



Companies XML Feed

Developer's Guide

Version 1.4

05/05/2015

Contents

Contents.....	2
1 Introduction	3
1.1 Overview	3
1.2 Audience	3
2 Outline Schema	3
2.1 Overview	3
2.2 <TrainOperatingCompany>.....	4
2.3 Sample XML Feed File	12
3 XML Feed Configuration.....	12
3.1 Overview	12
3.2 Configuration	12
3.3 Restricting Access to the XML Feeds	13
3.4 Pulling the XML Feed Data	13
4 Using the XML Feed	13
5.1 Accessing the XML Feeds	13
6 Document Details.....	13
6.1 Document Version	13
Appendix A - Sample Companies XML File.....	13
A.1 Sample Companies XML File.....	13

1 Introduction

1.1 Overview

This document has been prepared to provide National Rail Enquiries with a documented schema of the Train Operating Companies 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 Outline Schema

2.1 Overview

This chapter defines the structure, and provides a high level description, of the companies 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 (i.e. the root tag and its children) is marked in the same background colour (which alternate).

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

2.2 <TrainOperatingCompany>

Contains details about the train operating company's details using appropriate sub tags.

Tags	Sub tags/Values
<ChangeHistory> (mandatory)	<com:ChangedBy>, <com>LastChangedDate>
<com:ChangedBy> (mandatory)	Name
<com>LastChangedDate> (mandatory)	YYYY-MM-DD Thh:mm:sssZ. This is formatted as Zulu (UTC) time but the time is implemented as GMT/BST (at NRE's request - applies to all date times).
<AtocCode> (mandatory)	Contains the 2 character unique code of the train operating company.
<AtocMember>	Contains Boolean value as the TOC's member status.
<StationOperator>	Contains the Boolean value as the station operator status of the TOC.
<Name> (mandatory)	Contains the name of the train operating company.
<LegalName> (mandatory)	Contains the legal name of the train operating company.
<ManagingDirector>	Contains name of the managing director of the train operating company.
<Logo>	Contains company logo image file URI.
<NetworkMap>	Contains company network map file URI.
<OperatingPeriod>	<StartDate>, <EndDate>
<StartDate>	YYYY-MM-DD. Contains the start date of the operating period of the TOC
<EndDate>	YYYY-MM-DD, end date of the operating period (normally omitted)
<HeadOfficeContactDetails>	See section 2.2.1
<CompanyWebsite>	Contains the official web site address of the company.
<SupportAndInformation>	See section 2.2.2

<code><TicketingAndFares></code>	See section 2.2.3
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2.2.1 <HeadOfficeContactDetails>

Contains the contact details of the head office of the TOC.

Tags	Sub tags/Values
<code><com:Annotation></code>	<code><com>Note></code>
<code><com>Note></code> (mandatory)	Contact details note.
<code><com:PrimaryTelephoneNumber></code>	<code><com:TelNationalNumber></code>
<code><com:TelNationalNumber></code> (mandatory)	Contains the Telephone Number of the TOC
<code><com:AlternateInternalTelephoneNumbers></code>	<code><com:TelephoneNumber></code>
<code><com:TelephoneNumber></code> (mandatory, multiple)	<code><com: TelNationalNumber></code>
<code><com: TelNationalNumber></code> (mandatory)	An internal phone number.
<code><com:FaxNumber></code>	<code><com:TelNationalNumber></code>
<code><com:TelNationalNumber></code> (mandatory)	Contains the Fax number of the TOC
<code><com:PrimaryMinicomNumber></code>	<code><com:TelNationalNumber></code>
<code><com:TelNationalNumber></code> (mandatory)	Contains the minicom (text phone) number of the TOC
<code><com:PostalAddress></code>	<code><add:Line></code> , <code><add:Postcode></code>
<code><add:Line></code> (mandatory, multiple, 2 elements mandatory, max. 5 elements.)	Contains the line of the address
<code><add:PostCode></code>	Contains the postcode
<code><com:EmailAddress></code>	Company email address
<code><com:Url></code>	Contains the official URL of the company address

2.2.2 <SupportAndInformation>

Contains the customer support details using the sub tags.

Tags	Sub tags/Values
<code><CustomerService></code>	<code><com:Annotation></code> , <code><com:ContactDetails></code>

<com:Annotation>	<com>Note>
<com>Note> (mandatory)	Customer services note
<com:ContactDetails>	Customer Services Contact Details, see section 2.2.2.1
<LostProperty>	<com:Annotation>, <com:ContactDetails>, <com:Available>
<com:Annotation>	<com>Note>
<com>Note> (mandatory)	Lost property note
<com:ContactDetails>	Lost property contact details, see section 2.2.2.2
<com:Available>	true/false (legacy schema supports 'unknown', this will never be output, omission of tag is equivalent)
<AssistedTravel>	<com:Annotation>, <com:ContactDetails>
<com:Annotation>	<com>Note>
<com>Note> (mandatory)	Assisted travel note
<com:ContactDetails>	Assisted travel contact details, see section 2.2.2.3

2.2.2.1 <com:ContactDetails> Customer Services Contact Details

Sub-tag of CustomerService.

Tags	Sub tags/Values
<com:Annotation>	<com>Note>
<com>Note> (mandatory)	Contact details note
<com:PrimaryTelephoneNumber>	<com:TelNationalNumber>
<com:TelNationalNumber> (mandatory)	Customer services telephone number
<com:AlternatePublicTelephoneNumbers>	<com:TelephoneNumber>
<com:TelephoneNumber> (mandatory, multiple)	<com: TelNationalNumber>
<com: TelNationalNumber> (mandatory)	An additional public phone number.
<com:AlternateInternalTelephoneNumbers>	<com:TelephoneNumber>
<com:TelephoneNumber> (mandatory, multiple)	<com: TelNationalNumber>
<com: TelNationalNumber> (mandatory)	An internal phone number.

<com:FaxNumber>	<com:TelNationalNumber>
<com:TelNationalNumber> (mandatory)	Customer Services fax number
<com:PrimaryMinicomNumber>	<com:TelNationalNumber>
<com:TelNationalNumber> (mandatory)	Customer Services minicom (text phone) number
<com:AlternateMinicomNumber>	<com:TelNationalNumber>
<com:TelNationalNumber> (mandatory)	Alternative Customer Services minicom (text phone) number
<com:PostalAddress>	<add:Line>, <add:PostCode>
<add:Line> (mandatory, multiple, 2 elements mandatory, max. 5 elements)	Contains the line of the address
<add:PostCode>	Contains the postcode
<com:EmailAddress>	Customer Services email address
<com:Url>	Customer Services Url

2.2.2.2 <com:ContactDetails> Lost Property Contact Details

Sub-tag of LostProperty.

Tags	Sub tags/Values
<com:Annotation>	<com:Note>
<com:Note> (mandatory)	Contact details note
<com:PrimaryTelephoneNumber>	<com:TelNationalNumber>
<com:TelNationalNumber> (mandatory)	Lost property telephone number
<com:AlternateInternalTelephoneNumbers>	<com:TelephoneNumber>
<com:TelephoneNumber> (mandatory, multiple)	<com:TelNationalNumber>
<com:TelNationalNumber> (mandatory)	An internal phone number.
<com:FaxNumber>	<com:TelNationalNumber>
<com:TelNationalNumber> (mandatory)	Lost property fax number
<com:PrimaryMinicomNumber>	<com:TelNationalNumber>
<com:TelNationalNumber> (mandatory)	Lost property minicom (text phone) number
<com:PostalAddress>	<add:Line>,<add:PostCode>

<add:Line> (mandatory, multiple, 2 elements mandatory, max. 5 elements)	Contains the line of the address
<add:PostCode>	Contains the postcode
<com:EmailAddress>	Lost property email address
<com:Url>	Lost property Url

2.2.2.3 <com:ContactDetails> Assisted Travel Contact Details

Sub-tag of AssistedTravel.

Tags	Sub tags/Values
<com:Annotation>	<com>Note>
<com>Note> (mandatory)	Contact details note
<com:PrimaryTelephoneNumber>	<com:TelNationalNumber>
<com:TelNationalNumber> (mandatory)	Assisted Travel telephone number
<com:AlternatePublicTelephoneNumbers>	<com:TelephoneNumber>
<com:TelephoneNumber> (mandatory, multiple)	<com: TelNationalNumber>
<com: TelNationalNumber> (mandatory)	An additional public phone number.
<com:AlternateInternalTelephoneNumbers>	<com:TelephoneNumber>
<com:TelephoneNumber> (mandatory, multiple)	<com: TelNationalNumber>
<com: TelNationalNumber> (mandatory)	An internal phone number.
<com:FaxNumber>	<com:TelNationalNumber>
<com:TelNationalNumber> (mandatory)	Assisted Travel fax number
<com:PrimaryMinicomNumber>	<com:TelNationalNumber>
<com:TelNationalNumber> (mandatory)	Assisted Travel minicom (text phone) number
<com:AlternateMinicomNumber>	<com:TelNationalNumber>
<com:TelNationalNumber> (mandatory)	Alternative minicom number
<com:PostalAddress>	<add:Line>, <add:PostCode>
<add:Line> (mandatory, multiple, 2 elements mandatory, max. 5 elements)	Contains the line of the address
<add:PostCode>	Contains the postcode

<com:EmailAddress>	Assisted Travel email address
<com:Url>	Assisted Travel Url

2.2.3 <TicketingAndFares>

Contains the ticketing and fares information using the sub tags.

Tags	Sub tags/Values
<TeleSales>	<com:Annotation>, <com:ContactDetails>
<com:Annotation>	<com>Note>
<com>Note> (mandatory)	Telesales note
<com:ContactDetails>	Telesales contact details, see section 2.2.3.1
<GroupTravel>	<com:Annotation>, <com:ContactDetails>
<com:Annotation>	<com>Note>
<com>Note> (mandatory)	Group travel note
<com:ContactDetails>	Group travel contact details, see section 2.2.3.2
<BusinessTravel>	<com:Annotation>, <com:ContactDetails>
<com:Annotation>	<com>Note>
<com>Note> (mandatory)	Business travel note
<com:ContactDetails>	Business travel contact details, see section 2.2.3.3
<SeatReservations>	<com:Annotation>, <com:Available>
<com:Annotation>	<com>Note>
<com>Note> (mandatory)	Contains the note about the Seat reservations
<com:Available>	true/false (legacy schema supports 'unknown', this will never be output, omission of tag is equivalent)
<PenaltyFares>	<com:Annotation>
<com:Annotation>	<com>Note>
<com>Note>(mandatory)	This is a URL to the company penalty fares page (mapped to the legacy schema note field)

2.2.3.1 <com:ContactDetails> Telesales Contact Details

Sub-tag of TeleSales.

Tags	Sub tags/Values
<com:Annotation>	<com:Note>
<com:Note> (mandatory)	Contact details note
<com:PrimaryTelephoneNumber>	<com:TelNationalNumber>
<com:TelNationalNumber> (mandatory)	Telesales telephone number
<com:AlternatePublicTelephoneNumbers>	<com:TelephoneNumber>
<com:TelephoneNumber> (mandatory, multiple)	<com: TelNationalNumber>
<com: TelNationalNumber> (mandatory)	An additional public phone number.
<com:AlternateInternalTelephoneNumbers>	<com:TelephoneNumber>
<com:TelephoneNumber> (mandatory, multiple)	<com: TelNationalNumber>
<com: TelNationalNumber> (mandatory)	An internal phone number.
<com:FaxNumber>	<com:TelNationalNumber>
<com:TelNationalNumber> (mandatory)	Telesales fax number
<com:PrimaryMinicomNumber>	<com:TelNationalNumber>
<com:TelNationalNumber> (mandatory)	Telesales minicom (text phone) number
<com:PostalAddress>	<add:Line>, <add:PostCode>
<add:Line> (mandatory, multiple, 2 elements mandatory, max. 5 elements)	Contains the line of the address
<add:PostCode>	Contains the postcode
<com:EmailAddress>	Telesales email address
<com:Url>	Telesales Url

2.2.3.2 <com:ContactDetails> Group Travel Contact Details

Sub-tag of GroupTravel.

Tags	Sub tags/Values
------	-----------------

<com:Annotation>	<com>Note>
<com>Note> (mandatory)	Contact details note
<com:PrimaryTelephoneNumber>	<com:TelNationalNumber>
<com:TelNationalNumber> (mandatory)	Group travel telephone number
<com:AlternatePublicTelephoneNumbers>	<com:TelephoneNumber>
<com:TelephoneNumber> (mandatory, multiple)	<com: TelNationalNumber>
<com: TelNationalNumber> (mandatory)	An additional public phone number.
<com:AlternateInternalTelephoneNumbers>	<com:TelephoneNumber>
<com:TelephoneNumber> (mandatory, multiple)	<com: TelNationalNumber>
<com: TelNationalNumber> (mandatory)	An internal phone number.
<com:FaxNumber>	<com:TelNationalNumber>
<com:TelNationalNumber> (mandatory)	Group travel fax number
<com:PrimaryMinicomNumber>	<com:TelNationalNumber>
<com:TelNationalNumber> (mandatory)	Group travel minicom (text phone) number
<com:PostalAddress>	<add:Line>, <add:PostCode>
<add:Line> (mandatory, multiple, 2 elements mandatory, max. 5 elements)	Contains the line of the address
<add:PostCode>	Contains the postcode
<com:EmailAddress>	Group travel email address
<com:Url>	Group travel Url

2.2.3.3 <com:ContactDetails> Business Travel Contact Details

Sub-tag of BusinessTravel.

Tags	Sub tags/Values
<com:Annotation>	<com>Note>
<com>Note> (mandatory)	Contact details note
<com:PrimaryTelephoneNumber>	<com:TelNationalNumber>
<com:TelNationalNumber> (mandatory)	Business travel telephone number
<com:AlternatePublicTelephoneNumbers>	<com:TelephoneNumber>

<com:TelephoneNumber> (mandatory, multiple)	<com:TelNationalNumber>
<com:TelNationalNumber> (mandatory)	An additional public phone number.
<com:AlternateInternalTelephoneNumbers>	<com:TelephoneNumber>
<com:TelephoneNumber> (mandatory, multiple)	<com:TelNationalNumber>
<com:TelNationalNumber> (mandatory)	An internal phone number.
<com:FaxNumber>	<com:TelNationalNumber>
<com:TelNationalNumber> (mandatory)	Business travel fax number
<com:PrimaryMinicomNumber>	<com:TelNationalNumber>
<com:TelNationalNumber> (mandatory)	Business travel minicom (text phone) number
<com:PostalAddress>	<add:Line>, <add:PostCode>
<add:Line> (mandatory, multiple, 2 elements mandatory, max. 5 elements)	Contains the line of the address
<add:PostCode>	Contains the postcode
<com:EmailAddress>	Business travel email address
<com:Url>	Business travel Url

2.3 Sample XML Feed File

Appendix A shows a sample TOC 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 Configuration

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 Train Operating Company (TOC) XML feeds.

TOC by TOC code:

/xml/30/toc-?? .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 TOC XML feeds can be accessed by requesting the following URL;

4.1.1 TOC by TOC code

The TOC XML feed contains information about the specified TOC. The "??" in the following URL should be replaced by the required TOC two letter code;

<http://internal.nationalrail.co.uk/xml/30/toc-??.xml> - Production

<http://int.web.kb.awsre.co.uk/xml/30/toc-??.xml> - Staging

5 Document Details

5.1 Document Version

Version	Date	Modified by
1.0	03/06/2013	Maria Mlynarska
1.1	07/06/2013	Neil Fursey
1.2	22/07/2013	Neil Fursey
1.3	23/07/2013	Neil Fursey
1.4	05/05/2015	Lindsay Bleakley

Appendix A - Sample Companies XML File

A.1 Sample Companies XML File

```
<?xml version="1.0" encoding="utf-8"?>
```

```
<TrainOperatingCompany xmlns:xsi="http://www.w3.org/2001/XMLSchema-
instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema" xmlns:add="http://ww
w.govtalk.gov.uk/people/AddressAndPersonalDetails"xmlns:com="http://nationa
lrail.co.uk/xml/common" xmlns="http://nationalrail.co.uk/xml/toc">
  <ChangeHistory>
    <com:ChangedBy>Kathryn Daniels</com:ChangedBy>
    <com:LastChangedDate>
      2013-05-02T05:16:14.000Z
    </com:LastChangedDate>
  </ChangeHistory>
  <AtocCode>VT</AtocCode>
  <AtocMember>true</AtocMember>
  <StationOperator>true</StationOperator>
  <Name>Virgin Trains</Name>
  <LegalName>Virgin Trains</LegalName>
  <ManagingDirector>Chris Gibb</ManagingDirector>
  <Logo>
    http://nre.uat.cds.co.uk/static/images/content/Tocs/vt-logo.gif
  </Logo>
  <OperatingPeriod>
    <StartDate>2013-05-03</StartDate>
  </OperatingPeriod>
  <HeadOfficeContactDetails>
    <com:PrimaryTelephoneNumber>
      <com:TelNationalNumber>
        0845 000 8000
      </com:TelNationalNumber>
    </com:PrimaryTelephoneNumber>
    <com:PostalAddress>
      <add:Line>Virgin Trains</add:Line>
      <add:Line>85 Smallbrook Queensway</add:Line>
      <add:Line>Birmingham</add:Line>
      <add:PostCode>B5 4HA</add:PostCode>
    </com:PostalAddress>
    <com:EmailAddress>
      customer.relations@virgintrains.co.uk
    </com:EmailAddress>
  </HeadOfficeContactDetails>
  <CompanyWebsite>http://www.virgintrains.co.uk</CompanyWebsite>
  <SupportAndInformation>
    <CustomerService>
      <com:Annotation>
        <com:Note>
          <![CDATA[ - ]]>
        </com:Note>
      </com:Annotation>
      <com:ContactDetails>
        <com:PrimaryTelephoneNumber>
          <com:TelNationalNumber>
            0845 000 8000
          </com:TelNationalNumber>
        </com:PrimaryTelephoneNumber>
        <com:PostalAddress>
          <add:Line>
            Customer Relations - Virgin Trains
          </add:Line>
          <add:Line>
            FREEPOST BM 6613 - PO BOX 713
          </add:Line>
          <add:Line>Birmingham</add:Line>
        </com:PostalAddress>
      </com:ContactDetails>
    </CustomerService>
  </SupportAndInformation>
</TrainOperatingCompany>
```

```
        <add:PostCode>B5 4HH</add:PostCode>
    </com:PostalAddress>
    <com:Url>
        <a href="http://www.virgintrains.co.uk/contact/">http://www.virgintrains.co.uk/contact/
        </a>
    </com:Url>
</com:ContactDetails>
</CustomerService>
<LostProperty>
    <com:ContactDetails>
        <com:PrimaryTelephoneNumber>
            <com:TelNationalNumber>
                0845 000 8000
            </com:TelNationalNumber>
        </com:PrimaryTelephoneNumber>
    </com:ContactDetails>
    <com:Available>true</com:Available>
</LostProperty>
<AssistedTravel>
    <com:ContactDetails>
        <com:PrimaryTelephoneNumber>
            <com:TelNationalNumber>
                08457 443366
            </com:TelNationalNumber>
        </com:PrimaryTelephoneNumber>
        <com:PrimaryMinicomNumber>
            <com:TelNationalNumber>
                08457 443367
            </com:TelNationalNumber>
        </com:PrimaryMinicomNumber>
    </com:ContactDetails>
</AssistedTravel>
</SupportAndInformation>
<TicketingAndFares>
    <TeleSales>
        <com:ContactDetails>
            <com:PrimaryTelephoneNumber>
                <com:TelNationalNumber>
                    08445565650
                </com:TelNationalNumber>
            </com:PrimaryTelephoneNumber>
        </com:ContactDetails>
    </TeleSales>
    <GroupTravel>
        <com:ContactDetails>
            <com:PrimaryTelephoneNumber>
                <com:TelNationalNumber>
                    08445565622
                </com:TelNationalNumber>
            </com:PrimaryTelephoneNumber>
        </com:ContactDetails>
    </GroupTravel>
    <BusinessTravel>
        <com:ContactDetails>
            <com:PrimaryTelephoneNumber>
                <com:TelNationalNumber>-
            </com:TelNationalNumber>
            </com:PrimaryTelephoneNumber>
        </com:ContactDetails>
    </BusinessTravel>
</SeatReservations>
```

```
        <com:Available>true</com:Available>
      </SeatReservations>
    </TicketingAndFares>
  </TrainOperatingCompany>
```