



Ticket Restriction XML Feed

Developer's Guide

Version 1.1

05/05/2015

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1. Introduction

1.1.Overview

This document has been prepared to provide National Rail Enquiries with a documented schema of the Ticket Restrictions XML feed which will be distributed to existing and prospective users of the XML feeds.

This document contains the following information:

- High level description of XML feed contents
- Information about the XML feed configuration (i.e. how it is accessed and how long it is cached)
- Outline schema (how the feed is structured and what XML tags it contains)
- Description of the XML tags
- High level user guide (how to interpret the XML tags)

1.2.Audience

This document is to be used by National Rail Enquiries and existing and prospective users of XML feed. This document will be updated and distributed following any future update of the XML schema.

2. High Level Description

2.1.Overview

This chapter defines the structure, and provides a high level description, of the Ticket Restrictions XML tags. The information contained in each XML tag is described.

Where a tag is marked mandatory, consumers can rely upon the presence of this tag. Tags not marked mandatory are optional, i.e. consumers should not rely on these elements existing. Sub-tags marked as mandatory are only mandatory if their parent tag exists.

Where a tag is marked multiple, this means that this tag can be repeated, tags not marked as multiple will not be repeated (albeit that the legacy schema may define that they can).

Within each table of tags and sub-tags, each grouped set of tags (root tag and its children, or choice options) is marked in the same background colour (which alternate).

Please note that this document does not fully define all data types.

2.2.<TicketRestrictions>

Tags	Sub tags/Values
<TicketRestriction> (multiple)	See 2.3

2.3.<TicketRestriction>

Tags	Sub tags/Values
<Name> (mandatory)	Free text. Name of ticket restriction. Not unique, multiple ticket restrictions codes can map to the same name.
< LinkToDetailPage> (optional)	Free text. Relative URL path to the Ticket Restriction page
< RestrictionCode> (mandatory)	Free text. Unique identifier.
< TicketRestrictionIdentifier > (optional)	Free Text. CMS Unique Identifier
< ApplicableDays > (mandatory)	Free Text.
< Easement > (optional)	Free Text.
< Notes> (optional)	Free Text
< SeasonalVariations> (optional)	Free Text
< OutwardDirection > (mandatory, multiple)	Selection: Outward travel Morning travel Eastbound travel Northbound travel Southbound travel Westbound travel From London Towards London Outward Return
< ReturnDirection> (mandatory, multiple)	Selection: Return travel Evening travel Westbound travel Southbound travel Northbound travel Eastbound travel Towards London From London Return Outward
< ReturnStatus> (optional)	Free Text
< OutwardStatus> (optional)	Free Text

< RestrictionsType >(mandatory)	Integer: Selection 2 4
<Restrictions> (mandatory)(1 instance only)	See section 2.4

2.4.< Restrictions >

Tags	Sub tags/Values
< Restriction > (multiple)	See 2.5

2.5.< Restriction>

Tags	Sub tags/Values
< StationOutward> (optional)	3 letter station code
< StationReturn> (optional)	3 letter station code
<DetailsOutward>(mandatory)	Free text
<DetailsReturn> (optional)	Free text
<CommentsOutward>(optional)	Free text
<CommentsReturn>(optional)	Free text

2.6.Sample XML Feed File

Appendix A shows a sample Ticket Restriction XML Feed File

3. XML Feed Configuration

3.1.Overview

This chapter describes how the XML feeds are configured and the process for changing this configuration.

3.2.XML Feed Configuration File

The XML feeds are configured using REST web services utilising Microsoft WCF. The web services are responsible for managing incoming requests for XML Feeds, and replying with the correct response.

WCF configuration determines the URL patterns that can be used to request a particular XML feed. For example the following URL can be used to request the Ticket Restrictions XML feeds.

xml/4.0/ticket-restrictions

Changes to configuration will need to be authorised by National Rail Enquires and the consumers of the XML feeds will need to be notified of any changes that may affect their current systems.

3.3.Restricting Access to the XML Feeds

Access to the XML feeds is controlled by the National Rail Enquires firewalls which are located at the hosting provider's two sites. If a new client requires access to the XML feeds they must request that their server's IP addresses are added to the firewalls. This request should be made to National Rail Enquires.

3.4.Pulling the XML Feed data

The XML feed is configured to stay in the server cache for 1 minute, after which it is refreshed.

It's entirely up to the site taking the feed to define how often it's polled. Rather than re-querying the entire feed, the Last-Modified response header can be queried to determine if the feed data has been updated.

4. Using the XML Feed

The Ticket Restrictions XML feeds can be accessed by requesting the following URLs, the feeds contain a full list of ticket Restrictions;

Production:

<http://internal.nationalrail.co.uk/xml/4.0/ticket-restrictions.xml>

Staging:

<http://int.web.kb.awsre.co.uk/xml/4.0/ticket-restrictions.xml>

5. Document Details

5.1.Document Version

Version	Date	Modified by
1.0	08/10/2014	Juan Londono
1.1	05/05/2015	Lindsay Bleakley

Appendix A Sample TicketRestrictions XML file

A.1 Sample TicketRestrictions XML Feed

```
<?xml version="1.0" encoding="UTF-8"?>
<TicketRestrictions xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns="http://nationalrail.co.uk/xml/ticketrestrictions">
  <TicketRestriction>
    <Name><![CDATA[TR 4 columns]]></Name>

    <AddRemoveAfterNextFaresRound>N/A</AddRemoveAfterNextFaresRound>

    <LinkToDetailPage><![CDATA[/times_fares/ticket_types/52203.aspx]]></LinkToDetailPage>
    <RestrictionCode>NN</RestrictionCode>

    <TicketRestrictionIdentifier>D2326DE22973488D91EA81BCE94D6BB3</TicketRestrictionIdentifier>
    <ApplicableDays><![CDATA[<p>This is the applicable days for the&nbsp;2 columns TR</p>]]></ApplicableDays>
    <Easement><![CDATA[This is the easement for the&nbsp;2 columns TR&nbsp;]]></Easement>
    <Notes><![CDATA[This is the Notes for the&nbsp;2 columns TR&nbsp;]]></Notes>
    <SeasonalVariations><![CDATA[This is the Seasonal Variations for the&nbsp;2 columns TR&nbsp;]]></SeasonalVariations>
    <OutwardDirection>Outward Travel</OutwardDirection>
    <ReturnDirection>Evening Travel</ReturnDirection>
    <OutwardStatus>By any train except those timed to depart:</OutwardStatus>
    <ReturnStatus>By any train</ReturnStatus>
    <RestrictionsType>4</RestrictionsType>
    <Restrictions>
      <Restriction>
        <StationOutward>BOT</StationOutward>
        <CommentsOutward><![CDATA[2 columns outward comments&nbsp;]]></CommentsOutward>
        <DetailsOutward><![CDATA[2 columns outward details&nbsp;]]></DetailsOutward>
        <StationReturn>BYL</StationReturn>
        <CommentsReturn><![CDATA[2 columns return comments&nbsp;]]></CommentsReturn>
        <DetailsReturn><![CDATA[2 columns return details&nbsp;]]></DetailsReturn>
      </Restriction>
      <Restriction>
        <StationOutward>LDS</StationOutward>
        <CommentsOutward><![CDATA[<p>2 columns outward comments</p> ]]]></CommentsOutward>
        <DetailsOutward><![CDATA[ <p>2 columns outward details</p> ]]]></DetailsOutward>
        <StationReturn>ANF</StationReturn>
        <CommentsReturn><![CDATA[ <p>2 columns return Comments</p> ]]]></CommentsReturn>
        <DetailsReturn><![CDATA[ <p>2 columns return details</p> ]]]></DetailsReturn>
      </Restriction>
    </Restrictions>
  </TicketRestriction>
</TicketRestrictions>
```

```
</TicketRestriction>

<TicketRestriction>
  <Name><![CDATA[TR - 2]]></Name>

  <AddRemoveAfterNextFaresRound>N/A</AddRemoveAfterNextFaresRound>

  <LinkToDetailPage><![CDATA[/times_fares/ticket_types/55015.aspx]]></LinkToDetailPage>
  <RestrictionCode>12</RestrictionCode>

  <TicketRestrictionIdentifier>8FB61205CB404ABFB2B5EC93E535ED4F</TicketRestrictionIdentifier>
  <ApplicableDays><![CDATA[
  <p>Monday</p>
  ]]></ApplicableDays>
  <Easement><![CDATA[easements for 2 columns&nbsp;]]></Easement>
  <Notes><![CDATA[notes for 2 columns&nbsp;]]></Notes>
  <SeasonalVariations><![CDATA[seasonal variations for 2
columns&nbsp;]]></SeasonalVariations>
  <OutwardDirection>Outward Travel</OutwardDirection>
  <ReturnDirection>Evening Travel</ReturnDirection>
  <OutwardStatus></OutwardStatus>
  <ReturnStatus></ReturnStatus>
  <RestrictionsType>2</RestrictionsType>
  <Restrictions>
    <Restriction>
      <DetailsOutward><![CDATA[outward restrictions
details 2&nbsp;]]></DetailsOutward>
      <DetailsReturn><![CDATA[return&nbsp;restrictions
details 2&nbsp;]]>></DetailsReturn>
    </Restriction>
    <Restriction>
      <DetailsOutward><![CDATA[<p>Outward restriction
details 1</p>]]></DetailsOutward>
      <DetailsReturn><![CDATA[<p>Return restrictions
details 1</p>]]>></DetailsReturn>
    </Restriction>
  </Restrictions>
</TicketRestriction>
</TicketRestrictions>
```