Recruit an apprentice

Service Interface Version 5.1 Guide

Author	Mark Avery
Service Interface Version	5.1
Date	07/07/2016
Status	Published
Security Classification	NOT PROTECTIVELY MARKED

Contents

1   Introduction

1.1 Document Purpose

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

1.2 Support

For support questions please contact the NAS Helpdesk:

Email: nationalhelpdesk@findapprenticeship.service.gov.uk
Telephone: 0800 015 0400

1.3 Technical Standards

These 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:

	Training organisation	Employer	Other Third Party
ReferenceDataService	Yes	Yes	Yes
VacancyUpload	Yes	Yes	-
VacancyDetailsService	Yes	Yes	Yes
VacancySummaryService	Yes	Yes	Yes

2.2 Obtaining System IDs

If you are already a registered organisation within the Recruit an apprentice 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 Recruit an apprentice 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 Recruit an apprentice web services ReferenceDataService, VacancyDetailsService and VacancySummaryService are available from one production endpoint. The BulkVacancyUpload has 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 Recruit an apprentice 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://soapapi.findapprenticeship.service.gov.uk/Services/VacancyManagement/VacancyManagement51.svc
https://soapapi.findapprenticeship.service.gov.uk/Services/ReferenceData/ReferenceData51.svc
https://soapapi.findapprenticeship.service.gov.uk/Services/VacancyDetails/VacancyDetails51.svc
https://soapapi.findapprenticeship.service.gov.uk/Services/VacancySummary/VacancySummary51.svc

The following URLs are for the RSS Feed, which is now presented both over SSL and clear-text (available for aggregators such as Facebook which do not support SSL connection):
https://soapapi.findapprenticeship.service.gov.uk/VacancyRssFeedService/VacancyRss.aspx
https://rss.findapprenticeship.service.gov.uk

Note that the feed has a number of mandatory parameters when used. See section 5.5 for details.

Security Note: The Recruit an apprentice production web services use SSL to ensure that the ExternalSystemID and PublicKey passed as input parameters are encrypted.

4 Web services authorisation

To access the Recruit an apprentice 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 Recruit an apprentice system and has been granted access to the relevant service
PublicKey	Yes	String	This is a 16 characters complex password allocated by the Recruit an apprentice 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:

	Training organisation	Employer	Other Third Party
ReferenceDataService	Yes	Yes	Yes
VacancyUpload	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 for each service:

- https://soapapi.findapprenticeship.service.gov.uk/Services/VacancyManagement/VacancyManagement51.svc?WSDL

- https://soapapi.findapprenticeship.service.gov.uk/Services/ReferenceData/ReferenceData51.svc?WSDL

- https://soapapi.findapprenticeship.service.gov.uk/Services/VacancyDetails/VacancyDetails51.svc?WSDL

- https://soapapi.findapprenticeship.service.gov.uk/Services/VacancySummary/VacancySummary51.svc?WSDL

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: ReferenceData

The Reference Data service provides system integrators with the ability to download reference data from the Recruit an apprentice 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 Recruit an apprentice 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	

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

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 Recruit an apprentice 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

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 geographic regions (based on government regions) which are available within the Recruit an apprentice 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 Recruit an apprentice system

5.2 Service: VacancyManagement

The Vacancy Upload service allows Employers and Learning Providers to upload new vacancies to the Recruit an apprentice 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 Recruit an apprentice 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 ReferenceData service on a sufficiently regular basis.

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 Recruit an apprentice system.

Signature

    VacancyUploadResponse UploadVacancies (VacancyUploadRequest)

Input Parameters

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

Tag Name	Type		Notes / Validation
Header	Child Object	Mandatory	ExternalSystemId, PublicKey, GUID
VacancyUploadRequest	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
Title	String(100)	Mandatory	
ShortDescription	String(256)	Mandatory	
LongDescription	String(MAX)	Mandatory	
Employer	Child Object	Mandatory	
EdsUrn	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 VacancyLocatgionType is 'National' then if a valid relationship exists, it must allow Nationwide vacancies
Description	String(Infinite)	Conditional	This is a mandatory field if AnonymousName is populated
AnonymousName	String(255)	Conditional	If there is a value entered into the AnonymousName field, then the Description field should not be null or blank.
ContactName	String(100)	Optional	
Website	String(255)	Optional	
Image	Base64String	Optional	The EmployerImage field should have a byte length of less than 10240 (10KB) if the field is not blank
Vacancy	Child Object	Mandatory	
Wage	Decimal	Mandatory	
WageType	String	Mandatory	Must be set to valid text value, as detailed below: <table><tr><th>Value</th><th>Description</th></tr><tr><td>Weekly</td><td></td></tr></table>
WorkingWeek	String	Mandatory	
SkillsRequired	String(MAX)	Optional	
QualificationRequired	String(MAX)	Optional	
PersonalQualities	String(MAX)	Optional	
FutureProspects	String(4000)	Optional	
OtherImportantInformation	String(MAX)	Optional	

Tag Name				Type		Notes / Validation
			LocationType	String	Mandatory	Must be set to valid text value, as detailed below:

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
		LocationDetails		Child Object		
			SiteVacancyData	Child Object		One or more sites
				AddressDetails	Child Object		One address per VacancyDetails
					AddressLine1	String(50)	Mandatory	
					AddressLine2	String(50)	Optional	
					AddressLine3	String(50)	Optional	
					AddressLine4	String(50)	Optional	
					AddressLine5	String(50)	Optional	
					County	String(150)	Mandatory	
					GridEastM	Integer	Optional	Geo Code location data
					GridNorthM	Integer	Optional	Geo Code location data
					Latitude	Float	Optional	
					Longitude	Float	Optional	
					PostCode	String(8)	Mandatory	
					Town	String(40)	Mandatory	
					LocalAuthority	String	Optional	
				NumberOfVacancies	Integer	Mandatory	This value must be set to 1 or more
			EmployerWebsite	String	Optional	
		RealityCheck	String(MAX)	Optional	
		SupplementaryQuestion1	String(4000)	Mandatory	
		SupplementaryQuestion2	String(4000)	Mandatory	
	Application		Child Object	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
		Type	String	Mandatory	Must be set to valid text value, as detailed below:

Value	Description
Online	Applications are managed through the Apprenticeship vacancies site
Offline	Applications are managed through an Employer's or Learning Provider site

If a vacancy is Offline the URL for the Employer\Website must defined to provide the link for the candidates.

Tag Name	Type
Instructions	String

			Tag Name	Type		Notes / Validation
			Apprenticeship	Child Object	Mandatory	
			Framework	String(3)	Mandatory	Validated to check if valid framework (available from Reference Data)
			Type	String	Mandatory	Must be set to valid text value, as detailed below:

Value
Unspecified
IntermediateLevelApprenticeship
AdvancedLevelApprenticeship
HigherApprenticeship

			Tag Name	Type		Notes / Validation
			TrainingToBeProvided	String(MAX)	Optional	
			ExpectedDuration	String(50)	Optional	
		ContractedProviderUkprn		Integer	Mandatory	The Contracted Provide UK PRN is the UK PRN for the organisation with the contract with NAS. The Vacancy Owner, Vacancy Manager and Delivery Provider must all be setup in the system as owned by or a sub-contractor (or Recruitment Agency) to the Contracted Provider.
		VacancyOwnerEdsUrn		Integer	Mandatory	The Vacancy Owner EDS URN must be an existing EDS URN and have a valid relationship with the Employer EDS URN. If the user of this interface is a Provider, the UKPRN used when registering their access to the system must correspond to the EDS URN. If the Vacancy\LocationType is 'National' then if a valid relationship exists, it must allow Nationwide vacancies.
		VacancyManagerEdsUrn		Integer	Optional	The Vacancy Manager EDS URN must be an existing EDS URN and must either be the Vacancy Manager (this is default if not specified) or setup as a Recruitment Agency for the Vacancy Owner and Employer.
		DeliveryProviderEdsUrn		Integer	Optional	The Delivery Provider EDS URN must be an existing EDS URN and must either be the Vacancy Manager (this is default if not specified) or setup as a Recruitment Agency for the Vacancy Owner and Employer.
		IsDisplayRecruitmentAgency		Boolean	Optional	When a Recruitrment Agency is the Vacancy Manager, specifies whether the Recrtuitment Agency details are shown on the vacancy. Defaults to True if not provided.
		IsSmallEmployerWageIncentive		Boolean	Mandatory	Specifies whether the Employer is in receipt of the Small Employer Wage Incentive for this vacancy.

Note the use of Vacancy/LocationType 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).

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.

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: VacancyDetails

The Vacancy Details service provides system integrators with the ability to download open apprenticeships from the Recruit an apprentice 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 ReferenceData service.

5.3.1 Method: Get

Purpose

Use this method to obtain a list of the open apprenticeships which are available within the Recruit an apprentice system (subject to search criteria). This provides all the data for a specific vacancy. Please use the VacancySummary service 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 Recruit an apprentice reference data to be returned.
FrameworkCode	String (3)	No	This field allows the vacancies for a specified framework group as defined by the Recruit an apprentice 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
Header	Child Object	Contains generic information about the Recruit an apprentice system, appears once
RecruitAnApprenticeDescription	String	Descriptive information about the Recruit an apprentice system
RecruitAnApprenticeURL	String	URL for further information about the Recruit an apprentice 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	Always provided – see note above about address used
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
WageType	String	Always provided. Contains value "Text" or "Weekly"
Wage	Decimal Number	Optional information, this is specified in GB Pounds Sterling when WageType is Weekly
WageText	String	Optional information, this is specified when WageType is Text
WorkingWeek	String	Always provided
OtherImportantInformation	String	Optional information
EmployersWebsite	DateTime	Optional information
VacancyOwner	String	Trading name of Vacancy Owner
ContractOwner	String	Trading name of Contract Owner
DeliveryOrganisation	String	Full name of Delivery Organisation
VacancyManager	String	Trading name of Vacancy Manager
IsDisplayRecruitmentAgency	Boolean	Recruitment Agency should be displayed on vacancy
IsSmallEmployerWageIncentive	Boolean	Employer is in receipt of Small Employer Wage Incentive
TotalPages	Integer	Total number of pages of results that match search criteria

5.4 Service: VacancySummary

The Vacancy Summary service provides system integrators with the ability to download open apprenticeships from the Recruit an apprentice 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 ReferenceData service.

5.4.1 Method: Get

Purpose

Use this method to obtain a list of the open apprenticeships which are available within the Recruit an apprentice 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 Recruit an apprentice reference data to be returned.
FrameworkCode	String (3)	No	This field allows the vacancies for a specified framework group as defined by the Recruit an apprentice 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
Header	Child Object	Contains generic information about the Recruit an apprentice system, appears once
RecruitAnApprenticeDescription	String	Descriptive information about the Recruit an apprentice system
RecruitAnApprenticeURL	String	URL for further information about the Recruit an apprentice 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	Always provided – see note above about address used
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

5.5 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.

5.5.1 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://soapapi.findapprenticeship.service.gov.uk/VacancyRssFeedService/VacancyRss.aspx*?param1=value&param2=value*
http://feeds.soapapi.findapprenticeship.service.gov.uk/VacancyRssFeedService/VacancyRss.aspx*?param1=value&param2=value*
where 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. *Note that the settings for type 2 are system-wide and set by NAS.*
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.	*See Appendix B for a list of codes (correct at time of publication)*
Town	This is a comma separated listed of towns in which the vacancy resides in one.	
countyCode	Similar to town, although this is a comma separated list of counties, each represented by a three-letter code, available from the Reference Data Service.	*See Appendix B for a list of codes (correct at time of publication)*
regionCode	This is also similar to the countyCode although a comma separated list of regions, also represented as a code, 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.

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.

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.

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 at least £40
-10004	"WeeklyWage" is mandatory
-10005	"VacancyType" 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
-10052	"DisplayRecrutmentAgency" is mandatory
-10053	"SmallEmployerWageIncentive" is mandatory
-10054	"DeliveryOrganisation" does not exist
-10055	"VacancyManager" does not exist
-10056	"ContractOwner" is not authorised for this vacancy
-10057	"VacancyManager" is not authorised for this vacancy
-10058	"DeliveryOrganisation" is not authorised for this vacancy
-10059	"ContractOwnerUKPRN" is mandatory
-10060	"DeliveryProviderEdsUrn" is mandatory
-10061	"VacancyManagerEdsUrn" is mandatory
-10062	"VacancyOwnerEdsUrn" is mandatory
-10063	"LocalAuthority" does not exist
-10064	"Address" is mandatory
-10065	"SiteVacancyDetails" is mandatory
-10066	"WageType" is invalid
-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 ReferenceData service.

Appendix B: County and Occupation Code Reference Data

The current reference data is alwasys 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	County Code	County Name
BED	Bedfordshire	LIN	Lincolnshire
BER	Berkshire	LON	London
BUC	Buckinghamshire	MSY	Merseyside
CAM	Cambridgeshire	NOR	Norfolk
CHE	Cheshire	NYK	North Yorkshire
COR	Cornwall	NTP	Northamptonshire
CUM	Cumbria	NTB	Northumberland
DER	Derbyshire	NTG	Nottinghamshire
DEV	Devon	OXF	Oxfordshire
DOR	Dorset	SHR	Shropshire
DUR	Durham	SOM	Somerset
EYK	East Riding of Yorkshire	SYK	South Yorkshire
ESX	East Sussex	STA	Staffordshire
ESS	Essex	SUF	Suffolk
GLO	Gloucestershire	SUR	Surrey
GMN	Greater Manchester	TAW	Tyne and Wear
HAM	Hampshire	WAR	Warwickshire
HFD	Herefordshire	WMD	West Midlands
HTF	Hertfordshire	WSX	West Sussex
IOW	Isle of Wight	WYK	West Yorkshire
KEN	Kent	WIL	Wiltshire
LAN	Lancashire	WOR	Worcestershire
LEI	Leicestershire	RUT	Rutland

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

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 ReferenceData service.

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. Note that the Bulk Vacancy Upload Tool does not and will not support the new capabilities of the system around sub-contracting, Recruitment Agencies or new flags such as the Small Employer Wage Incentive.

This legacy interface is provided specifically 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.

Note that, as with the existing v1.0 Web Services, this option is now effectively deprecated and the intention is that this option will be removed completely in the next major release of the system, expected later in 2012.

Column in Excel	Tag in Web Service	Notes
Employer URN	Employer\EdsUrn	
Employer Name	-	This data is not needed by the Web Service.
Employer Postcode	-	
Employer LSC Region	-	*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.*
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	VacancyOwnerEdsUrn	Note that, like version 1.0 of the Web Services, this will be used to populate all related site details for the Vacancy Owner, the Vacancy Manager and the Delivery Organisation.
Provider UKPRN	-	Not required by the Web Service as this information can be derived directly from the Provider Site URN
Vacancy Contact Name	Employer\ContactName	

Column in Excel	Tag in Web Service	Notes
Vacancy Address Line1	Vacancy\LocationDetails\SiteVacancyData\AddressDetails\AddressLine1	
Vacancy Address Line2	Vacancy\LocationDetails\SiteVacancyData\AddressDetails\AddressLine2	
Vacancy Address Line3	Vacancy\LocationDetails\SiteVacancyData\AddressDetails\AddressLine3	
Vacancy Town/City	Vacancy\LocationDetails\SiteVacancyData\AddressDetails\Town	
Vacancy County	Vacancy\LocationDetails\SiteVacancyData\AddressDetails\County	Must match reference data for County
Vacancy Postcode	Vacancy\LocationDetails\SiteVacancyData\AddressDetails\PostCode	
Job Role (Framework)	Apprenticeship\Framework	Needs code instead of text description.
Vacancy Title	Title	
Vacancy Type	Vacancy\Type	Requires code instead of text.
Vacancy Short Description	ShortDescription	
Vacancy Full Description	LongDescription	
Weekly Wage	Vacancy\Wage	
Number Of Positions	Vacancy\LocationDetails\SiteVacancyData\NumberOfPositions	
Closing Date	Application\ClosingDate	
Interview Start Date	Application\InterviewStartDate	
Possible Start Date	Application\PossibleStartDate	
Expected Apprenticeship Duration	Apprenticeship\ExpectedDuration	
Working Week	Vacancy\WorkingWeek	
Employer's Anonymous Name	Employer\AnonymousName	
Employer Description	Employer\Description	
Upload Logo	Employer\Image	
Application Route	Application\Type	
Application Instructions	Application\Instructions	
Website Address	Vacancy\LocationDetails\SiteVacancyData\EmployerWebsite	
Employer Website	Employer\Website	
Training To Be Provided	TrainingToBeProvided	
Qualifications Required	Vacancy\QualificationsRequired	
Skills Required	Vacancy\SkillsRequired	
Personal Qualities	Vacancy\PersonalQualities	
Important Other Information	Vacancy\OtherImportantInformation	
Future Prospects	Vacancy\FutureProspects	
Reality Check	Vacancy\RealityCheck	
Supplementary Question 1	Vacancy\SupplementaryQuestion1	
Supplementary Question 2	Vacancy\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 help 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

PLEASE NOTE: SoapUI version 4.5.0 should not be used - due to a known bug as identified on the SoapUI forum site - http://www.soapui.org/forum/viewtopic.php?t=13547.

SoapUI version 4.0.1 is the currently recommended tool.

Appendix F: Release 5 (version 1.0) Web Services

The existing Web Services are being deprecated as part of Release 5a, and are not expected to be available after the next major release of the system. Full documentation for these is not included in this document – please refer to "Apprenticeship Vacancies - Release 5 - Service Interface Guide" version 1.0.3 and the relevant WSDL files for details.

Version 1.0 Functional Constraints

With the functionality in Release 5a adding support for the lead provider/sub-contractor relationship (including Recruitment Agencies) together with internal organisational changes, there are some areas of the legacy Web Services that have been amended to support the new data but which cannot fully support these changes:

Vacancy Upload

LearningProviderEdsUrn is used to derive all of the required provider information, behaving as per Release 5 where the provider is effectively contracted, the owner and is delivering the training. **It is not possible to reflect the sub-contracting of vacancies using the Release 5 interfaces.**

Vacancy Detail

LearningProvider returns the name, as per Release 5a search results and vacancy details, which shows sub-contracting as "Delivered by XYZ on behalf of ABC".

Version 1.0 Service End-Points

The end-points for the original (version 1.0) Web Services remain on their original URLs with the same security model, as summarised below:

Current Production Endpoint

https://soapapi.findapprenticeship.service.gov.uk/Services/BulkVacancyUploadService/BulkVacancyUploadService.svc
https://soapapi.findapprenticeship.service.gov.uk/Services/ReferenceDataService/ReferenceDataService.svc
https://soapapi.findapprenticeship.service.gov.uk/Services/VacancyDetailsService/VacancyDetailsService.svc
https://soapapi.findapprenticeship.service.gov.uk/Services/VacancySummaryService/VacancySummaryService.svc

The vacancy summary RSS feed is available from the URL, with the addition of an HTTP (non-SSL) feed to support those aggregators which cannot connect to HTTPS feeds.