



# Ticket Type XML Feed

Developer's Guide

Version 1.2

02/08/2013

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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 Types 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 Types 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 <TicketTypeDescriptionList>

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

## 2.3 <TicketTypeDescription>

Tags	Sub tags/Values
<TicketTypeCode> (mandatory)	3 character code. Unique identifier . <i>NB: in later versions of the XML – i.e. at a different URL and validating to a different schema, this is not expected to be unique .</i>
<TicketTypeName> (mandatory)	Free text. Name of ticket type. Not unique, multiple ticket type codes can map to the same name.
<Description> (mandatory)	Free text description.
<ApplicableTocs> (mandatory)	<AllTocs>, <IncludedTocs>, <ExcludedTocs>
<AllTocs> (mandatory)	Boolean. Does the ticket type apply to all train operators?
Optional choice – i.e. neither mandatory, but <IncludedTocs> and <ExcludedTocs> will never both be included at the same time.	
<IncludedTocs> (part of optional choice)	<TocRef>
<TocRef> (mandatory, multiple)	A collection of 3 character TOC codes indicating that this ticket type applies to these TOCs.
<ExcludedTocs> (part of optional choice)	<TocRef>
<TocRef> (mandatory, multiple)	A collection of 3 character TOC codes indicating that this ticket type does not apply to these TOCs.
<BreaksOfJourney>	Free text description of breaks of journey restrictions applicable to this ticket type.
<FareCategory> (mandatory)	'open', 'flexible' or 'restricted'
<GroupSave> (mandatory)	Boolean. Does the ticket type include a group save option?
<Conditions>	Free text description of conditions.
<Availability>	Free text description of availability.
<Retailing>	Free text description of retail locations.
<BookingDeadlines>	Free text description specifying booking deadlines.
<ChangesToTravelPlans>	Free text description of changes to ticket allowed post-purchase.

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<Refunds>	Free text description of ticket refund policy.
<Discounts>	Free text description describing discounts available, broken out into Child, Railcard and Group discounts.

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## 2.2 Sample XML Feed File

Appendix A shows a sample Ticket Types 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 Types XML feeds.

```
/xml/30/ticket-types.xml
```

```
/ticketTypeDescriptions.xml
```

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

### 4.1 Accessing the XML Feeds

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

**Production:**

<http://internal.nationalrail.co.uk/xml/30/ticket-types.xml>

**Staging:**

<http://int.web.kb.awsre.co.uk/xml/30/ticket-types.xml>

## 6 Document Details

### 6.1 Document Version

Version	Date	Modified by
1.0	03/06/2013	Maria Mlynarska
1.1	02/08/2013	Neil Fursey
1.2	05/05/2015	Lindsay Bleakley

## Appendix A Sample Ticket Type XML file

### A.1 Sample Ticket Type XML Feed

```
<?xml version="1.0" encoding="utf-8"?>
<TicketTypeDescriptionList xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns="http://nationalrail.co.uk/xml/ticket">
<TicketTypeDescription>
  <TicketTypeCode>A05</TicketTypeCode>
  <TicketTypeName>
    <![CDATA[ 12-month First Class Anglia Plus Season Ticket ]]>
  </TicketTypeName>
  <Description>
    <![CDATA[
    12-month First Class zonal Season Ticket for Anglia Plus Zones
    ]]>
  </Description>
  <ApplicableTocs>
    <AllTocs>>false</AllTocs>
    <IncludedTocs>
      <TocRef>LE</TocRef>
      <TocRef>LM</TocRef>
    </IncludedTocs>
  </ApplicableTocs>
  <BreaksOfJourney><![CDATA[ Yes&nbsp; ]]></BreaksOfJourney>
  <FareCategory>open</FareCategory>
  <GroupSave>>false</GroupSave>
  <Discounts><![CDATA[
```

```
Child:<br/>Child and New Deal
discounts.&nbsp;<br/>Railcard:<br/>Child and New Deal
discounts.&nbsp;<br/>Group:<br/>Child and New Deal discounts.&nbsp;<br/>
]]>
</Discounts>
<Retailing><![CDATA[ - ]]></Retailing>
<BookingDeadlines><![CDATA[
May be bought up to 4 days in advance or on the day of travel.]]>
</BookingDeadlines>
<ChangesToTravelPlans><![CDATA[ - ]]></ChangesToTravelPlans>
<Refunds><![CDATA[
Pro-rata refunds are available on Season Tickets. An administration
charge is deducted.]]>
</Refunds>
</TicketTypeDescription>
<TicketTypeDescription>
  <TicketTypeCode>C13</TicketTypeCode>
  <TicketTypeName>
    <![CDATA[ 13-week Centrocard Season Ticket ]]>
  </TicketTypeName>
  <Description>
    <![CDATA[
    13-week Season Ticket for the Centro West Midlands County PTE.
    Standard Class only.]]>
  </Description>
  <ApplicableTocs>
    <AllTocs>>false</AllTocs>
    <IncludedTocs>
      <TocRef>AW</TocRef>
      <TocRef>CH</TocRef>
      <TocRef>XC</TocRef>
      <TocRef>LM</TocRef>
      <TocRef>ZN</TocRef>
      <TocRef>VT</TocRef>
    </IncludedTocs>
  </ApplicableTocs>
  <BreaksOfJourney><![CDATA[ Yes&nbsp;<br/> ]]></BreaksOfJourney>
  <FareCategory>open</FareCategory>
  <GroupSave>>false</GroupSave>
  <Discounts><![CDATA[
  Child:<br/>No discounts.&nbsp;<br/>Railcard:<br/>No
  discounts.&nbsp;<br/>Group:<br/>No discounts.&nbsp;<br/>]]>
  </Discounts>
  <Availability><![CDATA[ Any day. ]]></Availability>
  <Retailing>
    <![CDATA[ Ticket offices, travel shops, travel agents. ]]>
  </Retailing>
  <BookingDeadlines>
    <![CDATA[ No reservations are needed. ]]>
  </BookingDeadlines>
  <ChangesToTravelPlans><![CDATA[ - ]]></ChangesToTravelPlans>
  <Refunds><![CDATA[
  Day tickets bought by passengers who forget their Season Tickets will
  not be refunded.]]>
  </Refunds>
</TicketTypeDescription>
<TicketTypeDescription>
  <TicketTypeCode>A04</TicketTypeCode>
  <TicketTypeName>
    <![CDATA[ 1-month First Class Anglia Plus Season Ticket ]]>
  </TicketTypeName>
  <Description>
    <![CDATA[
    1-month First Class Anglia Plus Season Ticket for the East of
    England. Standard Class only.]]>
  </Description>
  <ApplicableTocs>
    <AllTocs>>false</AllTocs>
    <IncludedTocs>
      <TocRef>AW</TocRef>
      <TocRef>CH</TocRef>
      <TocRef>XC</TocRef>
      <TocRef>LM</TocRef>
      <TocRef>ZN</TocRef>
      <TocRef>VT</TocRef>
    </IncludedTocs>
  </ApplicableTocs>
  <BreaksOfJourney><![CDATA[ Yes&nbsp;<br/> ]]></BreaksOfJourney>
  <FareCategory>open</FareCategory>
  <GroupSave>>false</GroupSave>
  <Discounts><![CDATA[
  Child:<br/>No discounts.&nbsp;<br/>Railcard:<br/>No
  discounts.&nbsp;<br/>Group:<br/>No discounts.&nbsp;<br/>]]>
  </Discounts>
  <Availability><![CDATA[ Any day. ]]></Availability>
  <Retailing>
    <![CDATA[ Ticket offices, travel shops, travel agents. ]]>
  </Retailing>
  <BookingDeadlines>
    <![CDATA[ No reservations are needed. ]]>
  </BookingDeadlines>
  <ChangesToTravelPlans><![CDATA[ - ]]></ChangesToTravelPlans>
  <Refunds><![CDATA[
  Day tickets bought by passengers who forget their Season Tickets will
  not be refunded.]]>
  </Refunds>
</TicketTypeDescription>
```

```
</TicketTypeName>
<Description><![CDATA[
1-month First Class zonal Season Ticket for Anglia Plus Zones]]>
</Description>
<ApplicableTocs>
  <AllTocs>>false</AllTocs>
  <IncludedTocs>
    <TocRef>LE</TocRef>
    <TocRef>LM</TocRef>
  </IncludedTocs>
</ApplicableTocs>
<BreaksOfJourney><![CDATA[ Yes  ]]></BreaksOfJourney>
<FareCategory>open</FareCategory>
<GroupSave>>false</GroupSave>
<Discounts>
<![CDATA[Child:<br/>Child and New Deal
discounts. <br/>Railcard:<br/>Child and New Deal
discounts. <br/>Group:<br/>Child and New Deal discounts. <br/>
]]>
</Discounts>
<Retailing><![CDATA[ - ]]></Retailing>
<BookingDeadlines><![CDATA[
May be bought up to 4 days in advance or on the day of travel.]]>
</BookingDeadlines>
<ChangesToTravelPlans><![CDATA[ - ]]></ChangesToTravelPlans>
<Refunds><![CDATA[
Pro-rata refunds are available on Season Tickets. An administration
charge is deducted.]]>
</Refunds>
</TicketTypeDescription>
</TicketTypeDescriptionList>
```