.3.7 Service()

```
BusService ReadingBusesAPI.JourneyDetails.LiveRecord.Service ( )
```

Returns the related BusService Object for the Bus [LiveRecord](#).

Returns

Information about the current bus service object.

Exceptions

<i>InvalidOperationException</i>	Can throw an exception if the service does not exists. This is however very unlikely, if this occurs there is an error in the API, not with your code.
----------------------------------	--

7.13.4 Member Data Documentation

7.13.4.1 _destination

```
string ReadingBusesAPI.JourneyDetails.LiveRecord._destination [package]
```


The acto-code for the destination stop.

7.13.4.2 `_origin`

```
string ReadingBusesAPI.JourneyDetails.LiveRecord._origin [package]
```

The acto-code for the origin stop.

7.13.5 Property Documentation

7.13.5.1 `DestinationName`

```
string ReadingBusesAPI.JourneyDetails.LiveRecord.DestinationName [get], [set]
```

Holds the destination for the bus.

7.13.5.2 `ExpectedArrival`

```
DateTime? ReadingBusesAPI.JourneyDetails.LiveRecord.ExpectedArrival [get], [set]
```

Holds the estimated/ expected arrival time of the bus, if Null no estimated time exists yet.

7.13.5.3 `ExpectedDeparture`

```
DateTime? ReadingBusesAPI.JourneyDetails.LiveRecord.ExpectedDeparture [get], [set]
```

Holds the estimated/ expected departure time of the bus, if Null no estimated time exists yet.

7.13.5.4 `OperatorCode`

```
Company ReadingBusesAPI.JourneyDetails.LiveRecord.OperatorCode [get], [set]
```

Holds the operator of the service.

7.13.5.5 ScheduledArrival

```
DateTime? ReadingBusesAPI.JourneyDetails.LiveRecord.ScheduledArrival [get], [set]
```

Holds the estimated/ expected arrival time of the bus, if Null no scheduled time exists.

7.13.5.6 ScheduledDeparture

```
DateTime? ReadingBusesAPI.JourneyDetails.LiveRecord.ScheduledDeparture [get], [set]
```

Holds scheduled departure time of the bus at the location.

7.13.5.7 ServiceNumber

```
string ReadingBusesAPI.JourneyDetails.LiveRecord.ServiceNumber [get], [set]
```

Holds the Service Number for the bus route.

7.13.5.8 VehicleRef

```
string ReadingBusesAPI.JourneyDetails.LiveRecord.VehicleRef [get], [set]
```

Holds the Vehicles reference ID or number to identify it.

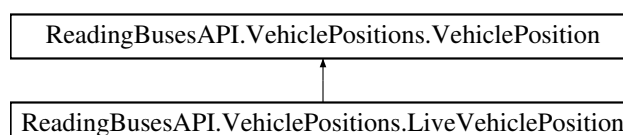
The documentation for this class was generated from the following file:

- ReadingBusesAPI/JourneyDetails/[LiveRecord.cs](#)

7.14 ReadingBusesAPI.VehiclePositions.LiveVehiclePosition Class Reference

A live GPS vehicle position record.

Inheritance diagram for ReadingBusesAPI.VehiclePositions.LiveVehiclePosition:



Public Member Functions

- [LiveVehiclePosition](#) ()
The default constructor, used only for JSON Parsing. Will be made internal when System.Text.Json add support for internal constructors in a future update.
- [BusService](#) [GetService](#) ()
Gets a reference to the service that is associated with this vehicle.
- async Task< [HistoricJourney](#)[] > [GetLiveJourneyData](#) ()
Gets live journey tracking information for this vehicle.

Properties

- string [ServiceId](#) [get, set]
Holds the Service Number for the bus route.

7.14.1 Detailed Description

A live GPS vehicle position record.

7.14.2 Constructor & Destructor Documentation

7.14.2.1 LiveVehiclePosition()

```
ReadingBusesAPI.VehiclePositions.LiveVehiclePosition.LiveVehiclePosition ( )
```

The default constructor, used only for JSON Parsing. Will be made internal when System.Text.Json add support for internal constructors in a future update.

7.14.3 Member Function Documentation

7.14.3.1 GetLiveJourneyData()

```
async Task< HistoricJourney[] > ReadingBusesAPI.VehiclePositions.LiveVehiclePosition.GetLive↵  
JourneyData ( )
```

Gets live journey tracking information for this vehicle.

Returns

The live journey tracing information for this vehicle.

7.14.3.2 GetService()

```
BusService ReadingBusesAPI.VehiclePositions.LiveVehiclePosition.GetService ( )
```

Gets a reference to the service that is associated with this vehicle.

Returns

Returns a Bus Service object for the associated service. Null if unknown within the API.

7.14.4 Property Documentation

7.14.4.1 ServiceId

```
string ReadingBusesAPI.VehiclePositions.LiveVehiclePosition.ServiceId [get], [set]
```

Holds the Service Number for the bus route.

The documentation for this class was generated from the following file:

- ReadingBusesAPI/VehiclePositions/[LiveVehiclePosition.cs](#)

7.15 ReadingBusesAPI.BusStops.Locations Class Reference

This classes simply gets all the buses stops visited by Reading Buses, by interfacing with the "List Of Bus Stops" API.

Package Functions

- `async Task< Dictionary< string, BusStop > > FindLocations ()`
Finds all the bus stops visited by Reading Buses.

7.15.1 Detailed Description

This classes simply gets all the buses stops visited by Reading Buses, by interfacing with the "List Of Bus Stops" API.

7.15.2 Member Function Documentation

7.15.2.1 FindLocations()

```
async Task< Dictionary< string, BusStop > > ReadingBusesAPI.BusStops.Locations.FindLocations  
( ) [package]
```

Finds all the bus stops visited by Reading Buses.

Exceptions

<i>InvalidOperationException</i>	Thrown if an invalid or expired API Key is used.
----------------------------------	--

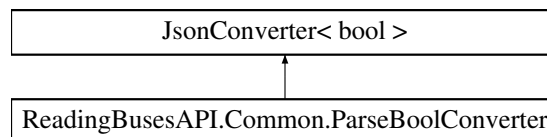
The documentation for this class was generated from the following file:

- ReadingBusesAPI/BusStops/[Locations.cs](#)

7.16 ReadingBusesAPI.Common.ParseBoolConverter Class Reference

Converts a datetime value between its JSON representation and the object.

Inheritance diagram for ReadingBusesAPI.Common.ParseBoolConverter:



Public Member Functions

- override bool [Read](#) (ref Utf8JsonReader reader, Type typeToConvert, JsonSerializerOptions options)
- override void [Write](#) (Utf8JsonWriter writer, bool value, JsonSerializerOptions options)

7.16.1 Detailed Description

Converts a datetime value between its JSON representation and the object.

7.16.2 Member Function Documentation

7.16.2.1 Read()

```
override bool ReadingBusesAPI.Common.ParseBoolConverter.Read (  
    ref Utf8JsonReader reader,  
    Type typeToConvert,  
    JsonSerializerOptions options )
```

7.16.2.2 Write()

```
override void ReadingBusesAPI.Common.ParseBoolConverter.Write (
    Utf8JsonWriter writer,
    bool value,
    JsonSerializerOptions options )
```

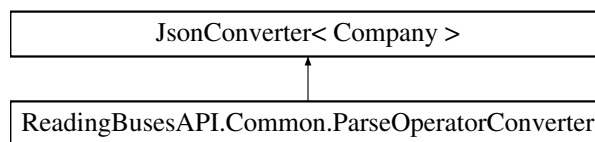
The documentation for this class was generated from the following file:

- [ReadingBusesAPI/Common/JSONConverters.cs](#)

7.17 ReadingBusesAPI.Common.ParseOperatorConverter Class Reference

Converts a string short code for an Operator into an Operator Enum and back again for the JSON converter.

Inheritance diagram for ReadingBusesAPI.Common.ParseOperatorConverter:



Public Member Functions

- override [Company Read](#) (ref Utf8JsonReader reader, Type typeToConvert, JsonSerializerOptions options)
- override void [Write](#) (Utf8JsonWriter writer, [Company](#) value, JsonSerializerOptions options)

7.17.1 Detailed Description

Converts a string short code for an Operator into an Operator Enum and back again for the JSON converter.

7.17.2 Member Function Documentation

7.17.2.1 Read()

```
override Company ReadingBusesAPI.Common.ParseOperatorConverter.Read (
    ref Utf8JsonReader reader,
    Type typeToConvert,
    JsonSerializerOptions options )
```

7.17.2.2 Write()

```
override void ReadingBusesAPI.Common.ParseOperatorConverter.Write (
    Utf8JsonWriter writer,
    Company value,
    JsonSerializerOptions options )
```

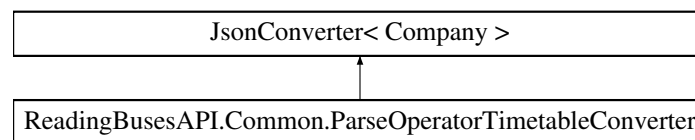
The documentation for this class was generated from the following file:

- [ReadingBusesAPI/Common/JSONConverters.cs](#)

7.18 ReadingBusesAPI.Common.ParseOperatorTimetableConverter Class Reference

Converts a string short code for an Operator into an Operator Enum and back again for the JSON converter.

Inheritance diagram for ReadingBusesAPI.Common.ParseOperatorTimetableConverter:



Public Member Functions

- override [Company Read](#) (ref Utf8JsonReader reader, Type typeToConvert, JsonSerializerOptions options)
- override void [Write](#) (Utf8JsonWriter writer, [Company](#) value, JsonSerializerOptions options)

7.18.1 Detailed Description

Converts a string short code for an Operator into an Operator Enum and back again for the JSON converter.

7.18.2 Member Function Documentation

7.18.2.1 Read()

```
override Company ReadingBusesAPI.Common.ParseOperatorTimetableConverter.Read (
    ref Utf8JsonReader reader,
    Type typeToConvert,
    JsonSerializerOptions options )
```

7.18.2.2 Write()

```
override void ReadingBusesAPI.Common.ParseOperatorTimetableConverter.Write (
    Utf8JsonWriter writer,
    Company value,
    JsonSerializerOptions options )
```

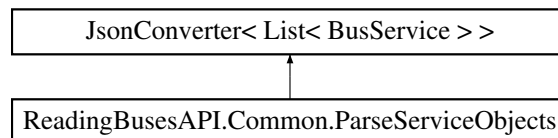
The documentation for this class was generated from the following file:

- [ReadingBusesAPI/Common/JSONConverters.cs](#)

7.19 ReadingBusesAPI.Common.ParseServiceObjects Class Reference

Converts a string short code for an Operator into an Operator Enum and back again for the JSON converter.

Inheritance diagram for ReadingBusesAPI.Common.ParseServiceObjects:



Public Member Functions

- override List< [BusService](#) > [Read](#) (ref Utf8JsonReader reader, Type typeToConvert, JsonSerializerOptions options)
- override void [Write](#) (Utf8JsonWriter writer, List< [BusService](#) > value, JsonSerializerOptions options)

7.19.1 Detailed Description

Converts a string short code for an Operator into an Operator Enum and back again for the JSON converter.

7.19.2 Member Function Documentation

7.19.2.1 Read()

```
override List< BusService > ReadingBusesAPI.Common.ParseServiceObjects.Read (
    ref Utf8JsonReader reader,
    Type typeToConvert,
    JsonSerializerOptions options )
```


7.19.2.2 Write()

```
override void ReadingBusesAPI.Common.ParseServiceObjects.Write (
    Utf8JsonWriter writer,
    List< BusService > value,
    JsonSerializerOptions options )
```

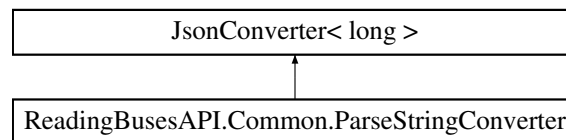
The documentation for this class was generated from the following file:

- ReadingBusesAPI/Common/[JSONConverters.cs](#)

7.20 ReadingBusesAPI.Common.ParseStringConverter Class Reference

Converts a string into a long and back again for the JSON converter.

Inheritance diagram for ReadingBusesAPI.Common.ParseStringConverter:



Public Member Functions

- override long [Read](#) (ref Utf8JsonReader reader, Type typeToConvert, JsonSerializerOptions options)
- override void [Write](#) (Utf8JsonWriter writer, long value, JsonSerializerOptions options)

7.20.1 Detailed Description

Converts a string into a long and back again for the JSON converter.

7.20.2 Member Function Documentation

7.20.2.1 Read()

```
override long ReadingBusesAPI.Common.ParseStringConverter.Read (
    ref Utf8JsonReader reader,
    Type typeToConvert,
    JsonSerializerOptions options )
```

7.20.2.2 Write()

```
override void ReadingBusesAPI.Common.ParseStringConverter.Write (
    Utf8JsonWriter writer,
    long value,
    JsonSerializerOptions options )
```

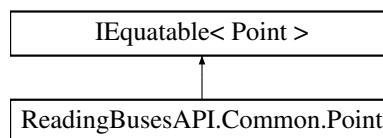
The documentation for this class was generated from the following file:

- [ReadingBusesAPI/Common/JSONConverters.cs](#)

7.21 ReadingBusesAPI.Common.Point Struct Reference

Stores an X and Y Position simply.

Inheritance diagram for ReadingBusesAPI.Common.Point:



Public Member Functions

- [Point](#) (double x, double y)
Default constructor
- override string [ToString](#) ()
Converts point to string representation.
- override int [GetHashCode](#) ()
Generates a unique number for each [Point](#) Object.
- override bool [Equals](#) (object obj)
Checks if two point objects are the same or not.
- bool [Equals](#) ([Point](#) other)
Implements logic for checking if two objects are equal.

Static Public Member Functions

- static bool [operator==](#) ([Point](#) point1, [Point](#) point2)
Checks if two objects are the same.
- static bool [operator!=](#) ([Point](#) point1, [Point](#) point2)
Checks if two objects are the not the same.

Properties

- double [X](#) [get]
The X value.
- double [Y](#) [get]
The Y Value.

7.21.1 Detailed Description

Stores an X and Y Position simply.

7.21.2 Constructor & Destructor Documentation

7.21.2.1 Point()

```
ReadingBusesAPI.Common.Point.Point (
    double x,
    double y )
```

Default constructor

Parameters

<i>x</i>	X value of Point .
<i>y</i>	Y value of Point .

7.21.3 Member Function Documentation

7.21.3.1 Equals() [1/2]

```
override bool ReadingBusesAPI.Common.Point.Equals (
    object obj )
```

Checks if two point objects are the same or not.

Parameters

<i>obj</i>	Another object to compare against this object.
------------	--

Returns

Is it the same object or not.

7.21.3.2 Equals() [2/2]

```
bool ReadingBusesAPI.Common.Point.Equals (
    Point other )
```

Implements logic for checking if two objects are equal.

Parameters

<i>other</i>	The other object to check if equal.
--------------	-------------------------------------

Returns

True if equals else false.

7.21.3.3 GetHashCode()

```
override int ReadingBusesAPI.Common.Point.GetHashCode ( )
```

Generates a unique number for each [Point](#) Object.

Returns

Int value of object.

7.21.3.4 operator"!=()"

```
static bool ReadingBusesAPI.Common.Point.operator!= (
    Point point1,
    Point point2 ) [static]
```

Checks if two objects are the not the same.

Parameters

<i>point1</i>	First Point Object.
<i>point2</i>	Second Point Object.

Returns

True if they are not the same.

7.21.3.5 operator"==()"

```
static bool ReadingBusesAPI.Common.Point.operator== (
    Point point1,
    Point point2 ) [static]
```

Checks if two objects are the same.

Parameters

<i>point1</i>	First Point Object.
<i>point2</i>	Second Point Object.

Returns

True if equal else false

7.21.3.6 ToString()

```
override string ReadingBusesAPI.Common.Point.ToString ( )
```

Converts point to string representation.

Returns

[Point](#) as a string.

7.21.4 Property Documentation**7.21.4.1 X**

```
double ReadingBusesAPI.Common.Point.X [get]
```

The X value.

7.21.4.2 Y

```
double ReadingBusesAPI.Common.Point.Y [get]
```

The Y Value.

The documentation for this struct was generated from the following file:

- [ReadingBusesAPI/Common/Point.cs](#)

7.22 ReadingBusesAPI.ReadingBuses Class Reference

This is the main class for the library, here you can initialise a singleton instance and then query and use the Reading Buses API.

Public Member Functions

- [BusStop GetLocation](#) (string actoCode)
Get a bus stop location based upon a bus stops location code
- [BusStop\[\] GetLocations](#) ()
All the bus stop locations that Reading Buses Visits
- bool [IsLocation](#) (string actoCode)
Checks to see if the acto code for the bus stop exists in the API feed or not.
- [BusService\[\] GetServices](#) ()
All the Services Reading Buses Operates
- [BusService\[\] GetServices](#) (string brandName)
Returns all services Reading Buses Operates under a brand name, for example "pink" would return "22,25,27,29" services.
- [BusService\[\] GetServices](#) (Company operatorCode)
Returns all services Reading Buses Operates under a specific operator.
- [BusService\[\] GetService](#) (string serviceNumber)
Returns a service which matches the Service Number passed, because the Reading Buses API now supports, Kennections and Newbury and District a service number can no longer be considered unique.
- [BusService GetService](#) (string serviceNumber, Company operators)
Returns a service which matches the Service Number passed and the bus operator.
- bool [IsService](#) (string serviceNumber)
Checks to see if a service of that number exists or not in the API feed.
- bool [IsService](#) (string serviceNumber, Company operators)
Checks to see if a service of that number exists or not in the API feed, for a specific bus operator.
- Task< [HistoricJourney\[\]](#)> [GetVehicleTrackingHistory](#) (DateTime date, string vehicle)
Gets the archived real bus departure and arrival times along with their time table history for a specific vehicle, on a specific date. This can be used to find how late a vehicle was throughout that day.

Static Public Member Functions

- static void [SetCache](#) (bool value)
Sets if you want to cache services and stop data into local files or always get new data from the API, which will take longer. This cache data will be kept for a specific cache length before being regenerated.
- static void [SetArchiveCache](#) (bool value)
Sets if you want to cache historical/archive timetable and location data into local files or always get new data from the API, which will take longer. This data would never change as is historical, recommended to keep true (default), unless space is an issue.
- static void [SetDebugging](#) (bool value)
Sets if you want to debug the library by making requests to a dummy server instead of the real live sever.
- static void [SetWarning](#) (bool value)
Sets if you want to print out warning messages to the console screen or not. Only done so in debug.
- static void [SetFullError](#) (bool value)
Sets if you want to print out the full error logs to console, only needed for debugging library errors. Only done so in debug.
- static void [SetCacheValidityLength](#) (int days)
Sets how long to keep Cache data for before invalidating it and getting new data.
- static void [InvalidateCache](#) ()
Deletes any Cache data stored, Cache data is deleted automatically after a number of days, use this only if you need to force new data early.
- static void [InvalidateArchiveCache](#) ()
Deletes any archived Cache data stored. This is Historical timetable, journey and gps tracking data. Any data which would not change if re-requested.

- static async Task< [ReadingBuses](#) > [Initialise](#) (string apiKey)

Used to initially initialise the [ReadingBuses](#) Object, it is recommended you do this in your programs start up.

- static [ReadingBuses](#) [GetInstance](#) ()

You will never need more than one [ReadingBuses](#) object, a singleton is used to ensure you always get the same instance.

Static Package Functions

- static void [PrintWarning](#) (string message)

Internal method for printing warning messages to the console screen. Only done so in debug.

- static void [PrintFullErrorLogs](#) (string message)

Internal method for printing warning messages to the console screen. Only done so in debug.

- static [Company](#) [GetOperatorE](#) (string operatorCodeS)

Converts the short hand code for an operator into its Enum value, for example RGB stands for Reading Buses.

Properties

- static bool [Debugging](#) [get]

Keeps track of if cache data is being used or not

- static bool [Cache](#) = true [get]

Keeps track of if cache data is being used or not

- static bool [ArchiveCache](#) = true [get]

Keeps track of if archived timetable & GPS cache data is being used or not

- static bool [Warning](#) = true [get]

Keeps track of if warnings are being outputted to console or not.

- static bool [FullError](#) [get]

Keeps track of if full error logs are being outputted to console or not.

- static int [CacheValidityLength](#) = 7 [get]

Stores how many days cache data is valid for in days before being regenerated

- static string [ApiKey](#) [get]

Holds the users API Key.

- [GpsController](#) [GpsController](#) [get]

Stores the GPS controller, which can help get vehicle GPS data.

7.22.1 Detailed Description

This is the main class for the library, here you can initialise a singleton instance and then query and use the Reading Buses API.

```
//Optional
ReadingBuses.SetCache(true);
ReadingBuses Controller = await ReadingBuses.Initialise("API KEY HERE");
BusService service = Controller.GetService("17"); or ReadingBuses.GetInstance().GetService("17");
```

Cached Data is data stored locally in JSON and XML files, stored in a hidden folder called "cache", in the same directory the program is executed from. This is a copy of the results from an API call, such as the bus services and bus stops, because it is unlikely for this data to change regularly. By default the cached data will be updated every 7 days, but you can request new data or disable cache if you wish. Caching data is however faster as you do not need to keep making API requests for data likely to be the same.

7.22.2 Member Function Documentation

7.22.2.1 GetInstance()

```
static ReadingBuses ReadingBusesAPI.ReadingBuses.GetInstance ( ) [static]
```

You will never need more than one [ReadingBuses](#) object, a singleton is used to ensure you always get the same instance.

Returns

Returns the [ReadingBuses](#) object to be used throughout your program.

Exceptions

<i>InvalidOperationException</i>	Thrown if you attempt to get an instance before you have called the "Initialise" function.
----------------------------------	--

See [ReadingBuses.Initialise\(string\)](#) to initially initialise the [ReadingBuses](#) Object singleton.

7.22.2.2 GetLocation()

```
BusStop ReadingBusesAPI.ReadingBuses.GetLocation (
    string actoCode )
```

Get a bus stop location based upon a bus stops location code

Parameters

<i>actoCode</i>	The code of the bus stop
-----------------	--------------------------

Returns

A Bus Stop object for the Acto Code specified.

Exceptions

<i>ReadingBusesApiExceptionMalformedQuery</i>	Thrown if the bus stop does not exist. You should first check with 'IsLocation' If there is any uncertainty.
---	--

See [ReadingBuses.IsLocation\(string\)](#) to check if it is a location.

7.22.2.3 GetLocations()

```
BusStop [ ] ReadingBusesAPI.ReadingBuses.GetLocations ( )
```

All the bus stop locations that Reading Buses Visits

Returns

All the bus stops Reading Buses visits

7.22.2.4 GetOperatorE()

```
static Company ReadingBusesAPI.ReadingBuses.GetOperatorE (
    string operatorCodeS ) [static], [package]
```

Converts the short hand code for an operator into its Enum value, for example RGB stands for Reading Buses.

Parameters

<i>operatorCodeS</i>	
----------------------	--

Returns

The Enum equivalent of the bus operator short code.

7.22.2.5 GetService() [1/2]

```
BusService[] ReadingBusesAPI.ReadingBuses.GetService (
    string serviceNumber )
```

Returns a service which matches the Service Number passed, because the Reading Buses API now supports, Kennections and Newbury and District a service number can no longer be considered unique.

Parameters

<i>serviceNumber</i>	The service number/ID for the service you wish to be returned eg: 17 or 22.
----------------------	---

Returns

The services matching the ID.

Exceptions

<i>ReadingBusesApiExceptionMalformedQuery</i>	Thrown if the bus services does not exist. You should first check with 'IsService' If there is any uncertainty.
---	---

See [ReadingBuses.IsService\(string\)](#) to check if it is a service.

7.22.2.6 GetService() [2/2]

```
BusService ReadingBusesAPI.ReadingBuses.GetService (
    string serviceNumber,
    Company operators )
```

Returns a service which matches the Service Number passed and the bus operator.

Parameters

<i>serviceNumber</i>	The service number/ID for the service you wish to be returned eg: 17 or 22.
<i>operators</i>	The bus operator to search in, for example "ReadingBuses"

Returns

The services matching the ID.

Exceptions

<i>ReadingBusesApiExceptionMalformedQuery</i>	Thrown if the bus services does not exist. You should first check with 'IsService' If there is any uncertainty.
---	---

See [ReadingBuses.IsService\(string\)](#) to check if it is a service.

7.22.2.7 GetServices() [1/3]

```
BusService[] ReadingBusesAPI.ReadingBuses.GetServices ( )
```

All the Services Reading Buses Operates

Returns

All the Services Reading Buses Operates

7.22.2.8 GetServices() [2/3]

```
BusService[] ReadingBusesAPI.ReadingBuses.GetServices (
    Company operatorCode )
```

Returns all services Reading Buses Operates under a specific operator.

Parameters

<i>operatorCode</i>	The operator/ company to filter by.
---------------------	-------------------------------------

Returns

An array of Bus Services which are of the brand name specified.

7.22.2.9 GetServices() [3/3]

```
BusService[] ReadingBusesAPI.ReadingBuses.GetServices (
    string brandName )
```

Returns all services Reading Buses Operates under a brand name, for example "pink" would return "22,25,27,29" services.

Parameters

<i>brandName</i>	The brand name for the services you wish to find, eg "pink" or "sky blue".
------------------	--

Returns

An array of Bus Services which are of the brand name specified.

7.22.2.10 GetVehicleTrackingHistory()

```
Task< HistoricJourney[] > ReadingBusesAPI.ReadingBuses.GetVehicleTrackingHistory (
    DateTime date,
    string vehicle )
```

Gets the archived real bus departure and arrival times along with their time table history for a specific vehicle, on a specific date. This can be used to find how late a vehicle was throughout that day.

Parameters

<i>date</i>	The date you want a report for, must be in the past.
<i>vehicle</i>	The vehicle ID number

Returns

An array of Archived Bus Departure and arrival times with their timetabled data.

Exceptions

<i>ReadingBusesApiExceptionMalformedQuery</i>	If you have tried to get data for a date in the future. Or if you have not provided any date, and/or you have not provided at least either the service or location or vehicle.
<i>ReadingBusesApiExceptionBadQuery</i>	Thrown if the API responds with an error message.
<i>ReadingBusesApiExceptionCritical</i>	Thrown if the API fails, but provides no reason.

7.22.2.11 Initialise()

```
static async Task< ReadingBuses > ReadingBusesAPI.ReadingBuses.Initialise (
    string apiKey ) [static]
```

Used to initially initialise the [ReadingBuses](#) Object, it is recommended you do this in your programs start up.

Parameters

<i>apiKey</i>	The Reading Buses API Key, get your own from https://reading-odata.r2p.com/
---------------	--

Returns

An instance of the library controller. This same instance can be got by calling the "GetInstance" method.

Exceptions

<i>ReadingBusesApiExceptionBadQuery</i>	Can throw an exception if you pass an invalid or expired API Key.
---	---

See [ReadingBuses.GetInstance\(\)](#) to get any future instances afterwards.

7.22.2.12 InvalidateArchiveCache()

```
static void ReadingBusesAPI.ReadingBuses.InvalidateArchiveCache ( ) [static]
```

Deletes any archived Cache data stored. This is Historical timetable, journey and gps tracking data. Any data which would not change if re-requested.

7.22.2.13 InvalidateCache()

```
static void ReadingBusesAPI.ReadingBuses.InvalidateCache ( ) [static]
```

Deletes any Cache data stored, Cache data is deleted automatically after a number of days, use this only if you need to force new data early.

7.22.2.14 IsLocation()

```
bool ReadingBusesAPI.ReadingBuses.IsLocation (
    string actoCode )
```

Checks to see if the acto code for the bus stop exists in the API feed or not.

Parameters

<i>actCode</i>	The ID Code for a bus stop.
----------------	-----------------------------

Returns

True or False depending on if the stop is in the API feed or not.

7.22.2.15 IsService() [1/2]

```
bool ReadingBusesAPI.ReadingBuses.IsService (
    string serviceName )
```

Checks to see if a service of that number exists or not in the API feed.

Parameters

<i>serviceName</i>	The service number to find.
--------------------	-----------------------------

Returns

True or False for if a service is the API feed or not.

7.22.2.16 IsService() [2/2]

```
bool ReadingBusesAPI.ReadingBuses.IsService (
    string serviceName,
    Company operators )
```

Checks to see if a service of that number exists or not in the API feed, for a specific bus operator.

Parameters

<i>serviceName</i>	The service number to find.
<i>operators</i>	The specific bus operator you want to search in.

Returns

True or False for if a service is the API feed or not.

7.22.2.17 PrintFullErrorLogs()

```
static void ReadingBusesAPI.ReadingBuses.PrintFullErrorLogs (
    string message ) [static], [package]
```

Internal method for printing warning messages to the console screen. Only done so in debug.

Parameters

<i>message</i>	The message to print off to console.
----------------	--------------------------------------

7.22.2.18 PrintWarning()

```
static void ReadingBusesAPI.ReadingBuses.PrintWarning (
    string message ) [static], [package]
```

Internal method for printing warning messages to the console screen. Only done so in debug.

Parameters

<i>message</i>	The message to print off to console.
----------------	--------------------------------------

7.22.2.19 SetArchiveCache()

```
static void ReadingBusesAPI.ReadingBuses.SetArchiveCache (
    bool value ) [static]
```

Sets if you want to cache historical/archive timetable and location data into local files or always get new data from the API, which will take longer. This data would never change as is historical, recommended to keep true (default), unless space is an issue.

Parameters

<i>value</i>	True (default) or False for if you want to get Cache or live data.
--------------	--

Exceptions

<i>ReadingBusesApiExceptionMalformedQuery</i>	Thrown if you attempt to change the cache options after the library has been instantiated
---	---

7.22.2.20 SetCache()

```
static void ReadingBusesAPI.ReadingBuses.SetCache (
    bool value ) [static]
```

Sets if you want to cache services and stop data into local files or always get new data from the API, which will take longer. This cache data will be kept for a specific cache length before being regenerated.

Parameters

<i>value</i>	True (default) or False for if you want to get Cache or live data.
--------------	--

Exceptions

<i>ReadingBusesApiExceptionMalformedQuery</i>	Thrown if you attempt to change the cache options after the library has been instantiated
---	---

7.22.2.21 SetCacheValidityLength()

```
static void ReadingBusesAPI.ReadingBuses.SetCacheValidityLength (
    int days ) [static]
```

Sets how long to keep Cache data for before invalidating it and getting new data.

Parameters

<i>days</i>	The number of days to store the cache data for before getting new data.
-------------	---

7.22.2.22 SetDebugging()

```
static void ReadingBusesAPI.ReadingBuses.SetDebugging (
    bool value ) [static]
```

Sets if you want to debug the library by making requests to a dummy server instead of the real live sever.

Parameters

<i>value</i>	True or False for if you want to debug or not.
--------------	--

Unless you are developing or editing library in some way you should not need to use this.

7.22.2.23 SetFullError()

```
static void ReadingBusesAPI.ReadingBuses.SetFullError (
```



```
bool value ) [static]
```

Sets if you want to print out the full error logs to console, only needed for debugging library errors. Only done so in debug.

Parameters

<i>value</i>	True or False for printing full error logs to console.
--------------	--

7.22.2.24 SetWarning()

```
static void ReadingBusesAPI.ReadingBuses.SetWarning (  
    bool value ) [static]
```

Sets if you want to print out warning messages to the console screen or not. Only done so in debug.

Parameters

<i>value</i>	True or False for printing warning messages.
--------------	--

7.22.3 Property Documentation

7.22.3.1 ApiKey

```
string ReadingBusesAPI.ReadingBuses.ApiKey [static], [get], [package]
```

Holds the users API Key.

7.22.3.2 ArchiveCache

```
bool ReadingBusesAPI.ReadingBuses.ArchiveCache = true [static], [get], [package]
```

Keeps track of if archived timetable & GPS cache data is being used or not

7.22.3.3 Cache

```
bool ReadingBusesAPI.ReadingBuses.Cache = true [static], [get], [package]
```

Keeps track of if cache data is being used or not

7.22.3.4 CacheValidityLength

```
int ReadingBusesAPI.ReadingBuses.CacheValidityLength = 7 [static], [get], [package]
```

Stores how many days cache data is valid for in days before being regenerated

7.22.3.5 Debugging

```
bool ReadingBusesAPI.ReadingBuses.Debugging [static], [get], [package]
```

Keeps track of if cache data is being used or not

7.22.3.6 FullError

```
bool ReadingBusesAPI.ReadingBuses.FullError [static], [get], [package]
```

Keeps track of if full error logs are being outputted to console or not.

7.22.3.7 GpsController

```
GpsController ReadingBusesAPI.ReadingBuses.GpsController [get]
```

Stores the GPS controller, which can help get vehicle GPS data.

7.22.3.8 Warning

```
bool ReadingBusesAPI.ReadingBuses.Warning = true [static], [get], [package]
```

Keeps track of if warnings are being outputted to console or not.

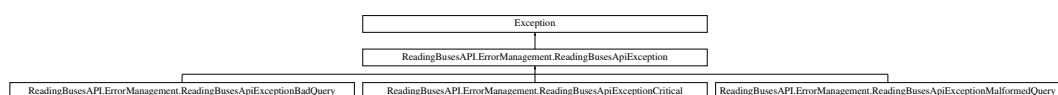
The documentation for this class was generated from the following file:

- [ReadingBusesAPI/ReadingBuses.cs](#)

7.23 ReadingBusesAPI.ErrorManagement.ReadingBusesApiException Class Reference

Stores the basic/base type of Exception which can be thrown by the API.

Inheritance diagram for ReadingBusesAPI.ErrorManagement.ReadingBusesApiException:



Package Functions

- [ReadingBusesApiException](#) ()
- [ReadingBusesApiException](#) (string content)
- [ReadingBusesApiException](#) (string message, Exception innerException)

7.23.1 Detailed Description

Stores the basic/base type of Exception which can be thrown by the API.

7.23.2 Constructor & Destructor Documentation

7.23.2.1 ReadingBusesApiException() [1/3]

```
ReadingBusesAPI.ErrorManagement.ReadingBusesApiException.ReadingBusesApiException ( ) [package]
```

7.23.2.2 ReadingBusesApiException() [2/3]

```
ReadingBusesAPI.ErrorManagement.ReadingBusesApiException.ReadingBusesApiException (
    string content ) [package]
```

7.23.2.3 ReadingBusesApiException() [3/3]

```
ReadingBusesAPI.ErrorManagement.ReadingBusesApiException.ReadingBusesApiException (
    string message,
    Exception innerException ) [package]
```

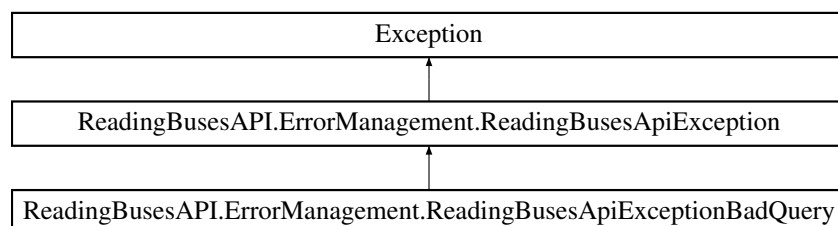
The documentation for this class was generated from the following file:

- ReadingBusesAPI/ErrorManagement/[ReadingBusesApiException.cs](#)

7.24 ReadingBusesAPI.ErrorManagement.ReadingBusesApiExceptionBadQuery Class Reference ↩

An exception type which is used when the API returns back an error message. Most likely due to an invalid request such as asking for data that does not exist.

Inheritance diagram for ReadingBusesAPI.ErrorManagement.ReadingBusesApiExceptionBadQuery:



Package Functions

- [ReadingBusesApiExceptionBadQuery](#) ([ErrorFormat](#) content)
- [ReadingBusesApiExceptionBadQuery](#) (string content)
- [ReadingBusesApiExceptionBadQuery](#) (string message, Exception innerException)

7.24.1 Detailed Description

An exception type which is used when the API returns back an error message. Most likely due to an invalid request such as asking for data that does not exist.

7.24.2 Constructor & Destructor Documentation

7.24.2.1 [ReadingBusesApiExceptionBadQuery\(\)](#) [1/3]

```
ReadingBusesAPI.ErrorManagement.ReadingBusesApiExceptionBadQuery.ReadingBusesApiExceptionBadQuery (
    ErrorFormat content ) [package]
```

7.24.2.2 [ReadingBusesApiExceptionBadQuery\(\)](#) [2/3]

```
ReadingBusesAPI.ErrorManagement.ReadingBusesApiExceptionBadQuery.ReadingBusesApiExceptionBadQuery (
    string content ) [package]
```

7.24.2.3 [ReadingBusesApiExceptionBadQuery\(\)](#) [3/3]

```
ReadingBusesAPI.ErrorManagement.ReadingBusesApiExceptionBadQuery.ReadingBusesApiExceptionBadQuery (
    string message,
    Exception innerException ) [package]
```

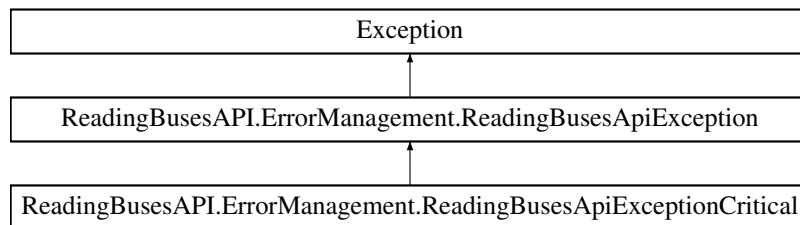
The documentation for this class was generated from the following file:

- ReadingBusesAPI/ErrorManagement/[ReadingBusesApiExceptionBadQuery.cs](#)

7.25 ReadingBusesAPI.ErrorManagement.ReadingBusesApiExceptionCritical Class Reference

An exception type which is thrown when the cause of the error is unknown.

Inheritance diagram for ReadingBusesAPI.ErrorManagement.ReadingBusesApiExceptionCritical:



Package Functions

- [ReadingBusesApiExceptionCritical](#) ()
- [ReadingBusesApiExceptionCritical](#) (string message)
- [ReadingBusesApiExceptionCritical](#) (string message, Exception innerException)

7.25.1 Detailed Description

An exception type which is thrown when the cause of the error is unknown.

7.25.2 Constructor & Destructor Documentation

7.25.2.1 ReadingBusesApiExceptionCritical() [1/3]

```
ReadingBusesAPI.ErrorManagement.ReadingBusesApiExceptionCritical.ReadingBusesApiExceptionCritical ( ) [package]
```

7.25.2.2 ReadingBusesApiExceptionCritical() [2/3]

```
ReadingBusesAPI.ErrorManagement.ReadingBusesApiExceptionCritical.ReadingBusesApiExceptionCritical (
    string message ) [package]
```

7.25.2.3 ReadingBusesApiExceptionCritical() [3/3]

```
ReadingBusesAPI.ErrorManagement.ReadingBusesApiExceptionCritical.ReadingBusesApiException↵
Critical (
    string message,
    Exception innerException ) [package]
```

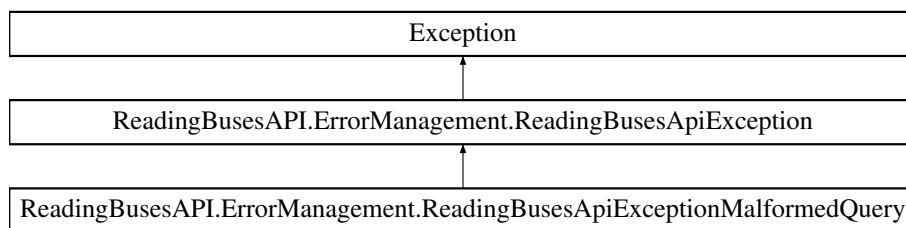
The documentation for this class was generated from the following file:

- ReadingBusesAPI/ErrorManagement/[ReadingBusesApiExceptionCritical.cs](#)

7.26 ReadingBusesAPI.ErrorManagement.ReadingBusesApiException↵ MalformedQuery Class Reference

An exception type which is used when the user asks to make a invalid API call This is would be thrown during checks done before even directly calling upon the web API. For example if you have not filtered by at least one property when required too.

Inheritance diagram for ReadingBusesAPI.ErrorManagement.ReadingBusesApiExceptionMalformedQuery:



Package Functions

- [ReadingBusesApiExceptionMalformedQuery](#) (string content)
- [ReadingBusesApiExceptionMalformedQuery](#) (string message, Exception innerException)

7.26.1 Detailed Description

An exception type which is used when the user asks to make a invalid API call This is would be thrown during checks done before even directly calling upon the web API. For example if you have not filtered by at least one property when required too.

7.26.2 Constructor & Destructor Documentation

7.26.2.1 ReadingBusesApiExceptionMalformedQuery() [1/2]

```
ReadingBusesAPI.ErrorManagement.ReadingBusesApiExceptionMalformedQuery.ReadingBusesApiException↵
MalformedQuery (
    string content ) [package]
```

7.26.2.2 ReadingBusesApiExceptionMalformedQuery() [2/2]

```
ReadingBusesAPI.ErrorManagement.ReadingBusesApiExceptionMalformedQuery.ReadingBusesApiException↵
MalformedQuery (
    string message,
    Exception innerException ) [package]
```

The documentation for this class was generated from the following file:

- ReadingBusesAPI/ErrorManagement/[ReadingBusesApiExceptionMalformedQuery.cs](#)

7.27 ReadingBusesAPI.TimeTable.ScheduledJourneysApi Class Reference

Contains the logic to call upon the Scheduled Journeys API.

Static Package Functions

- static async Task< [Journey](#)[]> [GetTimeTable](#) ([BusService](#) service, DateTime date, [BusStop](#) location)
Gets the time table of a service or a location as one array of 'BusTimeTable' objects.

7.27.1 Detailed Description

Contains the logic to call upon the Scheduled Journeys API.

7.27.2 Member Function Documentation**7.27.2.1 GetTimeTable()**

```
static async Task< Journey[]> ReadingBusesAPI.TimeTable.ScheduledJourneysApi.GetTimeTable (
    BusService service,
    DateTime date,
    BusStop location ) [static], [package]
```

Gets the time table of a service or a location as one array of 'BusTimeTable' objects.

Parameters

<i>service</i>	The bus services you wish to view.
<i>date</i>	The date of the time table.
<i>location</i>	The location to get timetable data from.

Returns

An array of time table records for the service or location or both

Exceptions

<i>ReadingBusesApiExceptionMalformedQuery</i>	If you have not provided any date, and/or you have not provided at least either the service or location.
<i>ReadingBusesApiExceptionBadQuery</i>	Thrown if the API responds with an error message.
<i>ReadingBusesApiExceptionCritical</i>	Thrown if the API fails, but provides no reason.

The documentation for this class was generated from the following file:

- ReadingBusesAPI/TimeTable/[ScheduledJourneysApi.cs](#)

7.28 ReadingBusesAPI.BusServices.Services Class Reference

This classes simply gets all the bus services operated by Reading Buses, by interfacing with the "List Of Services" API.

Package Functions

- `async Task< List< BusService > > FindServices ()`
Finds all the services operated by Reading Buses.

7.28.1 Detailed Description

This classes simply gets all the bus services operated by Reading Buses, by interfacing with the "List Of Services" API.

7.28.2 Member Function Documentation

7.28.2.1 FindServices()

```
async Task< List< BusService > > ReadingBusesAPI.BusServices.Services.FindServices ( ) [package]
```

Finds all the services operated by Reading Buses.

Exceptions

<i>ReadingBusesApiException</i>	Thrown if an invalid or expired API Key is used.
---------------------------------	--

The documentation for this class was generated from the following file:

- ReadingBusesAPI/BusServices/[Services.cs](#)

7.29 ReadingBusesAPI.BusStops.StopPattern Class Reference

An intermediary class used for the "Line Pattern" API, to get the route of a service.

Public Member Functions

- bool [IsOutbound](#) ()
Is an outbound stop pattern.

Properties

- string [ActoCode](#) [get, set]
The unique identifier for a bus stop.
- string [CommonName](#) [get, set]
The public, easy to understand stop name.
- [Company OperatorCode](#) [get, set]
The operator associated to the record, this is needed so you can filter it out.
- int [Order](#) [get, set]
The order in which a stop is visited.
- int [_direction](#) [get, set]

7.29.1 Detailed Description

An intermediary class used for the "Line Pattern" API, to get the route of a service.

7.29.2 Member Function Documentation

7.29.2.1 IsOutbound()

```
bool ReadingBusesAPI.BusStops.StopPattern.IsOutbound ( )
```

Is an outbound stop pattern.

Returns

True if outbound, false if inbound.

7.29.3 Property Documentation

7.29.3.1 `_direction`

```
int ReadingBusesAPI.BusStops.StopPattern._direction [get], [set]
```

The direction of travel.

todo make this private once system.text.json supports it.

7.29.3.2 `ActoCode`

```
string ReadingBusesAPI.BusStops.StopPattern.ActoCode [get], [set]
```

The unique identifier for a bus stop.

7.29.3.3 `CommonName`

```
string ReadingBusesAPI.BusStops.StopPattern.CommonName [get], [set]
```

The public, easy to understand stop name.

7.29.3.4 `OperatorCode`

```
Company ReadingBusesAPI.BusStops.StopPattern.OperatorCode [get], [set]
```

The operator associated to the record, this is needed so you can filter it out.

7.29.3.5 `Order`

```
int ReadingBusesAPI.BusStops.StopPattern.Order [get], [set]
```

The order in which a stop is visited.

The documentation for this class was generated from the following file:

- [ReadingBusesAPI/BusStops/StopPattern.cs](#)

7.30 ReadingBusesAPI.TimeTable.TrackingHistoryApi Class Reference

Contains the logic to call upon the Tracking History API.

Static Package Functions

- static async Task< [HistoricJourney](#)[]> [GetTimeTable](#) ([BusService](#) service, DateTime date, [BusStop](#) location, string vehicle)

Gets the actual arrival and departure times of a bus, by service, date, location and/or vehicle ID.

7.30.1 Detailed Description

Contains the logic to call upon the Tracking History API.

7.30.2 Member Function Documentation

7.30.2.1 GetTimeTable()

```
static async Task< HistoricJourney[]> ReadingBusesAPI.TimeTable.TrackingHistoryApi.GetTimeTable (
    BusService service,
    DateTime date,
    BusStop location,
    string vehicle ) [static], [package]
```

Gets the actual arrival and departure times of a bus, by service, date, location and/or vehicle ID.

Parameters

<i>service</i>	The bus services you wish to view.
<i>date</i>	The date of the time table.
<i>location</i>	The location to get timetable data from.
<i>vehicle</i>	A bus/Vehicle ID number.

Returns

An array of time table records for the service or location or both

Exceptions

<i>ReadingBusesApiExceptionMalformedQuery</i>	If you have tried to get data for a date in the future. Or if you have not provided any date, and/or you have not provided at least either the service or location or vehicle.
<i>ReadingBusesApiExceptionBadQuery</i>	Thrown if the API responds with an error message.
<i>ReadingBusesApiExceptionCritical</i>	Thrown if the API fails, but provides no reason.

The documentation for this class was generated from the following file:

- ReadingBusesAPI/TimeTable/[TrackingHistoryAPI.cs](#)

7.31 ReadingBusesAPI.Common.UrlConstructor Class Reference

Returns back the URL needed to make a get command to the Reading Buses Open Data API. You can use this for testing purposes to check the API is returning what you were expecting.

Static Public Member Functions

- static string [ListOfBusStops](#) ()
Returns back the URL needed for a get request to the 'List of Bus Stops' API.
- static string [LiveVehiclePositions](#) ()
Returns back the URL needed for a get request to the 'Live Vehicle Positions' API.
- static string [LiveJourneyDetails](#) ([BusService](#) service, string vehicle)
Returns back the URL needed for a get request to the 'Live Journey Details' API.
- static string [StopPredictions](#) (string actCode)
Returns back the URL needed for a get request to the 'Stop Predictions' API.
- static string [ListOfServices](#) ()
Returns back the URL needed for a get request to the 'List of Services' API.
- static string [LinePatterns](#) ([BusService](#) service)
Returns back the URL needed for a get request to the 'Line Patterns' API.
- static string [TimetabledJourneys](#) ([BusService](#) service, [BusStop](#) location, DateTime date)
Returns back the URL needed for a get request to the 'Time Tabled Journeys' API.
- static string [TrackingHistory](#) ([BusService](#) service, [BusStop](#) location, DateTime date, string vehicle)
Returns back the URL needed for a get request to the 'Tracking History' API.
- static string [VehiclePositionHistory](#) (DateTime dateStartTime, TimeSpan? timeSpan, string vehicle)
Returns back the URL needed for a get request to the 'Vehicle Position History' API.

7.31.1 Detailed Description

Returns back the URL needed to make a get command to the Reading Buses Open Data API. You can use this for testing purposes to check the API is returning what you were expecting.

7.31.2 Member Function Documentation

7.31.2.1 LinePatterns()

```
static string ReadingBusesAPI.Common.UrlConstructor.LinePatterns (
    BusService service ) [static]
```

Returns back the URL needed for a get request to the 'Line Patterns' API.

Parameters

<i>service</i>	The bus service to query for.
----------------	-------------------------------

Returns

Returns back the URL needed for a get request to the 'Line Patterns' API.

7.31.2.2 ListOfBusStops()

```
static string ReadingBusesAPI.Common.UrlConstructor.ListOfBusStops ( ) [static]
```

Returns back the URL needed for a get request to the 'List of Bus Stops' API.

Returns

Returns back the URL needed for a get request to the 'List of Bus Stops' API.

7.31.2.3 ListOfServices()

```
static string ReadingBusesAPI.Common.UrlConstructor.ListOfServices ( ) [static]
```

Returns back the URL needed for a get request to the 'List of Services' API.

Returns

Returns back the URL needed for a get request to the 'List of Services' API.

7.31.2.4 LiveJourneyDetails()

```
static string ReadingBusesAPI.Common.UrlConstructor.LiveJourneyDetails (
    BusService service,
    string vehicle ) [static]
```

Returns back the URL needed for a get request to the 'Live Journey Details' API.

Parameters

<i>service</i>	The bus service
<i>vehicle</i>	The vehicle ID

Returns

Returns back the URL needed for a get request to the 'Live Journey Details' API.

7.31.2.5 LiveVehiclePositions()

```
static string ReadingBusesAPI.Common.UrlConstructor.LiveVehiclePositions ( ) [static]
```

Returns back the URL needed for a get request to the 'Live Vehicle Positions' API.

Returns

Returns back the URL needed for a get request to the 'Live Vehicle Positions' API.

7.31.2.6 StopPredictions()

```
static string ReadingBusesAPI.Common.UrlConstructor.StopPredictions (
    string actCode ) [static]
```

Returns back the URL needed for a get request to the 'Stop Predictions' API.

Parameters

<i>actCode</i>	The bus stop ID code.
----------------	-----------------------

Returns

Returns back the URL needed for a get request to the 'Stop Predictions' API.

7.31.2.7 TimetabledJourneys()

```
static string ReadingBusesAPI.Common.UrlConstructor.TimetabledJourneys (
    BusService service,
    BusStop location,
    DateTime date ) [static]
```

Returns back the URL needed for a get request to the 'Time Tabled Journeys' API.

Parameters

<i>service</i>	The bus service to query for.
<i>location</i>	The bus stop to query for.
<i>date</i>	The date you want to query at.

Returns

Returns back the URL needed for a get request to the 'Time Tabled Journeys' API.

7.31.2.8 TrackingHistory()

```
static string ReadingBusesAPI.Common.UrlConstructor.TrackingHistory (
    BusService service,
    BusStop location,
    DateTime date,
    string vehicle ) [static]
```

Returns back the URL needed for a get request to the 'Tracking History' API.

Parameters

<i>service</i>	The bus service to query for.
<i>location</i>	The bus stop to query for.
<i>date</i>	The date you want to query at.
<i>vehicle</i>	A vehicle ID to query for.

Returns

Returns back the URL needed for a get request to the 'Tracking History' API.

7.31.2.9 VehiclePositionHistory()

```
static string ReadingBusesAPI.Common.UrlConstructor.VehiclePositionHistory (
    DateTime dateStartTime,
    TimeSpan? timeSpan,
    string vehicle ) [static]
```

Returns back the URL needed for a get request to the 'Vehicle Position History' API.

Parameters

<i>dateStartTime</i>	The date and time you want to query for.
<i>timeSpan</i>	The length of the time period to query for.
<i>vehicle</i>	A vehicle ID to query for.

Returns

Returns back the URL needed for a get request to the 'Vehicle Position History' API.

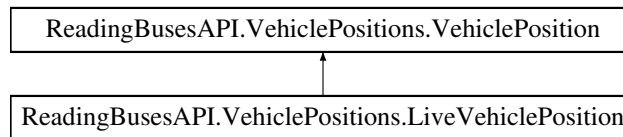
The documentation for this class was generated from the following file:

- ReadingBusesAPI/Common/[URLConstructor.cs](#)

7.32 ReadingBusesAPI.VehiclePositions.VehiclePosition Class Reference

Stores information about historical GPS data on a vehicle.

Inheritance diagram for ReadingBusesAPI.VehiclePositions.VehiclePosition:



Public Member Functions

- [VehiclePosition](#) ()
The default constructor, used only for JSON Parsing. Will be made internal when System.Text.Json add support for internal constructors in a future update.
- [Point GetPoint](#) ()
Gets the geographical position of the bus.

Properties

- [Company Company](#) [get, set]
Holds the operators enum value.
- string [Vehicle](#) [get, set]
Holds the reference/identifier for the vehicle
- DateTime [Observed](#) [get, set]
Holds the time it was last seen/ new data was retrieved.
- string [Latitude](#) [get, set]
Latitude position of the bus
- string [Longitude](#) [get, set]
longitude position of the bus

7.32.1 Detailed Description

Stores information about historical GPS data on a vehicle.

7.32.2 Constructor & Destructor Documentation

7.32.2.1 VehiclePosition()

```
ReadingBusesAPI.VehiclePositions.VehiclePosition.VehiclePosition ( )
```

The default constructor, used only for JSON Parsing. Will be made internal when System.Text.Json add support for internal constructors in a future update.

7.32.3 Member Function Documentation

7.32.3.1 GetPoint()

`Point` ReadingBusesAPI.VehiclePositions.VehiclePosition.GetPoint ()

Gets the geographical position of the bus.

Returns

A Point Object for the position of the bus.

7.32.4 Property Documentation

7.32.4.1 Company

`Company` ReadingBusesAPI.VehiclePositions.VehiclePosition.Company [get], [set]

Holds the operators enum value.

7.32.4.2 Latitude

`string` ReadingBusesAPI.VehiclePositions.VehiclePosition.Latitude [get], [set]

Latitude position of the bus

7.32.4.3 Longitude

`string` ReadingBusesAPI.VehiclePositions.VehiclePosition.Longitude [get], [set]

longitude position of the bus

7.32.4.4 Observed

`DateTime` ReadingBusesAPI.VehiclePositions.VehiclePosition.Observed [get], [set]

Holds the time it was last seen/ new data was retrieved.

7.32.4.5 Vehicle

```
string ReadingBusesAPI.VehiclePositions.VehiclePosition.Vehicle [get], [set]
```

Holds the reference/identifier for the vehicle

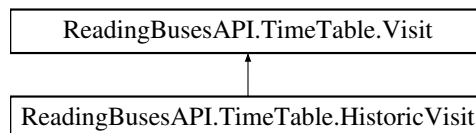
The documentation for this class was generated from the following file:

- ReadingBusesAPI/VehiclePositions/[VehiclePosition.cs](#)

7.33 ReadingBusesAPI.TimeTable.Visit Class Reference

Represents a single instance of a bus visiting at a specific bus stop.

Inheritance diagram for ReadingBusesAPI.TimeTable.Visit:



Public Member Functions

- [Visit](#) ()
The default constructor, used only for JSON Parsing. Will be made internal when System.Text.Json add support for internal constructors in a future update.

Properties

- string [AtcoCode](#) [get, set]
The unique identifier for the bus stop.
- int [Sequence](#) [get, set]
The sequence index value for which it is visited in.
- string [LocationName](#) [get, set]
The name of the location.
- DateTime [ScheduledArrival](#) [get, set]
The Scheduled Arrival time of the bus at the stop.
- DateTime [ScheduledDeparture](#) [get, set]
The Scheduled Departure time of the bus at the stop.
- bool [TimingPoint](#) [get, set]
Is this visit at a timing point stop or not.

7.33.1 Detailed Description

Represents a single instance of a bus visiting at a specific bus stop.

7.33.2 Constructor & Destructor Documentation

7.33.2.1 Visit()

```
ReadingBusesAPI.TimeTable.Visit.Visit ( )
```

The default constructor, used only for JSON Parsing. Will be made internal when System.Text.Json add support for internal constructors in a future update.

7.33.3 Property Documentation

7.33.3.1 AtcoCode

```
string ReadingBusesAPI.TimeTable.Visit.AtcoCode [get], [set]
```

The unique identifier for the bus stop.

7.33.3.2 LocationName

```
string ReadingBusesAPI.TimeTable.Visit.LocationName [get], [set]
```

The name of the location.

7.33.3.3 ScheduledArrival

```
DateTime ReadingBusesAPI.TimeTable.Visit.ScheduledArrival [get], [set]
```

The Scheduled Arrival time of the bus at the stop.

7.33.3.4 ScheduledDeparture

```
DateTime ReadingBusesAPI.TimeTable.Visit.ScheduledDeparture [get], [set]
```

The Scheduled Departure time of the bus at the stop.

7.33.3.5 Sequence

```
int ReadingBusesAPI.TimeTable.Visit.Sequence [get], [set]
```

The sequence index value for which it is visited in.

7.33.3.6 TimingPoint

```
bool ReadingBusesAPI.TimeTable.Visit.TimingPoint [get], [set]
```

Is this visit at a timing point stop or not.

The documentation for this class was generated from the following file:

- [ReadingBusesAPI/TimeTable/Visit.cs](#)

Chapter 8

File Documentation

8.1 ReadingBusesAPI/BusServices/BusService.cs File Reference

Classes

- class [ReadingBusesAPI.BusServices.BusService](#)
Stores information about an individual bus services. Related to the "List Of Lines" API.

Namespaces

- namespace [ReadingBusesAPI](#)
- namespace [ReadingBusesAPI.BusServices](#)

8.2 ReadingBusesAPI/BusServices/Services.cs File Reference

Classes

- class [ReadingBusesAPI.BusServices.Services](#)
This classes simply gets all the bus services operated by Reading Buses, by interfacing with the "List Of Services" API.

Namespaces

- namespace [ReadingBusesAPI](#)
- namespace [ReadingBusesAPI.BusServices](#)

8.3 ReadingBusesAPI/BusStops/BusStop.cs File Reference

Classes

- class [ReadingBusesAPI.BusStops.BusStop](#)
Stores information about a single bus stop. Related to the "List Of Bus Stops" API.

Namespaces

- namespace [ReadingBusesAPI](#)
- namespace [ReadingBusesAPI.BusStops](#)

8.4 ReadingBusesAPI/BusStops/BusStopIntermediary.cs File Reference

Classes

- class [ReadingBusesAPI.BusStops.BusStopIntermediary](#)
Stores information about a single bus stop and single service. Related to the raw output of the "List Of Bus Stops" API. This API returns the same stop multiple times with each service that visits it treated as a new stop?

Namespaces

- namespace [ReadingBusesAPI](#)
- namespace [ReadingBusesAPI.BusStops](#)

8.5 ReadingBusesAPI/BusStops/Locations.cs File Reference

Classes

- class [ReadingBusesAPI.BusStops.Locations](#)
This classes simply gets all the buses stops visited by Reading Buses, by interfacing with the "List Of Bus Stops" API.

Namespaces

- namespace [ReadingBusesAPI](#)
- namespace [ReadingBusesAPI.BusStops](#)

8.6 ReadingBusesAPI/BusStops/StopPattern.cs File Reference

Classes

- class [ReadingBusesAPI.BusStops.StopPattern](#)
An intermediary class used for the "Line Pattern" API, to get the route of a service.

Namespaces

- namespace [ReadingBusesAPI](#)
- namespace [ReadingBusesAPI.BusStops](#)

8.7 ReadingBusesAPI/Common/CacheWriter.cs File Reference

Classes

- class [ReadingBusesAPI.Common.CacheWriter](#)
Used to write a cache files to the disk.

Namespaces

- namespace [ReadingBusesAPI](#)
- namespace [ReadingBusesAPI.Common](#)

8.8 ReadingBusesAPI/Common/Company.cs File Reference

Namespaces

- namespace [ReadingBusesAPI](#)
- namespace [ReadingBusesAPI.Common](#)

Enumerations

- enum [ReadingBusesAPI.Common.Company](#) { [ReadingBusesAPI.Common.ReadingBuses](#) , [ReadingBusesAPI.Common.NewBuses](#) , [ReadingBusesAPI.Common.ThamesValley](#) , [ReadingBusesAPI.Common.Other](#) }
An Enum of the Operators Reading Buses owns or manages in their API.

8.9 ReadingBusesAPI/Common/Direction.cs File Reference

Namespaces

- namespace [ReadingBusesAPI](#)
- namespace [ReadingBusesAPI.Common](#)

Enumerations

- enum [ReadingBusesAPI.Common.Direction](#) { [ReadingBusesAPI.Common.Inbound](#) , [ReadingBusesAPI.Common.Outbound](#) }
The direction in which a bus is traveling.

8.10 ReadingBusesAPI/Common/JSONConverters.cs File Reference

Classes

- class [ReadingBusesAPI.Common.ParseServiceObjects](#)
Converts a string short code for an Operator into an Operator Enum and back again for the JSON converter.
- class [ReadingBusesAPI.Common.ParseOperatorConverter](#)
Converts a string short code for an Operator into an Operator Enum and back again for the JSON converter.
- class [ReadingBusesAPI.Common.DateTimeOffsetConverter](#)
Converts a datetime value between its JSON representation and the object.
- class [ReadingBusesAPI.Common.ParseBoolConverter](#)
Converts a datetime value between its JSON representation and the object.
- class [ReadingBusesAPI.Common.ParseOperatorTimetableConverter](#)
Converts a string short code for an Operator into an Operator Enum and back again for the JSON converter.
- class [ReadingBusesAPI.Common.ParseStringConverter](#)
Converts a string into a long and back again for the JSON converter.

Namespaces

- namespace [ReadingBusesAPI](#)
- namespace [ReadingBusesAPI.Common](#)

8.11 ReadingBusesAPI/Common/Point.cs File Reference

Classes

- struct [ReadingBusesAPI.Common.Point](#)
Stores an X and Y Position simply.

Namespaces

- namespace [ReadingBusesAPI](#)
- namespace [ReadingBusesAPI.Common](#)

8.12 ReadingBusesAPI/Common/URLConstructor.cs File Reference

Classes

- class [ReadingBusesAPI.Common.UrlConstructor](#)
Returns back the URL needed to make a get command to the Reading Buses Open Data API. You can use this for testing purposes to check the API is returning what you were expecting.

Namespaces

- namespace [ReadingBusesAPI](#)
- namespace [ReadingBusesAPI.Common](#)

8.13 ReadingBusesAPI/ErrorManagement/ErrorFormat.cs File Reference

Classes

- class [ReadingBusesAPI.ErrorManagement.ErrorFormat](#)
Represents an error message object returned by all JSON feeds of the API.

Namespaces

- namespace [ReadingBusesAPI](#)
- namespace [ReadingBusesAPI.ErrorManagement](#)

8.14 ReadingBusesAPI/ErrorManagement/ErrorMessage.cs File Reference

Classes

- class [ReadingBusesAPI.ErrorManagement.ErrorMessage](#)
Responsible for extracting and producing an error message from an API result. To the end user.

Namespaces

- namespace [ReadingBusesAPI](#)
- namespace [ReadingBusesAPI.ErrorManagement](#)

8.15 ReadingBusesAPI/ErrorManagement/ReadingBusesAPIException.cs File Reference

Classes

- class [ReadingBusesAPI.ErrorManagement.ReadingBusesAPIException](#)
Stores the basic/base type of Exception which can be thrown by the API.

Namespaces

- namespace [ReadingBusesAPI](#)
- namespace [ReadingBusesAPI.ErrorManagement](#)

8.16 ReadingBusesAPI/ErrorManagement/ReadingBusesAPIExceptionBadQuery.cs File Reference

Classes

- class [ReadingBusesAPI.ErrorManagement.ReadingBusesAPIExceptionBadQuery](#)
An exception type which is used when the API returns back an error message. Most likely due to an invalid request such as asking for data that does not exist.

Namespaces

- namespace [ReadingBusesAPI](#)
- namespace [ReadingBusesAPI.ErrorManagement](#)

8.17 [ReadingBusesAPI/ErrorManagement/ReadingBusesApiException](#)↔ Critical.cs File Reference

Classes

- class [ReadingBusesAPI.ErrorManagement.ReadingBusesApiExceptionCritical](#)

An exception type which is thrown when the cause of the error is unknown.

Namespaces

- namespace [ReadingBusesAPI](#)
- namespace [ReadingBusesAPI.ErrorManagement](#)

8.18 [ReadingBusesAPI/ErrorManagement/ReadingBusesApiException](#)↔ MalformedQuery.cs File Reference

Classes

- class [ReadingBusesAPI.ErrorManagement.ReadingBusesApiExceptionMalformedQuery](#)

An exception type which is used when the user asks to make a invalid API call This is would be thrown during checks done before even directly calling upon the web API. For example if you have not filtered by at least one property when required too.

Namespaces

- namespace [ReadingBusesAPI](#)
- namespace [ReadingBusesAPI.ErrorManagement](#)

8.19 [ReadingBusesAPI/JourneyDetails/LiveJourneyDetailsApi.cs](#) File Reference

Classes

- class [ReadingBusesAPI.JourneyDetails.LiveJourneyDetailsApi](#)

Contains the logic to call upon the Live Journey Details API.

Namespaces

- namespace [ReadingBusesAPI](#)
- namespace [ReadingBusesAPI.JourneyDetails](#)

8.20 ReadingBusesAPI/JourneyDetails/LiveRecord.cs File Reference

Classes

- class [ReadingBusesAPI.JourneyDetails.LiveRecord](#)

Used to store information about a buses arrival at a bus stop. Mainly related to the "Stop Predictions" API.

Namespaces

- namespace [ReadingBusesAPI](#)
- namespace [ReadingBusesAPI.JourneyDetails](#)

8.21 ReadingBusesAPI/ReadingBuses.cs File Reference

Classes

- class [ReadingBusesAPI.ReadingBuses](#)

This is the main class for the library, here you can initialise a singleton instance and then query and use the Reading Buses API.

Namespaces

- namespace [ReadingBusesAPI](#)

8.22 ReadingBusesAPI/README.md File Reference

8.23 ReadingBusesAPI/TimeTable/HistoricJourney.cs File Reference

Classes

- class [ReadingBusesAPI.TimeTable.HistoricJourney](#)

A historical journey, one that has happened in the past.

Namespaces

- namespace [ReadingBusesAPI](#)
- namespace [ReadingBusesAPI.TimeTable](#)

8.24 ReadingBusesAPI/TimeTable/HistoricVisit.cs File Reference

Classes

- class [ReadingBusesAPI.TimeTable.HistoricVisit](#)

Represents a single instance of a bus visiting at a specific bus stop in the past.

Namespaces

- namespace [ReadingBusesAPI](#)
- namespace [ReadingBusesAPI.TimeTable](#)

8.25 ReadingBusesAPI/TimeTable/Journey.cs File Reference

Classes

- class [ReadingBusesAPI.TimeTable.Journey](#)

Represents a journey, which is a grouping of [Visit](#) objects, or a specific service doing one single direction of the route. A timetable for a service is made up of multiple journeys.

Namespaces

- namespace [ReadingBusesAPI](#)
- namespace [ReadingBusesAPI.TimeTable](#)

8.26 ReadingBusesAPI/TimeTable/ScheduledJourneysApi.cs File Reference

Classes

- class [ReadingBusesAPI.TimeTable.ScheduledJourneysApi](#)

Contains the logic to call upon the Scheduled Journeys API.

Namespaces

- namespace [ReadingBusesAPI](#)
- namespace [ReadingBusesAPI.TimeTable](#)

8.27 ReadingBusesAPI/TimeTable/TrackingHistoryAPI.cs File Reference

Classes

- class [ReadingBusesAPI.TimeTable.TrackingHistoryApi](#)

Contains the logic to call upon the Tracking History API.

Namespaces

- namespace [ReadingBusesAPI](#)
- namespace [ReadingBusesAPI.TimeTable](#)

8.28 ReadingBusesAPI/TimeTable/Visit.cs File Reference

Classes

- class [ReadingBusesAPI.TimeTable.Visit](#)
Represents a single instance of a bus visiting at a specific bus stop.

Namespaces

- namespace [ReadingBusesAPI](#)
- namespace [ReadingBusesAPI.TimeTable](#)

8.29 ReadingBusesAPI/VehiclePositions/GPSController.cs File Reference

Classes

- class [ReadingBusesAPI.VehiclePositions.GpsController](#)
Helps get live and historical GPS data on vehicles by accessing the "Live Vehicle Positions" API.

Namespaces

- namespace [ReadingBusesAPI](#)
- namespace [ReadingBusesAPI.VehiclePositions](#)

8.30 ReadingBusesAPI/VehiclePositions/LiveVehiclePosition.cs File Reference

Classes

- class [ReadingBusesAPI.VehiclePositions.LiveVehiclePosition](#)
A live GPS vehicle position record.

Namespaces

- namespace [ReadingBusesAPI](#)
- namespace [ReadingBusesAPI.VehiclePositions](#)

8.31 ReadingBusesAPI/VehiclePositions/VehiclePosition.cs File Reference

Classes

- class [ReadingBusesAPI.VehiclePositions.VehiclePosition](#)
Stores information about historical GPS data on a vehicle.

Namespaces

- namespace [ReadingBusesAPI](#)
- namespace [ReadingBusesAPI.VehiclePositions](#)

Index

- [_destination](#)
ReadingBusesAPI.JourneyDetails.LiveRecord, [52](#)
 - [_direction](#)
ReadingBusesAPI.BusStops.StopPattern, [86](#)
 - [_origin](#)
ReadingBusesAPI.JourneyDetails.LiveRecord, [53](#)
- [ActoCode](#)
 - ReadingBusesAPI.BusStops.BusStop, [27](#)
 - ReadingBusesAPI.BusStops.BusStopIntermediary, [30](#)
 - ReadingBusesAPI.BusStops.StopPattern, [86](#)
- [ActualArrival](#)
 - ReadingBusesAPI.TimeTable.HistoricVisit, [44](#)
- [ActualDeparture](#)
 - ReadingBusesAPI.TimeTable.HistoricVisit, [44](#)
- [ApiKey](#)
 - ReadingBusesAPI.ReadingBuses, [77](#)
- [ArchiveCache](#)
 - ReadingBusesAPI.ReadingBuses, [77](#)
- [ARCHIVED_CACHE_FOLDER](#)
 - ReadingBusesAPI.Common.CacheWriter, [34](#)
- [ArrivalLateness](#)
 - ReadingBusesAPI.TimeTable.HistoricVisit, [43](#)
- [ArrivalMin](#)
 - ReadingBusesAPI.JourneyDetails.LiveRecord, [50](#)
- [ArrivalStatus](#)
 - ReadingBusesAPI.TimeTable.HistoricVisit, [44](#)
- [AtcoCode](#)
 - ReadingBusesAPI.TimeTable.Visit, [95](#)
- [BayNumber](#)
 - ReadingBusesAPI.BusStops.BusStop, [28](#)
- [Bearing](#)
 - ReadingBusesAPI.BusStops.BusStop, [28](#)
 - ReadingBusesAPI.BusStops.BusStopIntermediary, [30](#)
- [BrandName](#)
 - ReadingBusesAPI.BusServices.BusService, [21](#)
- [BusService](#)
 - ReadingBusesAPI.BusServices.BusService, [16](#), [17](#)
- [BusStop](#)
 - ReadingBusesAPI.BusStops.BusStop, [23](#), [24](#)
- [BusStopIntermediary](#)
 - ReadingBusesAPI.BusStops.BusStopIntermediary, [30](#)
- [Cache](#)
 - ReadingBusesAPI.ReadingBuses, [77](#)
- [CACHE_FOLDER](#)
 - ReadingBusesAPI.Common.CacheWriter, [34](#)
- [CacheValidityLength](#)
 - ReadingBusesAPI.ReadingBuses, [77](#)
- [Code](#)
 - ReadingBusesAPI.ErrorManagement.ErrorFormat, [36](#)
- [CommonName](#)
 - ReadingBusesAPI.BusStops.BusStop, [28](#)
 - ReadingBusesAPI.BusStops.BusStopIntermediary, [30](#)
 - ReadingBusesAPI.BusStops.StopPattern, [86](#)
- [Company](#)
 - ReadingBusesAPI.BusServices.BusService, [22](#)
 - ReadingBusesAPI.Common, [12](#)
 - ReadingBusesAPI.TimeTable.Journey, [46](#)
 - ReadingBusesAPI.VehiclePositions.VehiclePosition, [93](#)
- [CreateCacheDirectory](#)
 - ReadingBusesAPI.Common.CacheWriter, [32](#)
- [Debugging](#)
 - ReadingBusesAPI.ReadingBuses, [78](#)
- [DepartureLateness](#)
 - ReadingBusesAPI.TimeTable.HistoricVisit, [43](#)
- [DepartureStatus](#)
 - ReadingBusesAPI.TimeTable.HistoricVisit, [44](#)
- [DestinationName](#)
 - ReadingBusesAPI.JourneyDetails.LiveRecord, [53](#)
- [Direction](#)
 - ReadingBusesAPI.Common, [13](#)
- [DisplayTime](#)
 - ReadingBusesAPI.JourneyDetails.LiveRecord, [50](#)
- [Duty](#)
 - ReadingBusesAPI.TimeTable.Journey, [46](#)
- [Equals](#)
 - ReadingBusesAPI.BusServices.BusService, [17](#)
 - ReadingBusesAPI.BusStops.BusStop, [24](#)
 - ReadingBusesAPI.Common.Point, [63](#)
- [ExpectedArrival](#)
 - ReadingBusesAPI.JourneyDetails.LiveRecord, [53](#)
- [ExpectedDeparture](#)
 - ReadingBusesAPI.JourneyDetails.LiveRecord, [53](#)
- [FindLocations](#)
 - ReadingBusesAPI.BusStops.Locations, [56](#)
- [FindServices](#)
 - ReadingBusesAPI.BusServices.Services, [84](#)
- [FullError](#)

- ReadingBusesAPI.ReadingBuses, 78
- GetArchivedTimeTable
 - ReadingBusesAPI.BusServices.BusService, 17, 18
 - ReadingBusesAPI.BusStops.BusStop, 24, 25
- GetArchivedVehiclePositions
 - ReadingBusesAPI.VehiclePositions.GpsController, 38, 39
- GetDestinationStop
 - ReadingBusesAPI.JourneyDetails.LiveRecord, 51
- GetHashCode
 - ReadingBusesAPI.BusServices.BusService, 18
 - ReadingBusesAPI.BusStops.BusStop, 25
 - ReadingBusesAPI.Common.Point, 65
- GetInstance
 - ReadingBusesAPI.ReadingBuses, 69
- GetLiveData
 - ReadingBusesAPI.BusStops.BusStop, 25
 - ReadingBusesAPI.JourneyDetails.LiveRecord, 51
- GetLiveJourney
 - ReadingBusesAPI.JourneyDetails.LiveJourneyDetailsApi, 48
- GetLiveJourneyData
 - ReadingBusesAPI.BusServices.BusService, 19
 - ReadingBusesAPI.JourneyDetails.LiveRecord, 51
 - ReadingBusesAPI.VehiclePositions.LiveVehiclePosition, 55
- GetLivePositions
 - ReadingBusesAPI.BusServices.BusService, 19
- GetLiveVehiclePosition
 - ReadingBusesAPI.VehiclePositions.GpsController, 40
- GetLiveVehiclePositions
 - ReadingBusesAPI.VehiclePositions.GpsController, 40
- GetLocation
 - ReadingBusesAPI.ReadingBuses, 69
- GetLocations
 - ReadingBusesAPI.BusServices.BusService, 19
 - ReadingBusesAPI.ReadingBuses, 69
- GetLocationsActo
 - ReadingBusesAPI.BusServices.BusService, 20
- GetOperatorE
 - ReadingBusesAPI.ReadingBuses, 70
- GetOriginStop
 - ReadingBusesAPI.JourneyDetails.LiveRecord, 52
- GetPoint
 - ReadingBusesAPI.BusStops.BusStop, 25
 - ReadingBusesAPI.VehiclePositions.VehiclePosition, 93
- GetService
 - ReadingBusesAPI.BusStops.BusStopIntermediary, 30
 - ReadingBusesAPI.ReadingBuses, 70
 - ReadingBusesAPI.TimeTable.Journey, 46
 - ReadingBusesAPI.VehiclePositions.LiveVehiclePosition, 55
- GetServices
 - ReadingBusesAPI.BusStops.BusStop, 26
 - ReadingBusesAPI.ReadingBuses, 71, 72
- GetTimeTable
 - ReadingBusesAPI.BusServices.BusService, 20, 21
 - ReadingBusesAPI.BusStops.BusStop, 26, 27
 - ReadingBusesAPI.TimeTable.ScheduledJourneysApi, 83
 - ReadingBusesAPI.TimeTable.TrackingHistoryApi, 87
- GetVehicleTrackingHistory
 - ReadingBusesAPI.ReadingBuses, 72
- GpsController
 - ReadingBusesAPI.ReadingBuses, 78
 - ReadingBusesAPI.VehiclePositions.GpsController, 38
- HistoricJourney
 - ReadingBusesAPI.TimeTable.HistoricJourney, 42
- HistoricVisit
 - ReadingBusesAPI.TimeTable.HistoricVisit, 43
- Id
 - ReadingBusesAPI.TimeTable.Journey, 46
- Inbound
 - ReadingBusesAPI.Common, 13
- Initialise
 - ReadingBusesAPI.ReadingBuses, 73
- InvalidateArchiveCache
 - ReadingBusesAPI.ReadingBuses, 73
- InvalidateCache
 - ReadingBusesAPI.ReadingBuses, 73
- IsLocation
 - ReadingBusesAPI.ReadingBuses, 73
- IsOutbound
 - ReadingBusesAPI.BusStops.StopPattern, 85
- IsService
 - ReadingBusesAPI.ReadingBuses, 74
- IsVehicle
 - ReadingBusesAPI.VehiclePositions.GpsController, 40
- Journey
 - ReadingBusesAPI.TimeTable.Journey, 46
- JourneyCode
 - ReadingBusesAPI.TimeTable.Journey, 47
- JourneyPattern
 - ReadingBusesAPI.TimeTable.Journey, 47
- Latitude
 - ReadingBusesAPI.BusStops.BusStop, 28
 - ReadingBusesAPI.BusStops.BusStopIntermediary, 31
 - ReadingBusesAPI.VehiclePositions.VehiclePosition, 93
- LinePatterns
 - ReadingBusesAPI.Common.UrlConstructor, 88
- ListOfBusStops
 - ReadingBusesAPI.Common.UrlConstructor, 89

- ListOfServices
 - ReadingBusesAPI.Common.UrlConstructor, [89](#)
- LiveJourneyDetails
 - ReadingBusesAPI.Common.UrlConstructor, [89](#)
- LiveRecord
 - ReadingBusesAPI.JourneyDetails.LiveRecord, [50](#)
- LiveVehiclePosition
 - ReadingBusesAPI.VehiclePositions.LiveVehiclePosition, [55](#)
- LiveVehiclePositions
 - ReadingBusesAPI.Common.UrlConstructor, [90](#)
- LocationName
 - ReadingBusesAPI.TimeTable.Visit, [95](#)
- Longitude
 - ReadingBusesAPI.BusStops.BusStop, [28](#)
 - ReadingBusesAPI.BusStops.BusStopIntermediary, [31](#)
 - ReadingBusesAPI.VehiclePositions.VehiclePosition, [93](#)
- Merge
 - ReadingBusesAPI.BusStops.BusStop, [27](#)
- Message
 - ReadingBusesAPI.ErrorManagement.ErrorFormat, [36](#)
- NewburyAndDistrict
 - ReadingBusesAPI.Common, [13](#)
- Observed
 - ReadingBusesAPI.VehiclePositions.VehiclePosition, [93](#)
- operator!=
 - ReadingBusesAPI.Common.Point, [65](#)
- operator==
 - ReadingBusesAPI.Common.Point, [65](#)
- OperatorCode
 - ReadingBusesAPI.BusStops.BusStopIntermediary, [31](#)
 - ReadingBusesAPI.BusStops.StopPattern, [86](#)
 - ReadingBusesAPI.JourneyDetails.LiveRecord, [53](#)
- Order
 - ReadingBusesAPI.BusStops.StopPattern, [86](#)
- Other
 - ReadingBusesAPI.Common, [13](#)
- Outbound
 - ReadingBusesAPI.Common, [13](#)
- Point
 - ReadingBusesAPI.Common.Point, [63](#)
- PrintFullErrorLogs
 - ReadingBusesAPI.ReadingBuses, [74](#)
- PrintWarning
 - ReadingBusesAPI.ReadingBuses, [75](#)
- Read
 - ReadingBusesAPI.Common.DateTimeOffsetConverter, [35](#)
 - ReadingBusesAPI.Common.ParseBoolConverter, [57](#)
 - ReadingBusesAPI.Common.ParseOperatorConverter, [58](#)
 - ReadingBusesAPI.Common.ParseOperatorTimetableConverter, [59](#)
 - ReadingBusesAPI.Common.ParseServiceObjects, [60](#)
 - ReadingBusesAPI.Common.ParseStringConverter, [61](#)
 - ReadingBuses
 - ReadingBusesAPI.Common, [13](#)
 - ReadingBusesAPI, [11](#)
 - ReadingBusesAPI.BusServices, [11](#)
 - ReadingBusesAPI.BusServices.BusService, [15](#)
 - BrandName, [21](#)
 - BusService, [16](#), [17](#)
 - Company, [22](#)
 - Equals, [17](#)
 - GetArchivedTimeTable, [17](#), [18](#)
 - GetHashCode, [18](#)
 - GetLiveJourneyData, [19](#)
 - GetLivePositions, [19](#)
 - GetLocations, [19](#)
 - GetLocationsActo, [20](#)
 - GetTimeTable, [20](#), [21](#)
 - ServiceId, [22](#)
 - ReadingBusesAPI.BusServices.Services, [84](#)
 - FindServices, [84](#)
 - ReadingBusesAPI.BusStops, [12](#)
 - ReadingBusesAPI.BusStops.BusStop, [22](#)
 - ActoCode, [27](#)
 - BayNumber, [28](#)
 - Bearing, [28](#)
 - BusStop, [23](#), [24](#)
 - CommonName, [28](#)
 - Equals, [24](#)
 - GetArchivedTimeTable, [24](#), [25](#)
 - GetHashCode, [25](#)
 - GetLiveData, [25](#)
 - GetPoint, [25](#)
 - GetServices, [26](#)
 - GetTimeTable, [26](#), [27](#)
 - Latitude, [28](#)
 - Longitude, [28](#)
 - Merge, [27](#)
 - ServiceObjects, [28](#)
 - ReadingBusesAPI.BusStops.BusStopIntermediary, [29](#)
 - ActoCode, [30](#)
 - Bearing, [30](#)
 - BusStopIntermediary, [30](#)
 - CommonName, [30](#)
 - GetService, [30](#)
 - Latitude, [31](#)
 - Longitude, [31](#)
 - OperatorCode, [31](#)
 - RouteCode, [31](#)
 - ReadingBusesAPI.BusStops.Locations, [56](#)
 - FindLocations, [56](#)
 - ReadingBusesAPI.BusStops.StopPattern, [85](#)

- [_direction](#), 86
 - [ActoCode](#), 86
 - [CommonName](#), 86
 - [IsOutbound](#), 85
 - [OperatorCode](#), 86
 - [Order](#), 86
 - [ReadingBusesAPI.Common](#), 12
 - [Company](#), 12
 - [Direction](#), 13
 - [Inbound](#), 13
 - [NewburyAndDistrict](#), 13
 - [Other](#), 13
 - [Outbound](#), 13
 - [ReadingBuses](#), 13
 - [ThamesValley](#), 13
 - [ReadingBusesAPI.Common.CacheWriter](#), 31
 - [ARCHIVED_CACHE_FOLDER](#), 34
 - [CACHE_FOLDER](#), 34
 - [CreateCacheDirectory](#), 32
 - [ReadOrCreateCache< T >](#), 32
 - [TimetabledJourneys](#), 33
 - [TrackingHistory](#), 33
 - [VehiclePositionHistory](#), 34
 - [ReadingBusesAPI.Common.DateTimeOffsetConverter](#), 35
 - [Read](#), 35
 - [Write](#), 35
 - [ReadingBusesAPI.Common.ParseBoolConverter](#), 57
 - [Read](#), 57
 - [Write](#), 57
 - [ReadingBusesAPI.Common.ParseOperatorConverter](#), 58
 - [Read](#), 58
 - [Write](#), 58
 - [ReadingBusesAPI.Common.ParseOperatorTimetableConverter](#), 59
 - [Read](#), 59
 - [Write](#), 59
 - [ReadingBusesAPI.Common.ParseServiceObjects](#), 60
 - [Read](#), 60
 - [Write](#), 60
 - [ReadingBusesAPI.Common.ParseStringConverter](#), 61
 - [Read](#), 61
 - [Write](#), 61
 - [ReadingBusesAPI.Common.Point](#), 62
 - [Equals](#), 63
 - [GetHashCode](#), 65
 - [operator!=](#), 65
 - [operator==](#), 65
 - [Point](#), 63
 - [ToString](#), 66
 - [X](#), 66
 - [Y](#), 66
 - [ReadingBusesAPI.Common.UrlConstructor](#), 88
 - [LinePatterns](#), 88
 - [ListOfBusStops](#), 89
 - [ListOfServices](#), 89
 - [LiveJourneyDetails](#), 89
 - [LiveVehiclePositions](#), 90
 - [StopPredictions](#), 90
 - [TimetabledJourneys](#), 90
 - [TrackingHistory](#), 91
 - [VehiclePositionHistory](#), 91
 - [ReadingBusesAPI.ErrorManagement](#), 13
 - [ReadingBusesAPI.ErrorManagement.ErrorFormat](#), 36
 - [Code](#), 36
 - [Message](#), 36
 - [Status](#), 36
 - [ReadingBusesAPI.ErrorManagement.ErrorManager](#), 37
 - [TryErrorMessageRetrieval](#), 37
 - [ReadingBusesAPI.ErrorManagement.ReadingBusesApiException](#), 78
 - [ReadingBusesApiException](#), 79
 - [ReadingBusesAPI.ErrorManagement.ReadingBusesApiExceptionBadQuery](#), 79
 - [ReadingBusesApiExceptionBadQuery](#), 80
 - [ReadingBusesAPI.ErrorManagement.ReadingBusesApiExceptionCritical](#), 81
 - [ReadingBusesApiExceptionCritical](#), 81
 - [ReadingBusesAPI.ErrorManagement.ReadingBusesApiExceptionMalformedQuery](#), 82
 - [ReadingBusesApiExceptionMalformedQuery](#), 82, 83
 - [ReadingBusesAPI.JourneyDetails](#), 13
 - [ReadingBusesAPI.JourneyDetails.LiveJourneyDetailsApi](#), 48
 - [GetLiveJourney](#), 48
 - [ReadingBusesAPI.JourneyDetails.LiveRecord](#), 49
 - [_destination](#), 52
 - [_origin](#), 53
 - [ArrivalMin](#), 50
 - [DestinationName](#), 53
 - [DisplayTime](#), 50
 - [ExpectedArrival](#), 53
 - [ExpectedDeparture](#), 53
 - [GetDestinationStop](#), 51
 - [GetLiveData](#), 51
 - [GetLiveJourneyData](#), 51
 - [GetOriginStop](#), 52
 - [LiveRecord](#), 50
 - [OperatorCode](#), 53
 - [ScheduledArrival](#), 53
 - [ScheduledDeparture](#), 54
 - [Service](#), 52
 - [ServiceNumber](#), 54
 - [VehicleRef](#), 54
 - [ReadingBusesAPI.ReadingBuses](#), 66
 - [ApiKey](#), 77
 - [ArchiveCache](#), 77
 - [Cache](#), 77
 - [CacheValidityLength](#), 77
 - [Debugging](#), 78
 - [FullError](#), 78
 - [GetInstance](#), 69
 - [GetLocation](#), 69
 - [GetLocations](#), 69

- GetOperatorE, [70](#)
- GetService, [70](#)
- GetServices, [71](#), [72](#)
- GetVehicleTrackingHistory, [72](#)
- GpsController, [78](#)
- Initialise, [73](#)
- InvalidateArchiveCache, [73](#)
- InvalidateCache, [73](#)
- IsLocation, [73](#)
- IsService, [74](#)
- PrintFullErrorLogs, [74](#)
- PrintWarning, [75](#)
- SetArchiveCache, [75](#)
- SetCache, [75](#)
- SetCacheValidityLength, [76](#)
- SetDebugging, [76](#)
- SetFullError, [76](#)
- SetWarning, [77](#)
- Warning, [78](#)
- ReadingBusesAPI.TimeTable, [14](#)
- ReadingBusesAPI.TimeTable.HistoricJourney, [41](#)
 - HistoricJourney, [42](#)
 - VehicleCode, [42](#)
 - Visits, [42](#)
- ReadingBusesAPI.TimeTable.HistoricVisit, [42](#)
 - ActualArrival, [44](#)
 - ActualDeparture, [44](#)
 - ArrivalLateness, [43](#)
 - ArrivalStatus, [44](#)
 - DepartureLateness, [43](#)
 - DepartureStatus, [44](#)
 - HistoricVisit, [43](#)
- ReadingBusesAPI.TimeTable.Journey, [45](#)
 - Company, [46](#)
 - Duty, [46](#)
 - GetService, [46](#)
 - Id, [46](#)
 - Journey, [46](#)
 - JourneyCode, [47](#)
 - JourneyPattern, [47](#)
 - RunningBoard, [47](#)
 - ScheduledStart, [47](#)
 - ServiceId, [47](#)
 - Visits, [47](#)
- ReadingBusesAPI.TimeTable.ScheduledJourneysApi, [83](#)
 - GetTimeTable, [83](#)
- ReadingBusesAPI.TimeTable.TrackingHistoryApi, [87](#)
 - GetTimeTable, [87](#)
- ReadingBusesAPI.TimeTable.Visit, [94](#)
 - AtcoCode, [95](#)
 - LocationName, [95](#)
 - ScheduledArrival, [95](#)
 - ScheduledDeparture, [95](#)
 - Sequence, [95](#)
 - TimingPoint, [96](#)
 - Visit, [95](#)
- ReadingBusesAPI.VehiclePositions, [14](#)
 - ReadingBusesAPI.VehiclePositions.GpsController, [37](#)
 - GetArchivedVehiclePositions, [38](#), [39](#)
 - GetLiveVehiclePosition, [40](#)
 - GetLiveVehiclePositions, [40](#)
 - GpsController, [38](#)
 - IsVehicle, [40](#)
 - ReadingBusesAPI.VehiclePositions.LiveVehiclePosition, [54](#)
 - GetLiveJourneyData, [55](#)
 - GetService, [55](#)
 - LiveVehiclePosition, [55](#)
 - ServiceId, [56](#)
 - ReadingBusesAPI.VehiclePositions.VehiclePosition, [92](#)
 - Company, [93](#)
 - GetPoint, [93](#)
 - Latitude, [93](#)
 - Longitude, [93](#)
 - Observed, [93](#)
 - Vehicle, [93](#)
 - VehiclePosition, [92](#)
- ReadingBusesAPI/BusServices/BusService.cs, [97](#)
- ReadingBusesAPI/BusServices/Services.cs, [97](#)
- ReadingBusesAPI/BusStops/BusStop.cs, [97](#)
- ReadingBusesAPI/BusStops/BusStopIntermediary.cs, [98](#)
- ReadingBusesAPI/BusStops/Locations.cs, [98](#)
- ReadingBusesAPI/BusStops/StopPattern.cs, [98](#)
- ReadingBusesAPI/Common/CacheWriter.cs, [99](#)
- ReadingBusesAPI/Common/Company.cs, [99](#)
- ReadingBusesAPI/Common/Direction.cs, [99](#)
- ReadingBusesAPI/Common/JSONConverters.cs, [100](#)
- ReadingBusesAPI/Common/Point.cs, [100](#)
- ReadingBusesAPI/Common/URLConstructor.cs, [100](#)
- ReadingBusesAPI/ErrorManagement/ErrorFormat.cs, [101](#)
- ReadingBusesAPI/ErrorManagement/ErrorHandler.cs, [101](#)
- ReadingBusesAPI/ErrorManagement/ReadingBusesAPIException.cs, [101](#)
- ReadingBusesAPI/ErrorManagement/ReadingBusesApiExceptionBadQue, [101](#)
- ReadingBusesAPI/ErrorManagement/ReadingBusesApiExceptionCritical, [102](#)
- ReadingBusesAPI/ErrorManagement/ReadingBusesApiExceptionMalform, [102](#)
- ReadingBusesAPI/JourneyDetails/LiveJourneyDetailsApi.cs, [102](#)
- ReadingBusesAPI/JourneyDetails/LiveRecord.cs, [103](#)
- ReadingBusesAPI/ReadingBuses.cs, [103](#)
- ReadingBusesAPI/README.md, [103](#)
- ReadingBusesAPI/TimeTable/HistoricJourney.cs, [103](#)
- ReadingBusesAPI/TimeTable/HistoricVisit.cs, [103](#)
- ReadingBusesAPI/TimeTable/Journey.cs, [104](#)
- ReadingBusesAPI/TimeTable/ScheduledJourneysApi.cs, [104](#)
- ReadingBusesAPI/TimeTable/TrackingHistoryApi.cs, [104](#)
- ReadingBusesAPI/TimeTable/Visit.cs, [105](#)

- ReadingBusesAPI/VehiclePositions/GPSController.cs, 105
- ReadingBusesAPI/VehiclePositions/LiveVehiclePosition.cs, 105
- ReadingBusesAPI/VehiclePositions/VehiclePosition.cs, 105
- ReadingBusesApiException
 - ReadingBusesAPI.ErrorManagement.ReadingBusesApiException, 79
- ReadingBusesApiExceptionBadQuery
 - ReadingBusesAPI.ErrorManagement.ReadingBusesApiExceptionBadQuery, 80
- ReadingBusesApiExceptionCritical
 - ReadingBusesAPI.ErrorManagement.ReadingBusesApiExceptionCritical, 81
- ReadingBusesApiExceptionMalformedQuery
 - ReadingBusesAPI.ErrorManagement.ReadingBusesApiExceptionMalformedQuery, 82, 83
- ReadOrCreateCache< T >
 - ReadingBusesAPI.Common.CacheWriter, 32
- RouteCode
 - ReadingBusesAPI.BusStops.BusStopIntermediary, 31
- RunningBoard
 - ReadingBusesAPI.TimeTable.Journey, 47
- ScheduledArrival
 - ReadingBusesAPI.JourneyDetails.LiveRecord, 53
 - ReadingBusesAPI.TimeTable.Visit, 95
- ScheduledDeparture
 - ReadingBusesAPI.JourneyDetails.LiveRecord, 54
 - ReadingBusesAPI.TimeTable.Visit, 95
- ScheduledStart
 - ReadingBusesAPI.TimeTable.Journey, 47
- Sequence
 - ReadingBusesAPI.TimeTable.Visit, 95
- Service
 - ReadingBusesAPI.JourneyDetails.LiveRecord, 52
- ServiceId
 - ReadingBusesAPI.BusServices.BusService, 22
 - ReadingBusesAPI.TimeTable.Journey, 47
 - ReadingBusesAPI.VehiclePositions.LiveVehiclePosition, 56
- ServiceNumber
 - ReadingBusesAPI.JourneyDetails.LiveRecord, 54
- ServiceObjects
 - ReadingBusesAPI.BusStops.BusStop, 28
- SetArchiveCache
 - ReadingBusesAPI.ReadingBuses, 75
- SetCache
 - ReadingBusesAPI.ReadingBuses, 75
- SetCacheValidityLength
 - ReadingBusesAPI.ReadingBuses, 76
- SetDebugging
 - ReadingBusesAPI.ReadingBuses, 76
- SetFullError
 - ReadingBusesAPI.ReadingBuses, 76
- SetWarning
 - ReadingBusesAPI.ReadingBuses, 77
- Status
 - ReadingBusesAPI.ErrorManagement.ErrorFormat, 36
- StopPredictions
 - ReadingBusesAPI.Common.UrlConstructor, 90
- ThamesValley
 - ReadingBusesAPI.Common, 13
- TimetabledJourneys
 - ReadingBusesAPI.Common.CacheWriter, 33
 - ReadingBusesAPI.Common.UrlConstructor, 90
- TimingPoint
 - ReadingBusesAPI.TimeTable.Visit, 96
- ToString
 - ReadingBusesApiExceptionCritical, 81
 - ReadingBusesAPI.Common.Point, 66
- TrackingHistory
 - ReadingBusesAPI.Common.CacheWriter, 33
 - ReadingBusesAPI.Common.UrlConstructor, 91
- TryErrorMessageRetrieval
 - ReadingBusesAPI.ErrorManagement.ErrorManager, 37
- Vehicle
 - ReadingBusesAPI.VehiclePositions.VehiclePosition, 93
- VehicleCode
 - ReadingBusesAPI.TimeTable.HistoricJourney, 42
- VehiclePosition
 - ReadingBusesAPI.VehiclePositions.VehiclePosition, 92
- VehiclePositionHistory
 - ReadingBusesAPI.Common.CacheWriter, 34
 - ReadingBusesAPI.Common.UrlConstructor, 91
- VehicleRef
 - ReadingBusesAPI.JourneyDetails.LiveRecord, 54
- Visit
 - ReadingBusesAPI.TimeTable.Visit, 95
- Visits
 - ReadingBusesAPI.TimeTable.HistoricJourney, 42
 - ReadingBusesAPI.TimeTable.Journey, 47
- Warning
 - ReadingBusesAPI.ReadingBuses, 78
- Write
 - ReadingBusesAPI.Common.DateTimeOffsetConverter, 35
 - ReadingBusesAPI.Common.ParseBoolConverter, 57
 - ReadingBusesAPI.Common.ParseOperatorConverter, 58
 - ReadingBusesAPI.Common.ParseOperatorTimetableConverter, 59
 - ReadingBusesAPI.Common.ParseServiceObjects, 60
 - ReadingBusesAPI.Common.ParseStringConverter, 61
- X
 - ReadingBusesAPI.Common.Point, 66

Y

ReadingBusesAPI.Common.Point, [66](#)