

National Apprenticeship Service

Apprenticeship vacancies R5

Service Interface Guide

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Release History

The following provides the document revision history as issued. Internal revision history information is maintained in Appendix Z which is not included in the published version of the document.

Version	Description	Date	Author
1.0.0	The first release of the new Web Services and RSS feed, delivered as part of Apprenticeship vacancies Release 5.	July 2011	Capgemini
1.0.1	Minor update to reflect the manual provision of WSDL files for the Web Services	July 2011	Capgemini
1.0.2	Minor update clarifying specification of RSS feed and adding specific examples of RSS feeds	August 2011	Capgemini
1.0.3	Correction to URL for “sandbox” test services. Clarification in use of parameters on RSS feeds. Appendix with current reference data for County and Occupation code for use with RSS feed.	October 2011	Capgemini

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1 Introduction

1.1 Background

The Apprenticeship vacancies system was initially delivered in December 2008 to provide a central location for employers to promote Apprenticeships and to allow candidates to search and apply.

The system has been enhanced since the initial release and the latest release includes providing system to system interfaces to allow employers and other 3rd parties to further integrate with the system. The following diagram provides a contextual view of the new services offered:

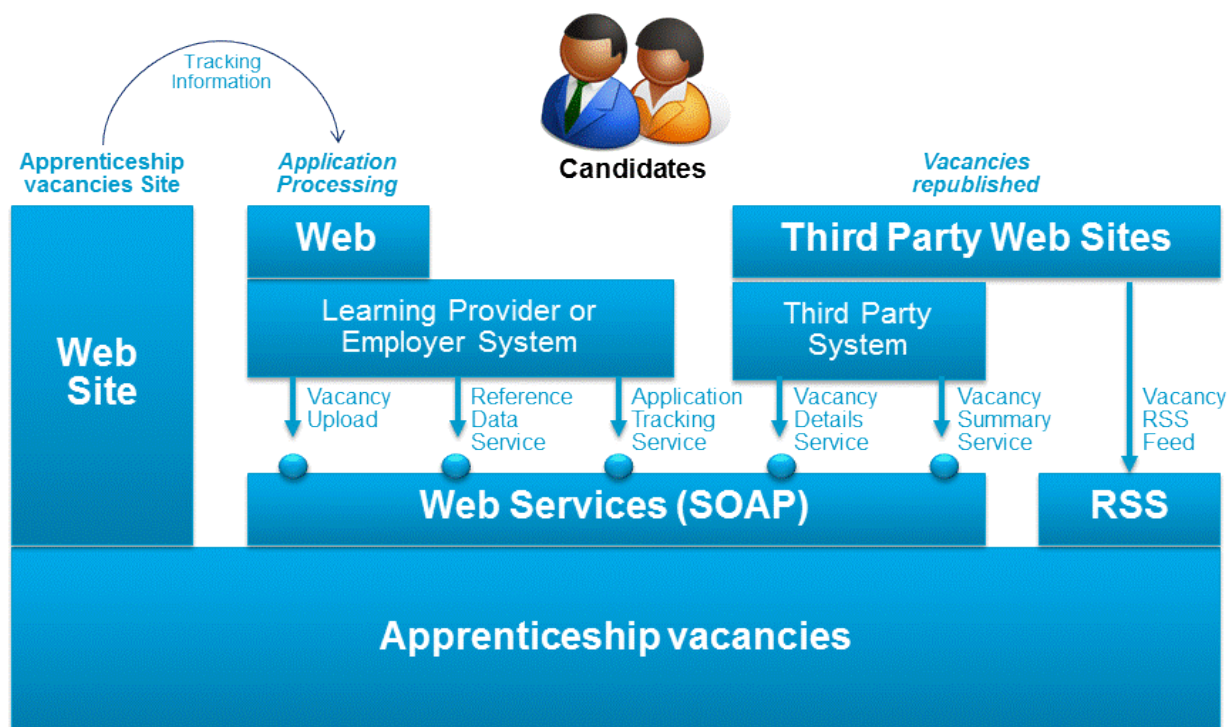


Figure 1. Interfaces in Context

It is important to understand that there are three specific scenarios that are being addressed by the new interfaces, and that these are specific to different types of organisation:

1. Submitting Vacancies (replacing the Bulk Vacancy Upload Tool)
2. Providing tools that enable the automation for Tracking Offline Applications
3. Republishing of Vacancies through third party web sites

1.2 Document Purpose

This document provides a system integration guide to software developers who require detailed technical information about how to integrate the Apprenticeship vacancies web services into their application.

1.3 Support

For support questions please contact the NAS Helpdesk:

Email: nationalhelpdesk@apprenticeships.gov.uk

Telephone: 024 76 82 6482

1.4 Style Guide

Users of the VacancySummaryServices and VacancyDetailsService should refer to the Agency's Style Guide when considering how to display vacancies. Details can be found at:

<http://www.apprenticeships.org.uk/Partners/Marketing/Identity-Guidelines.aspx>

1.5 Technical Standards

The Apprenticeship vacancies web services conform to the following technical standards as defined in the central government Technical Standards Catalogue Version 6.2, Final September 2005.

SSL v3/TLS (RFC 2246)

SOAP v1.1, as defined by the W3C

WSDL 1.1, as defined by the W3C

Basic Security Profile Version 1.0 (WS-I Security) as defined by WS-I

XML as defined by W3C

XML schema (XSD) conforms to W3C standards

Transformation Format – 8 bit UTF-8 (RFC 2279)

2 Security

All of the Web Services provided by the system are secured in two ways: First the Web Services are encrypted using SSL. Secondly, each call to the Web service requires an ExternalSystemID and an associated PublicKey that are issued through the system.

Due to technical limitations, and to ensure the widest possible reach for the services within the target organisations, the Vacancy RSS feed allows anonymous access, although the URL is not published on the public web site.

2.1 System IDs

One ExternalSystemID can be used for one or more systems – and each organisation can have one or more ExternalSystemID. This flexibility allows each organisation to manage their System IDs in a way that is appropriate to them.

Each System ID can be configured to enable one or more of the services available to that organisation. The following table lists the services available for each type of organisation:

	Learning Provider	Employer	Other Third Party
ReferenceDataService	Yes	Yes	Yes
VacancyUpload	Yes	Yes	-
ApplicationTrackingService	Yes	Yes	-
VacancyDetailsService	Yes	Yes	Yes
VacancySummaryService	Yes	Yes	Yes

2.2 Obtaining System IDs

If you are already a registered organisation within the Apprenticeship vacancies system and have a valid logon to the system with the correct rights (your User Approver can provide this information) the SystemIDs and Public Keys can all be managed via the Interface Management screens on the Apprenticeship vacancies system. Currently this only applies to registered Learning Providers and registered Employer Sites.

If you are a Third Party wanting to access the VacancyDetailsService or VacancySummaryService, you will need to request an ExternalSystemID and Public Key from NAS Support.

3 Web Service Endpoints

The Apprenticeship vacancies web services ReferenceDataService, VacancyDetailsService and VacancySummaryService are available from one production endpoint. Apprenticeship vacancies web services ApplicationTrackingService and BulkVacancyUpload have two endpoints; production and test. In each environment any breaking changes will be published to a new endpoint and previous versions deprecated.

3.1 Production Environment

This environment provides access to the live Apprenticeship vacancies web services and should be used for normal operational use.

The only access restriction is that a valid ExternalSystemID and PublicKey (password) must be supplied as two of the input parameters for all calls to the web service. Only if the supplied ExternalSystemID and PublicKey is authenticated will the controlled access web service return the requested data.

Current Production Endpoint

The following URLs are for the Web Services:

<https://apprenticeshipvacancymatchingservice.lsc.gov.uk/Services/ApplicationTrackingService/ApplicationTrackingService.svc>
<https://apprenticeshipvacancymatchingservice.lsc.gov.uk/Services/BulkVacancyUploadService/BulkVacancyUploadService.svc>
<https://apprenticeshipvacancymatchingservice.lsc.gov.uk/Services/ReferenceDataService/ReferenceDataService.svc>
<https://apprenticeshipvacancymatchingservice.lsc.gov.uk/Services/VacancyDetailsService/VacancyDetailsService.svc>
<https://apprenticeshipvacancymatchingservice.lsc.gov.uk/Services/VacancySummaryService/VacancySummaryService.svc>

The following URL is for the RSS Feed:

<https://apprenticeshipvacancymatchingservice.lsc.gov.uk/VacancyRssFeedService/VacancyRss.aspx>

Note that the feed has a number of mandatory parameters when used. See section 5.6 for details.

3.2 Test Environment

This environment provides access to a test Apprenticeship vacancies web service(s) and should be used to test the development of your application integration with the Apprenticeship vacancies system. The test service will return values for all services based on a set of predefined dummy data. For more information refer to Appendix B.

Security Note: The Apprenticeship vacancies production web services uses SSL to ensure that the ExternalSystemID and PublicKey passed as input parameters are encrypted.

Current Test Endpoint

<https://apprenticeshipvacancymatchingservice.lsc.gov.uk/Sandbox/ApplicationTrackingService/ApplicationTrackingService.svc>
<https://apprenticeshipvacancymatchingservice.lsc.gov.uk/Sandbox/BulkVacancyUploadService/BulkVacancyUploadService.svc>

4 Web Services Authorisation

To access the Apprenticeship vacancies web services you will require a MessageID, valid ExternalSystemID and PublicKey. The ExternalSystemID and PublicKey need to be obtained by registering the system with NAS as described above.

Each web call will be required to provide the following information in the SOAP header.

```
<soapenv:Header>
  <ns:PublicKey></ns:PublicKey>
  <ns:MessageId?></ns:MessageId>
  <ns:ExternalSystemId?></ns:ExternalSystemId>
</soapenv:Header>
```

Field	Mandatory	Type	Description
ExternalSystemID	Yes	GUID	This is the ExternalSystemID which has been allocated by the Apprenticeship vacancies system and has been granted access to the relevant service
PublicKey	Yes	String	This is a 16 characters complex password allocated by the Apprenticeship vacancy system and associated with the ExternalSystemID
MessageID	Yes	GUID	This is a unique message ID which is provided by the calling system. This is to ensure that messages are only processed once by the system.

The MessageID will be returned with all successful calls to enable the integrating system the ability to monitor which calls are successful.

4.1 Access Rights

The Web Services that are available to an organisation depends on both the configuration of the system information (where NAS can revoke rights to specific interfaces if necessary) as well as the following rules:

	Learning Provider	Employer	Other Third Party
ReferenceDataService	Yes	Yes	Yes
VacancyUpload	Yes	Yes	-
ApplicationTrackingService	Yes	Yes	-
VacancyDetailsService	Yes	Yes	Yes
VacancySummaryService	Yes	Yes	Yes

Due to technical limitations, and to ensure the widest possible reach for the services within the target organisations, the Vacancy RSS feed allows anonymous access, although the URL is not published on the public web site.

5 Web Service Definitions

This section describes the different service definitions in detail. For each web service method the following information is provided:

Purpose: what you can use the web service method for.

Signature: the name of the web service method, the type of value it returns and the names and types of its parameters.

The data types used in describing the web services are W3C XML Schema types.

It is important to note that all of the Web Services are reply-request SOAP-based. This approach has been taken to ensure the widest possible coverage for the interfaces but does introduce some constraints, specifically around the message size supported without introducing network timeout issues. The maximum message size is currently configured as 250kb.

The details of the Web Service interfaces are also provided as WSDL files which are available in a ZIP file which can be downloaded from the same location as this document.

Search Criteria

A number of the web services detailed within this document provide multiple parameters to allow the searching of vacancies to a specific area i.e. searching is available by Region, County, Framework and Occupation

The web services only provide limited validation on the parameters and will not logically check that they correlate with another parameter – it is therefore possible to submit a search by Region and County by specifying a value for both parameters but the system will not check that the specified county is in the specified region. In this instance the system will perform the search and return zero vacancies.

Paging of Returned Data

Both the VacancySummaryService and VacancyDetailsService can return a large amount of data. To ensure that the each request is handled in a proficient manner the search results are returned in a page-by-page mode. Each page contains a default number of records (default 25) and a field (TotalPages) indicating the total number of pages. The client should specify the number of the page they wish to retrieve (this defaults to 1). The paging numbering starts from 1.

Submitting Multiple Vacancies

Both the VacancyUpload and ApplicationTrackingService can submit more than one vacancy as part of a message. However, as the message size is limited, sending systems may need to “chunk up” messages to fit within this limit. In both cases the Web Services can be called for individual vacancies, although this would impact performance due to the normal messaging overheads.

5.1 Service: ReferenceDataService

The Reference Data Service provides system integrators with the ability to download reference data from the Apprenticeship vacancies system. This reference data is the used as input parameters to other web service calls.

5.1.1 Method: GetApprenticeshipFrameworks

Purpose

Use this method to obtain a list of the apprenticeship frameworks which are available within the Apprenticeship vacancies system.

Signature

GetApprenticeshipFrameworksResponse GetApprenticeshipFrameworks()

Input Parameters

None

Return Value

GetApprenticeshipFrameworksResponse

Tag Name	Type	Description
ApprenticeshipFrameworks	Tag Group	Contains ApprenticeshipFrameworkAndOccupationData group and MessageID tag
ApprenticeshipFrameworkAndOccupationData	Tag Group	Contains framework and occupation data elements
ApprenticeshipFrameworkCodeName	String	Code relating to the framework. This is the value that can be returned as part of other web calls.
ApprenticeshipFrameworkFullName	String	Framework Full Name
ApprenticeshipFrameworkShortName	String	
ApprenticeshipOccupationCodeName	String	Code relating to the Occupation. This is the value that can be returned as part of other web calls.
ApprenticeshipOccupationFullName	String	Occupation Full Name
ApprenticeshipOccupationShortName	String	

The following example shows 1 framework

```
<GetApprenticeshipFrameworksResponse xmlns="http://Navms.Ms.ExternalInterfaces/2011">
  <ApprenticeshipFrameworks xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
    <ApprenticeshipFrameworkAndOccupationData>
      <ApprenticeshipFrameworkCodeName>102</ApprenticeshipFrameworkCodeName>
      <ApprenticeshipFrameworkFullName>Business and
Administration</ApprenticeshipFrameworkFullName>
      <ApprenticeshipFrameworkShortName>102</ApprenticeshipFrameworkShortName>
      <ApprenticeshipOccupationCodeName>AHR</ApprenticeshipOccupationCodeName>
      <ApprenticeshipOccupationFullName>Business, Administration and
Law</ApprenticeshipOccupationFullName>
      <ApprenticeshipOccupationShortName>15</ApprenticeshipOccupationShortName>
    </ApprenticeshipFrameworkAndOccupationData> </ApprenticeshipFrameworks>
    <MessageId>31527164-bfdf-4c43-bbb9-e64d57295279</MessageId>
  </GetApprenticeshipFrameworksResponse>
```

5.1.2 Method: GetCounties

Purpose

Use this method to obtain a list of the counties which are available within the Apprenticeship vacancies system.

Signature

GetCountiesResponse GetCounties ()

Input Parameters

None

Return Value

GetCountiesResponse

Tag Name	Type	Description
Counties	Tag Group	
CountyData	Tag Group	
CountyCode	Integer	County Code. This parameter can be used as input to other web service calls
FullName	String	County Name

The following example shows 1 county

```
<GetCountiesResponse xmlns="http://Navms.Ms.ExternalInterfaces/2011">  
  <Counties xmlns:i="http://www.w3.org/2001/XMLSchema-instance">  
    <CountyData>  
      <CountyCode>BED</CountyCode>  
      <FullName>Bedfordshire</FullName>  
    </CountyData>  
  </Counties>  
  <MessageId>21527164-bfdf-4c43-bbb9-e64d57295279</MessageId>  
</GetCountiesResponse>
```

5.1.3 Method: GetErrorCodes

Purpose

Use this method to return a list of error codes and associated descriptions which can be returned by the various web services within the Apprenticeship vacancies system.

Signature

GetErrorCodesResponse GetErrorCodes ()

Input Parameters

None

Return Value

GetErrorCodesResponse

Tag Name	Type	Description
ErrorCodes	Tag group	
ErrorCodesData	Tag group	
InterfaceErrorCode	String	Error Code
InterfaceErrorDescription	String	Error Description

The following example shows 1 error code

```
<GetErrorCodesResponse xmlns="http://Navms.Ms.ExternalInterfaces/2011">  
  <ErrorCodes xmlns:i="http://www.w3.org/2001/XMLSchema-instance">  
    <ErrorCodesData>  
      <InterfaceErrorCode>-10001</InterfaceErrorCode>  
      <InterfaceErrorDescription>"WorkingWeek" must be 100 characters or  
less</InterfaceErrorDescription>  
    </ErrorCodesData>  
  </ErrorCodes>  
  <MessageId>91527164-bfdf-4c43-bbb9-e64d57295279</MessageId>  
</GetErrorCodesResponse>
```

A full list of error codes are available in the appendix.

5.1.4 Method: GetRegions

Purpose

Use this method to obtain a list of the regions which are available within the Apprenticeship vacancies system.

Signature

GetRegionsResponse GetRegions ()

Input Parameters

None

Return Value

GetRegionsResponse

Tag Name	Type	Description
RegionData	TAG Group	
CodeName	String	This parameter can be used as input to other web service calls
FullName	String	Full description of the Regions within the Apprenticeship vacancies system

The following example shows 1 region

```
<GetRegionResponse xmlns="http://Navms.Ms.ExternalInterfaces/2011">  
<MessageId>de7721fb-e231-495f-8d3a-0259d0401b2e</MessageId>  
<Regions xmlns:i="http://www.w3.org/2001/XMLSchema-instance">  
<RegionData>  
<CodeName>EM</CodeName>  
<FullName>East Midlands</FullName>  
</RegionData>  
</Regions>  
</GetRegionResponse>
```

5.2 Service: VacancyUpload

The Vacancy Upload service allows Employers and Learning Providers to upload new vacancies to the Apprenticeship vacancies system. They can upload vacancies based on their valid relationship with learning provider and employer respectively.

This service allows vacancies to be published both where the vacancies will be managed in the Apprenticeship vacancies system and where the vacancies are managed externally (“offline”). As the reference information needed in this service is validated on submission, it is recommended that the reference date for the submitted vacancies is obtained through the ReferenceDataService on a sufficiently regular basis.

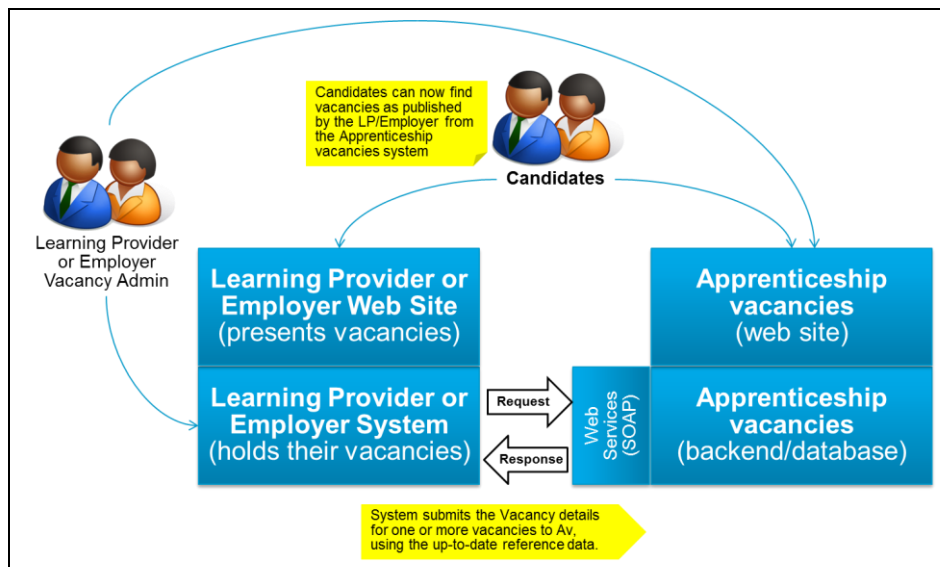


Figure 2. Vacancy Upload Example for “Offline” Vacancies

More than one vacancy can be uploaded as one message, although the maximum message size means that large uploads will need to be “chunked up” into a number of messages.

5.2.1 Method: UploadVacancies

Purpose

Use this method to upload vacancies to the Apprenticeship vacancies system.

Signature

BulkVacancyUploadResponse UploadVacancies (BulkVacancyUploadRequest)

Input Parameters

Note that the XML hierarchy is reflected in the indentation of the table below.

Tag Name	Type		Notes / Validation								
AVMSHeader	Child Object	Mandatory	ExternalSystemId, PublicKey, GUID								
BulkVacancyUploadRequest	Child Object	Mandatory									
Vacancies	Child Object	Mandatory	One or more vacancies can be sent at the same time								
VacancyId	GUID	Mandatory	This is a GUID which will be returned as part of the response indicating the status of the upload for this specific vacancy. Mandatory Field								
LearningProviderEdsUrn	Integer	Mandatory	The Training Provider EDS URN must be an existing ED URN. It must also have a valid relationship with the Employer EDS URN. If the user of this system is a Training Provider, the UKPRN used when registering must correspond to the EDS URN. If the VacancyLocationType is 'National' then if a valid relationship exists, it must allow Nationwide vacancies								
EmployerEdsUrn	Integer	Mandatory	The Employer EDSURN must be an existing EDURN and it must also have a valid relationship with the Training Provider EDSURN. If the VacancyLocationType is 'National' then if a valid relationship exists, it must allow Nationwide vacancies								
Title	String(100)	Mandatory									
ShortDescription	String(256)	Mandatory									
LongDescription	String(MAX)	Mandatory									
WeeklyWage	Integer	Mandatory									
WorkingWeek	String	Mandatory									
FutureProspects	String(4000)	Optional									
ContactName	String(100)	Optional									
EmployerAnonymousName	String(255)	Conditional	If there is a value entered into the EmployerAnonymousName field, then the EmployerDescription field should not be null or blank.								
EmployerImage	Base64String	Optional	The EmployerImage field should have a byte length of less than 10240 (10KB) if the field is not blank								
EmployerDescription	String(Infinite)	Conditional	This is a mandatory field if EmployerAnonymousName is populated								
EmployerWebsite	String(255)	Optional									
VacancyLocationType	String	Mandatory	Must be set to valid text value, as detailed below: <table border="1" data-bbox="1037 1792 1444 2049"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Standard</td> <td>Vacancies with a single location</td> </tr> <tr> <td>MultipleLocation</td> <td>Vacancies with more than one location</td> </tr> <tr> <td>National</td> <td>Vacancies that are "national" i.e. have no specific location</td> </tr> </tbody> </table>	Value	Description	Standard	Vacancies with a single location	MultipleLocation	Vacancies with more than one location	National	Vacancies that are "national" i.e. have no specific location
Value	Description										
Standard	Vacancies with a single location										
MultipleLocation	Vacancies with more than one location										
National	Vacancies that are "national" i.e. have no specific location										

Tag Name	Type		Notes / Validation
AddressDetails	Child Object		This section is only required when VacancyLocationType is 'Standard'
AddressLine1	String(50)	Conditional	If VacancyLocationType is set to 'Standard', cannot be blank
AddressLine2	String(50)	Optional	
AddressLine3	String(50)	Optional	
AddressLine4	String(50)	Optional	
AddressLine5	String(50)	Optional	
County	String(150)	Conditional	The County must be a valid County (available from Reference Data)
GridEastM	Integer	Optional	Geo Code location data
GridNorthM	Integer	Optional	Geo Code location data
Latitude	Float	Optional	
Longitude	Float	Optional	
PostCode	String(8)	Conditional	If VacancyLocationType is set to 'Standard', then this must not be blank and must be a valid postcode.
Town	String(40)	Conditional	If VacancyLocationType is 'Standard', checked to see if it is not blank
NumberOfPositions	Integer	Conditional	If VacancyLocationType is 'Standard' then this field must be 1 or more
MultisiteVacanciesDetails	Child Object	Optional	Required, with the following hierarchy if the VacancyLocationType is set to 'MultipleLocation'
MultisiteVacanciesData	Child Object		One or more sites
AddressDetails	Child Object		One address per VacancyDetails
AddressLine1	String(50)	Conditional	If VacancyLocationType is set to 'MultipleLocation' must not be blank
AddressLine2	String(50)	Optional	
AddressLine3	String(50)	Optional	
AddressLine4	String(50)	Optional	
AddressLine5	String(50)	Optional	
County	String(150)	Conditional	If VacancyLocationType is set to 'MultipleLocation' must not be blank. The County must be a valid County (available from Reference Data)
GridEastM	Integer	Optional	Geo Code location data
GridNorthM	Integer	Optional	Geo Code location data
Latitude	Float	Optional	
Longitude	Float	Optional	
PostCode	String(8)	Conditional	If VacancyLocationType is set to 'MultipleLocation', then this must not be blank and must be valid postcode.
Town	String(40)	Conditional	If VacancyLocationType is set to 'MultipleLocation', then checked to see if it is not blank
NumberOfVacancies	Integer	Conditional	If VacancyLocationType is set to 'MultipleLocation' then this value must be set to 1 or more

Tag Name	Type		Notes / Validation						
ApprenticeshipFramework	String(3)	Mandatory	Validated to check if valid framework (available from Reference Data)						
VacancyType	String	Mandatory	Must be set to valid text value, as detailed below: <table border="1" data-bbox="1038 439 1445 600"> <thead> <tr> <th>Value</th> </tr> </thead> <tbody> <tr> <td>Unspecified</td> </tr> <tr> <td>IntermediateLevelApprenticeship</td> </tr> <tr> <td>AdvancedLevelApprenticeship</td> </tr> <tr> <td>HigherApprenticeship</td> </tr> </tbody> </table>	Value	Unspecified	IntermediateLevelApprenticeship	AdvancedLevelApprenticeship	HigherApprenticeship	
Value									
Unspecified									
IntermediateLevelApprenticeship									
AdvancedLevelApprenticeship									
HigherApprenticeship									
TrainingToBeProvided	String(MAX)	Optional							
ExpectedDurationOfApprenticeship	String(50)	Optional							
SkillsRequired	String(MAX)	Optional							
PersonalQualities	String(MAX)	Optional							
QualificationRequired	String(MAX)	Optional							
RealityCheck	String(MAX)	Optional							
OtherImportantInformation	String(MAX)	Optional							
SupplementaryQuestion1	String(4000)	Mandatory							
SupplementaryQuestion2	String(4000)	Mandatory							
ClosingDate	DateTime	Mandatory	Should be after today's date						
InterviewStartDate	DateTime	Mandatory	Should be after today's date						
PossibleStartDate	DateTime	Mandatory	Should be after today's date						
ApplicationType	String	Mandatory	Must be set to valid text value, as detailed below: <table border="1" data-bbox="1038 1149 1445 1417"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Online</td> <td>Applications are managed through the Apprenticeship vacancies site</td> </tr> <tr> <td>Offline</td> <td>Applications are managed through an Employer's or Learning Provider site</td> </tr> </tbody> </table> <p>If a vacancy is Offline the URL for the EmployerExternalApplicationWebsite must defined to provide the link for the candidates.</p>	Value	Description	Online	Applications are managed through the Apprenticeship vacancies site	Offline	Applications are managed through an Employer's or Learning Provider site
Value	Description								
Online	Applications are managed through the Apprenticeship vacancies site								
Offline	Applications are managed through an Employer's or Learning Provider site								
ApplicationInstructions	String								
EmployerExternalApplicationWebsite	String(255)	Conditional	An External vacancy, as identified in the ApplicationType, should have the link to the employers vacancy/site						

Note the use of VacancyLocationType is key to this Web Service call, as it determines whether a vacancy has no specific address (National), one address (Standard) or a set of addresses with vacancies at each (MultiLocation). This flag affects the message structure as detailed above.

Return Value

Tag Name	Type	Description
VacancyUploadResultData	TAG Group	
VacancyID		This is the vacancy ID passed in by the calling system
Status	String	This is either Success or Fail. If the import has failed please check the error code values to determine why.
Error Codes	TAG Group	This is list of error codes.
Error Code	Integer	This is a specific error code indicating why the import failed. Please check the appendix for a full list of error codes.
VacancyReference	Integer	This returns the new vacancy reference number. This is checked against the database when generated to make sure the reference number does not exist when creating the vacancy.

The following example shows a successful response from the bulk upload service

```
<BulkVacancyUploadResponse xmlns="http://Navms.Ms.ExternalInterfaces/2011">
  <MessageId>c15f8c31-09c6-5ed9-9ac4-a92af93cda80</MessageId>
  <Vacancies xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
    <VacancyUploadResultData>
      <VacancyId>4ab48d73-126c-48ed-99b6-b6c17c423346</VacancyId>
      <Status>Success</Status>
      <ErrorCodes/>
      <ReferenceNumber>47139</ReferenceNumber>
    </VacancyUploadResultData>
  </Vacancies>
</BulkVacancyUploadResponse>
```

Fault Codes

In the event that the service experiences an unexpected error (e.g. invalid SOAP message) then a standard SOAP fault will be returned. The faults that may be raised are:

Fault Code	Fault String
Client	The message was incorrectly formed or contained incorrect information
Server	There was a problem with the server so the message could not proceed

5.3 Service: ApplicationTrackingService

This service allows employers who advertise apprenticeships on Apprenticeship vacancies but use a different system for the candidate to apply for the apprenticeship (“offline applications”) to update the Apprenticeship vacancies system with the number of successful applicants. This is designed to replace the highly manual process of collating information and providing this back to the Agency.

The service includes the optional provision of a Tracking ID for the link to the Employer’s system (where the existing vacancies do not already provide this) and a Web Service to allow submission of the success information. The following diagram shows the overall flow.

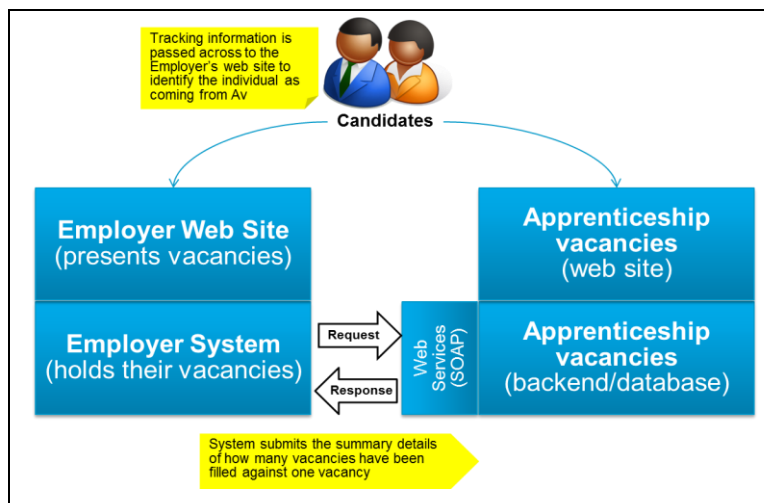


Figure 3. Application Tracking

Provision of Tracking ID

Employers can be setup within Apprenticeship vacancies so that any links from the vacancies have unique tracking information added by the Apprenticeship vacancies system. In this case, when a candidate applies for a vacancy they are provided with a URL which allows them to click through to the employers system. This URL provides the following information as part of its QueryString:

QueryString Value	Type	Notes
TrackingID	GUID	This is an internal number recording the click through to the external system and is not currently being used at present
VacancyReference	String	This is the reference number of the vacancy being applied for. This will be used as part of the ApplicationTrackingService call.

Note that, although the tracking ID can be matched internally back to the original candidate within the Apprenticeship vacancies system, this capability has not been implemented at present. This is included in the interface so that external systems can be developed in such a way as to allow for this enhancement in the future.

Web Service to Submit Tracking Statistics

The second element of this service is the Web Service that allows the summary information about the numbers of successful applicants to be updated in the Apprenticeship vacancies system.

5.3.1 Method: Submit

Purpose

Use this method to update the number of successful offline applicants for a specific vacancy reference.

Note that this value overwrites the existing value, and you can submit a value less than previously submitted if, for example, a correction has been made on your system.

Signature

ApplicationTrackingResponse Submit (ApplicationTrackingRequest)

Input Parameters

ApplicationTrackingRequest is made up of the ApplicationTrackingVacancyReferenceData group which may be repeated to allow the updating of multiple vacancies within the same call. ApplicationTrackingVacancyReferenceData has the following parameters

Tag Name	Type	Mandatory	Description
ApplicationTrackingVacancyReferenceData	Child Object	Yes	May be repeated 1 or more times
VacancyReference	Integer	Yes	This is the VacancyReference which is passed through to the client system when the candidate clicks through to apply.
NewApplicationsCount	Integer	Yes	This is the number of successful applicants for this vacancy reference. This value overwrites any previous value.

Return Value

Tag Name	Type	Description
VacancyReference	Integer	The response returns the updated vacancy reference number
Error Code	Integer	This is result of the update. A error code of 0 means that the update has been completed successfully. A list of all error codes and descriptions can be found in the appendix.

The following example shows a successful response from the application tracking service

```
<SubmitApplicationTrackingResponse xmlns="http://Navms.Ms.ExternalInterfaces/2011">
  <MessageId>32639ca3-c8c8-49bc-b5e7-279d0fbb7013</MessageId>
  <ErrorCode xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
    <ErrorCode>0</ErrorCode>
  </ErrorCode>
  <Vacancies xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
    <ApplicationTrackingResultData>
      <VacancyReference>46845</VacancyReference>
      <ErrorCode>
        <ErrorCode>0</ErrorCode>
      </ErrorCode>
    </ApplicationTrackingResultData>
  </Vacancies>
</SubmitApplicationTrackingResponse>
```

5.4 Service: VacancyDetailsService

The Vacancy Details Service provides system integrators with the ability to download open apprenticeships from the Apprenticeship vacancies system. This service allows various parameters to allow the system integrators to select the most relevant apprenticeships and/or request up to date details after a given date.

This web service call uses specific data for each of its parameters. A copy of the available values can be obtained from the ReferenceDataService.

5.4.1 Method: Get

Purpose

Use this method to obtain a list of the open apprenticeships which are available within the Apprenticeship vacancies system (subject to search criteria). This provides all the data for a specific vacancy. Please use the VacancySummaryService to retrieve a smaller limited view of the vacancy.

Signature

VacancyDetailsResponse Get (VacancySearchCriteria)

Input Parameters

VacancySearchCriteria has the following parameters

Tag Name	Type	Mandatory	Description
VacancyReferenceId	Integer	No	This field allows the details of a single vacancy to be returned. Only 1 vacancy reference may be supplied.
OccupationCode	String (3)	No	This field allows the vacancies for a specified occupation group as defined by the Apprenticeship vacancies reference data to be returned.
FrameworkCode	String (3)	No	This field allows the vacancies for a specified framework group as defined by the Apprenticeship vacancies reference data to be returned.
VacancyLocationType	String (11)	Yes	This must be set to either 'National' or 'NonNational'. If set to 'National' then the CountyCode, Town and RegionCode will be ignored as only Nationwide vacancies will be returned. If set to 'NonNational' the location search criteria can be specified. NOTE that when set to 'NonNational' then any Nationwide vacancies will NOT be included in the results – you can call the Web Service multiple times to build an inclusive result set.
CountyCode	String (3)	No	Restricts search to vacancies within the specified county.
Town	String (255)	No	A free format string which can be used to retrieve vacancies which are available within the town specified. If a parameter is spelt incorrectly the search will return no results (unless a vacancy has been setup with its town spelt incorrectly.)
RegionCode	String (3)	No	Restricts search to vacancies within the specified region
VacancyPublishedDate	DateTime	No	Only vacancies that have been published since this date will be included
PageIndex	Integer	Yes	This should be set to 1 for the first call.

Any optional (Mandatory=No) tags above should not be submitted if they do not have a value.

Return Value

VacancyDetailsResponse

Note that the XML hierarchy is reflected in the indentation of the table below.

Property Name	Type	Description
AVMSHeader	Child Object	Contains generic information about the Apprenticeship vacancies system, appears once
ApprenticeshipVacanciesDescription	String	Descriptive information about the Apprenticeship vacancies system
ApprenticeshipVacanciesURL	String	URL for further information about the Apprenticeship vacancies system
SearchResults	Child Object	Contains all of the search results data, appears once
VacancyFullData	Child Object	Contains one set of Vacancy Details, can appear zero or numerous times
VacancyLocationType	String	Returns 'Standard', 'MultipleLocation' or 'National'. Note that, where the search criteria is National, only records that are 'National' will be returned; when the search is NonNational, then 'Standard' or 'MultiLocation' records will be returned.
VacancyAddress	Child Object	Contains the address of the Vacancy. When the vacancy is a 'National' vacancy this will contain the Employer's address as specified in the vacancy. When the vacancy is a 'MultiLocation' vacancy, each location will be returned by the system as an individual vacancy.
AddressLine1	String	Always provided – see note above about address used
AddressLine2	String	Address lines 2 to 5 might have information provided, depending on the address details
AddressLine3	String	
AddressLine4	String	
AddressLine5	String	
County	String	
GridEastM	Integer	Geo Code location data, this should be provided but, where data is provided through VacancyUpload there is a small risk that data has not been provided and the background task to update this has not yet provided it.
GridNorthM	Integer	
Latitude	Decimal Number	
Longitude	Decimal Number	
PostCode	String	Always provided – see note above about address used
Town	String	Always provided – see note above about address used
ApprenticeshipFramework	String	Always provided
ClosingDate	DateTime	Always provided
ShortDescription	String	Always provided
EmployerName	String	Always provided
LearningProviderName	String	Always provided
NumberOfPositions	Integer	Always provided
VacancyTitle	String	Always provided
CreatedDateTime	DateTime	Always provided
VacancyReference	String	Always provided
VacancyType	String	Always provided
VacancyUrl	String	Always provided
FullDescription	String	Always provided
SupplementaryQuestion1	String	Always provided
SupplementaryQuestion2	String	Always provided
ContactPerson	String	Optional information
EmployerDescription	String	Always provided
ExpectedDuration	String	Optional information

Property Name	Type	Description
FutureProspects	String	Optional information
InterviewFromDate	DateTime	Always provided
LearningProviderDesc	String	Always provided
LearningProviderSectorPassRate	Integer	The success rate for the Learning Provider in this sector as a simple percentage (0-100) expressed as an integer. Where the value is NULL then the sector is new for the Learning Provider and therefore they have no pass rates to report – this is the same as the “New” radio button on the Learning Provider’s information screen.
PersonalQualities	String	Optional information
PossibleStartDate	DateTime	Always provided
QualificationRequired	String	Optional information
SkillsRequired	String	Optional information
TrainingToBeProvided	String	Optional information
WeeklyWage	Decimal Number	Always provided, this is specified in GB Pounds Sterling
WorkingWeek	String	Always provided
OtherImportantInformation	String	Optional information
EmployersWebsite	DateTime	Optional information
TotalPages	Integer	Total number of pages of results that match search criteria

The following example shows 1 vacancy

```
<VacancyDetailsResponse xmlns="http://Navms.Ms.ExternalInterfaces/2011">
  <MessageId>d6e96208-52df-4ac9-b6d5-1f68cac19b44</MessageId>
  <SearchResults xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
    <AVMSHeader>
      <ApprenticeshipVacanciesDescription>If you are interested in finding out more about employing apprentices, the benefits they can bring to your business, and the benefits of Apprenticeship vacancies please visit our website and complete the online enquiry form.</ApprenticeshipVacanciesDescription>
      <ApprenticeshipVacanciesURL>http://www.apprenticeshipvacancies.gov.uk/Employers.aspx</ApprenticeshipVacanciesURL>
    </AVMSHeader>
    <SearchResults>
      <VacancyFullData>
        <VacancyAddress>
          <AddressLine1>73 Hertford Road</AddressLine1>
          <AddressLine2/>
          <AddressLine3/>
          <AddressLine4/>
          <AddressLine5/>
          <County>London</County>
          <GridEastM>535200</GridEastM>
          <GridNorthM>196700</GridNorthM>
          <Latitude>51.6523455142</Latitude>
          <Longitude>-0.0454335307</Longitude>
          <PostCode>EN3 5HA</PostCode>
          <Town>Enfield</Town>
        </VacancyAddress>
        <ApprenticeshipFramework i:nil="true"/>
        <ClosingDate>0001-01-01T00:00:00</ClosingDate>
        <ShortDescription>This course includes an NVQ Level 2 in railway engineering (permanent way renewals) Key skills at level 1 in Application of Number & Communication and a Technical Certificate in Business Improvement Techniques. Small plant training is also included</ShortDescription>
        <EmployerName>Silver track Training</EmployerName>
        <LearningProviderName>College of Haringey, Enfield and North East London</LearningProviderName>
        <NumberOfPositions>60</NumberOfPositions>
        <VacancyTitle>Railway Engineering Apprenticeship</VacancyTitle>
        <CreatedDateTime>2011-03-16T11:52:11.497</CreatedDateTime>
        <VacancyReference>17523</VacancyReference>
        <VacancyType>Apprenticeship</VacancyType>
      </VacancyFullData>
    </SearchResults>
  </SearchResults>
</VacancyDetailsResponse>
```

<VacancyUrl><http://www.ApprenticeshipVacancies.org.uk/NAVMS/Forms/Vacancy/VacancyDetails.aspx?Query=08hykpD%2byCypaFrr3gCqLR37SIJXtDGlZugy6GdhqzF%2bQxR326DBaEXz3Mv%2fe1V></VacancyUrl>
<SupplementaryQuestion1>Why are you interested in working in the Rail Sector</SupplementaryQuestion1>
<SupplementaryQuestion2>How would you demonstrate that you would be capable of working safely as this is a safety critical industry</SupplementaryQuestion2>
<ContactPerson>0800 678 3000 Lines open Mon - Fri 8.00am to 6.00pm (answerphone outside these times)</ContactPerson>
<EmployerDescription>Private Railway, Engineering and Safety Training Company</EmployerDescription>
<ExpectedDuration>14 weeks</ExpectedDuration>
<FutureProspects>Can possibly lead to a full or part time job working as a @Track Person and moving up to Supervisor</FutureProspects>
<InterviewFromDate>2010-09-06T00:00:00</InterviewFromDate>
<LearningProviderDesc>Earn while you learn at The College of North East London! Apprenticeships give you the chance to earn money whilst getting on-the-job training. They provide high quality, work-based training for those who want to develop their career prospects. When you decide to take up an Apprenticeship you will: Earn real wages, Gain new qualifications, Gain new knowledge and key skills As well as great on-the-job training each apprentice also spends one day a week at college, so finding the right college for you is vital. In choosing The College of North East London, you would be making a great decision - with a 92% pass rate for our Apprentices in Plumbing and an outstanding Ofsted inspection in 2008 our staff are dedicated to supporting and encouraging you every step of the way. Remember an apprenticeship is available for all ages, whether you'd like to retrain, change career, or whether you're a school leaver it could be just the opportunity you're looking for. So if you'd like an informal chat with us about your apprenticeship options just give CONEL's Employment Training Solutions Team a call. We look forward to hearing from you.</LearningProviderDesc>
<LearningProviderSectorPassRate>0</LearningProviderSectorPassRate>
<PersonalQualities>Committed and hard working</PersonalQualities>
<PossibleStartDate>2010-09-20T00:00:00</PossibleStartDate>
<QualificationRequired>Minimum of E3 in literacy and numeracy</QualificationRequired>
<SkillsRequired>Prior to recruitment you will have to undergo a medical/drug & alcohol screening</SkillsRequired>
<TrainingRequired>Personal Track Safety, Track Induction Course and renewal and maintenance of the permanent way infrastructure. Recruited onto course for 14 weeks and then signposted to further career opportunities within the rail industry when available.</TrainingRequired>
<WeeklyWage>95.0000</WeeklyWage>
<WorkingWeek>30 hours Mon to Fri 09:00-15:30</WorkingWeek>
<ApprenticeshipFramework/>
<ClosingDate>0001-01-01T00:00:00</ClosingDate>
</VacancyFullData>
</SearchResults>
<TotalPages>2</TotalPages>
</VacancyDetailsResponse>

5.5 Service: VacancySummaryService

The Vacancy Summary Service provides system integrators with the ability to download open apprenticeships from the Apprenticeship vacancies system. This service allows various parameters to allow the system integrators to select the most relevant apprenticeships and/or request up-to date details after a given date.

This web service call uses specific data for each of its parameters. A copy of the available values can be obtained from the ReferenceDataService.

5.5.1 Method: Get

Purpose

Use this method to obtain a list of the open apprenticeships which are available within the Apprenticeship vacancies system (subject to search criteria).

Signature

VacancySummaryResponse Get (VacancySearchCriteria)

Input Parameters

VacancySearchCriteria has the following parameters

Tag Name	Type	Mandatory	Description
VacancyReferenceId	Integer	No	This field allows the details of a single vacancy to be returned. Only 1 vacancy reference may be supplied.
OccupationCode	String (3)	No	This field allows the vacancies for a specified occupation group as defined by the Apprenticeship vacancies reference data to be returned.
FrameworkCode	String (3)	No	This field allows the vacancies for a specified framework group as defined by the Apprenticeship vacancies reference data to be returned.
VacancyLocationType	String (11)	Yes	This must be set to either 'National' or 'NonNational'. If set to 'National' then the CountyCode, Town and RegionCode will be ignored as only Nationwide vacancies will be returned. If set to 'NonNational' the location search criteria can be specified. NOTE that when set to 'NonNational' then any Nationwide vacancies will NOT be included in the results – you can call the Web Service multiple times to build an inclusive result set.
CountyCode	String (3)	No	Restricts search to vacancies within the specified county.
Town	String (255)	No	This is a free format string which can be used to retrieve vacancies which are available within the town specified. If a parameter is spelt incorrectly the search will return no results (unless a vacancy has been setup with its town spelt incorrectly.)
RegionCode	String (3)	No	Restricts search to vacancies within the specified region
VacancyPublishedDate	DateTime	No	Only vacancies that have been published since this date will be included
PageIndex	Integer	Yes	This should be set to 1 for the first call.

Any optional (Mandatory=No) tags above should not be submitted if they do not have a value.

Return Value

VacancySummaryResponse

Note that the XML hierarchy is reflected in the indentation of the table below.

Tag Name	Type	Description
AVMSHeader	Child Object	Contains generic information about the Apprenticeship vacancies system, appears once
ApprenticeshipVacanciesDescription	String	Descriptive information about the Apprenticeship vacancies system
ApprenticeshipVacanciesURL	String	URL for further information about the Apprenticeship vacancies system
SearchResults	Child Object	Contains all of the search results data, appears once
VacancySummaryData	Child Object	Contains one set of Vacancy Details, can appear zero or numerous times
VacancyLocationType	String	Returns 'Standard', 'MultipleLocation' or 'National'. Note that, where the search criteria is National, only records that are 'National' will be returned; when the search is NonNational, then 'Standard' or 'MultiLocation' records will be returned.
VacancyAddress	Child Object	Contains the address of the Vacancy. When the vacancy is a 'National' vacancy this will contain the Employer's address as specified in the vacancy. When the vacancy is a 'MultiLocation' vacancy, each location will be returned by the system as an individual vacancy (differs, by design, from the upload).
AddressLine1	String	Always provided – see note above about address used
AddressLine2	String	Address lines 2 to 5 might have information provided, depending on the address details
AddressLine3	String	
AddressLine4	String	
AddressLine5	String	
County	String	
GridEastM	Integer	Geo Code location data, this should be provided but, where data is provided through VacancyUpload there is a small risk that data has not been provided and the background task to update this has not yet provided it.
GridNorthM	Integer	
Latitude	Float	
Longitude	Float	
PostCode	String	Always provided – see note above about address used
Town	String	Always provided – see note above about address used
ApprenticeshipFramework	String	Always provided
ClosingDate	DateTime	Always provided
ShortDescription	String	Always provided
EmployerName	String	Always provided
TrainingProviderName	String	Always provided
NumberOfPositions	Integer	Always provided
VacancyTitle	String	Always provided
CreatedDateTime	DateTime	Always provided
VacancyReference	Integer	Always provided
VacancyType	String	Always provided
VacancyUrl	String	Always provided
TotalPages	Integer	Total number of pages of results that match the search criteria

The following example shows 1 vacancy

```
<VacancySummaryResponse xmlns="http://Navms.Ms.ExternalInterfaces/2011">
  <MessageId>4315056b-10b2-4fc0-8a3b-26d8dec2c3f6</MessageId>
  <ResponseData xmlns:i="http://www.w3.org/2001/XMLSchema-instance">
    <SearchResults>
      <AVMSHeader>
        <ApprenticeshipVacanciesDescription>If you are interested in finding out more about employing apprentices, the benefits they can bring to your
business, and the benefits of Apprenticeship vacancies please visit our website and complete the online enquiry
form.</ApprenticeshipVacanciesDescription>
        <ApprenticeshipVacanciesURL>http:\\www.apprenticeshipvacancies.gov.uk\Employers.aspx</ApprenticeshipVacanciesURL>
      </AVMSHeader>
      <VacancySummaryData>
        <VacancyAddress>
          <AddressLine1>73 Hertford Road</AddressLine1>
          <AddressLine2/>
          <AddressLine3/>
          <AddressLine4/>
          <AddressLine5/>
          <County>London</County>
          <GridEastM>535200</GridEastM>
          <GridNorthM>196700</GridNorthM>
          <Latitude>51.6523455142</Latitude>
          <Longitude>-0.0454335307</Longitude>
          <PostCode>EN3 5HA</PostCode>
          <Town>Enfield</Town>
        </VacancyAddress>
        <ApprenticeshipFramework>Rail Transport Engineering</ApprenticeshipFramework>
        <ClosingDate>2011-02-25T00:00:00</ClosingDate>
        <ShortDescription>A railway engineering apprenticeship which includes mandatory Network Rail courses</ShortDescription>
        <EmployerName>Silver track Training</EmployerName>
        <LearningProviderName>College of Haringey, Enfield and North East London</LearningProviderName>
        <NumberOfPositions>60</NumberOfPositions>
        <VacancyTitle>Railway Engineering Apprenticeship</VacancyTitle>
        <CreatedDateTime>2010-06-07T10:49:11.503</CreatedDateTime>
        <VacancyReference>17523</VacancyReference>
        <VacancyType>Apprenticeship</VacancyType>
        <VacancyUrl>http:// www.ApprenticeshipVacancies.org.uk
/NAVMS/Forms/Vacancy/VacancyDetails.aspx?Query=08hykD%2byCypaFrr3gCqLR37SIJXtDG1Zugy6GdhqzF%2bQxR326DBaEXz3Mv%2fe1V</VacancyUrl>
      </VacancySummaryData>
    </SearchResults>
    <TotalPages>1</TotalPages>
  </ResponseData>
</VacancySummaryResponse>
```

5.6 Service: VacancyRSSFeed

The RSS Feed Service is an alternative version to the Vacancy Summary Details Service, and uses most of its search criteria. This is a generic ASPX page which changes its content type to output a static RSS feed based on certain query string parameters. There is no Authentication taking place on this service.

5.6.1 Method: CreateFeed

The usage of this service is different from the other services available. This is reliant upon a normal web page which outputs RSS content, rather than a dedicated Web Service.

Signature

void CreateFeed()

Input Parameters

The parameters for this service are provided through the querystring on the service URL
<https://apprenticeshipvacancymatchingservice.lsc.gov.uk/VacancyRssFeedService/VacancyRss.aspx?param1=value¶m2=value>.

The parameters are as follows:

Parameter Name	Description	Notes
feedType	This is a setting to set the type of feed that is required: value of 1 provides a list of vacancies that went to 'Live' status within the number of days specified in dayRange; value of 2 provides a list of vacancies that are due to close in the next 7 days and have 5 or less applicants.	This is a mandatory parameter and only accepts the numbers 1 or 2. Setting this parameter to 1 makes the dayRange parameter mandatory. <i>Note that the settings for type 2 are system-wide and set by NAS.</i>
dayRange	This is the amount of days from the date the query was run that the vacancies went 'Live'.	This is mandatory when feedType=1. Leave out if feedType=2.
frameworkCode	This is the three digit Framework Code used by vacancies to describe a job role	
occupationCode	The occupationCode is a three letter code The full list of codes can be retrieved using the Reference Data Service.	<i>See Appendix B for a list of codes (correct at time of publication)</i>
Town	The town parameter is fairly self-explanatory. This is the town in which the vacancy resides.	
countyCode	Similar to town, although this is the three-letter code for the county, available from the Reference Data Service.	<i>See Appendix B for a list of codes (correct at time of publication)</i>
regionCode	This is also similar to the countyCode although specifying region, also available from the Reference Data Service	
referenceNumber	This is the vacancy reference number for a specific vacancy. This option is not normally used.	If used, do not combine with any of the above optional parameters.
Format	This is to specify the format of the feed and, if required, should be "ATOM" for Atom 1.0 or "RSS" for RSS 2.0.	If this parameter is not specified, the feed type will default to RSS.

Note that, for the RSS feed, National vacancies are included in the results of all searches, irrespective of any Town, countyCode and/or regionCode specified in the criteria.

As an example, the basic queries for All Vacancies that have gone live in the last 5 days is
<https://apprenticeshipvacancymatchingservice.lsc.gov.uk/VacancyRssFeedService/VacancyRss.aspx?feedType=1&dayRange=5>
 and the All Vacancies that are closing on the next 7 days which have 5 or less applicants is
<https://apprenticeshipvacancymatchingservice.lsc.gov.uk/VacancyRssFeedService/VacancyRss.aspx?feedType=2>

Return Value

Tag	Type	Notes
RSS	Tag Group	
Channel	Tag Group	
Title	String	This information is retrieved from the System Parameters table
Description	String	This information is retrieved from the System Parameters table
Copyright	String	This information is retrieved from the System Parameters table
Item	Tag Group	This is repeated for each vacancy
Category	String	This is the framework description
Title	String	
Description	String	
PubDate	DateTime	This is the date that the vacancy went to 'Live' status
Link	String	This will direct the user to the Vacancy Details Page. It will request a login, if the user is not logged in.

Below is an example of an RSS:

```
<?xml version="1.0" encoding="utf-8"?>
<rss xmlns:a10="http://www.w3.org/2005/Atom" version="2.0">
  <channel>
    <title>Vacancies</title>
    <description>The Vacancy Matching System provides a list of new vacancies in your
region</description>
    <copyright>RSS feed supplied by the National Apprenticeship Service, @ Chief Executive of
Skills Funding</copyright>
    <item>
      <category>Business and Administration</category>
      <title>Administrator</title>
      <description>
        Apprenticeship with A 4 E in Weston-super-Mare. Business and Administration. A4e are
        looking for an ambitious individual to join their busy admin team.

        The successful applicant will have the opportunity to develop within a small friendly team
        and gain a nationally recognised qualification within a training organisation.. Closing
        Date: 06/03/2012
      </description>
      <pubDate>Thu, 24 Mar 2011 14:44:03 Z</pubDate>
      <a10:link
href="http://localhost/navms/Forms/Vacancy/VacancyDetails.aspx?Query=Eyr1r%2frxg7PtJhMhffz1G
IzzISKehKmZH%2bLIEuSdDTY5ioJVijksXVhDNFwDm%2b0LGBUVQ61mhW0M85L8b9peJDsy%2fq3WC9h%2fQecctR%2b
fK%2b25w1bSf%2fLVTWeF0Paw9X9Mvn%2f6PEXvs%2fCHVgGxJqpUXS5DZFuY%2fSroedkFWPtWUEQz5YAjguwI1m64
QGMvPIDpcr6gMNPAGpjZZaKs%2fp03FsfQvbJUc9j3d0HFVsTZPHUwbvtviJxiivfRdnRFg455BGu5wTv18oGS5nAv3%2
f%2ber1kP9Sp4SE15FVtwcXE2vyY%3d" />
      </item>
    </channel>
  </rss>
```

Fault Codes

In the event of an error, the following scenarios may occur:

- Navigating to the RSS service URL directly will return an ASP error page and show which field is invalid, or will return an error code if it's an unexpected error.
- Calling the service from code with errors will result in Internal Error 500 if an invalid field is detected, or another code should there be an unexpected error, such as 404 if the service URL is incorrect or the service is unavailable.

6 Future Releases

There are expected to be future releases of the Web Services to improve and enhance the service, and to reflect changes in the underlying Apprenticeship vacancies system. This may take the form of additional methods on the existing services, changes to the services themselves or new services.

It is reasonable to assume that both the method of invoking the services and the security model associated with them (ExternalSystemIds and PublicKeys) will remain the same in future releases.

6.1 Versioning

Where possible, any changes to existing services will be designed to be non-breaking for existing consumers of the application, for example through the use of “optional” fields. However, there may be situations (for example, where there are data type changes or new mandatory fields) where this is not possible and the service will be “versioned” to reflect this change.

Any such changes that impact existing consumers of the applications will be communicated to consumers of the service, as in some cases it may not be possible to retain backwards compatibility due to the nature of the underlying system changes.

6.2 Services Roadmap

It is expected that a release of the interfaces will be required in the coming 9 months to support new services and functionality in vacancy information needed to support business change. At this point, it is not clear whether these additional fields will need to be mandatory.

APPENDICES

Appendix A: Error Codes

The current set of error codes are also available through the Reference Data Web Service, and these should be used as the master source for error codes. These are correct at the time of publishing for this document, but may change in future releases.

Error Code	Error Description
-1	Unknown System Error
-2	SuppliedDataInvalid
-10001	"WorkingWeek" must be 100 characters or less
-10002	"WorkingWeek" is mandatory
-10003	"WeeklyWage" should be atleast £40
-10004	"WeeklyWage" is mandatory
-10005	"VacancyLocationType" is mandatory
-10006	"Title" must be 200 characters or less
-10007	"Title" is mandatory
-10008	"PossibleStartDate" is mandatory
-10009	"ShortDescription" must be 512 characters or less
-10010	"ShortDescription" is mandatory
-10011	"NumberOfPositions" is mandatory for standard vancancies
-10012	"LearningProviderEdsUrn" is mandatory
-10013	"InterviewStartDate" is mandatory
-10014	"LongDescription" is mandatory
-10015	"ApprenticeshipFramework" is mandatory
-10016	"ApprenticeshipFramework" must be 3 characters
-10017	"EmployerWebsite" must be 512 characters or less
-10018	"EmployerExternalApplicationWebsite" must be 512 characters or less
-10019	"EmployerEdsUrn" is mandatory
-10020	"EmployerDescription" must be 8000 characters or less
-10021	"EmployerAnonymousName" must be 510 characters or less
-10022	"ContactName" must be 200 characters or less
-10023	"ClosingDate" is mandatory
-10024	"ApplicationInstructions" must be 8000 characters or less
-10025	"NumberOfVacancies" is mandatory for multi-site vancancies
-10026	"ClosingDate" is Invalid
-10027	"EmployerImage" size must be less than 10K
-10028	"LongDescription" must be 2147483648 characters or less
-10029	"InterviewStartDate" is Invalid
-10030	"PossibleStartDate" is Invalid
-10031	"EmployerExternalApplicationWebsite " in mandatory for offline vancancies
-10032	"EmployerDescription" is mandatory for anonymous employer
-10033	Learning Provider is not authorised for this vacancy
-10034	Vacancy reference number already exists
-10035	Invalid relationship for training provider and employer

Error Code	Error Description
-10036	"ApprenticeshipFramework" is invalid
-10037	"County" for standard location is invalid
-10038	"County" for multiple location is invalid
-10039	"County" for standard location is mandatory
-10040	"County" for multiple location is mandatory
-10041	"AddressLine1" for standard location is mandatory
-10042	"AddressLine1" for multiple location is mandatory
-10043	"EmployerImage" is not valid.
-10044	Entered Training Provider and Employer cannot have national vacancy
-10045	"EmployerEdsUrn" is invalid
-10046	"LearningProviderEdsUrn" is invalid
-10047	"PostCode" is mandatory for standard vacancies
-10048	"PostCode" is mandatory for multisite vacancies
-10049	"PostCode" is invalid for standard vacancy
-10050	"PostCode" is invalid for multisite vacancy
-10051	Unsupported HTML data format
-20001	Unknown Vacancy Reference
-20002	InvalidVacancyReference
-20003	Invalid Update Value
-20004	You cannot record this number of candidates as successful as the total number of successes is greater than the number of vacancies available for this advert. Either the number of successful candidates reported is incorrect or the number of vacancies for this advert needs to be increased.
-20005	Updates Not Allowed

Remember that the most up-to-date source for Error Codes is the ReferenceDataService.

Appendix B: County and Occupation Code Reference Data

The current reference data is always available through the Reference Data Web Service, and these should be used as the master source. However, for ease of use These are correct at the time of publishing for this document, but may change in future releases.

County Code	County Name
BED	Bedfordshire
BER	Berkshire
BUC	Buckinghamshire
CAM	Cambridgeshire
CHE	Cheshire
COR	Cornwall
CUM	Cumbria
DER	Derbyshire
DEV	Devon
DOR	Dorset
DUR	Durham
EYK	East Riding of Yorkshire
ESX	East Sussex
ESS	Essex
GLO	Gloucestershire
GMN	Greater Manchester
HAM	Hampshire
HFD	Herefordshire
HTF	Hertfordshire
IOW	Isle of Wight
KEN	Kent
LAN	Lancashire
LEI	Leicestershire

County Code	County Name
LIN	Lincolnshire
LON	London
MSY	Merseyside
NOR	Norfolk
NYK	North Yorkshire
NTP	Northamptonshire
NTB	Northumberland
NTG	Nottinghamshire
OXF	Oxfordshire
SHR	Shropshire
SOM	Somerset
SYK	South Yorkshire
STA	Staffordshire
SUF	Suffolk
SUR	Surrey
TAW	Tyne and Wear
WAR	Warwickshire
WMD	West Midlands
WSX	West Sussex
WYK	West Yorkshire
WIL	Wiltshire
WOR	Worcestershire
RUT	Rutland

Remember that the most up-to-date source for reference data is the ReferenceDataService.

Occupation Code	Description
AHR	Business, Administration and Law
ALB	Agriculture, Horticulture and Animal Care
ACC	Arts, Media and Publishing
CST	Construction, Planning and the Built Environment
HBY	Retail and Commercial Enterprise
HTL	Leisure, Travel and Tourism
ITC	Information and Communication Technology
MFP	Engineering and Manufacturing Technologies
PUB	Health, Public Services and Care
13	Education and Training

Remember that the most up-to-date source for reference data is the ReferenceDataService.

Appendix C: Test Data

The test environment is secured in the same manner as the live environment, and will require valid ExternalSystemID and PublicKeys.

To maintain the data in a known condition, the test environment is “reset” every evening to the latest data from live so that testing can be as realistic as possible.

Note that there is no UI access to the test system, nor are there any separate security rights to the system – these are all inherited and managed in the live environment.

Note that, as a result, any ExternalSystemID and/or PublicKey changes (including creation) made in the live environment may not appear until the following morning.

Appendix D: Bulk Vacancy Upload Tool Data Mapping

The following table provides a mapping from the Bulk Vacancy Upload Excel spreadsheet's columns to the new UploadVacancy Web Service. This is provided for users who have developed systems that can populate the Bulk Vacancy Upload tool's Excel spreadsheet to assist them in the move to the new Web Services.

Column in Excel	Tag in Web Service	Notes
Employer URN	EmployerEdsUrn	
Employer Name	-	This data is not needed by the Web Service. <i>This Employer information was included in the original tool to allow initial data load of the existing registered Employers. The new Web Service requires that all of the Employers' relationships with the Learning Provider are already configured. Where there is no existing relationship, the vacancy will not be accepted and an error returned.</i>
Employer Postcode	-	
Employer LSC Region	-	
Lead Contact Title	-	
Lead Contact First Name	-	
Lead Contact Surname	-	
Lead Contact Position	-	
Lead Contact Address Line 1	-	
Lead Contact Address Line 2	-	
Lead Contact Address Line 3	-	
Lead Contact Town/City	-	
Lead Contact County	-	
Lead Contact Postcode	-	
Lead Contact Telephone	-	
Lead Contact Mobile No.	-	
Lead Contact Email Address	-	
Lead Contact Fax No.	-	
Lead Contact Preference	-	
Provider Site URN	LearningProviderEdsUrn	
Provider UKPRN	-	Not required by the Web Service as this information can be derived directly from the Provider Site URN
Vacancy Contact Name	ContactName	
Vacancy Address Line1	AddressLine1	
Vacancy Address Line2	AddressLine2	
Vacancy Address Line3	AddressLine3	
Vacancy Town/City	Town	
Vacancy County	County	Must match reference data for County
Vacancy Postcode	PostCode	
Job Role (Framework)	ApprenticeshipFramework	Requires code instead of text description.
Vacancy Title	Title	
Vacancy Type	VacancyType	Requires code instead of text.
Vacancy Short Description	ShortDescription	
Vacancy Full Description	LongDescription	

Column in Excel	Tag in Web Service	Notes
Weekly Wage	WeeklyWage	
Number Of Positions	NumberOfPositions	
Closing Date	ClosingDate	
Interview Start Date	InterviewStartDate	
Possible Start Date	PossibleStartDate	
Expected Apprenticeship Duration	ExpectedDurationOfApprenticeship	
Working Week	WorkingWeek	
Employer's Anonymous Name	EmployerAnonymousName	
Employer Description	EmployerDescription	
Upload Logo	EmployerImage	
Application Route	ApplicationType	
Application Instructions	ApplicationInstructions	
Website Address	EmployerExternalApplicationWebsite	
Employer Website	EmployerWebsite	
Training To Be Provided	TrainingToBeProvided	
Qualifications Required	QualificationsRequired	
Skills Required	SkillsRequired	
Personal Qualities	PersonalQualities	
Important Other Information	OtherImportantInformation	
Future Prospects	FutureProspects	
Reality Check	RealityCheck	
Supplementary Question 1	SupplementaryQuestion1	
Supplementary Question 2	SupplementaryQuestion2	
Unique Vacancy Identifier	-	No longer used

Appendix E: SoapUI Test Tool

SoapUI is an open source, cross-platform, Java-based web service test tool. It may be downloaded from <http://www.soapui.org/>

To facilitate testing and to give a standard method of testing connectivity and confirming web service availability a SoapUI project file (XML) will be provided. This project includes a test case with assertions for each of the main request/response scenarios documented in Appendix C. Using this it is possible to check whether the web service is available and responsive from a given client without using custom code.

If you access the internet via a proxy server then you need to configure this within SoapUI through the File/Preferences menu.

To enable SoapUI to use HTTPS you need to make a change to the SoapUI configuration file, as follows:

- Open the SoapUI's bin folder. This is normally in C:\Program Files\Eviware\SoapUI-{version}\bin or C:\Program Files (x86)\Eviware\SoapUI-{version}\bin (Windows x64)
- Open the "soapUI-{version}.vmoptions" file using NOTEPAD or another text editor
- Add a new line at the end of the file (if it does not exist already):
-Dsun.security.ssl.allowUnsafeRenegotiation=true"
- Save the file and then restart SoapUI