



Access to API

The train load API is currently located at <https://rdis-api.realtimetrains.com>. Authentication to the API is through a HTTP Authorization Bearer token. Tokens will be issued by the RASIC consortium to licensed API users and will be periodically renewed.

A HTTP Authorization header containing 'Bearer <token>' should be sent to the server which will verify the token before allowing access to the service.

Endpoints

There are two API endpoints currently available. All queries must have the bearer token passed, and parameters to queries should be passed as parameters in a GET request. All queries return JSON objects.

Responses will, generally, only contain information which is different from the default value, or is empty, in order to conserve space. The documentation details the default value for each property returned.

Where timestamps are returned, they will always be in ISO-8601 format in **local** time.

The endpoints are as follows:

Location search

Returns a list of all valid services at the location.

Endpoint URI: /location/

Available parameters:

- location, a CRS or TIPLOC code
- date, in ISO-8601 format yyyy-mm-dd
- time, in format HHmm. If date is not provided then this will be ignored.

Returns an object containing the following:

Name	Description	Default
location	A LocationDetail object	n/a
filter	Will always be null for all requests to the RDIS API	null
services	A list of LocationContainer objects	n/a

Service query

Returns the detail of a particular train service at a given location.

Endpoint URI: /service/

Available parameters:

- uid, a schedule UID in the format [A-Z]?[0-9]{5}
- date, the departure date of the service in ISO-8601 format yyyy-mm-dd

Returns an object containing the following:

Name	Description	Default
serviceUid	Contains the schedule UID	n/a

runDate	the date of departure from origin in ISO-8601 format yyyy-mm-dd	n/a
serviceType	Enum containing 'bus', 'ship' or 'train'	n/a
isPassenger	Boolean as to whether this is a passenger journey	n/a
runsAsRequired	Boolean as to whether this is a Q or Y train	false
trainIdentity	The four character alpha-numeric headcode	n/a
powerType	Power Type as derived from the CIF	Null
trainClass	Train Class codes as derived from the CIF	Null
sleepers	Sleeper class codes as derived from the CIF	Null
atocCode	Two character ATOC code as derived from the CIF	Null
atocName	Operator name, as derived from the ATOC code	Null
performanceMonitored	Boolean that represents the CIF ATS field	False
origin	A list of LocationPair objects	n/a
destination	A list of LocationPair objects	n/a
locations	A list of Location objects	Empty list
runningIdentity	The four character alpha-numeric headcode as reported from TRUST	Null
plannedCancel	Boolean indicating whether this was planned as CAN in the CIF	false
allocations	A list of Allocation objects	Empty list
loading	A list of Loading objects	Null

Loading data query

Provided to enable auditing outputs of the train loading interface. Returns a list of Loading objects.

Endpoint URI: /loading/

Available parameters:

- date (**mandatory**), the departure date of the service in ISO-8601 format yyyy-mm-dd
- batch, an integer indicating the 'page' of the request. Defaults to page 1 if not present.

Returns a JSON list containing LoadingContainer objects for the train services on the given day. Only 500 responses will be returned per query. In order to return further pages, use the 'batch' key in the queries. E.g. a request for batch '2' will return services 501-1000.

Loading batch query

Provided to indicate number of available services with load and the number of batch pages that are required to return all services.

Endpoint URI: /loadingcount/

Available parameters:

- date (**mandatory**), the departure date of the service in ISO-8601 format yyyy-mm-dd

Returns a JSON object with keys `count` and `pages`, they represent:

- `count` details the total number of services with available loads for the queried date
- `pages` details the total number of batch pages to query, in the loading query, to return all services

Object types

LocationDetail object

Name	Description	Default
name	Descriptive name of the location	n/a
crs	CRS code of the location	n/a
tiploc	If this is a string, TIPLOC of the location. If this is a list, all valid TIPLOCs at the location used to build the query	n/a

LocationContainer object

Name	Description	Default
locationDetail	The Location object for this service	n/a
serviceUid	Contains the schedule UID	n/a
runDate	the date of departure from origin in ISO-8601 format yyyy-mm-dd	n/a
trainIdentity	The four character alpha-numeric headcode	n/a
runningIdentity	The four character alpha-numeric headcode as reported from TRUST	Null
atocCode	Two character ATOC code as derived from the CIF	Null
atocName	Operator name, as derived from the ATOC code	Null
serviceType	Enum containing 'bus', 'ship' or 'train'	n/a
plannedCancel	Boolean indicating whether this was planned as CAN in the CIF	false
isPassenger	Boolean as to whether this is a passenger journey	n/a

LocationPair object

Name	Description	Default
tiploc	The TIPLOC code of the location in the schedule	n/a
description	Descriptive name of the location in the schedule	n/a
workingTime	Working Timetable derived time of this location	n/a
publicTime	GBTT derived time of this location	n/a

Location object

Name	Description	Default
realtimeActivated	Boolean indicating whether this train has been tracked in the real-time monitoring process	false
tiploc	TIPLOC of the location	n/a

crs	Public CRS of the location	n/a
description	Descriptive name of the location	n/a
gbttBookedArrival	Booked arrival time of the location	null
gbttBookedDeparture	Booked departure time of the location	null
wttBookedPass	Booked passing time of this location. This field may include interpolated times where the location is not a mandatory timing or calling point.	null
isCall	Boolean indicating whether this is a booked call for any reason (operational or passenger)	false
isPublicCall	Boolean indicating whether this is a booked call for passenger purposes (set down, pick up or open call)	false
realtimeArrival	Actual arrival time of the service, rounded down except if the train arrived in the last 10 seconds of a minute. This field can be included even if realtimeArrivalNoReport is marked as true.	null
realtimeDeparture	Actual departure time of the service, rounded down except if the train departed in the last 10 seconds of a minute. This field can be included even if realtimeDepartureNoReport is marked as true.	null
realtimePass	Actual passing time of the service	null
realtimeArrivalActual	Indicates whether an actual report was received for this location	false
realtimeArrivalNoReport	Indicates whether no report was received for this location and a subsequent report has been	false
realtimeDepartureActual	Indicates whether an actual report was received for this location	false
realtimeDepartureNoReport	Indicates whether no report was received for this location and a subsequent report has been	false
realtimePassActual	Indicates whether an actual report was received for this location	false
realtimePassNoReport	Indicates whether no report was received for this location and a subsequent report has been	false
realtimeGbttArrivalLateness	Lateness in minutes at this location	false
realtimeGbttDepartureLateness	Lateness in minutes at this location	false

platform	Platform number at this location	null
platformConfirmed	If this platform has been confirmed by any monitoring system	false
platformChanged	If this platform has changed from its planned platform	false
displayAs	Values that can appear in this field are CALL, PASS, ORIGIN, DESTINATION, STARTS, TERMINATES, CANCELLED_CALL, CANCELLED_PASS. ORIGIN and DESTINATION represent the original origin & destination of a service. If STARTS or TERMINATES appear, then this means a service has started short or terminated en-route - the original origin/destination will show CANCELLED_CALL.	null
passengerVehicles	An integer value showing the number of passenger vehicles attached to the service on departure from this station. If this is the final location in the service, it will show vehicles on arrival.	null
trainLoading	An enum showing an approximate train loading. The values that can be shown are RED, AMBER, GREEN or UNKNOWN.	null

Allocation object

Name	Description	Default
attached	A LocPair object showing where this allocation applies from	n/a
detached	A LocPair object showing where this allocation ceases to apply	n/a
vehicles	A list of VehicleGroup objects	Empty list

VehicleGroup object

Name	Description	Default
type	The type of vehicle group, these include but are not limited to 'unit', 'set', 'loco', 'wagon', 'carriage'	n/a
identity	The vehicle group identity, e.g. unit/loco number or set identity	n/a
paxCoaches	Number of passenger coaches in this group	0
suppressIdentity	Boolean whether the identity of this vehicle group has been requested to be suppressed. If this is set to true, identity will replace the last	false

	three digits of a loco/unit identity to 'xxx' and last two digits of a set identifier to 'xx'	
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Loading objects

Name	Description	Default
tiploc	TIPLOC of the location	n/a
eligibleBoarders	Total number of passengers that <i>could</i> have boarded this train at this station, refer to 9Q documentation	0
allocatedBoarders	Total number of passengers onboarded at this location	0
eligibleAlighters	As eligibleBoarders, but for alighting	0
allocatedAlighters	As allocatedBoarders, but for alighting	0
totalPassengersOnDeparture	Total passengers calculated onboard the service on board at departure	0
usedCapacityOnDeparture	Percentage of available capacity used on departure, where 100 is 100%	0
capacityIncludesStanding	Reserved for future use.	null
confidence	Reserved for future use.	null
currentSeatingCapacity	Current assumed capacity of the service, derived from the train allocation	0
normalSeatingCapacity	Normal standard class seating capacity of the train service	0

LoadingContainer objects

Name	Description	Default
locations	A list of Loading objects for this service	n/a
serviceUid	Contains the schedule UID	n/a
runDate	The date the service departed from its scheduled origin destination	n/a
processedTime	ISO-8601 timestamp of when the data was processed into the database	0