

# Workday Integration System Fundamentals

## Course Manual and Activity Guide

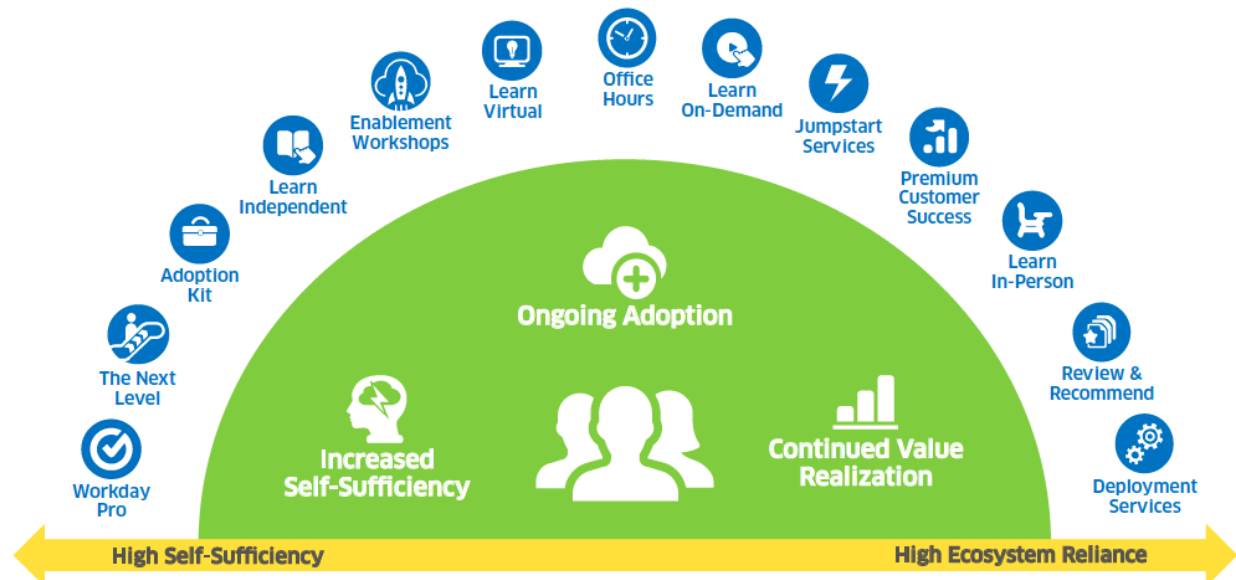
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# Get Maximum Value From Your Workday!



## Available Programs and Services for **Customers**



### Workday Pro

This customer-focused accreditation program helps drive greater Workday competency and self-sufficiency for your organization.



### The Next Level

A series of online demonstrations that show Workday in action and give you tips on deploying features.



### Adoption Kit

This collection of templates and resources accelerates student training and your Workday rollout. It includes a combination of videos and job aids, as well as facilitation and marketing materials. All content can be tailored to your needs, or used as is.



### Learn Independent

This learning experience combines videos, interactive exercises, quizzes, and tests into a comprehensive, online learning curriculum that students can complete at their own pace. Courses include: Business Process Fundamentals and Configurable Security Fundamentals.



### Enablement Workshops

In-person training with hands-on configuration in your own sandbox tenant.



### Learn Virtual

Our Virtual Classroom offers the advantages of live instructors without the expense and time associated with travel. Students connect to our training environment and participate remotely, complete hands-on activities, and interact with instructors and other students. Courses include:

- HCM Transactions
- Payroll Transactions
- Business Process Fundamentals
- Configurable Security Fundamentals



### Office Hours

One-hour appointments with Workday consultants to ask how-to questions or view tailored demos of features you already own.



### Learn On-Demand

As a supplement to instructor-led offerings, this training provides immediate access to specific courses and includes short, topic-specific videos and job aids.



### Jumpstart Services

A design-focused engagement preparing you for a successful deployment by delivering a detailed design guide and deployment approach. Service includes: Jumpstart Plus Package for Workday Executive HCM Dashboard.



### Premium Customer Success

A designated Customer Success Manager partners with the project team during deployment to provide additional guidance and project oversight. During production, the CSM works with the customer to continuously drive business value from Workday.



### Learn In-Person

This instructor-led, in-classroom training prepares students to meet their job requirements. It combines lectures, social learning, product demonstrations, and hands-on activities. Courses include:

- HCM Fundamentals
- Benefits Fundamentals
- Compensation Fundamentals
- Financials Fundamentals
- Payroll Fundamentals
- Procure-to-Pay Fundamentals
- Recruiting Fundamentals
- Workday Integration System Fundamentals



### Review and Recommend

A detailed review of your Workday configuration and identification of new ways to optimize your Workday solution. Service includes: Review and Recommend for HCM Reporting and Analytics.



### Deployment Services

Accelerated services to guide you with configuration and roll-out of new functionality.

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# WORKDAY INTEGRATION SYSTEM FUNDAMENTALS FOR WORKDAY 30

## DESCRIPTION

This class introduces Workday users to tools and concepts needed to build and maintain Workday integration systems. We explore the technologies used to integrate with Workday and discuss the strengths and limitations of each. This class also introduces basic concepts in web services and XML and how Workday integrations leverage them.

## GOAL & OBJECTIVES

This class is designed to prepare you to leverage the Workday integration architecture and associated integration technologies.

- Define the Workday integration framework
- Define core concepts needed to use Workday integration tools
- Build, launch, and monitor Workday integration systems
- Configure integration business processes and security
- Transform and deliver integration output
- Determine which tools to use in an integration scenario based on their strengths and limitations

## AGENDA

- Workday Integration Architecture and Overview of Tools
- Reporting as a Service (RaaS)
  - XML Overview
  - Integration IDs
  - Enterprise Interface Builder (EIB)
- Workday Web Services (WWS)
  - Workday Public Web Services
  - Integration Cloud Connect
- Business Process Framework
  - Delivery
  - Notifications
  - Document Transformation
- Integration System Security
- Workday Studio
- Common Design Patterns



## COURSE STRUCTURE

You will use this course manual throughout the course. There are various interactive elements throughout this course, including:



### **Activities**

You use your individual training tenant to perform activities in the Workday system. These activities reinforce concepts discussed in the demos and course manual.

Most activities include “shortcuts”: pre-built reports and integrations for students to investigate key concepts without having to perform configuration tasks.

Some activities include unguided Challenge Tasks meant for those students wishing to explore advanced concepts on their own.



### **Optional Activities**

The instructor demonstrates concepts, configuration, and functionality within a Workday training environment. Students are welcome to work through the demo steps in their tenants as time permits.

## CHAPTER 1 – INTRODUCTION TO WORKDAY

### OVERVIEW

Workday's suite of business services is hosted as a set of metadata and microservices that support a persistent, in-memory store of objects. All interaction with these objects is done via web services.

### OBJECTIVES

By the end of this chapter, you will be able to:

- Explain how the Integration Cloud Platform fits within the Workday architecture.
- Compare SOAP and REST API functionality.
- Define Workday Integration Systems and Services.

## INTEGRATION ARCHITECTURE OVERVIEW

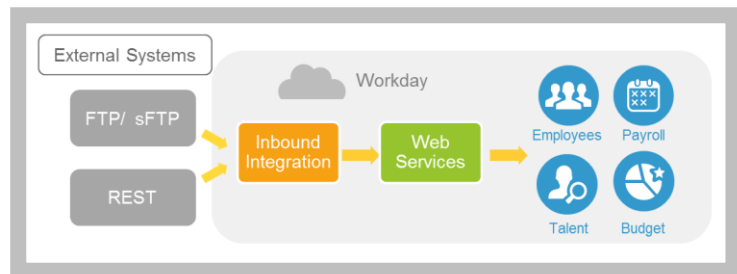
All Workday customer data is stored as objects within a persistent, in-memory store. Originally, a suite of business services called the **Object Management System (OMS)** maintained the relationships and integrity of these objects. Over time, the OMS has evolved to become a set of microservices that scale based on transaction and reporting demand. The only way to access Workday object data is via web service requests. This is an important aspect of how Workday addresses issues such as security and performance.

All communication with the Workday services is via HTTPS requests. Users generally access Workday through web browsers. The User Interface Server (UI Server) handles these requests, presenting HTML forms for user interaction, while communicating with the Workday platform using XML messages. Developers also connect via the UI Server to make use of the browser-based tools, for example, when configuring Integration Systems or building integrations using Enterprise Interface Builder (EIB).

Workday has application programming interfaces (APIs) that support both inbound and outbound requests for mobile applications and data-driven integrations that do not use the Workday UI.

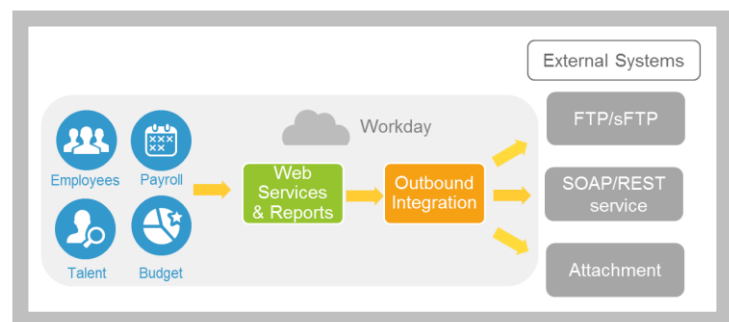
### Inbound

- Data is fed into Workday.
- Incoming data is transformed into Workday Web Service (WWS) compliant format.



### Outbound

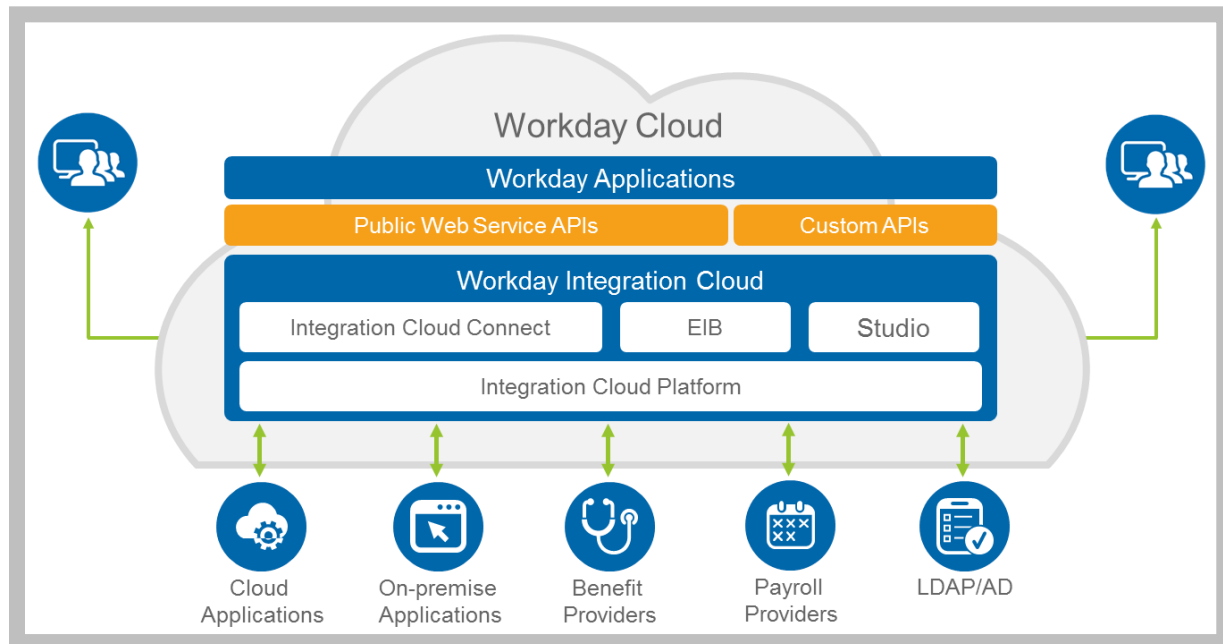
- Data is provided by Workday.
- Outgoing data may be transformed.



Workday supports integration scheduling, data encryption, and secure transfer protocols, allowing for the regular synchronization of large volumes of customer data using file servers.

## INTEGRATION CLOUD PLATFORM

Workday's enterprise-class Integration Platform-as-a-Service allows all integrations to deploy to, and run in, the Workday Cloud without on premise middleware. Workday hosts these integrations, freeing you from the burden of managing and maintaining separate infrastructures.



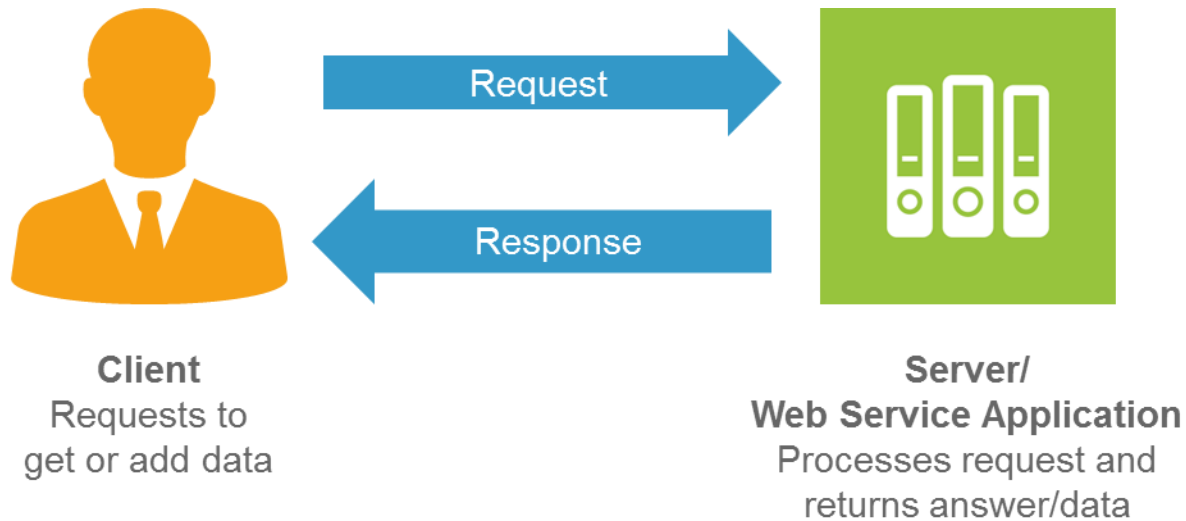
### 1 - Workday integration architecture

There are three ways to access the web services to get and update data via an integration system to your Workday tenant. You can use the delivered configurable integrations (Cloud Connect), custom integration tools to create integration systems (EIB and Workday Studio), or your own existing middleware.

## WEB SERVICES

A web service is a method of communication between two electronic devices over the web. At its simplest, it is a client—typically, an application accessed on an internet browser operated by a person—and a server that houses a web service application.

The application or system will send a request to the server so the end-point application, or web service, can process the request. The web service application will generate a response and send it back to the browser application via the server.



There are standards and rules that need to be adhered to while writing these services. For example, if I offer a web service, I publish a document using **Web Service Description Language (WSDL)**. Put very simply, it defines the rules of the service that I offer so you can build a client application to interact with it.

Web Services:

- Are application components.
- Can be used by other applications.
- Communicate using open protocols.
- Are based on HTTP and XML.
- Are self-contained and self-describing.

## TWO TYPES OF WEB SERVICES: SOAP AND REST

**Simple Object Access Protocol (SOAP)** web services allow for platform-independent information exchange using XML.

Architectures that use SOAP must:

- Expose a list of the operations that the web service offers.
- Provide a description of each interface, including input and output message formats.
  - A web service specification is sometimes referred to as a contract.
  - WSDL is often used to describe the details of each operation.
- Address any complex, nonfunctional requirements (availability, security, scalability, etc.)

**Representational State Transfer (REST)** services allow sessionless data interchange using a simple request and response model.

RESTful web services:

- Do not typically require XML messages or WSDL documentation.
  - REST requests are simple URLs in many cases.
  - JavaScript Object Notation (JSON) is a common output format.
- Are well suited for basic, ad-hoc integration scenarios, e.g., mobile applications and authentication.

## WORKDAY WEB SERVICES

**Workday Web Services (WWS)** provide a programmatic public API for our On-Demand Workday Business Management Services. WWS are implemented using industry standard web services technology which encompass WSDL, SOAP, REST and the WS-\* standards. Delivering WWS on open standards means avoiding the traditional pitfalls of building tightly coupled and proprietary integrations that are brittle and difficult to change.

### SOAP API

Workday Community provides API Documentation for our SOAP-based web services: <https://community.workday.com/api>.

## API Documentation

[VIEW](#) | [REVISIONS](#)

Updated 2 weeks 1 day ago • Read 101471 times

### Latest WWS API Documentation Directory

API Type	Description
<a href="#">Public Web Services API Directory</a>	Workday offers an open, standards-based SOAP API for programmatic access to our On-Demand Business Management Services. The following directory provide the API Documentation for our multi-tenant SOAP-based web services with corresponding WSDL and XML Schemas (XSD's).
<a href="#">Operation Directory Page for Latest Version (*New)</a>	This directory provies list of all public web service operations in alphabetical order for the latest version in production. Please use the Find (CTRL+F) capability in browser to search for a particular operation. The services which the operations belong to, are listed on the last column.

### 2 - Workday Web Services API Documentation Directory

The SOAP interface is targeted for import and export of data needed for integration with enterprise business systems external to Workday. These integrations typically involve large quantities of data moving between systems, often scheduled and initiated automatically from one system to another.

### REST API

The Workday REST API is an addition to the Public APIs supported by Workday:

<https://community.workday.com/rest>

This RESTful interface supports enterprise web and mobile applications characterized by small, typically self-service transactions initiated by end users. This REST API exists alongside the current SOAP-based web services, but serves a different need.

The REST API is designed to quickly return a small set of frequently used information for display or further action. Customers can integrate REST calls into an enterprise portal or mobile application, providing a subset of Workday functionality crafted for that specific audience.

### REPORTS AS A SERVICE (RAAS)

Furthermore, Workday allows you to expose custom reports as web services. Web services-enabled reports are accessible via both SOAP XML requests and REST URLs.



## WORKDAY INTEGRATION SYSTEMS

Workday includes several options to build integrations that interact with our Public Web Services and RaaS. In addition to the Integration Cloud Connect pre-built integrations, these tools give you a framework to build both inbound and outbound integrations based on your unique business needs.

All integrations systems have certain key elements:

**Integration System:** An external system defined in Workday. It provides both the security necessary for an external system to access Workday and a methodology to communicate data in a way that both Workday Web Services and the customer system understand.

**Data Source:** The location of the data Workday will receive from an external source or will extract from Workday objects for output.

**Transformation (optional):** Converts the data into something that Workday or the receiving external system can understand. Workday provides some transformations, but the users can create their own using XSLT.

**Transport Protocol:** Where, or to what endpoint, the Integration System will send the integration's outgoing message data. The transport protocol also defines the method of delivery.

## INTEGRATION SERVICES

Integration services perform tasks required to run an integration system. Some services are unique to a given integration template; others (such as Integration Document Retrieval) are available to most integrations. Integration services are sometimes optional for a given integration system, and can be enabled and disabled as needed.

### List of Common Services:

Service	Definition
<b>Attributes</b>	Values that are required to configure the integration system. They are configurable constants that may need to be changed occasionally in Workday.
<b>Custom Object (Studio)</b>	Associates a Workday Custom Object with an alias defined in Workday Studio. Integrations built using Workday Studio use the Custom Object Service to access each Custom Object using this alias.
<b>Document Delivery</b>	Enables your integration to send output files to an external system over a range of different transports such as AS2, FTP, FTPS, and SFTP.

Service	Definition
<b>Document Retrieval</b>	Enables your integration to import files from an external system over a range of different transports such as AS2, FTP, FTPS, and SFTP. Workday loads the integration file(s) into your W: Drive so that integrations can retrieve and process them.
<b>Field Attributes (Connectors)</b>	Enables you to configure the contents of an integration output file field by field. You can select which fields to include in the integration, specify whether the fields are required, and define maximum field length
<b>Field Overrides (Connectors)</b>	A flexible tool to customize your integration system. Use field overrides to map tenanted data to an external system and add custom values to integration output files. Field overrides use report fields or calculated fields to supply the values that are required by the external system.
<b>Integration Maps</b>	Used to map internal Workday values to their equivalent in external systems. For example, you might decide to map Workday cost center or gender codes into equivalent codes supported by the external system.
<b>Report Service (Studio)</b>	Associates a Workday custom report with an alias. Integrations built using Workday Studio use the Report Service to access the custom report using this alias. By using an alias, the integration can still locate the custom report even if the report's name or owner changes.
<b>Sequence Generator</b>	Generates a unique, sequenced file name each time it runs.
<b>Transaction Log</b>	Improves change detection performance by subscribing to events for particular transaction types or business process types.

## DATA SOURCES

You may use the Reports as a Service (RaaS) or the Workday Public Web Service SOAP API as data sources for outbound integration systems. Inbound integrations use external files provided by a resource outside of Workday. Outbound data can be transformed, and inbound data typically requires transformation before updating Workday.

## TRANSFORMATIONS

An integration transformation tells Workday how to convert data from an external system so that Workday can understand it, or how to convert Workday data so that the external system can interpret it. Workday supports three types of integration transformations:

- Delivered transformations
- Custom report transformations (EIB with RaaS only)
- XSLT attachment transformations

## TRANSPORT PROTOCOL TYPES

A transport protocol tells Workday how to deliver data to or from an external system. Workday supports the following types of transport protocols to import or export data:

### **Document Delivery:**

- AS2
- Email
- FTP
- FTP/SSL
- Google Cloud Storage
- HTTP/SSL
- SFTP
- Workday Attachment

### **Document Retrieval:**

- FTP
- FTP/SSL
- REST URL
- SFTP

## CHAPTER 2 – REPORTS AS A SERVICE

### OVERVIEW

Workday enables you to build your own web services through our Report Writer / Custom Reports functionality. Web service-enabled reports may be used as data sources for custom integrations, such as those built with Enterprise Interface Builder (EIB) and Workday Studio.

### OBJECTIVES

By the end of this chapter, you will be able to:

- Configure a custom report as a web service.
- Compare Workday XML and Simple XML data structure.
- Locate integration IDs for objects in your tenant.
- Build a simple integration using EIB and RaaS.

## REPORTS AS A SERVICE (RAAS)

When custom reports are web service-enabled, they become **Reports as a Service (RaaS)** and are exposed as both SOAP- and REST-based web services for integration scenarios.

Only Advanced and Search reports can be enabled for web services.

3 - Create Custom Report task with Enable As Web Service option selected



**Important:** When you enable web services for a custom report, the maximum size of the response that Workday returns is 2 GB.

## NAMESPACE

Namespaces define the scope of named elements and attributes in an XML document, avoiding conflicts where a single document might use the same tag name for multiple purposes.

When you enable a custom report as a web service, Workday generates a default RaaS **namespace** for the report, using the following format: `urn:com.workday.report/Report_Name` (where *Report\_Name* is the name of the report with underscores replacing spaces).

Web Services Options

A save and re-open is required to see and modify the web service aliases if they are not shown. (empty)

Enable As Web Service ☒

Web Service API Version \* v31.0

Namespace \* m.workday.report/WICT\_RW\_Positions

#### 4 - Custom Report Advanced Web Services Options

The RaaS namespace remains fixed even if the report owner changes due to transfers of ownership or if the report name changes. This prevents integrations that rely on the report's output from being unable to interpret the data.

You can edit the namespace for a custom report. However, you should consider the following:

- Workday does not verify that a changed RaaS namespace is unique.
- If you have any integrations that use the report, you will have to update them to use the new RaaS namespace.

Reports that are enabled as a web service must have **XML aliases** defined for all columns, prompts, and related business objects.

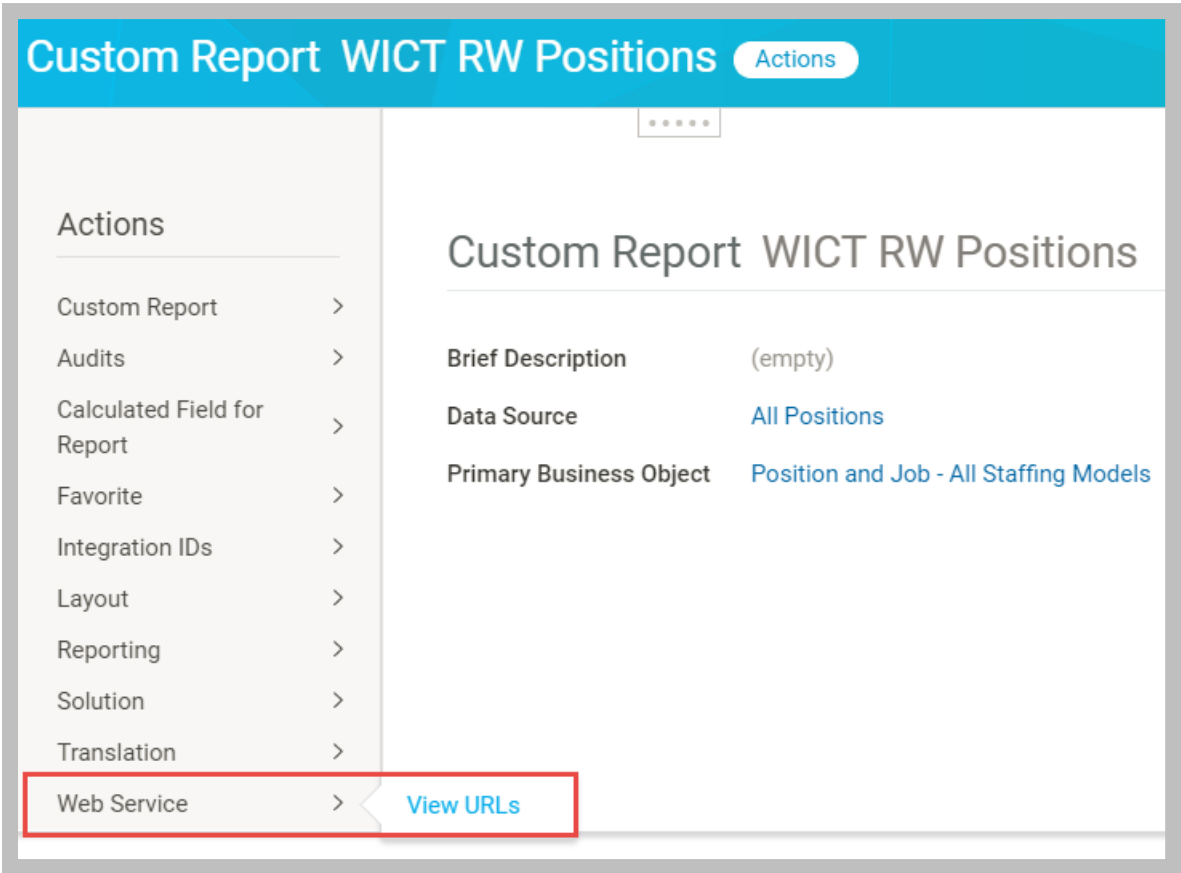
Columns	Sort	Filter	Prompts	Output	Share	Advanced
5 items						
Business Object	Field		Column Heading Override XML Alias			
Position and Job - All Staffing Models	Position ID		Position			
Position and Job - All Staffing Models	Position Text		Title			
Position and Job - All Staffing Models	Annual Compensation / Pay in USD		Pay			
Position and Job - All Staffing Models	Available For Hire		Available			
Position and Job - All Staffing Models	Availability Date		AvailabilityDt			

#### 5 - Custom Report Columns with Column Heading Override XML Aliases

WORKDAY REPORT XML

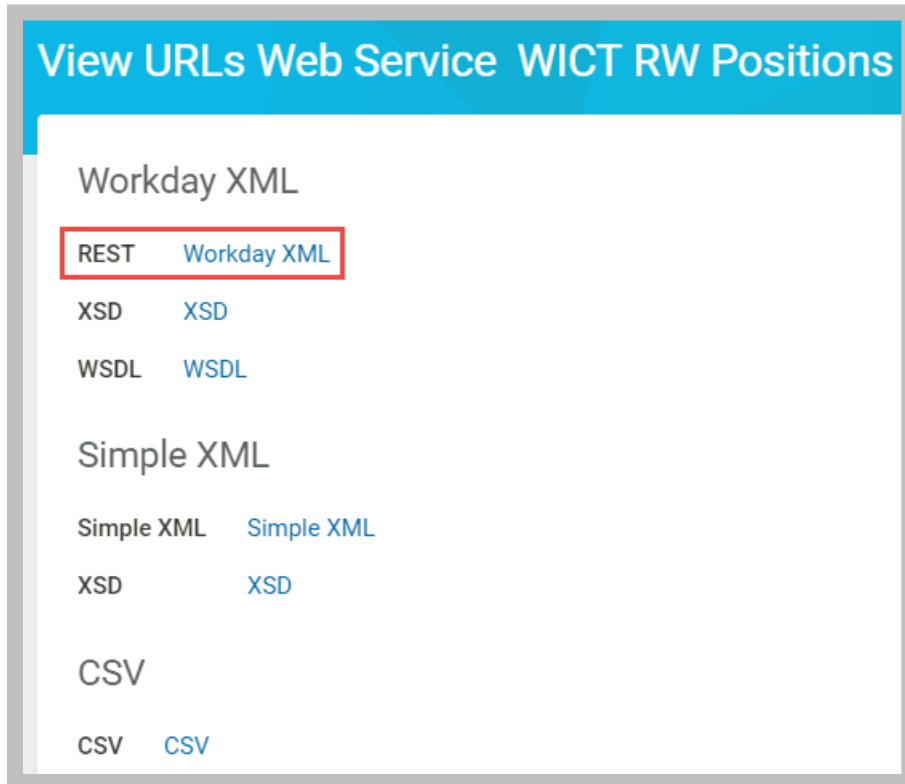
Workday accepts REST-based report requests via URLs, enabling simple integration between Workday and external business services, such as payroll or benefits providers.

To view the Workday XML, XSD, WSDL, and alternative report formats, navigate to the report in the tenant and use its Related Actions to view the Web Service URLs. If your report contains prompts, you will need to enter the values.



6 - View URLs Related Action

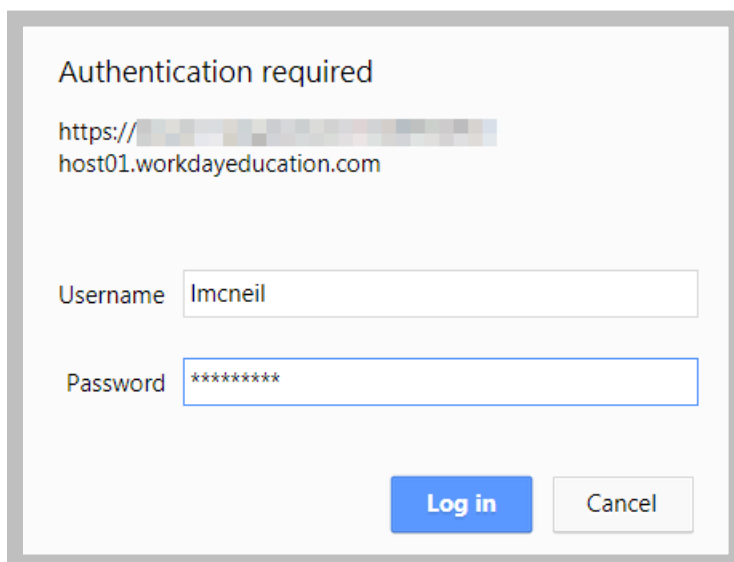
Then click the **Workday XML** link to view the report in a browser window.



7 - Workday XML link on the View URLs Web Service page



**Note:** The first time you click the Workday XML link in a browser session, you will need to enter a user name/password. Make sure pop-ups are not disabled.



8 - Basic authentication prompt



The Workday XML option outputs the literal, and somewhat advanced, XML code used internally within Workday. This option might be useful in cases where REST or SOAP is used to leverage Workday's sophisticated use of the XML language.

```
<?xml version="1.0" encoding="UTF-8"?>
<wd:Report_Data xmlns:wd="urn:com.workday.report/WICT_RW_Positions">
  - <wd:Report_Entry>
    <wd:Title>Senior Benefits Analyst Allocation (3 Headcount Unfilled)</wd:Title>
    <wd:Pay>77500</wd:Pay>
    <wd:Available>0</wd:Available>
    <wd:AvailabilityDt>2000-01-01-08:00</wd:AvailabilityDt>
  </wd:Report_Entry>
  - <wd:Report_Entry>
    <wd:Title>Staff Benefits Analyst Allocation (1 Headcount Unfilled)</wd:Title>
    <wd:Pay>77500</wd:Pay>
    <wd:Available>0</wd:Available>
    <wd:AvailabilityDt>2000-01-01-08:00</wd:AvailabilityDt>
  </wd:Report_Entry>
  - <wd:Report_Entry>
    <wd:Title>Senior Payroll Specialist (1 Headcount Unfilled)</wd:Title>
    <wd:Pay>0</wd:Pay>
```

#### 9 - RaaS output as Workday XML



## ACTIVITY 2.1 – CREATE A REPORT AS A SERVICE

**Business Case:** You have been tasked with synchronizing position information with an external application. You will start by building a custom report to expose Workday position data as a web service.

- Initially, the report will include a few simple report fields (no objects).
- You will use a filter to limit the data to a range of dates.

**Shortcut:** Use the pre-built report **WDINST RW EIB Positions** and skip to Task #2.

### TASK #1: CREATE A CUSTOM REPORT

- Sign in as Logan McNeil (*lmcneil*).
- Search for and select the *Create Custom Report* task.
- Enter the following information:

<i><b>Field Name</b></i>	<i><b>Entry Value</b></i>
Report Name	WICT RW Positions
Report Type	Advanced
Data Source	All Positions (second instance)
Enable As Web Service	Checked

- Click the **OK** button.
- On the **Columns** tab, click the **Add** button  to add the following fields and XML Aliases:

<i><b>Field</b></i>	<i><b>Column Heading Override XML Alias</b></i>
Position ID	Position
Position Text	Title
Annual Compensation / Pay in USD	Pay
Available for Hire	Available
Availability Date	AvailabilityDt

Columns	Sort	Filter	Subfilter	Prompts	Output	Share	Advanced
5 items							
+	Order	*Business Object	Field	Column Heading Override	Column Heading Override XML Alias		
+	▼	Position and Job - All Staffing Models	Position ID		Position		
+	▲	Position and Job - All Staffing Models	Position Text		Title		
+	▲	Position and Job - All Staffing Models	Annual Compensation / Pay in USD		Pay		
+	▲	Position and Job - All Staffing Models	Available For Hire		Available		
+	▲	Position and Job - All Staffing Models	Availability Date		AvailabilityDt		

10 - Columns tab with Column Heading Override XML Alias configured

6. On the **Filter** tab, enter the following two filters:

A.

Field Name	Entry Value
Field	Availability Date
Operator	<b>greater than or equal to</b>
Comparison Type	Prompt the user for the value
Comparison Value	<b>Starting Prompt</b>

B.

Field Name	Entry Value
Field	Availability Date
Operator	<b>less than or equal to</b>
Comparison Type	Prompt the user for the value
Comparison Value	<b>Ending Prompt</b>

Columns | Sort | **Filter** | Subfilter | Prompts | Output | Share | Advanced

Filter on Instances

Filter conditions for filtering on instances 2 items

*Field	*Operator	Comparison Type	Comparison Value
Availability Date	greater than or equal to	Prompt the user for the value	Starting Prompt
× Availability Date	× less than or equal to	× Prompt the user for the value	× Ending Prompt

11 - Filter tab with Availability Date prompts configured

- On the **Prompts** tab, click the **Populate undefined Prompt Defaults** checkbox to add two rows under **Prompt Defaults** and enter the following:

A.

Field Name	Entry Value
Field	Availability Date
Prompt Qualifier	Starting Prompt
Label For Prompt XML Alias	Start

B.

Field Name	Entry Value
Field	Availability Date
Prompt Qualifier	Ending Prompt
Label For Prompt XML Alias	End

Populate undefined Prompt Defaults ☒

Display Prompt Values in Subtitle ☒

Prompt Defaults 2 items

Order	*Field	Prompt Qualifier	Label for Prompt	Label For Prompt XML Alias
+	Availability Date	Starting Prompt		Start
+	× Availability Date	× Ending Prompt		End

12 - Prompts tab with Label for Prompt XML Alias configured

8. On the **Advanced** tab, verify the following:
  - A. *Enable As Web Service* is checked.
  - B. *Web Service API Version* is the highest available.
  - C. *Namespace* includes the underscored version of your report name.
9. Click **OK** to save your report.

## TASK #2: RUN REPORT AND VIEW WORKDAY XML

1. Click the **Run** button to run your report, and enter the following at the prompts:
  - A. Starting Availability Date: *01/01/2000*
  - B. Ending Availability Date: *[today's date]*
2. Confirm that there are 640 results.

640 items

Position ID	Position Text	Annual Compensation / Pay in USD	Available For Hire	Availability Date
	Senior Benefits Analyst Allocation (3 Headcount Unfilled)-	77,500.00		01/01/2000
	Staff Benefits Analyst Allocation (1 Headcount Unfilled)-	77,500.00		01/01/2000
	Senior Payroll Specialist (1 Headcount Unfilled)-	0.00		01/01/2000
	Staff Payroll Specialist (3 Headcount Unfilled)-	77,500.00		01/01/2000
	Senior Workforce Analyst (None Available)-	0.00		01/01/2000
	Workforce Analyst (1 Headcount Unfilled)-	77,500.00		01/01/2000

### 13 - Tenant report output

3. Use the report's **Related Actions** to select **Web Service > View URLs**.
4. Enter the following dates in the prompts:
  - A. Starting Hire Date: *01/01/2000*
  - B. Ending Hire Date: *[today's date]*
5. Click **OK**.

6. Select the REST **Workday XML** link.
7. When prompted, enter *lmcneil* as the user and your tenant password.
8. Review the report XML.

```
<?xml version="1.0" encoding="UTF-8"?>
<wd:Report_Data xmlns:wd="urn:com.workday.report/WICT_RW_Positions">
  - <wd:Report_Entry>
    <wd:Title>Senior Benefits Analyst Allocation (3 Headcount Unfilled)-</wd:Title>
    <wd:Pay>77500</wd:Pay>
    <wd:Available>0</wd:Available>
    <wd:AvailabilityDt>2000-01-01-08:00</wd:AvailabilityDt>
  </wd:Report_Entry>
  - <wd:Report_Entry>
    <wd:Title>Staff Benefits Analyst Allocation (1 Headcount Unfilled)-</wd:Title>
    <wd:Pay>77500</wd:Pay>
    <wd:Available>0</wd:Available>
    <wd:AvailabilityDt>2000-01-01-08:00</wd:AvailabilityDt>
  </wd:Report_Entry>
  - <wd:Report_Entry>
    <wd:Title>Senior Payroll Specialist (1 Headcount Unfilled)-</wd:Title>
    <wd:Pay>0</wd:Pay>
```

14 - Workday XML output



## XML OVERVIEW

### WHAT IS XML?

- XML stands for **E**xtensible **M**arkup **L**anguage.
- XML is a markup language, much like HTML.
- XML was designed to carry data, not to display data.
- XML tags are not predefined; each application must define its own tags.
- XML is self-descriptive.

XML does not *do* anything. XML was created to structure, store, and transport information.

### WHAT DOES XML LOOK LIKE?

XML must be “well formed”.

```
<message>
  <record>
    <payload>Not really all that interesting</payload>
  </record>
  <record>
    <ofrelevance>yes</ofrelevance>
    <payload>Something more interesting</payload>
  </record>
</message>
```

15 - Well-formed XML example

XML has a single “root” element that contains all other elements.

```
<message>                                “root” element
  <record>
    <payload>Not really all that interesting</payload>
  </record>
  <record>
    <ofrelevance>yes</ofrelevance>
    <payload>Something more interesting</payload>
  </record>
</message>
```

16 - Root “message” element

Elements are nested.

```
<message>
  <record>
    <payload>Not really all that interesting</payload>
  </record>
  <record>
    <ofrelevance>yes</ofrelevance>
    <payload>Something more interesting</payload>
  </record>
</message>
```

record element [1]

record element [2]

17 - Nested "record" elements

Elements contain either text or other elements.

```
<message>
  <record>
    <payload>Not really all that interesting</payload>
  </record>
  <record>
    <ofrelevance>yes</ofrelevance>
    <payload>Something more interesting</payload>
  </record>
</message>
```

Some data! (text)

18 - "payload" element with text data

Elements have begin and end tags.

```
<message>
  <record>
    <payload>Not really all that interesting</payload>
  </record>
  <record>
    <ofrelevance>yes</ofrelevance>
    <payload>Something more interesting</payload>
  </record>
</message>
```

Begin Tag

End Tag

19 - Begin and end tags of "payload" element



Begin and end tags must be correctly nested.

```
<message>
  <record>
    <payload>Not really all that interesting</payload>
  </record>
  <record>
    <ofrelevance>yes</ofrelevance>
    <payload>Something more interesting</payload>
  </record>
</message>
```

20 - Nested "record" elements correctly delimited with begin and end tags

Elements can contain attributes. Attributes appear as *name="value"* pairs within begin tags.

```
<message>
  <record ID="001">      Attribute (ID with value of 001)
    <payload>Not really all that interesting</payload>
  </record>
  <record ID="002">      Attribute (ID with value of 002)
    <ofrelevance>yes</ofrelevance>
    <payload>Something more interesting</payload>
  </record>
</message>
```

21 - "record" elements with "ID" attributes

## WORKDAY XML: RAAS ELEMENTS AND TAGS

Workday XML from RaaS has a predictable structure based on the report definition.

```
<?xml version="1.0" encoding="UTF-8"?>
- <wd:Report_Data xmlns:wd="urn:com.workday.report/WICT_RW_Positions">
  - <wd:Report_Entry>
    <wd:Title>Senior Benefits Analyst Allocation (3 Headcount Unfilled)-</wd:Title>
    <wd:Pay>77500</wd:Pay>
    <wd:Available>0</wd:Available>
    <wd:AvailabilityDt>2000-01-01-08:00</wd:AvailabilityDt>
  </wd:Report_Entry>
  - <wd:Report_Entry>
    <wd:Title>Staff Benefits Analyst Allocation (1 Headcount Unfilled)-</wd:Title>
    <wd:Pay>77500</wd:Pay>
    <wd:Available>0</wd:Available>
    <wd:AvailabilityDt>2000-01-01-08:00</wd:AvailabilityDt>
  </wd:Report_Entry>
  - <wd:Report_Entry>
    <wd:Title>Senior Payroll Specialist (1 Headcount Unfilled)-</wd:Title>
    <wd:Pay>0</wd:Pay>
    <wd:Available>0</wd:Available>
    <wd:AvailabilityDt>2000-01-01-08:00</wd:AvailabilityDt>
  </wd:Report_Entry>
```

### 22 - RaaS Workday XML structure

The **wd:Report\_Data** root node contains list of **wd:Report\_Entry** elements. (It also has an **xmlns** attribute that associates the **wd** prefix with the report namespace.)

Each **wd:Report\_Entry** contains list of other elements or "fields" as defined by the report.

E.g., **wd:Pay** contains the contents of the Annual Compensation / Pay in USD field (**77500**).

SIMPLE TYPES VS. BUSINESS OBJECTS

All Business Objects (BOs) have Workday IDs (WIDs). “Simple” data types display in black, whereas BOs typically display as blue, actionable links. BOs have Related Actions.

01/01/2000	<a href="#">Atlanta</a> <a href="#">Dallas</a> <a href="#">San Francisco</a>		<a href="#">Jeff Gordon</a>	<a href="#">Dallas</a>	Employee
10/15/2014	<a href="#">San Francisco</a>	Employee			
01/01/2000	<a href="#">Mumbai</a>	Contingent Worker	<a href="#">Chaaya Basu [C]</a>	<a href="#">Mumbai</a>	Contingent Worker
01/01/2000	<a href="#">Manila</a>	Contingent Worker	<a href="#">Ariceli Bermudez [C]</a>	<a href="#">Manila</a>	Contingent Worker

23 - Custom report output with related business objects

Fields that contain a BO have either a 1-to-1 or a 1-to-many relationship to the Business Object.

Position and Job - All Staffing Models

Position and Job - All Staffing Models

Worker

Worker

X Worker

Hiring Restrictions - Location

Hiring Restrictions - Worker Type

Worker

Location

X Worker Type

24 - Custom report Columns tab with related business object fields

Use the Group Column Headings section to provide XML Aliases for related business object data.

Group Column Headings 1 item

\*Business Object

X Worker

Group Column Heading

Group Column Heading XML Alias

WorkerDetail

25 - Group Column Headings configured with Group Column Heading XML Alias

The resulting Workday XML contains *Integration IDs* associated with the business object instance. Related business objects are nested within Group Column Heading XML Aliases.

```
<?xml version="1.0" encoding="UTF-8"?>
<wd:Report_Data xmlns:wd="urn:com.workday.report/WICT_RW_Positions">
  + <wd:Report_Entry>
  + <wd:Report_Entry>
  + <wd:Report_Entry>
  + <wd:Report_Entry>
  - <wd:Report_Entry>
    <wd:Position>P-00043</wd:Position>
    <wd>Title>P-00043 IT HelpDesk Specialist - Jeff Gordon-P-00043</wd>Title>
    <wd:Pay>70297</wd:Pay>
    <wd:Available>0</wd:Available>
    <wd:AvailabilityDt>2000-01-01-08:00</wd:AvailabilityDt>
    - <wd:Restrictions-Location wd:Descriptor="Dallas">
      <wd:ID wd:type="WID">c2215e4e5d6e413aa972fc4d22f37870</wd:ID>
      <wd:ID wd:type="Location_ID">Dallas_site</wd:ID>
    </wd:Restrictions-Location>
    - <wd:Restrictions-Location wd:Descriptor="Atlanta">
      <wd:ID wd:type="WID">cc237600165744559cea44608b969271</wd:ID>
      <wd:ID wd:type="Location_ID">Atlanta_site</wd:ID>
    </wd:Restrictions-Location>
    - <wd:Restrictions-Location wd:Descriptor="San Francisco">
      <wd:ID wd:type="WID">d13a7c46a06443c4a33c09afbfd72c73</wd:ID>
      <wd:ID wd:type="Location_ID">San_Francisco_site</wd:ID>
    </wd:Restrictions-Location>
    - <wd:WorkerDetail>
      - <wd:Worker wd:Descriptor="Jeff Gordon">
        <wd:ID wd:type="WID">50bf8a32796e476ca4e56a7c47b54d2b</wd:ID>
        <wd:ID wd:type="Employee_ID">21025</wd:ID>
      </wd:Worker>
      - <wd:Location wd:Descriptor="Dallas">
        <wd:ID wd:type="WID">c2215e4e5d6e413aa972fc4d22f37870</wd:ID>
        <wd:ID wd:type="Location_ID">Dallas_site</wd:ID>
      </wd:Location>
      - <wd:Type wd:Descriptor="Employee">
        <wd:ID wd:type="WID">d588c41a446c11de98360015c5e6daf6</wd:ID>
        <wd:ID wd:type="Worker_Type_ID">EE</wd:ID>
      </wd:Type>
    </wd:WorkerDetail>
  </wd:Report_Entry>
  + <wd:Report_Entry>
  + <wd:Report_Entry>
  + <wd:Report_Entry>
  + <wd:Report_Entry>
</wd:Report_Data>
```

26 - RaaS Workday XML output including objects

In this example, **wd:Location** contains a **wd:Descriptor** attribute with a value of **Dallas**.

## ALTERNATE OUTPUT FORMATS

### Simple XML

Workday XML may be too complex for many integration needs, such as quickly creating a refreshable report with Microsoft Excel. In such cases, the Simple XML option may be more appropriate.

Simple XML is particularly useful for basic desktop integrations, in which a knowledgeable user wants to integrate with other reporting tools such as Microsoft Excel or Crystal Reports. With Simple XML, the complexity of Workday XML is distilled into basic XML elements that are simple to understand and can be processed by many desktop applications.

Simple XML results in XML that is easier to read and understand than Workday XML. Here are a couple of key examples of how it is different:

- Single-instance fields are changed to simple string-type elements.
- Multi-instance fields are changed to simple string-type elements.
- Multi-instance fields within the primary business object are changed to simple string-type elements, with a semi-colon separating each value.
- Data fields that only contain dates (that is, they do not contain times) output dates only, with no times or offset from GMT.

Workday XML is the default output of an integration unless an alternate output is selected or a custom transformation is applied.

### Other Output Formats

**CSV:** Comma-Separated Values. This output option is likely to be used to import data into a spreadsheet as simply and quickly as possible. No knowledge of XML or schemas is required.

**RSS:** Really Simple Syndication. It is an XML standard for publishing frequently updated content over the Internet. Common examples are news headlines and blog postings.

**GData:** Google Data protocol. This option is useful for integrations with Google gadgets and other cases where it is desirable to allow programmatic access to this data format.

**JSON:** JavaScript Object Notation. This lightweight format has become the de facto standard for data interchange with cloud-based REST APIs.



## ACTIVITY 2.2 – ADD BUSINESS OBJECTS TO RAAS

**Business Case:** You have been asked to include some position restriction information as well as worker details to your web service output. The data should also be organization-specific.

- Modify the custom report to include object data, including fields from the Worker related business object (RBO).
- Add a prompt to filter by Supervisory Organization.
- Compare the output of Workday XML and Simple XML.

**Shortcut:** Use the pre-built report **WDINST RW EIB Positions with RBOs** and skip to Task #2.

### TASK #1: MODIFY THE CUSTOM REPORT

1. Sign in as Logan McNeil (*lmcneil*).
2. Edit **WICT RW Positions** to include the following fields and XML aliases:

<i><b>Business Object</b></i>	<i><b>Field</b></i>	<i><b>Column Heading Override XML Alias</b></i>
Position and Job – All Staffing Models	Hiring Restrictions – Location	Restrictions-Location
Position and Job – All Staffing Models	Hiring Restrictions – Worker Type	Restrictions-Type
<b>Worker</b>	Worker (first instance)	Worker
<b>Worker</b>	Location	Location
<b>Worker</b>	Worker Type	Type

3. Click the **Add** button in the **Group Column Headings** section and enter the following:
  - A. Business Object: *Worker*
  - B. Group Column Heading XML Alias: *WorkerDetail*

The screenshot displays the 'Columns' configuration interface. The top section is a table with columns: Order, \*Business Object, Field, Column Heading Override, Column Heading Override XML Alias, and F. It lists various business objects like 'Position and Job - All Staffing Models' and 'Worker', with fields such as 'Availability Date', 'Hiring Restrictions - Location', and 'Worker'. The bottom section, 'Group Column Headings', shows a single item 'Worker' with a 'Group Column Heading' and a 'Group Column Heading XML Alias' (WorkerDetail). Red boxes highlight specific fields and group headings.

Order	*Business Object	Field	Column Heading Override	Column Heading Override XML Alias	F
	Position and Job - All Staffing Models	Availability Date		Available	
	Position and Job - All Staffing Models	Availability Date		AvailabilityDt	
	Position and Job - All Staffing Models	Hiring Restrictions - Location		Restrictions-Location	
	Position and Job - All Staffing Models	Hiring Restrictions - Worker Type		Restrictions-Type	
	Worker	Worker		Worker	
	Worker	Location		Location	
	X Worker	X Worker Type		Type	

*Business Object	Group Column Heading	Group Column Heading XML Alias
X Worker		WorkerDetail

27 - Business object fields and Group Column Headings

4. Click the **Filter** tab and add the following filter condition:

Field Name	Entry Value
Field	Supervisory Organization
Operator	In the selection list
Comparison Type	Prompt the user for the value
Comparison Value	Default Prompt

The screenshot shows the 'Filter' tab in the configuration interface. It displays 'Filter conditions for filtering on instances' with 3 items. The table has columns: \*Field, \*Operator, Comparison Type, and Comparison Value. The conditions are: 'Availability Date' greater than or equal to 'Starting Prompt', 'Availability Date' less than or equal to 'Ending Prompt', and 'Supervisory Organization' in the selection list with 'Prompt the user for the value' and 'Default Prompt'.

*Field	*Operator	Comparison Type	Comparison Value
Availability Date	greater than or equal to	Prompt the user for the value	Starting Prompt
Availability Date	less than or equal to	Prompt the user for the value	Ending Prompt
X Supervisory Organization	X in the selection list	X Prompt the user for the value	X Default Prompt

28 - Filter with business object prompt

- On the **Prompts** tab, click the **Populate undefined Prompt Defaults** checkbox to add the Supervisory Organization prompt. Accept the defaults.

Populate undefined Prompt Defaults ☒

Display Prompt Values in Subtitle ☒

Prompt Defaults 3 items

Order	*Field	Prompt Qualifier	Label for Prompt	Label For Prompt XML Alias	*Default Type
1	Supervisory Organization	X Default Prompt		Supervisory_Organization	No default value
2	Availability Date	Starting Prompt		Start	No default value
3	Availability Date	Ending Prompt		End	No default value

29 - Prompts tab with business object prompt configured

### TASK #2: RUN REPORT AND COMPARE SIMPLE XML TO WORKDAY XML

- Run the report with the following values:

Field Name	Entry Value
Supervisory Organization	IT HelpDesk Department
Starting Availability Date	01/01/2000
Ending Hire Date	[Today's Date]

Note: All five new fields are actionable, although only three are hyperlinked.



Availability Date	Hiring Restrictions - Location	Hiring Restrictions - Worker Type	Worker	Location	Worker Type
02/07/2018	📍 San Francisco	Employee			
02/07/2018	📍 San Francisco	Employee			
02/07/2018	📍 San Francisco	Employee			
02/07/2018	📍 San Francisco	Employee			
01/01/2000	📍 Atlanta 📍 Dallas 📍 San Francisco		Jeff Gordon	📍 Dallas	Employee
10/15/2014	📍 San Francisco	Employee			
01/01/2000	📍 Mumbai	Contingent Worker	Chaaya Basu [C]	📍 Mumbai	Contingent Worker
01/01/2000	📍 Manila	Contingent Worker	Ariceli Bermudez [C]	📍 Manila	Contingent Worker

### 30 - Custom report output with actionable objects

- Use the reports related actions to select **Web Service > View URLs**.
- When prompted, enter the following:

Field Name	Entry Value
Supervisory Organization	IT HelpDesk Department
Starting Availability Date	01/01/2000
Ending Hire Date	[Today's Date]

- On the View URLs Web Service page, select the **Workday XML** link.
  - If prompted, enter your tenant username and password at the basic authentication prompt.
  - Review the resulting XML. Pay particular attention to Position **P-00043**.

```

<?xml version="1.0" encoding="UTF-8"?>
<wd:Report_Data xmlns:wd="urn:com.workday.report/WICT_RW_Positions">
  + <wd:Report_Entry>
  + <wd:Report_Entry>
  + <wd:Report_Entry>
  + <wd:Report_Entry>
  - <wd:Report_Entry>
    <wd:Position>P-00043</wd:Position>
    <wd>Title>P-00043 IT HelpDesk Specialist - Jeff Gordon-P-00043</wd>Title>
    <wd:Pay>70297</wd:Pay>
    <wd:Available>0</wd:Available>
    <wd:AvailabilityDt>2000-01-01-08:00</wd:AvailabilityDt>
    - <wd:Restrictions-Location wd:Descriptor="Dallas">
      <wd:ID wd:type="WID">c2215e4e5d6e413aa972fc4d22f37870</wd:ID>
      <wd:ID wd:type="Location_ID">Dallas_site</wd:ID>
    </wd:Restrictions-Location>
    - <wd:Restrictions-Location wd:Descriptor="Atlanta">
      <wd:ID wd:type="WID">cc237600165744559cea44608b969271</wd:ID>
      <wd:ID wd:type="Location_ID">Atlanta_site</wd:ID>
    </wd:Restrictions-Location>
    - <wd:Restrictions-Location wd:Descriptor="San Francisco">
      <wd:ID wd:type="WID">d13a7c46a06443c4a33c09afbfd72c73</wd:ID>
      <wd:ID wd:type="Location_ID">San_Francisco_site</wd:ID>
    </wd:Restrictions-Location>
    - <wd:WorkerDetail>
      - <wd:Worker wd:Descriptor="Jeff Gordon">
        <wd:ID wd:type="WID">50bf8a32796e476ca4e56a7c47b54d2b</wd:ID>
        <wd:ID wd:type="Employee_ID">21025</wd:ID>
      </wd:Worker>
      - <wd:Location wd:Descriptor="Dallas">
        <wd:ID wd:type="WID">c2215e4e5d6e413aa972fc4d22f37870</wd:ID>
        <wd:ID wd:type="Location_ID">Dallas_site</wd:ID>
      </wd:Location>
      - <wd:Type wd:Descriptor="Employee">
        <wd:ID wd:type="WID">d588c41a446c11de98360015c5e6daf6</wd:ID>
        <wd:ID wd:type="Worker_Type_ID">EE</wd:ID>
      </wd:Type>
    </wd:WorkerDetail>
  </wd:Report_Entry>
  + <wd:Report_Entry>
  + <wd:Report_Entry>
  + <wd:Report_Entry>
  + <wd:Report_Entry>
</wd:Report_Data>

```

### 31 - Workday XML output including objects

5. Return to the View URLs Web Service page and click **Simple XML**.
6. Review the resulting XML. Again, pay close attention to Position **P-00043**.

```

<?xml version="1.0" encoding="UTF-8"?>
<wd:Report_Data xmlns:wd="urn:com.workday.report/WICT_RW_Positions">
  + <wd:Report_Entry>
  + <wd:Report_Entry>
  + <wd:Report_Entry>
  + <wd:Report_Entry>
  - <wd:Report_Entry>
    <wd:Position>P-00043</wd:Position>
    <wd>Title>P-00043 IT HelpDesk Specialist - Jeff Gordon-P-00043</wd>Title>
    <wd:Pay>70297</wd:Pay>
    <wd:Available>0</wd:Available>
    <wd:AvailabilityDt>2000-01-01</wd:AvailabilityDt>
    <wd:Restrictions-Location>Dallas; Atlanta; San Francisco</wd:Restrictions-Location>
    <wd:Worker>Jeff Gordon</wd:Worker>
    <wd:Location>Dallas</wd:Location>
    <wd>Type>Employee</wd>Type>
  </wd:Report_Entry>
  + <wd:Report_Entry>
  + <wd:Report_Entry>
  + <wd:Report_Entry>
  + <wd:Report_Entry>
</wd:Report_Data>

```

### 32 - Simple XML output

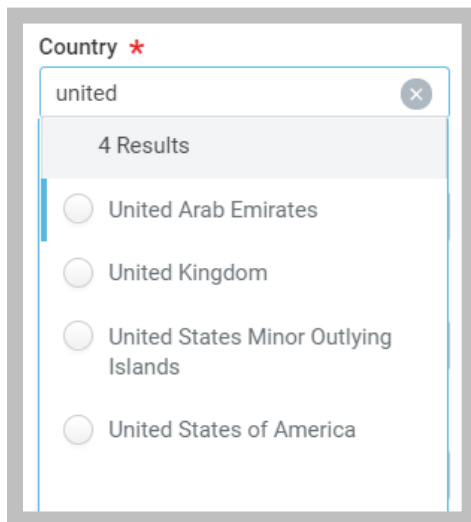
- Compare the Simple XML to the Workday XML. What do you notice about the business objects?
- Compare the actual URLs of the Workday XML and the Simple XML. What is the difference between them?
- What is controlling the element names of the fields in the Workday XML? For example, if you wanted to change the value of <wd:AvailabilityDt> to <wd:AvailabilityDate>, where is that action performed?
- When viewing the Workday XML, the document contains a namespace of wd="urn:com.workday.report/WICT\_RW\_Positions". Where in the report definition is that defined?



## INTEGRATION IDS

Workday uses "Integration IDs" as an umbrella term for all of the various object identifiers that can be used for integrations.

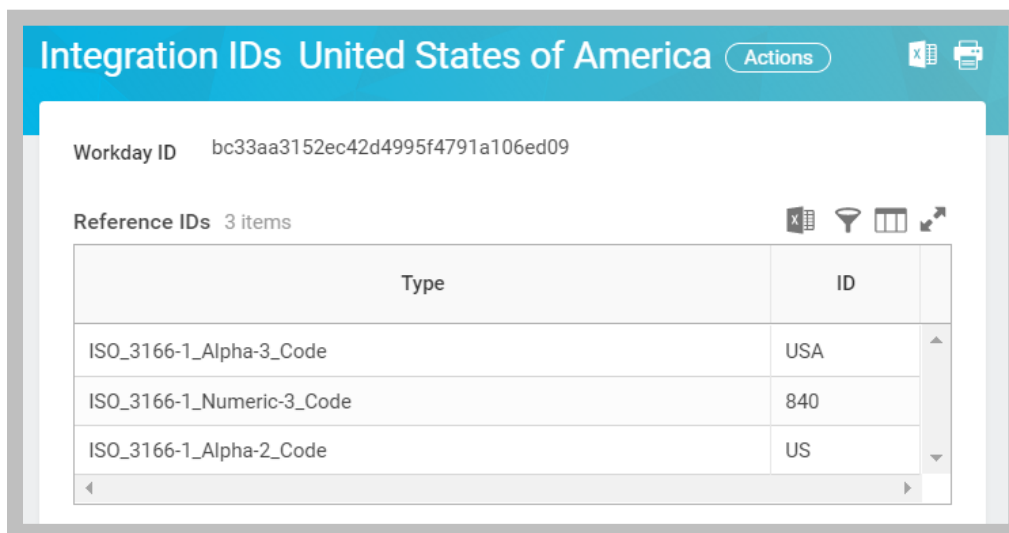
Many fields in Workday appear as lookups, presenting users with a limited list of values. Users can narrow down a list by typing in known codes (e.g., a worker's employee ID) or partial search terms (e.g., the first few letters of an organization's title).



33 - Country prompt

Each of these values is actually an object instance in Workday. Unlike users entering them through the Workday UI, background processes cannot generally access objects using their descriptions. **Integration IDs** provide a method to identify an object for retrieval or update.

Integration ID types include **Workday ID (WID)**, **Reference ID** and **External ID**.



34 - Integration IDs for a Country instance

## Workday ID (WID)

A globally unique identifier that Workday automatically generates on all object data. Workday IDs consist of a 32-character, immutable string. E.g., bc33aa3152ec42d4995f4791a106ed09.

WIDs are unique across all Workday environments, thus the same Workday object has different WIDs in your production, testing, and implementation tenants. Although the use of WIDs can prevent integrations from inadvertently running against the wrong environment, testing and migration of these integrations is more complex.



**Tip:** The exception to the above is the sandbox environment, which is a regularly refreshed clone of your production environment. Because these two tenants share WIDs, it is recommended to test your integrations fully in your sandbox in case any of your solutions use WIDs for object references.

## Reference ID

An optional, unique identifier that can be set externally or within Workday. Workday determines whether a business object can have one or more Reference ID types. All Reference IDs contain a "type" and a "value".

- The "type" defines the attribute that holds the unique identifier (e.g. ISO\_3166-1\_Alpha-3\_Code).
- The "value" is the identifier itself (e.g. USA).

Reference IDs are only unique by type and value and can be shared between tenants. This allows you to build an integration in one environment and use the same object identifiers after moving to production. While Workday uses WIDs internally to represent data, Reference IDs are more useful for integration purposes, particularly when users need to manipulate them, such as when populating spreadsheet templates for inbound EIB integrations.

## External ID

A two-part, unique identifier that is determined by an external system. They require an "Integration System" together with an identifier value. In prior versions, these IDs were referred to as "Integration IDs" but are now called "External IDs" for clarity. Since the introduction of Reference IDs, External IDs have become less common in integrations.

External IDs consist of:

- A "System ID", which identifies an integration system in Workday. E.g., "SFDC" is a System ID for a tenanted integration system between Workday and Salesforce.com.
- A "value", which identifies a particular business object instance. E.g., W-001 is the external ID value for the Western region instance of the sales organization.

## Reserved System ID

A subtype of External ID that allow for backward compatibility with the original v1 and v2 operations in the Workday API. The Reserved System IDs are internal system ID values that are needed for some web service operations that have not been updated to use Reference IDs.

There are two types of Reserved System IDs still in use today:

- **WD-WID:** Used to pass Workday IDs into a v1 or v2 operation.
- **WD-EMPLID:** Used to pass Employee IDs or Contingent Worker IDs into a v1 or v2 operation.

For example, the Add Workday Account operation does not yet support Reference IDs. Integrations like the following EIB template need to use the WD-EMPLID System ID in order to refer to an existing worker when creating an account:

	A	B	C	D	E	F
1	<b>Workday Account for Worker Add</b>					
2	Area	Employee Reference		Contingent Worker Reference		Workday Account for Work
3	Restrictions	Optional	Optional	Optional	Optional	Required
4	Format	Text	Text	Text	Text	Text
5	Fields	System ID	ID	System ID	ID	User Name*
6		WD-EMPLID	21226			djackson
7		WD-EMPLID	21225			jwilson

35 - Spreadsheet template for Add Workday Account inbound EIB

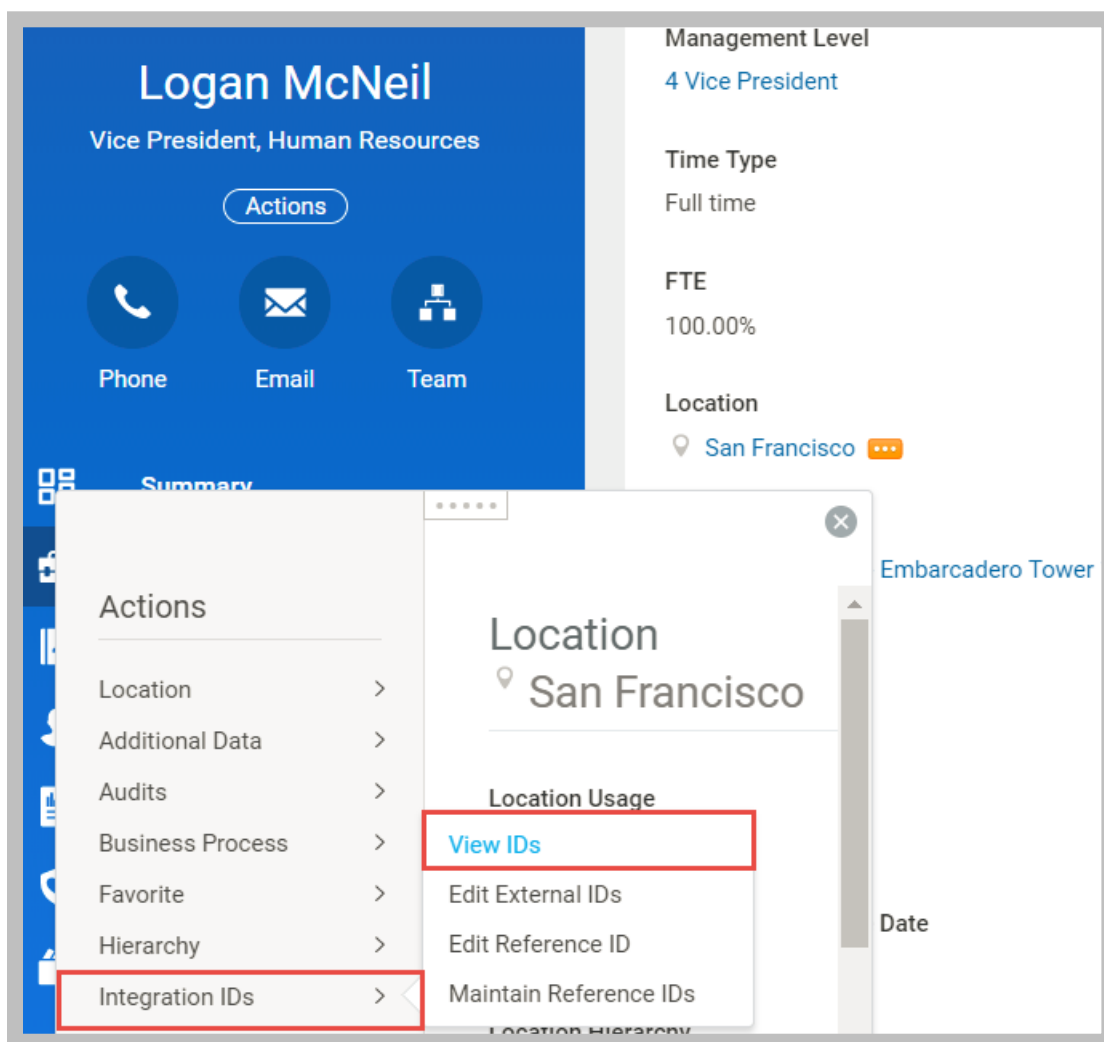
## FINDING INTEGRATION IDS

Methods to locate the IDs needed for integrations consist of using related actions from objects in the user interface, and running the Integration ID or View Reference ID reports.

### Workday user interface

One of the most effective ways to become familiar with the Workday object model and Integration IDs is through the Workday UI.

To view IDs for a specific instance of a business object, click **Related Actions > Integration IDs > View IDs**.



36 - Integration IDs > View IDs related action

Integration IDs		San Francisco	Actions
Workday ID	d13a7c46a06443c4a33c09afbfd72c73		
Reference IDs	1 item		
Type	ID		
Location_ID	San_Francisco_site		
External IDs	2 items		
System	ID Value		
ADP PayForce	SF1		
New Organization Hierarchy Load (EIB)	San_Francisco_site		

37 - Integration IDs for a Location instance

### Integration IDs report

This delivered report includes IDs for tenanted and non-tenanted data. Since Reference IDs are optional in Workday, and not all business objects support them, the Integration IDs report could contain instances of data that do not have reference ID values.

To find all of the Integration IDs associated with a business object in Workday, search for the **Integration IDs** report and enter one or more Business Object types at the prompt.

### Integration IDs

Business Object \*

- X Language Proficiency
- X Language Ability Type
- X Language Ability
- X Language

38 - Integration IDs report prompt with multiple business objects



← Integration IDs				
744 Items				
Business Object	Instance	Workday ID	Reference IDs	
			Type	ID
Language Proficiency	1 - Beginner	bd89ce7337104d64a4b7141d22a4b8d7	Language_Proficiency_ID	233.1
Language Proficiency	2 - Classroom Study	283bb7753241410a87f50871a2635ca0	Language_Proficiency_ID	233.2
Language Proficiency	3 - Intermediate	ed6b319958e24a1e869b46f0ce2fd7af	Language_Proficiency_ID	233.3
Language Proficiency	4 - Advanced	d76547fac38d479282925b73b672dad0	Language_Proficiency_ID	233.4
Language Proficiency	5 - Fluent	82412376d1cb4ad0a568245bee9631fa	Language_Proficiency_ID	233.5
Language	English	deff4eab62f646b8904e180693dce877	Language_ID	234.1
Language	Latin	953c429ff8724c0ba4827a553a762384	Language_ID	234.2

### 39 - Integration IDs report displaying WIDs and Reference IDs



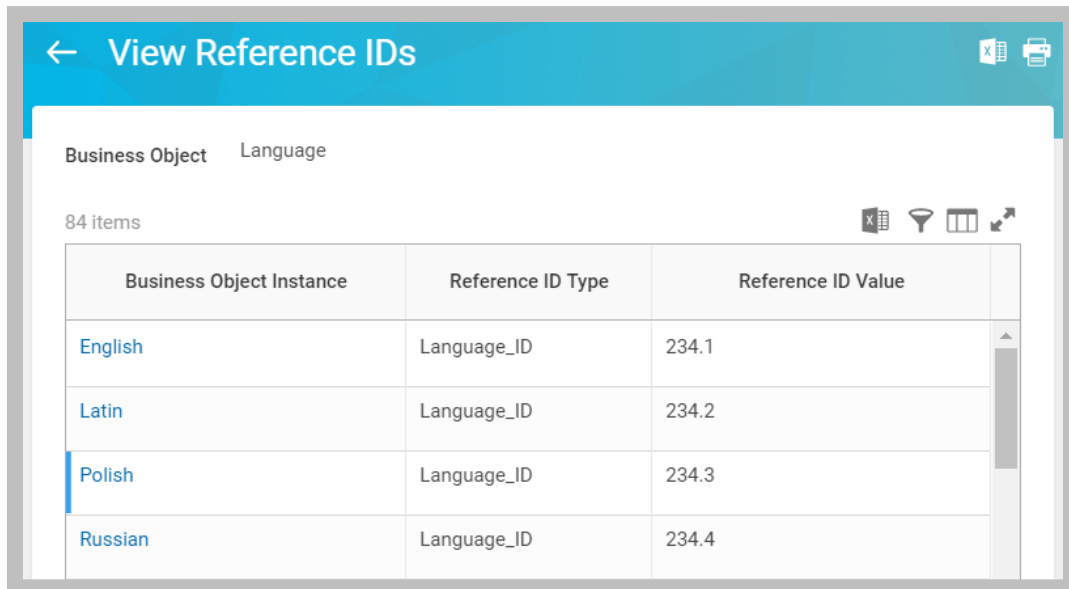
**Tip:** Several worker-related business events prompt the user to enter a reason (e.g., hire, change job, termination). These event codes are classified into categories and subcategories. Categories make it easier to look up an event reason when entering data; the subcategory value is actually stored in the field. Use the Integration IDs report to generate a list of the subcategory reference IDs that you might need for an integration.

Business Object	Instance	Workday ID	Reference IDs	
			Type	ID
Category	Information	7125a70bd1f0f6	gory_ID	
General Event Category	Manage Medicare Information > Add New Medicare Information	2e24fa108aea10d5fd71262fc18e10f9	General_Event_Category_ID	GENERAL_EVENT_CATEGORY-16-65
General Event Category	Create Position > Acquisition	2eb21d19e0a110106777b47313090362	General_Event_Category_ID	GENERAL_EVENT_CATEGORY-16-66
General Event Category	Create Job Requisition > Acquisition	2eb21d19e0a1101067a72403af7f038d	General_Event_Category_ID	GENERAL_EVENT_CATEGORY-16-67
General Event Category	Hire Employee > Acquisition	2eb21d19e0a1101067d6d4ef4dab03ca	General_Event_Category_ID	GENERAL_EVENT_CATEGORY-16-68
General Event Subcategory	Additional Headcount Request > Headcount Request > New Project	b1f726390965404f819ccda1fe078b85	Event_Classification_Subcategory_ID	Additional_Headcount_Request_Headcount_Request_New_Project
			General_Event_Subcategory_ID	Additional_Headcount_Request_Headcount_Request_New_Project
General Event Subcategory	Additional Headcount Request > Headcount Request > Understaffed	987832b94d2841ba9519aaaa7a037095	Event_Classification_Subcategory_ID	Additional_Headcount_Request_Headcount_Request_Understaffed
			General_Event_Subcategory_ID	Additional_Headcount_Request_Headcount_Request_Understaffed

### 40 - Integration IDs report for General Event Categories and Subcategories

### View Reference ID report

This delivered report shows all reference IDs for a single business object. It will display reference IDs specific to your tenanted data only.



View Reference IDs		
Business Object Language		
84 items		
Business Object Instance	Reference ID Type	Reference ID Value
English	Language_ID	234.1
Latin	Language_ID	234.2
Polish	Language_ID	234.3
Russian	Language_ID	234.4

41 - View Reference IDs report displaying Reference IDs for a business object



## ACTIVITY 2.3 – FIND INTEGRATION IDS

**Business Case:** In order to become more familiar with Workday Integration IDs, you will find integration IDs for various business objects using different methods.

- Use related actions to find integration IDs through the UI.
- Run reports to review integration IDs for multiple instances of objects.

### TASK #1: USE THE UI TO VIEW REFERENCE IDS

1. Sign in as Logan McNeil (*lmcneil*).
2. Click Logan McNeil's profile picture and click **View Profile** to access her **Job Details** (visible from the Summary or Job page).
3. Use the related actions of the following objects to find the listed integration IDs:

Object	Integration ID Type	Value
<b>Organization</b>	Organization_Reference_ID	
<b>Position</b>	WID	
<b>Time Type</b>	Position_Time_Type_ID	
<b>Location</b>	Location_ID	

### TASK #2: USE THE INTEGRATION IDS REPORT TO VIEW INTEGRATION IDS

1. Search for and select the *Integration IDs* report to run it.
2. Run the report for the following Business Objects to find the listed integration IDs:

Business Object	Instance	Integration ID Type	Value
<b>Language</b>	French	WID	
<b>Language</b>	Russian	Language_ID	
<b>Country</b>	United States	WID	
<b>Country</b>	Canada	ISO_3166-1_Alpha-2_Code	
<b>Employee Type</b>	Regular	WID	

Business Object	Instance	Integration ID Type	Value
<b>Supervisory Organization</b>	IT HelpDesk Department	WID	
<b>Supervisory Organization</b>	Field Sales – North American Group	Organization_Reference_ID	
<b>General Event Subcategory</b>	Request Compensation Change > Adjustment > Performance	General_Event_Subcategory_ID	

## TASK #3: USE THE VIEW REFERENCE IDS REPORT TO VIEW REFERENCE IDS

1. Search for and select the *View Reference IDs* report to run it.
2. Run the report for the following Business Objects to find their Reference IDs:

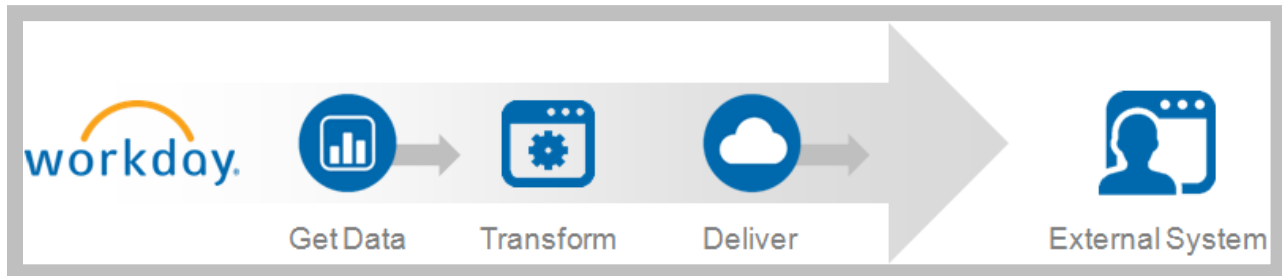
Business Object	Instance	Reference ID Type	Value
<b>Absence Plan</b>	Floating Holiday Plan		
<b>Compensation Plan</b>	General Salary Plan		



## SIMPLE INTEGRATIONS – EIB AND RAAS

### ENTERPRISE INTERFACE BUILDER

The Enterprise Interface Builder (EIB) tool provides an easy-to-use graphical and guided interface to define inbound and outbound integrations with little to no programming. Both IT users and business experts can leverage EIB to address simple integration needs.



#### 42 - Enterprise Interface Builder (EIB) Outbound Design Pattern

Because of its ease-of-use, EIB makes up 40-50% of all customer integrations. Of those, up to 90% are outbound and use RaaS as the data source. Inbound EIB can make use of spreadsheet templates, allowing bulk imports of Excel-entered data into a Workday web service without any additional coding.

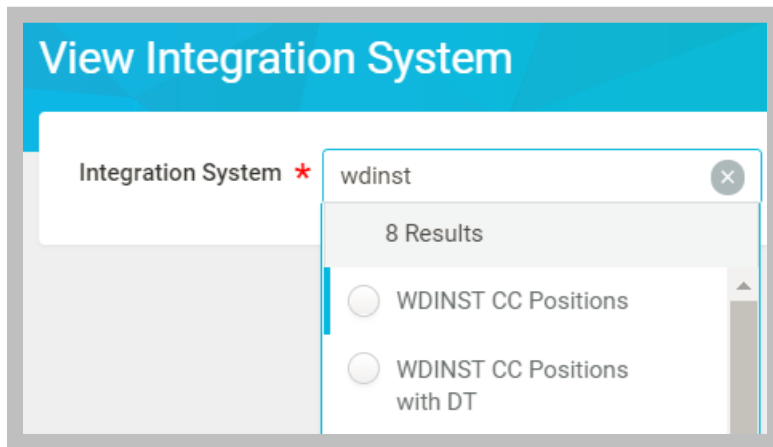
EIB is quite limited, in that each integration only supports a single data source, one transformation (if needed), and one endpoint. Furthermore, EIB does not support any conditional logic, error handling, or configurable integration maps or attributes. As such, use EIB to solve integration problems of low data volume and complexity.



**Additional Training:** The Simple Integrations course (3-day VILT) covers multiple inbound and outbound EIB use cases, including RaaS, WWS, custom transformation, and spreadsheet templates.

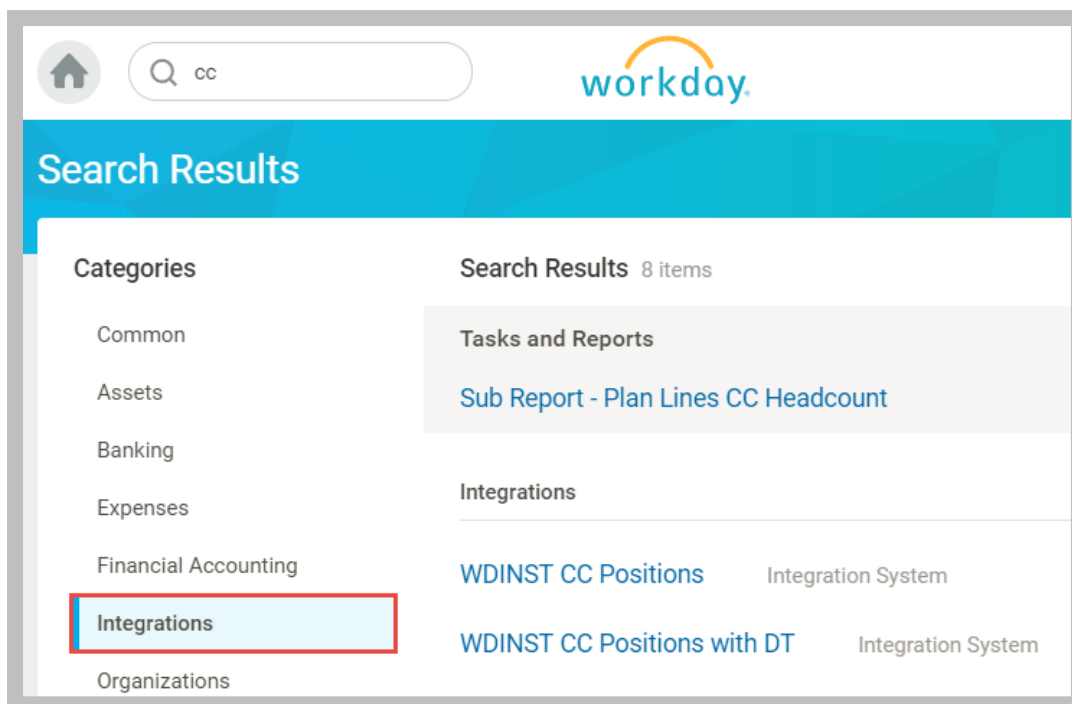
## VIEWING AN INTEGRATION SYSTEM

To search for an existing integration system, you can run the “View Integration System” report.



43 - Locating Integration Systems using the View Integration System report

You can also search for the name of the integration system directly. When searching, the default scope is “Common”. Since an integration will not be displayed using the Common scope, you will need to change it to “Integrations” or “All of Workday”.



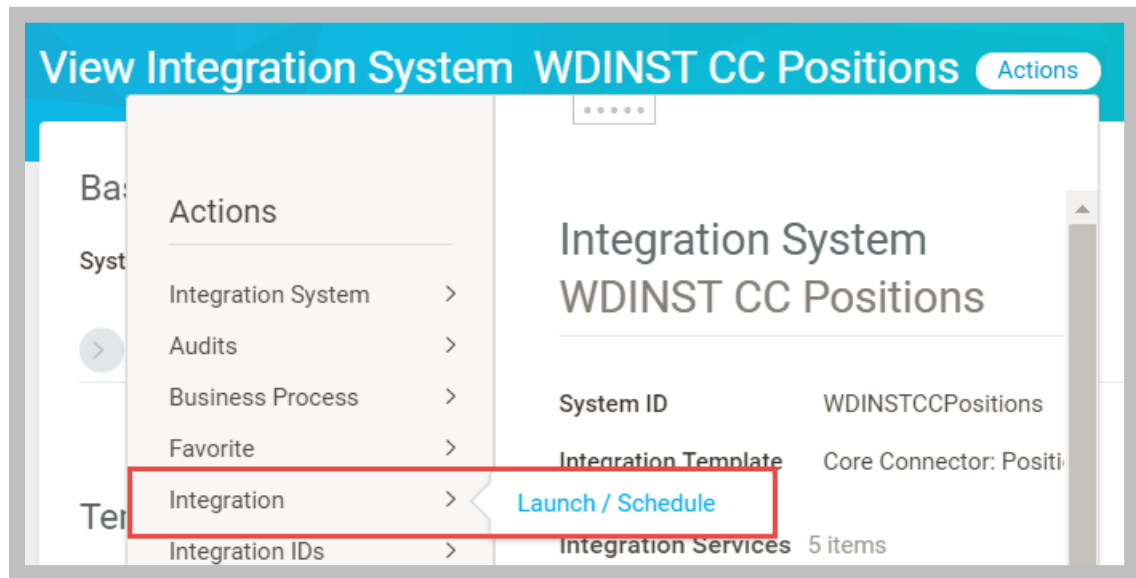
44 - Locating Integration Systems by search and category



**Tip:** Use the *intsys:* prefix to force a search on integration systems by name.

## LAUNCHING AN INTEGRATION SYSTEM

From an integration system's Related Actions, select **Integration > Launch/Schedule**.



### 45 - Launching an Integration System by related action

Launch / Schedule options include restricting processing by Organization and choosing a Run Frequency.

In addition to launching an integration to run immediately, you can schedule integrations to run once in the future or on a recurring basis. You can also configure a scheduled process to be dependent on the completion status of another process, allowing for a dependent chain of integration and other events (e.g. reports).

### Launch / Schedule Integration

Integration \*

X

WDINST CC Positions

Organization

Run Frequency \*

X

Run Now

search

☒ Run Now

☐ Run Once in the Future

☐ Minute Recurrence

☐ Hourly Recurrence

☐ Daily Recurrence

☐ Weekly Recurrence

☐ Monthly Recurrence

☐ Dependent

#### 46 - Launch / Schedule Integration task with Run Frequency options

You must populate any required launch parameters, which could include prompts from a custom report data source.

Field	Description	Value Type	Value
Position(s)	Extracts only the specified Position(s).	<input type="text" value="Specify Value"/>	<input type="text"/>
Supervisory Organization(s)	Extracts Positions for only the specified Supervisory Organization(s).	<input type="text" value="Specify Value"/>	<input type="text"/>
Location(s)	Extracts Positions for only the specified Location(s).	<input type="text" value="Specify Value"/>	<input type="text"/>
Full Extract	Extracts Positions as of the As Of Entry Moment and Effective Date, regardless of whether or not they have changed.	<input type="text" value="Specify Value"/>	<input type="checkbox"/>

#### 47 - Entering Integration Criteria



## VIEW BACKGROUND PROCESS EVENT

When an integration is set to Run Now, the View Background Process page is displayed immediately. Click the **Refresh** button until you see the Status change. If there are no errors, the Status will change to **Completed** once the integration event has finished processing.

The screenshot shows the 'View Background Process' page for the integration 'WDINST CC Positions'. The page has a blue header with the title and an 'Actions' button. Below the header, there is a table-like structure showing process details:

Process	WDINST CC Positions
Request Name	WDINST CC Positions
Status	Processing
Percent Complete	<div><div></div></div> 75.00%
Current Processing Time (hour:min:sec)	00:00:10

Below the table is a 'Refresh' button, which is highlighted with a red rectangle in the image. At the bottom of the page, there is a tabbed interface with four tabs: 'Integration Details' (selected), 'Process Info', 'Process History', and 'Output Files (0)'. Under the 'Integration Details' tab, the 'Integration Process' section shows:

- Parent Event: Integration: WDINST CC Positions - 04/05/2018 13:48:53.435
- Integration Event: WDINST CC Positions - 04/05/2018 13:48:53.435 (Processing)

48 - View Background Process Page for an Integration Event

## INTEGRATION EVENT

Launching an integration system creates a new integration event. The integration background process performs any required transformations and outputs the appropriate files or web service messages.

You can access an event via the Process Monitor, however, the **Integration Events** report was specifically designed to monitor and review the results of integrations.

## Integration Events

Integration Systems

Integration Event Status

by Person

Sent After

MM / DD / YYYY

-- : -- : -- AM

Sent Before

MM / DD / YYYY

-- : -- : -- AM

49 - Integration Events report search criteria



**Tip:** Since each launch of an integration produces a new event, you should enter some criteria, such as a Sent After date and time, to limit the number of results.

← Integration Events <span>Actions</span>				
Sent After 04/05/2018 12:00:00 AM				
3 items				
Workday Integration Cloud Platform (ESB) Process IDs	Event Type	Integration Event	Integration System	by Person
<a href="#">b33df2f57ede017b3d4eda791100ae00</a>	Integration Event	<a href="#">WDINST DT Positions XTT Fixed - 04/05/2018 13:52:32.651 (Processing)</a>	<a href="#">WDINST DT Positions XTT Fixed</a>	<a href="#">Logan McNeil</a>
<a href="#">b33df2f57ede01618336f07711009800</a>	Integration Event	<a href="#">WDINST CC Positions with DT - 04/05/2018 13:52:24.237 (Completed)</a>	<a href="#">WDINST CC Positions with DT</a>	<a href="#">Logan McNeil</a>
<a href="#">b33df2f57ede0192955ae04611007c00</a>	Integration Event	<a href="#">WDINST CC Positions - 04/05/2018 13:48:53.435 (Completed)</a>	<a href="#">WDINST CC Positions</a>	<a href="#">Logan McNeil</a>

50 - Integration Events report results

Clicking a link in the **Integration Event** column opens the View Background Process page for that launch. Each link in the **Integration System** column is a reference to the integration system itself, providing easy access to its View Integration System page and related actions.



## ACTIVITY 2.4 – CREATE AND LAUNCH EIB

**Business Case:** You will create your first integration using EIB to invoke your web service-enabled report.

- The EIB will leverage the WICT RW Positions custom report.
- This first integration system will not require transformation nor deliver the output externally.



**Shortcut:** Use the pre-built integration **WDINST EIB Positions** and skip to Task #2. (Note: The output for this integration is JSON instead of XML.)

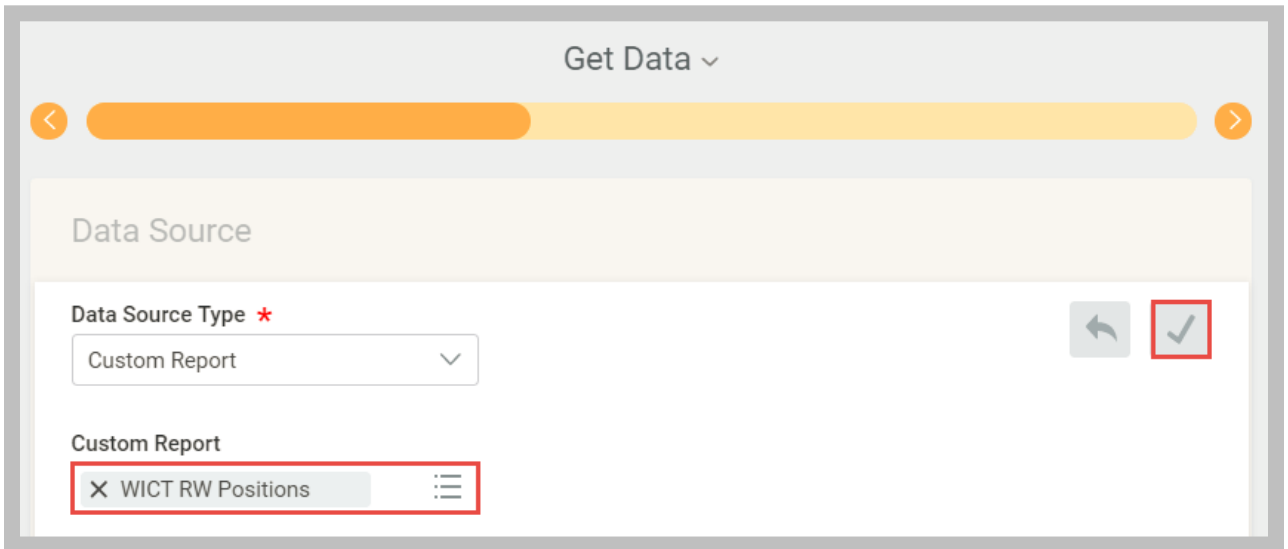
### TASK #1: CREATE EIB

1. Sign in as Logan McNeil (*lmcneil*).
2. Search for and select the **Create EIB** task.
  - A. Enter a **Name** of *WICT EIB Positions*.
  - B. Select the **Outbound** option.
  - C. Click the **OK** button.

51 - Create EIB task

3. Click **Next** to accept the default General Settings.

4. In the Data Source section, click the **Edit** button 
  - A. In the Custom Report field, select the **WICT RW Positions** report.
  - B. Click the **Save** button .
  - C. Click **Next** to complete the Get Data step.



Get Data ▾

<  >

Data Source

Data Source Type \*  
Custom Report ▾

Custom Report

✕ WICT RW Positions ⋮

⬅️ ✓

### 52 - EIB Get Data step

5. Click **Next** to skip the Transform step.
6. In the Deliver section, click the **Edit** button.
  - A. Enter a **File Name** of *positions.xml*.
  - B. Click the **Save** button.
  - C. Click **Next** to complete the Deliver step.

Deliver ▾

<

>

Deliver

Delivery Method \*

Workday Attachment ▾

↩

✓

Delivery Details

(Workday Attachment)

File Name \*

positions.xml

Document Retention Policy (in Days) \*

1

53 - EIB Deliver step

- 7. Review the Summary and click **OK**.

## View Integration System WICT EIB Positions Actions

### Basic Details

System Name WICT EIB Positions

> System ID

Configuration

Security

### Get Data

Name Custom Report

Data Source [WICT RW Positions](#)

> Details

Deliver 1 item




Delivery	File Name	Document Retention Policy
Delivery Method Workday Attachment	positions.xml	1

54 - Viewing the EIB integration system

## TASK #2: LAUNCH EIB

1. Search for and select the **WICT EIB Positions** integration system.
2. From its **Related Actions**, select **Integration > Launch/Schedule**.
3. Verify the **Run Frequency** is **Run Now** and click **OK**.
4. Enter the following integration criteria:

<i>Field Name</i>	<i>Entry Value</i>
Supervisory Organization	IT HelpDesk Department
Starting Availability Date	01/01/2000
Ending Hire Date	[Today's Date]

Field	Value Type	Value
 Supervisory Organization	<input type="text" value="Specify Value"/>	<input type="text" value="IT HelpDesk Department"/>
 Starting Availability Date	<input type="text" value="Specify Value"/>	<input type="text" value="01/01/2000"/>
 Ending Availability Date	<input type="text" value="Specify Value"/>	<input type="text" value="04/05/2018"/>

## 55 - EIB Integration Criteria

- Click **OK**.
- On the View Background Process page, click **Refresh** until the Status is **Completed**.

## View Background Process WICT EIB Positions Actions

Process	WICT EIB Positions
Request Name	WICT EIB Positions
Status	Completed
Current Processing Time (hour:min:sec)	00:00:04

Integration Details
Process Info
Process History
Output Files (1)

Enterprise Interface Event [WICT EIB Positions - 04/05/2018 14:00:42.807 \(Completed\)](#)

## 56 - Background Process details for Completed EIB integration event

- On the **Output Files** tab, select the **positions.xml** file to view it.

```
<?xml version="1.0" encoding="UTF-8"?>
<wd:Report_Data xmlns:wd="urn:com.workday.report/WICT_RW_Positions">
  - <wd:Report_Entry>
    <wd:Position>P-00030</wd:Position>
    <wd>Title>P-00030 Senior IT Analyst (Unfilled)-P-00030</wd>Title>
    <wd:Pay>0</wd:Pay>
    <wd:Available>1</wd:Available>
    <wd:AvailabilityDt>2018-02-07-08:00</wd:AvailabilityDt>
    - <wd:Restrictions-Location wd:Descriptor="San Francisco">
      <wd:ID wd:type="WID">d13a7c46a06443c4a33c09afbd72c73</wd:ID>
      <wd:ID wd:type="Location_ID">San_Francisco_site</wd:ID>
    </wd:Restrictions-Location>
    - <wd:Restrictions-Type wd:Descriptor="Employee">
      <wd:ID wd:type="WID">d588c41a446c11de98360015c5e6daf6</wd:ID>
      <wd:ID wd:type="Worker_Type_ID">EE</wd:ID>
    </wd:Restrictions-Type>
  </wd:Report_Entry>
  - <wd:Report_Entry>
    <wd:Position>P-00031</wd:Position>
    <wd>Title>P-00031 Senior IT Analyst (Unfilled)-P-00031</wd>Title>
    <wd:Pay>0</wd:Pay>
    <wd:Available>1</wd:Available>
    <wd:AvailabilityDt>2018-02-07-08:00</wd:AvailabilityDt>
    - <wd:Restrictions-Location wd:Descriptor="San Francisco">
      <wd:ID wd:type="WID">d13a7c46a06443c4a33c09afbd72c73</wd:ID>
      <wd:ID wd:type="Location_ID">San_Francisco_site</wd:ID>
    </wd:Restrictions-Location>
    - <wd:Restrictions-Type wd:Descriptor="Employee">
      <wd:ID wd:type="WID">d588c41a446c11de98360015c5e6daf6</wd:ID>
      <wd:ID wd:type="Worker_Type_ID">EE</wd:ID>
    </wd:Restrictions-Type>
  </wd:Report_Entry>
</wd:Report_Data>
```

57 - Outbound EIB RaaS output

## CHALLENGE TASK: OUTPUT JSON INSTEAD OF WORKDAY XML

- Edit the EIB Data Source to select an **Alternate Output Format** of **JSON**.
- Change the **File Name** in the Deliver section to *positions.txt* to view it in a text editor.

Hint: Use the EIB's related action **Enterprise Interface > Edit** to return to the Summary.





## CHAPTER 3 – WORKDAY WEB SERVICES

### OVERVIEW

Workday's public web services (WWS) offer an open, standards-based API for programmatic access to our on-demand business management services. Integration Cloud Connect is a collection of templates that allows customers to take advantage of the power of WWS through configuration rather than coding.

### OBJECTIVES

By the end of this chapter, you will be able to:

- Locate documentation on Workday's public web services.
- Submit web service requests to Workday using a third-party application.
- Explain Workday's web service support policy.
- Create a prebuilt integration using a Core Connector template.

### PUBLIC WEB SERVICES – SOAP API

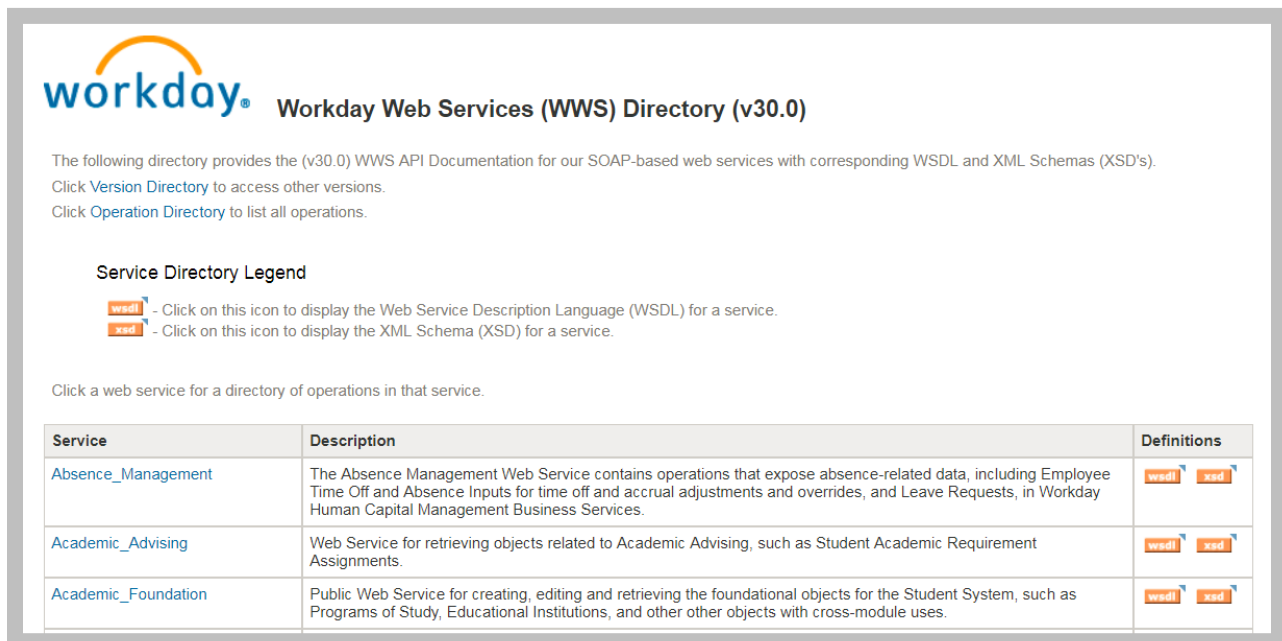
Even without using Workday's delivered and supported integration templates, you can incorporate Workday's public web service (WWS) operations into your own applications.

#### API DOCUMENTATION

You might find it helpful to familiarize yourself with the details of the available WWS operations so that you understand their elements and validations: <https://community.workday.com/api>.

#### Workday Web Services (WWS) API Documentation



The Workday Community contains the latest documentation for our SOAP- and REST-based web services, with corresponding Web Service Description Language (WSDL) and XML Schema (XSD) files.









**workday® Workday Web Services (WWS) Directory (v30.0)**

The following directory provides the (v30.0) WWS API Documentation for our SOAP-based web services with corresponding WSDL and XML Schemas (XSD's).  
Click [Version Directory](#) to access other versions.  
Click [Operation Directory](#) to list all operations.

**Service Directory Legend**

 - Click on this icon to display the Web Service Description Language (WSDL) for a service.  
 - Click on this icon to display the XML Schema (XSD) for a service.

Click a web service for a directory of operations in that service.

Service	Description	Definitions
<a href="#">Absence_Management</a>	The Absence Management Web Service contains operations that expose absence-related data, including Employee Time Off and Absence Inputs for time off and accrual adjustments and overrides, and Leave Requests, in Workday Human Capital Management Business Services.	 
<a href="#">Academic_Advising</a>	Web Service for retrieving objects related to Academic Advising, such as Student Academic Requirement Assignments.	 
<a href="#">Academic_Foundation</a>	Public Web Service for creating, editing and retrieving the foundational objects for the Student System, such as Programs of Study, Educational Institutions, and other other objects with cross-module uses.	 

#### 58 - Workday Web Services (WWS) Directory

Select a web service to view all of its available operations.

Service Directory > v30.0 > Staffing

### Web Service: Staffing (v30.0)

The Staffing Web Service operations expose Workday Human Capital Management Business Services and data. These services pertain to staffing transactions for both employees and contingent workers, such as bringing employees and contingent workers on board.

**Version**

- v30.0 [wsdl](#) [xsd](#)

**Operations**

Operation	Description
<a href="#">Add_Additional_Job</a>	Adds an additional job for an existing employee. Uses the Add Additional Job business process.
<a href="#">Add_Retiree_Status</a>	Changes the status of a previously terminated worker to retiree. Uses the Add Retiree Status business process.
<a href="#">Assign_Organization</a>	Assigns company, cost center, region, fund, grant, business unit, program, and custom organizations configured for staffing usage to a staffing position. Uses the Change Organization Assignments for Worker business process.
<a href="#">Assign_Organization_Roles</a> <b>DEPRECATED</b>	DEPRECATED: This web service operation is deprecated. Please use the Assign_Roles web service operation instead. If you do use this web service operation, note that all new and existing assignees must be specified as role assignees. Any existing role assignees that are not included in the set of role assignees will be removed. Later-dated role assignments will not be updated with new or removed assignees.

#### 59 - Staffing web service operations

By selecting a specific operation, you can learn about its requirements, including the request and response messages, and their underlying elements. You can even download sample XML requests and responses.

Service Directory > v30.0 > Staffing > [Get\\_Positions](#)

### Operation: [Get\\_Positions](#)

Returns information for position management positions. If a position is filled, identifies the worker filling the position.

@ - A parameter name with this symbol denotes an XML attribute within the document instead of an XML element.

**Contents**

- [Web Service](#)
- [Request](#)
- [Response](#)
- [Elements](#)

**Web Service**

- [Staffing \(v30.0\)](#) [wsdl](#) [xsd](#)

**Request**

- Element: [Get\\_Positions\\_Request](#) [xml](#)

#### 60 - Get Positions service operation details

## WEB SERVICES DESCRIPTION LANGUAGE

Web Services Description Language (WSDL) is an XML-based interface definition language that describes the functionality offered by a web service. Workday provides WSDL documents for all publicly available services.

### WSDL TERMINOLOGY

Term	Definition
<b>Service</b>	The available service and its Port
<b>Port</b>	The address or connection point to a web service
<b>Binding</b>	The binding style and transport for one or more Port Types
<b>Port Type (Interface)</b>	The input and output messages needed to perform an operation
<b>Operation</b>	A function or method being called via the service
<b>Types</b>	The valid data elements and structures for web service messaging

### VIEWING THE WSDL TO DETERMINE ENDPOINT

Community documentation is not sufficient to integrate with a specific Workday tenant. You need to determine the actual endpoint for the WWS that you wish to access.

For each delivered web service, you can view the WSDL specific to your tenant by running the **Public Web Services** report. (You can also retrieve the WSDL to access custom objects you have built in your tenant.)

**Public Web Services** Actions

43 items

Web Service	Documentation
Absence Management (Public)	The Absence Management Web Service contains operations that expose Time Off and Absence Inputs for time off and accrual adjustments and Human Capital Management Business Services.
Academic Advising (Public)	Web Service for retrieving objects related to Academic Advising, such as Assignments.
Academic Foundation (Public)	..., editing and retrieving the foundational Institutions, and other other objects with
Admissions (Public)	g and retrieving objects related to Admis
Adoption (Public)	
Benefits Administration (Public)	itions that expo

**Actions**

- Web Service > View Custom WSDL
- Integration IDs > View WSDL
- Security > ted data.

61 - Public Web Services Report with View WSDL related action

From the desired Web Service's Related Actions, click **Web Service > View WSDL**. Scroll to the bottom of the WSDL and you will find the service endpoint in the location attribute within the `<soapbind:address>` element:

```

</wsdl:fault>
</wsdl:operation>
</wsdl:binding>
▼<wsdl:service name="Academic_FoundationService">
  ▼<wsdl:port name="Academic_Foundation" binding="wd-wsdl:Academic_FoundationBinding">
    <soapbind:address location="https://[redacted]
    host01.workdayeducation.com/ccx/service/crossappgms01/Academic_Foundation/v31.0"/>
  </wsdl:port>
</wsdl:service>
</wsdl:definitions>

```

62 - WSDL SOAP binding address location

The API at this URL can accept SOAP-based web service requests from external applications into your Workday tenant.



**Reminder:** You do not generally need to download a WSDL if you use Workday's delivered technologies to integrate with external systems. Workday Studio, for example, includes a Schema Explorer that allows you to test and develop for WWS without having to run the Public Web Services report in your tenant.

## WORKDAY XML: WORKDAY PUBLIC WEB SERVICES

The XML response from a Workday Web Service (WWS) request is specific to each service operation and often more complex than the output from a RaaS request.

```
<env:Envelope xmlns:env="http://schemas.xmlsoap.org/soap/envelope/">
  <env:Body>
    <wd:Get_Positions_Response wd:version="v31.0" xmlns:wd="urn:com.workday/bsvc">
      <wd:Request_Criteria>
        <wd:Supervisory_Organization_Reference wd:Descriptor="IT HelpDesk Department">
          <wd:ID wd:type="WID">af6d7f10878340d186121b9d88ae1b5d</wd:ID>
          <wd:ID wd:type="Organization_Reference_ID">IT_HelpDesk_supervisory</wd:ID>
        </wd:Supervisory_Organization_Reference>
      </wd:Request_Criteria>
      <wd:Response_Filter>
        <wd:Page>1</wd:Page>
        <wd:Count>5</wd:Count>
      </wd:Response_Filter>
      <wd:Response_Group>
        <wd:Include_Position_Definition_Data>1</wd:Include_Position_Definition_Data>
        <wd:Include_Qualifications>1</wd:Include_Qualifications>
      </wd:Response_Group>
      <wd:Response_Results>
        <wd:Total_Results>8</wd:Total_Results>
        <wd:Total_Pages>2</wd:Total_Pages>
        <wd:Page_Results>5</wd:Page_Results>
        <wd:Page>1</wd:Page>
      </wd:Response_Results>
      <wd:Response_Data>
        <wd:Position>
          <wd:Position_Data>
```

### 63 - SOAP response example with namespaces highlighted

SOAP acts as a wrapper around application-specific request and response data. A WWS request might include elements nested within both the SOAP Header and Body sections.

XML namespaces provide a method to avoid element name conflicts between SOAP and Workday-specific XML tags. The namespace for Workday WWS is typically “urn:com.workday/bsvc”.

Community provides full details of the SOAP XML elements for both the request and response messages of all publicly available operations.

## WORKDAY COMMON HEADER

The only SOAP Header element that Workday currently uses is a flag that sets whether or not you want Descriptor attributes in object data output.

```

1 <soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:bsvc="urn:com.workday/bsvc">
2   <soapenv:Header>
3     <bsvc:Workday_Common_Header>
4       <!--Optional:-->
5       <bsvc:Include_Reference_Descriptors_In_Response>true</bsvc:Include_Reference_Descriptors_In_Response>
6     </bsvc:Workday_Common_Header>
7   </soapenv:Header>
8   <soapenv:Body>
122 </soapenv:Envelope>

```

### 64 - Workday Common Header element of SOAP Header



**Note:** Workday suppresses object descriptors if you omit Include\_Reference\_Descriptors\_In\_Response.

## GET REQUEST

The scope of data returned from a “Get”-type WWS operation is determined by filters, criteria, and other parameters entered in the SOAP request.

Request Element: Get_Positions_Request										
Request element to get position management positions and their associated data.										
Parameter name	Type/Value	Cardinality	Description	Validations						
@version	string	[0..1]	Web Service version							
Request_References	Position_Request_References	[0..1]	Utilize the Request References element to retrieve a specific instance(s) of Position and its associated data.	<table><tr><th>Validation</th><th>Description</th></tr><tr><td>Position [position] is not a position management position. This web service only returns position management positions.</td><td></td></tr><tr><td>The Position has a future dated request [date].</td><td></td></tr></table>	Validation	Description	Position [position] is not a position management position. This web service only returns position management positions.		The Position has a future dated request [date].	
Validation	Description									
Position [position] is not a position management position. This web service only returns position management positions.										
The Position has a future dated request [date].										
Request_Criteria	Position_Request_Criteria	[0..1]	Utilize the Request Criteria element to search the transaction log for specific instance(s) of a Position.							
Response_Filter	Response_Filter	[0..1]	The "Response_Filter" element contains common WWS information that allows you control the response data that you will be provided including As_Of_Date, As_Of_Entry_Moment, and Page attributes.	<table><tr><th>Validation</th><th>Description</th></tr><tr><td>Page Number cannot be zero.</td><td>Page number cannot be zero.</td></tr></table>	Validation	Description	Page Number cannot be zero.	Page number cannot be zero.		
Validation	Description									
Page Number cannot be zero.	Page number cannot be zero.									
Response_Group	Position_Response_Group	[0..1]	The response group allows for the response data to be tailored to only included elements that the user is looking for. If no response group is provided in the request the only the following elements will be returned: Reference and Position Definition Data							

### 65 - API Documentation of a Get Request



**Important:** Within the body of the SOAP request, the specific Workday API Version is included as an attribute on the root node of the service operation call. If omitted, the most current, supported API version for the operation will process the request.

## REQUEST REFERENCES

Use the <Request\_References> section when there are specific instances of an object you want to retrieve.

<b>Position_Request_References</b> part of: <a href="#">Get_Positions_Request</a> , <a href="#">Get_Positions_Response</a> Utilize the Request References element to retrieve a specific instance(s) of Position and its associated data.			
Parameter name	Type/Value	Cardinality	Description
@Skip_Non_Existing_Instances	boolean	[1..1]	
Positions_Reference	<a href="#">Position_JSONObject</a>	[1..*]	An unique identifier for a Position requested.
<b>Validation</b> Position [position] is not a position management position. This web service only returns position management positions. The Position has a future dated request [date].			

### 66 - API Documentation of the Request References section

## REQUEST CRITERIA

The <Request\_Criteria> element varies by service operation and allows you to limit the scope of data Workday will process.

<b>Position_Request_Criteria</b> part of: <a href="#">Get_Positions_Request</a> , <a href="#">Get_Positions_Response</a> Utilize the Request Criteria element to search the transaction log for specific instance(s) of a Position.			
Parameter name	Type/Value	Cardinality	Description
Transaction_Log_Criteria_Data	<a href="#">Transaction_Log_Criteria</a>	[0..*]	Searches the transaction log for business processes and event lites to find specific events that occurred during a period of time.
Supervisory_Organization_Reference	<a href="#">Supervisory_OrganizationObject</a>	[0..*]	A unique identifier for the organization.
Job_Requisition_Reference	<a href="#">Job_RequisitionObject</a>	[0..*]	A unique Identifier for a Job Requisition for a Position. Identifies all positions connected to the Job Requisition.
Exclude_Filled_Positions	boolean	[0..1]	Indicates if filled positions are to be returned in the response

### 67 - API Documentation of the Request Criteria section



## RESPONSE\_FILTER

The <Response\_Filter> contains generic parameters that let you filter the data returned in the response. You can filter returned data by effective date, entry date-time, and page attributes.

### Response\_Filter

part of: [Get\\_Positions\\_Request](#), [Get\\_Positions\\_Response](#)

Parameters that let you filter the data returned in the response. You can filter returned data by dates and page attributes.

Parameter name	Type/Value	Cardinality	Description
As_Of_Effective_Date	date	[0..1]	Indicates the date when application data, such as benefits and compensation, are deemed effective in the Workday system. (Also referred to as the "Effective Moment".) If not specified, this date defaults to TODAY.
As_Of_Entry_DateTime	dateTime	[0..1]	Indicates the date and time that data was entered into the system. (This field is also referred to as the "Entry Moment".) If not specified, defaults to the CURRENT DATE/TIME.
Page	decimal (12, 0) >0	[0..1]	Indicates the page of data to return in the response, and defaults to the first page (Page = 1). For response: contain more than one page of data, use this parameter to retrieve the additional pages of data. For example set Page = 2 to retrieve the second page of data. Note: If you set the page parameter, you must also specify "As_Of_Entry_Date" to ensure that the result set remains the same between your requests.
Count	decimal (3, 0) >0	[0..1]	Sets the number of objects to return within each response page (Min = 1, Max = 999, Default = 100 if not set). Any values you set must be between 1-999.

## 68 - API Documentation of the Response Filter section

## RESPONSE\_GROUP

The <Response\_Group> contains a set of Boolean flags, allowing you to limit the types of data included for each record returned. If the request does not set any values for the response group, then the response returns a default set of elements.

### Position\_Response\_Group

part of: [Get\\_Positions\\_Request](#), [Get\\_Positions\\_Response](#)

The response group allows for the response data to be tailored to only included elements that the user is looking for. If no response group is provided in the request the following elements will be returned: Reference and Position Definition Data

Parameter name	Type/Value	Cardinality	Description
Include_Reference	boolean	[0..1]	Indicates if the Reference for the Position is included in the response.
Include_Position_Definition_Data	boolean	[0..1]	Indicates if the details of the Position is included in the response.
Include_Position_Restrictions_Data	boolean	[0..1]	Indicates if the Hiring Restrictions is included in the response.
Include_Default_Compensation_Data	boolean	[0..1]	Indicates if the Default Compensation is included in the response.
Include_Default_Position_Organization_Assignment_Data	boolean	[0..1]	Indicates if the Default Position Organization Assignment Data is included in the response.
Include_Worker_For_Filled_Positions_Data	boolean	[0..1]	Indicates if the Worker for Filled Positions is included in the response.
Include_Qualifications	boolean	[0..1]	Indicates if the Position's Qualifications (Competencies, Education, Responsibilities, etc.) are included in the response.
Include_Job_Requisition_Data	boolean	[0..1]	Indicates if the Position's Open Job Requisition (if there is one) is included in the response.
Include_Job_Requisition_Attachments	boolean	[0..1]	Indicates if the Position's Open Job Requisition Attachments (if they exist) are included in the response.

## 69 - API Documentation of the Response Group section

### RESPONSE RESULTS

The SOAP response returns a summary of the requested Reference, Criteria, Filter, and Group parameters, as well as the number of results included in the output. The <Response\_Data> element contains the requested data itself.

```
<wd:Response_Results>
  <wd:Total_Results>570</wd:Total_Results>
  <wd:Total_Pages>6</wd:Total_Pages>
  <wd:Page_Results>100</wd:Page_Results>
  <wd:Page>1</wd:Page>
</wd:Response_Results>
```

#### 70 - Response Results section of a Get operation



Note: The following demonstration uses SoapUI as a proxy for an external application accessing Workday via web services. You can use other web services-aware clients and browser plugins to perform these same requests. If you have Workday Studio installed, you can investigate WWS using the Schema Explorer.



## ACTIVITY 3.1 (OPTIONAL) – REVIEW SOAP REQUESTS AND RESPONSES USING SOAPUI

Business Case: We are going to use SoapUI to test the Get Positions web service operation as a possible replacement of our custom RaaS. This operation is in the Staffing web service.

- Other tools can also retrieve Workday WSDL and submit WWS requests.
- The instructor will demonstrate this activity; it is optional for students.

### TASK #1: DETERMINE WWS ENDPOINT

1. Sign in to your tenant as Logan McNeil (*lmcneil*).
2. Search for and run the **Public Web Services** report.
3. Review the list of available web services.
4. Use the **Staffing** service's related actions to select **Web Service > View WSDL**.
5. In the new browser tab or window that opened, scroll to the bottom of the downloaded WSDL document.
  - A. Locate the value of the **soapbind:address location** attribute.
  - B. Select and copy (Ctrl-C) the address location (only select the value in quotes).


```

<?xml version='1.0' encoding='utf-8'>
<wsdl:service name="StaffingService">
  <wsdl:port name="Staffing" binding="wd-wsdl:StaffingBinding">
    <soapbind:address location="https://host01.workdayeducation.com/ccx/service/crossappgms01/Staffing/v31.0"/>
  </wsdl:port>
</wsdl:service>
  
```

71 - SOAP binding address location for Staffing WWS

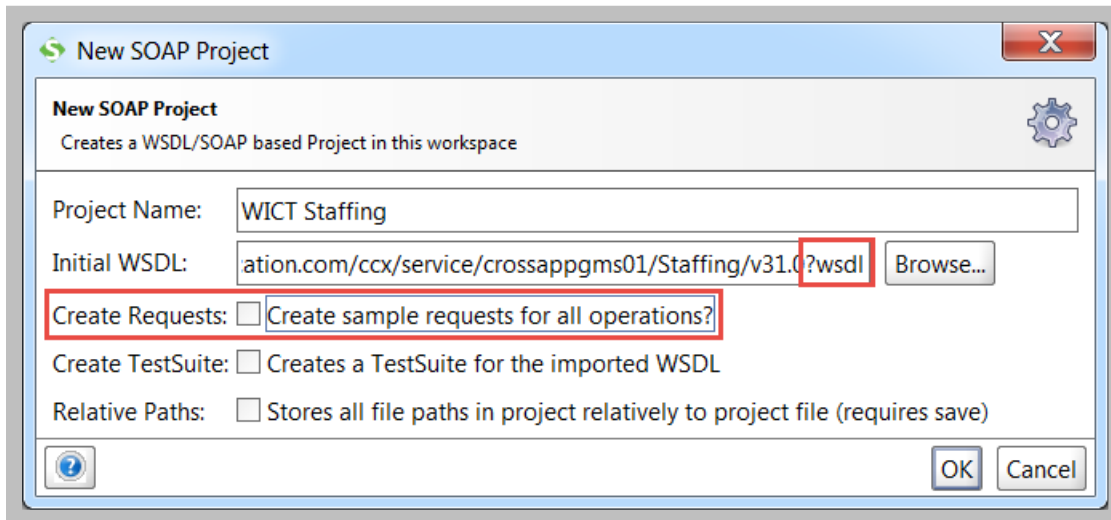
6. Close the new browser window or tab.

### TASK #2: CREATE WWS TEST PROJECT WITH SOAPUI

1. Launch **SoapUI** using its desktop icon  or Start menu shortcut (under SmartBear).
2. Create a new SoapUI project for your tests by selecting **File > New SOAP Project**.

- Enter the details for your new project:

<b>Field Name</b>	<b>Entry Value</b>
Project Name	WICT Staffing
Initial WSDL	[service address location from previous task + “?wsdl” suffix]
Create Requests	Unchecked

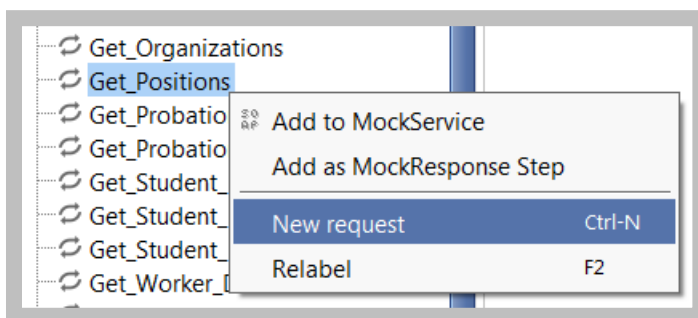


72 - SoapUI New SOAP Project

- Click **OK** to retrieve the WSDL into the SoapUI project.

### TASK #3: CREATE REQUEST TO GET POSITIONS

- Right-click on the **Get\_Positions** operation and select **New Request**.



73 - SoapUI New Request command

- Enter **WICT Get Positions** as the name for your new request and click **OK**.

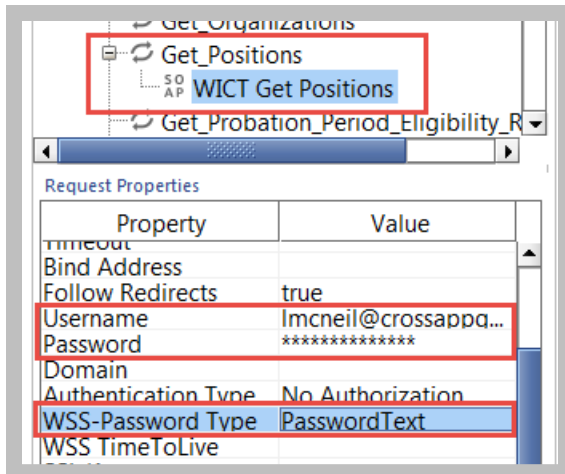
3. Modify the XML to create a test request with no criteria.

```
<soapenv:Envelope
xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:bsvc="urn:com.workday/bsvc">
  <soapenv:Header>
    <bsvc:Workday_Common_Header>
      <!--Optional:-->

    </bsvc:Workday_Common_Header>
  </soapenv:Header>
  <soapenv:Body>
    <bsvc:Get_Positions_Request>
      </bsvc:Get_Positions_Request>
    </soapenv:Body>
  </soapenv:Envelope>
```

4. In the Project Navigator, expand the Get Positions operation and select the **WICT Get Positions** request.
5. Enter the following information into the Request Properties sheet:

<i><b>Property</b></i>	<i><b>Value</b></i>
Username	<b>lmcneil@crossappgmsXX</b> (where XX are the digits of your tenant)
Password	[your tenant password]
WSS-Password Type	PasswordText



## 74 - Get Positions Request Properties

6. Click the **Submit** button ► to send the request.

```
<env:Envelope xmlns:env="http://schemas.xmlsoap.org/soap/envelope/">
  <env:Body>
    <wd:Get_Positions_Response wd:version="v31.0" xmlns:wd="urn:com.workday/bsvc">
      <wd:Response_Results>
        <wd:Total_Results>570</wd:Total_Results>
        <wd:Total_Pages>6</wd:Total_Pages>
        <wd:Page_Results>100</wd:Page_Results>
        <wd:Page>1</wd:Page>
      </wd:Response_Results>
      <wd:Response_Data>
        <wd:Position>
          <wd:Position_Reference wd:Descriptor="P-00054 Chief Risk Management Office">
            <wd:ID wd:type="WID">b98b3c3628bc44fa9c6b4c8483a0d530</wd:ID>
            <wd:ID wd:type="Position_ID">P-00054</wd:ID>
          </wd:Position_Reference>
          <wd:Position_Data>
            <wd:Supervisory_Organization_Reference wd:Descriptor="Finance & Administration">
              <wd:ID wd:type="WID">1ad7d37487904a989b2db1bfa6fed57d</wd:ID>
              <wd:ID wd:type="Organization_Reference_ID">Finance_Administration_S<
            </wd:Supervisory_Organization_Reference>
            <wd:Effective_Date>2011-11-01-07:00</wd:Effective_Date>
            <wd:Position_Definition_Data>
              <wd:Position_ID>P-00054</wd:Position_ID>
            </wd:Position_Definition_Data>
          </wd:Position_Data>
        </wd:Position>
      </wd:Response_Data>
    </wd:Get_Positions_Response>
  </env:Body>
</env:Envelope>
```

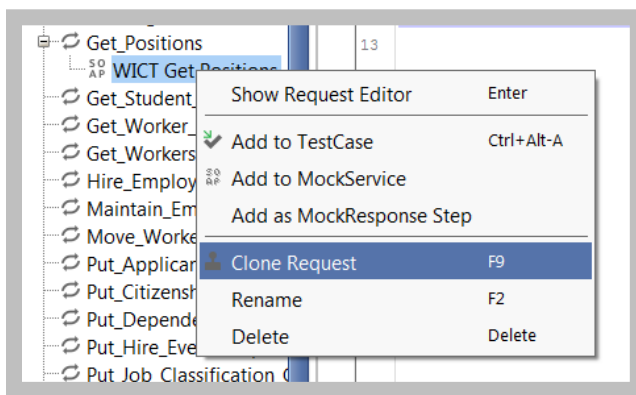
## 75 - Get Positions Response with no criteria

7. Review the response.
- How many positions (Total Results) did Workday find based on our request?
  - How many total pages of results does this represent?

- C. How many results were returned to SoapUI based on our request?
- D. Which page was returned?
- E. What types of positional data are included in the response?

#### TASK #4: MODIFY REQUEST TO RETRIEVE 5 IT HELPDESK POSITIONS, INCLUDING QUALIFICATION DATA

1. Create a new SOAP request by right-clicking on **WICT Get Positions** and selecting **Clone Request**.



##### 76 - SoapUI Clone Request

2. Enter **WICT Get IT HelpDesk Positions** as the new request name and click **OK**.
3. Add a **Request Criteria** section that limits the data to the IT HelpDesk organization (HINT: Search your tenant for *org:it helpdesk* to find its WID).
4. Modify the XML to include a **Response Filter** that returns the first 5 results.
5. Add a **Response Group** element that includes **Position Definition Data** and **Qualifications**.

Full request:

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:bsvc="urn:com.workday/bsvc">
  <soapenv:Header>
    <bsvc:Workday_Common_Header>
      <!--Optional:-->

    </bsvc:Workday_Common_Header>
  </soapenv:Header>
  <soapenv:Body>
    <bsvc:Get_Positions_Request>
      <bsvc:Request_Criteria>
        <bsvc:Supervisory_Organization_Reference>
          <bsvc:ID
bsvc:type="WID">af6d7f10878340d186121b9d88ae1b5d</bsvc:ID>
          </bsvc:Supervisory_Organization_Reference>
        </bsvc:Request_Criteria>
        <bsvc:Response_Filter>
          <bsvc:Page>1</bsvc:Page>
          <bsvc:Count>5</bsvc:Count>
        </bsvc:Response_Filter>
        <bsvc:Response_Group>

      </bsvc:Request_Criteria>
    </bsvc:Get_Positions_Request>
  </soapenv:Body>
</soapenv:Envelope>
```



## 6. Submit the request and review the results.

```

<env:Envelope xmlns:env="http://schemas.xmlsoap.org/soap/envelope/">
  <env:Body>
    <wd:Get_Positions_Response wd:version="v31.0" xmlns:wd="urn:com.workday/bsvc">
      <wd:Request_Criteria>
        <wd:Supervisory_Organization_Reference wd:Descriptor="IT HelpDesk Department">
          <wd:ID wd:type="WID">af6d7f10878340d186121b9d88ae1b5d</wd:ID>
          <wd:ID wd:type="Organization_Reference_ID">IT_HelpDesk_supervisory</wd:ID>
        </wd:Supervisory_Organization_Reference>
      </wd:Request_Criteria>
      <wd:Response_Filter>
        <wd:Page>1</wd:Page>
        <wd:Count>5</wd:Count>
      </wd:Response_Filter>
      <wd:Response_Group>
        <wd:Include_Position_Definition_Data>1</wd:Include_Position_Definition_Data>
        <wd:Include_Qualifications>1</wd:Include_Qualifications>
      </wd:Response_Group>
      <wd:Response_Results>
        <wd:Total_Results>8</wd:Total_Results>
        <wd:Total_Pages>2</wd:Total_Pages>
        <wd:Page_Results>5</wd:Page_Results>
        <wd:Page>1</wd:Page>
      </wd:Response_Results>
      <wd:Response_Data>
        <wd:Position>
          <wd:Position_Data>
            <wd:Supervisory_Organization_Reference wd:Descriptor="IT HelpDesk Department">
              <wd:Effective_Date>2000-01-01-08:00</wd:Effective_Date>
              <wd:Position_Definition_Data>
                <wd:Qualification_Data>
                  <wd:Closed>0</wd:Closed>
                </wd:Qualification_Data>
            </wd:Supervisory_Organization_Reference>
          </wd:Position_Data>
        </wd:Position>
      </wd:Response_Data>
    </wd:Get_Positions_Response>
  </env:Body>
</env:Envelope>

```

## 77 - Get Positions Response with Request Criteria, Response Filter, and Response Group

- A. How many positions (Total Results) did Workday find based on our request?
- B. How many total pages of results does this represent?
- C. How many results were returned to SoapUI based on our request?
- D. What is a friendlier alternative to the WID to specify an organization?
- E. .What Response Groups are now included in the output?
- F. Are any Response Groups missing that were in the first response?



## IMPORT VS. SUBMIT WEB SERVICES

The Workday Import Web Service (IWS) pattern improves integration performance during large data loads by running a background process for each request that splits up large documents into smaller data sets.

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:bsvc="urn:com.wor
  <soapenv:Header>
  </soapenv:Header>
  <soapenv:Body>
    <bsvc:Import_Currency_Conversion_Rates_Request>
      <bsvc:Currency_Conversion_Rate_Data>
      <bsvc:Currency_Conversion_Rate_Data>
      <bsvc:Currency_Conversion_Rate_Data>
      <bsvc:Currency_Conversion_Rate_Data>
      <bsvc:Currency_Conversion_Rate_Data>
      <bsvc:Currency_Conversion_Rate_Data>
      <bsvc:Currency_Conversion_Rate_Data>
      <bsvc:Currency_Conversion_Rate_Data>
      <!-- Invalid Target Currency Code -->
      <bsvc:Currency_Conversion_Rate_Data>
        <bsvc:Effective_Timestamp>2018-04-01T07:00:00.000-08:00</bsvc:Effective_Timestamp>
        <bsvc:From_Currency_Reference>
          <bsvc:ID bsvc:type="Currency_ID">USD</bsvc:ID>
        </bsvc:From_Currency_Reference>
        <bsvc:Target_Currency_Reference>
          <bsvc:ID bsvc:type="Currency_ID">XYZ</bsvc:ID>
        </bsvc:Target_Currency_Reference>
        <bsvc:Currency_Rate_Type_Reference>
          <bsvc:ID bsvc:type="Currency_Rate_Type_ID">CURRENT</bsvc:ID>
        </bsvc:Currency_Rate_Type_Reference>
        <bsvc:Currency_Rate>99.999</bsvc:Currency_Rate>
      </bsvc:Currency_Conversion_Rate_Data>
    </bsvc:Import_Currency_Conversion_Rates_Request>
  </soapenv:Body>
</soapenv:Envelope>
```

### 78 - Sample Import Web Services Request

The Import Web Service returns a reference to a Workday Web Service Background Process (WSBP) instance, allowing you to monitor the import process activity.

```
<env:Envelope xmlns:env="http://schemas.xmlsoap.org/soap/envelope/">
  <env:Body>
    <wd:Put_Import_Process_Response wd:version="v30.0" xmlns:wd="urn:com.workday/bsvc">
      <wd:Import_Process_Reference>
        <wd:ID wd:type="WID">41c22532dbb60138c253c62a18009c00</wd:ID>
      </wd:Import_Process_Reference>
    </wd:Put_Import_Process_Response>
  </env:Body>
</env:Envelope>
```

### 79 - Sample Response from an Import Web Service Operation Request

You can monitor an import directly by using the **Get\_Import\_Process\_Messages** operation. The **Process Monitor** in your Workday tenant also provides detailed information for any errors or warnings generated during processing.

The screenshot displays the 'Process Monitor' interface. At the top, filters show 'From Date and Time' as 04/06/2018 12:00:00.000 AM, 'To Date and Time' as 04/08/2018 12:00:00.000 AM, and 'Process Type' as 'Web Service'. A 'Maximum Rows' of 100 is set. A 'Refresh' button is present. Below, a table titled 'Background Processes' shows 1 item. The table has columns: Request, Status, Total Processing Time, Submitted by, Errors & Warnings, and Target Instance. The row shows 'Import Currency Conversion Rates' with status 'Completed With Errors', processing time '00:00:01', submitted by 'Logan McNeil', 1 error/warning, and target instance 'Rate Load - 2018 04 06 11 14 -0700'. A modal window is open showing details for the error. It has a 'Criteria' section with 'View by' and 'and then by' dropdowns, and a 'Refresh' button. The table below has columns: Date and Time, Severity, Message, Par Count Line Number, and Background Process. The row shows the error details: '04/06/2018 11:14:38.411 AM', 'Error', 'Invalid ID value. 'XYZ' is not a valid ID value for type = 'Currency\_ID'', '9', and 'Import Currency Conversion Rates (Rate Load - 2018 04 06 11 14 -0700)'.

Request	Status	Total Processing Time	Submitted by	Errors & Warnings	Target Instance
<a href="#">Import Currency Conversion Rates</a>	Completed With Errors	00:00:01	Logan McNeil	1	<a href="#">Rate Load - 2018 04 06 11 14 -0700</a>

Date and Time	Severity	Message	Par Count Line Number	Background Process
04/06/2018 11:14:38.411 AM	Error	Invalid ID value. 'XYZ' is not a valid ID value for type = 'Currency_ID'	9	<a href="#">Import Currency Conversion Rates (Rate Load - 2018 04 06 11 14 -0700)</a>

#### 80 - Reviewing Import Web Service Requests with the Process Monitor

As well as improving integration performance, the IWS design pattern has the following benefits:

- It improves availability of the Workday application for other users and systems during data loads.
- It provides better visibility into data loading jobs.

## WORKDAY WEB SERVICES API SUPPORT POLICY

You can find the Workday Web Services (WWS) API Support Policy on Community:  
<https://community.workday.com/articles/437>.

### SUPPORT

Workday recommends using the most recent WWS version for optimum performance and stability. We update prior versions of our WWS APIs to maintain backward-compatibility for all non-current versions of our WWS APIs that have not reached an end-of-life status., but they are not generally enhanced.

#### **Backward Compatibility**

Workday strives to make our WWS APIs completely backward compatible from release-to-release. Our WWS APIs are backward compatible in that an application created to work with a given API version will continue to work with that same API version even as Workday introduces new API versions. Workday does not guarantee that an application will always work with all future API versions as certain object model changes and data representations are often required as we continue to enhance the API.

#### **Deprecation**

When a specific operation within our WWS API is to be no longer enhanced or updated (and has been replaced another operation), Workday will communicate the deprecation of an operation through our API Documentation within our Workday Developer Network at [developer.workday.com](https://developer.workday.com). Deprecated operations will continue to work and be accepted until an end-of-life status is reached.

#### **End-of-Life**

When an API operation is to be removed and requests for that operation are no longer accepted, advance “End-of-Life” notice will be given at least 18 months before support for that API operation is ended through [developer.workday.com](https://developer.workday.com). Workday will also directly notify customers using API operations planned for removal.

When a new Workday version is released, you should review the available release notes:  
<https://community.workday.com/wws/notes>.

## WWS Update: v30.0 Release Notes

**VIEW** | REVISIONS

Updated 4 weeks ago • Read 580 times

### WWS v30.0 Notes

- [Support Policy for Prior API Versions](#)
- [Change Logs](#)

### WWS API Updates in v30.0

- [New Operations](#)
- [Modified Operations](#)
- [Renamed Operations](#)
- [Deprecated Operations](#)
- [EOL Operations](#)
- [EOL Versions](#)

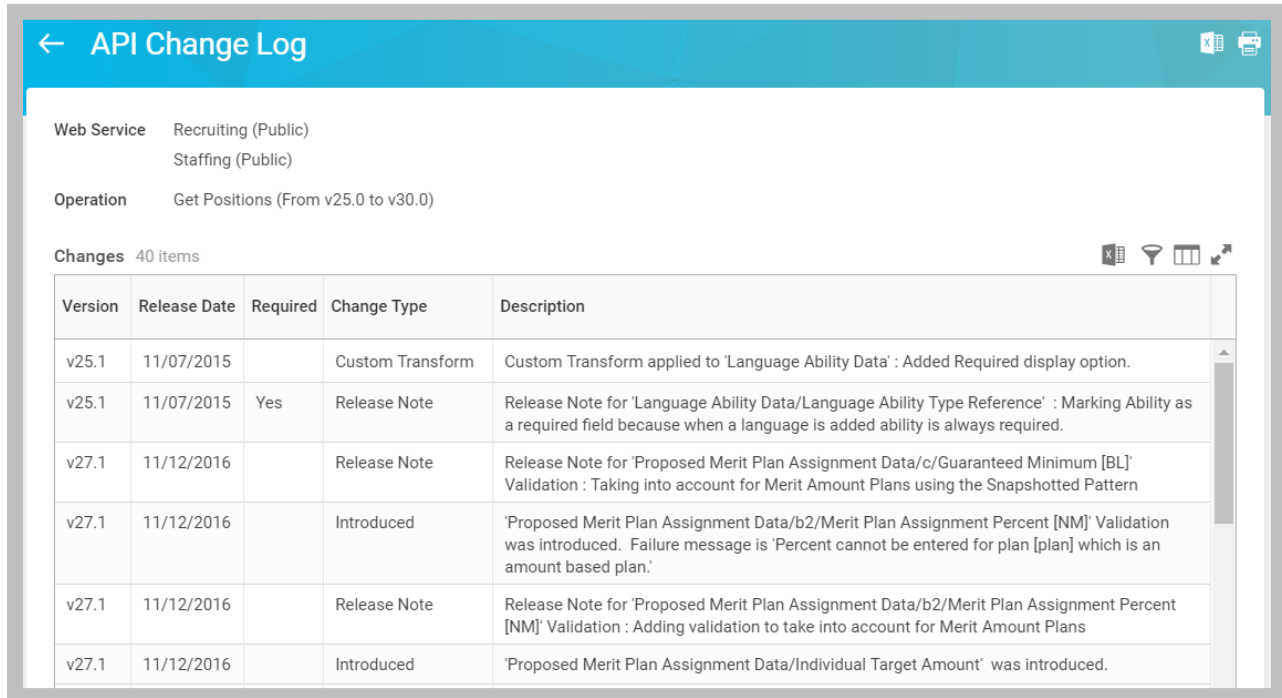
### WWS v30.0 Notes

Workday introduces a new version (v30.0) of the Workday Web Services (WWS) API and adds 68 new operations.

81 – WWS Update Release Notes

### API CHANGE LOG

Use the **API Change Log** report to display the changes to a WWS operation from one version to another. You will find this useful if you are considering updating your custom integration to use a newer version of an operation.



Version	Release Date	Required	Change Type	Description
v25.1	11/07/2015		Custom Transform	Custom Transform applied to 'Language Ability Data' : Added Required display option.
v25.1	11/07/2015	Yes	Release Note	Release Note for 'Language Ability Data/Language Ability Type Reference' : Marking Ability as a required field because when a language is added ability is always required.
v27.1	11/12/2016		Release Note	Release Note for 'Proposed Merit Plan Assignment Data/c/Guaranteed Minimum [BL]' Validation : Taking into account for Merit Amount Plans using the Snapshot Pattern
v27.1	11/12/2016		Introduced	'Proposed Merit Plan Assignment Data/b2/Merit Plan Assignment Percent [NM]' Validation was introduced. Failure message is 'Percent cannot be entered for plan [plan] which is an amount based plan.'
v27.1	11/12/2016		Release Note	Release Note for 'Proposed Merit Plan Assignment Data/b2/Merit Plan Assignment Percent [NM]' Validation : Adding validation to take into account for Merit Amount Plans
v27.1	11/12/2016		Introduced	'Proposed Merit Plan Assignment Data/Individual Target Amount' was introduced.

#### 82 - API Change Log for the Get Positions Web Service Operation

## PREBUILT INTEGRATIONS – WORKDAY CLOUD CONNECT

Workday Integration Cloud Connect consists of a growing number of packaged integrations and connectors to complement solutions that are built, supported, and maintained by Workday:

<https://community.workday.com/workday/connector>.

Home > **Connector Catalog**

Integration category
Clear

☐ HCM (43)  
☐ Payroll (40)  
☐ Recruiting (19)  
☐ Financials (15)  
☐ Payroll Integration (15)  
☐ Payments (11)  
☐ Staffing (10)  
☐ State and Local Taxes (10)  
☐ Technology (7)  
☐ Expenses (6)  
☐ Time and Attendance

Sort By: Connector asc

From Workday-built connectors, to the partner-provided integrations in our ecosystem, the Connector Catalog is an easy place to search all available solutions available for our Customers.

Connector	Provided by	Integration with	Integration category
1099-MISC Electronic Filing Connector	Workday		Payroll, State and Local Taxes
Accounting Journal Connector	Workday		Payroll, GL Interface

### 83 - Workday Connector Catalog on Community

The benefits of this approach to the customer are many, including access to a set of integrations that are:

- Lower cost, lower risk, and faster to deploy without requiring any coding.
- Fully supported by Workday and are certified and tested across updates and patches.
- Treated like any other part of the product, with a published product roadmap.

Because of the high level of support provided for connectors, these templates should be your first choice when building new integrations.

## CONNECTORS

Workday provides two types of Connectors:

- **End-to-End (Packaged) Connectors** support a specific, named third-party application or service. When an End-to-end Connector is deployed, the specific business functions between the two systems are configured with no additional coding required.
- **Connectors** are prebuilt integrations that address the majority of the integration effort required to connect to third-party endpoints.

All Connectors require some level of tenant configuration and testing. Each customer may have specific mapping requirements and different endpoint configurations. These differences in customer configurations can be accommodated with Workday's integration templates and mapping capabilities.

## INTEGRATION TEMPLATES

With the exception of EIB, when you view an integration system in the tenant, the **Integration Template** will indicate which tool was used to build the integration system.

**View Integration System** WDINST CC Positions Actions

**Basic Details** System Name WDINST CC Positions

**Template** Integration Template Core Connector: Positions

> System ID

**Integration Services** 5 items

Integration Template Service	Initial Service to Invoke	Optional	Enabled
Core Connector: Positions / Core Connector: Positions Initial Service*	Yes		Yes
Core Connector: Positions / Core Connector: Date Launch Parameters			Yes
Core Connector: Positions / Core Connector: Position Data Section Fields			Yes
Core Connector: Positions / Core Connector: Job Qualification Data Section Fields		Yes	Yes
Core Connector: Positions / Integration Document Retention			Yes

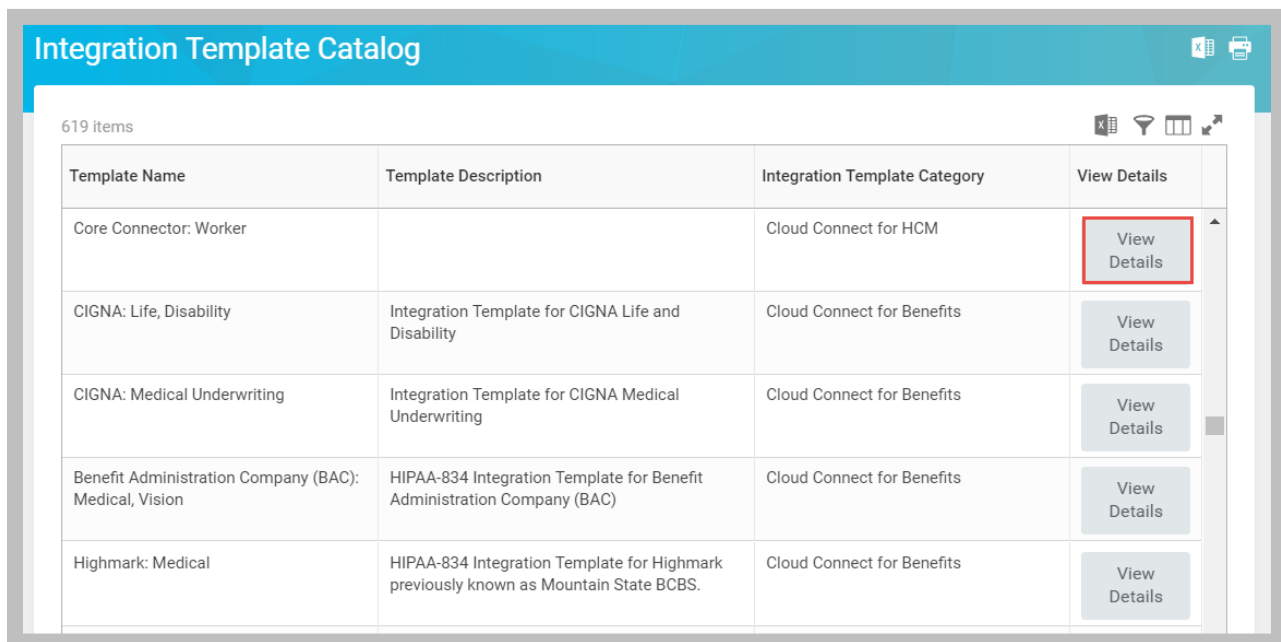
### 84 - Integration Template for a Core Connector



An integration template is a collection of integration services that enables communication between Workday and an external system. Many of the delivered templates contain default values for attributes, as well as configurable prompts for attributes and maps to refine the integration for your needs.

Outbound connectors have built-in change detection, allowing you to schedule integrations that only output the incremental data changes that take effect between launches. The Transaction Log Service further limits the scope of events to suit your needs.

The **Integration Template Catalog** report provides the list of available integration templates in your tenant. Click the **View Details** button to see a summary of the services, attributes, and maps supported by a template.



Template Name	Template Description	Integration Template Category	View Details
Core Connector: Worker		Cloud Connect for HCM	<a href="#">View Details</a>
CIGNA: Life, Disability	Integration Template for CIGNA Life and Disability	Cloud Connect for Benefits	<a href="#">View Details</a>
CIGNA: Medical Underwriting	Integration Template for CIGNA Medical Underwriting	Cloud Connect for Benefits	<a href="#">View Details</a>
Benefit Administration Company (BAC): Medical, Vision	HIPAA-834 Integration Template for Benefit Administration Company (BAC)	Cloud Connect for Benefits	<a href="#">View Details</a>
Highmark: Medical	HIPAA-834 Integration Template for Highmark previously known as Mountain State BCBS.	Cloud Connect for Benefits	<a href="#">View Details</a>

#### 85 - Integration Template Catalog report



**Additional Training:** The Core Connector and Document Transformation course (2-day VILT) covers common inbound and outbound connector examples, as well as the use of Document Transformation to enhance output and to transform input files.



## ACTIVITY 3.2 – CREATE AND LAUNCH A CONNECTOR

**Business Case:** You will explore using a connector as a better supported and more feature-rich alternative to EIB with RaaS, and as a more easily configured option to WWS requests.

- The Core Connector: Positions template is based on the Get Positions operation, but allows for the selection of individual fields for output.
- You will disable change detection when testing by choosing the Full Extract option.

**Shortcut:** Use the pre-built integration **WDINST CC Positions** and skip to Task #3.

### TASK #1: CREATE INTEGRATION SYSTEM

1. Sign in as Logan McNeil (*lmcneil*).
2. Search for and select the **Create Integration System** task.
  - A. Enter a **System Name** of *WICT CC Positions*.
  - B. In the **New using Template** prompt, select **Core Connector: Positions**.
  - C. Click the **OK** button.

86 - Create Integration System using the Core Connector: Positions Template

- On the Configure Integration Services page, select the optional **Job Qualification Data Section Fields** service and click **OK**.

Integration Template    Core Connector: Positions

Enable All Services    ☐

Integration Services    9 items

Integration Template Service	Initial Service to Invoke	Optional	Enabled
Core Connector: Positions / Core Connector: Positions Initial Service*	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Core Connector: Positions / Core Connector: Date Launch Parameters	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Core Connector: Positions / Core Connector: Position Data Section Fields	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Core Connector: Positions / Core Connector: Job Qualification Data Section Fields	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Core Connector: Positions / Core Connector: Job Requisition Data Section Fields	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Core Connector: Positions / Core Connector: Job Profile Data Section Fields	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

87 - Configure Integration Services with an optional Data Section Fields service enabled

## TASK #2: SELECT FIELDS

- Use WICT CC Positions' related actions to select **Integration System > Configure Integration Field Attributes**.
- Select the **Core Connector: Position Data Section Fields** service to select the following fields for output (Position ID is required and already selected):
  - Supervisory Organization
  - Job Posting Title
  - Available for Hire
  - Availability Date

E. Location

F. Worker Type

G. Filled By Worker

Core Connector: Position Data Secti...

Core Connector: Job Qualification D...

Section Fields\*

Include All Fields in Output ☐

Field Configuration 16 items

Field(s)	Override Default Values	Include in Output	Required Field
Supervisory Organization	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Job Posting Title	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Available For Hire	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Available For Recruiting	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hiring Freeze	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Availability Date	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Earliest Hire Date	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Job Family	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Job Profile	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Location	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Worker Type	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Time Type	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Worker Subtype	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Filled By Worker	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

88 - Position Data Section Fields Included in Output

3. Select the **Core Connector: Job Qualification Data Section Fields** service to select the following fields for output (Position ID is required and already selected):
  - A. Education Qualification
  - B. Education Qualification / Education Degree
  - C. Education Qualification / Education Field of Study

Field(s)	Description	Include in Output
Certification Qualification / Certification Required		<input type="checkbox"/>
Education Qualification		<input checked="" type="checkbox"/>
Education Qualification / Education Degree		<input checked="" type="checkbox"/>
Education Qualification / Education Field of Study		<input checked="" type="checkbox"/>
Education Qualification / Education Required		<input type="checkbox"/>

#### 89 - Job Qualification Data Section Fields Included in Output

4. Click the **OK** button. (Do NOT click Done.)

### TASK #3: LAUNCH INTEGRATION

1. If necessary, search for and select the **WICT CC Positions** integration system.
2. Use the WICT CC Positions related actions to select **Integration > Launch / Schedule**.
3. Accept the default Run Frequency of Run Now and click **OK**.

- Enter the following Integration Criteria:

<i><b>Field</b></i>	<i><b>Entry Value</b></i>
Supervisory Organization(s)	IT HelpDesk Department
Full Extract	Selected

- Click **OK** and click **Refresh** on the View Background Process page until the Status is Completed.
- On the **Output Files** tab, select **output.xml** to download it.

Integration Details

Process Info

Process History




Output Files (4)

Messages (5)

Child Processes (2)

Reports and Other Output Files

4 items

Date and Time Created	File	Type	Created by	Number of Shared Users	Expiration Date	Document Tag
04/07/2018 10:10 AM	<div>  <a href="#">DiagnosticAudit.html</a> </div>	XML Document (XML)	Logan McNeil		05/07/2018	
04/07/2018 10:10 AM	<div>  <a href="#">MessagesAudit_1.zip</a> </div>	Compressed Archive (ZIP)	Logan McNeil		05/07/2018	
04/07/2018 10:10 AM	<div>  <a href="#">output.xml</a> </div>	XML Document (XML)	Logan McNeil		05/07/2018	Deliverable
04/07/2018 10:10 AM	<div> <a href="#">positions.xsd</a> </div>	Text Document (TXT)	Logan McNeil		05/07/2018	

## 90 - Connector Integration Event Output Files

## 7. Review the results.

```

<?xml version="1.0" encoding="UTF-8"?>
<ps:Positions xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:ps="urn:com.workday/coreconnector/positions">
  - <ps:Header>
    <ps:Prior_Entry_Time>2018-04-07T21:45:57.517-07:00</ps:Prior_Entry_Time>
    <ps:Current_Entry_Time>2018-04-07T22:20:41.430-07:00</ps:Current_Entry_Time>
    <ps:Prior_Effective_Time>2018-04-07T00:00:00.000-07:00</ps:Prior_Effective_Time>
    <ps:Current_Effective_Time>2018-04-07T00:00:00.000-07:00</ps:Current_Effective_Time>
    <ps:Full_File>true</ps:Full_File>
    <ps:Document_Retention_Policy>30</ps:Document_Retention_Policy>
    <ps:Position_Count>8</ps:Position_Count>
  </ps:Header>
  - <ps:Position>
    - <ps:Position_Data>
      <ps:Position_ID>P-00030</ps:Position_ID>
      <ps:Supervisory_Organization>IT_HelpDesk_supervisory</ps:Supervisory_Organization>
      <ps:Job_Posting_Title>Senior IT Analyst</ps:Job_Posting_Title>
      <ps:Available_For_Hire>false</ps:Available_For_Hire>
      <ps:Availability_Date>2000-01-01</ps:Availability_Date>
      <ps:Location>Dallas_site</ps:Location>
      <ps:Location>Atlanta_site</ps:Location>
      <ps:Location>San_Francisco_site</ps:Location>
      <ps:Filled_By_Worker>21459</ps:Filled_By_Worker>
    </ps:Position_Data>
    <ps:Qualification_Data/>
  </ps:Position>
  - <ps:Position>
    - <ps:Position_Data>
      <ps:Position_ID>P-00031</ps:Position_ID>
      <ps:Supervisory_Organization>IT_HelpDesk_supervisory</ps:Supervisory_Organization>
      <ps:Job_Posting_Title>Senior IT Analyst</ps:Job_Posting_Title>
      <ps:Available_For_Hire>true</ps:Available_For_Hire>
      <ps:Availability_Date>2018-02-07</ps:Availability_Date>
      <ps:Location>San_Francisco_site</ps:Location>
      <ps:Worker_Type>EE</ps:Worker_Type>
    </ps:Position_Data>
    <ps:Qualification_Data/>

```

91 - Core Connector: Positions output

## CHALLENGE TASK: REVIEW MESSAGES AUDIT

1. Download the **MessagesAudit\_1.zip** file from the Output Files tab of the event.
2. Compare the xml files with the SOAP requests and responses in **Activity 3.1**.



## CHAPTER 4 – INTEGRATION BUSINESS PROCESS

### OVERVIEW

A business process in Workday is a set of tasks that people initiate, act upon, and complete in order to accomplish a desired business objective. Workday supports integration-specific business processes using the Integration Process Event business process type.

### OBJECTIVES

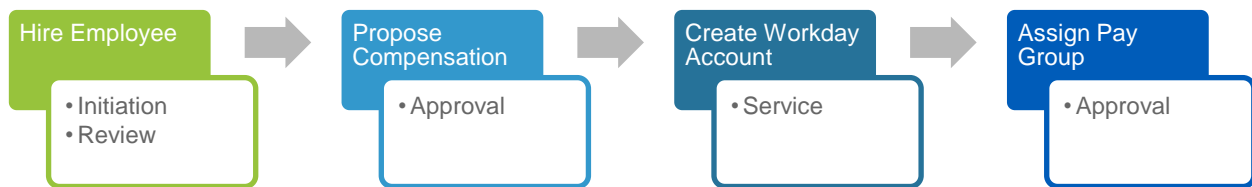
By the end of this chapter, you will be able to:

- Trigger an integration event from a step in a business process.
- Configure an integration process to deliver files to an SFTP server.
- Enable notifications for integration events.
- Transform the output of a connector using Document Transformation.



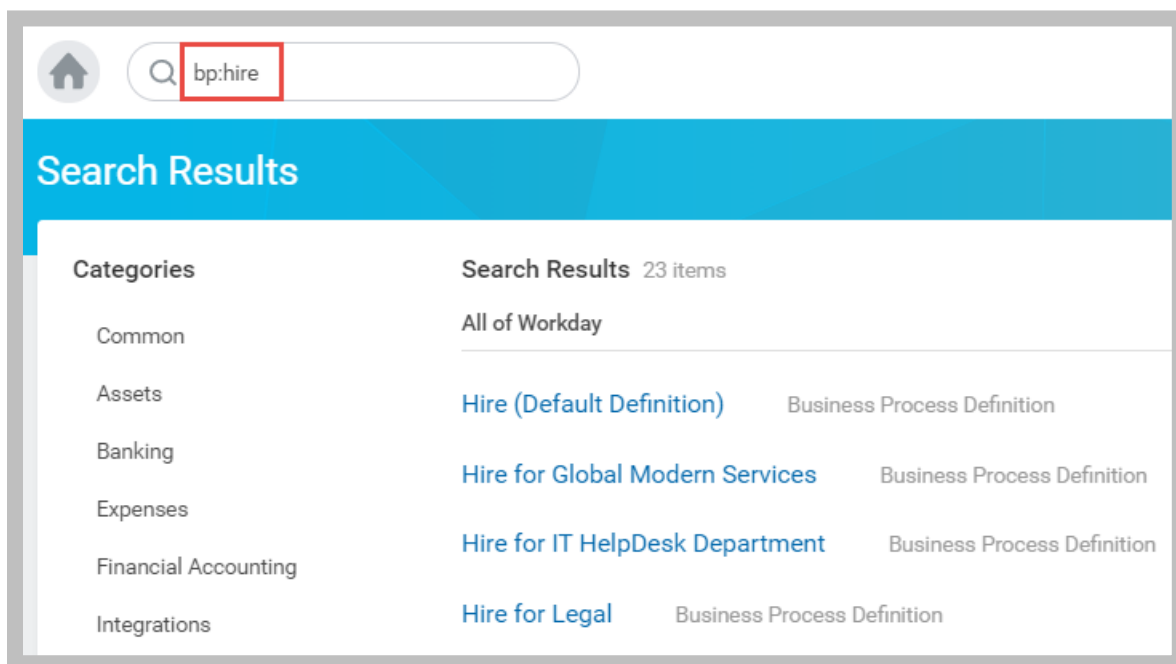
## WORKDAY BUSINESS PROCESSES

A business process is the definition of tasks that need to be done in order for an event to occur, the order in which they must be completed, and who must do them. The business process definition specifies the security group responsible for each step in the process, notifies the workers in these groups, and gets feedback on when each step is complete so it can move on to the next step. Steps can also be conditional.



### 92 - Example Hire business process with both user-driven and automated service steps

Workday's default business processes are delivered definitions that can be customized to meet your needs. You also have the option of configuring context-specific business processes (e.g., by supervisory organization).



### 93 - Search for a business process using the 'bp:' search prefix



**Note:** While you can create different versions of the same business process for different organizations, Workday recommends having a single definition per business process type for ease of maintenance and troubleshooting.

Once you select a business process, you can view its steps and other details.

Business Process Steps									
Business Process Steps 3 items									
Step		Order	Type	Specify	Optional	Group	All	Run As User	
Q		a	Initiation		No				
Q		b	Action	Propose Compensation Hire	No	Manager			
Q	Configure WICT EIB Position - BP	c	Integration		No			Imcneil / Logan McNeil	

### 94 - Organization-specific Business Process Definition with configured Integration step

Business processes support automated step types, such as Services and Reports. Integration steps can be run as specific user accounts to determine their access to data, and fields from the business event can be mapped dynamically to integration system launch parameters.



**Note:** Step Order labels can be non-consecutive (e.g., a, b, f); however, they are ordered alphabetically. You should therefore only use letters for steps to avoid confusion (e.g., b11 is alphabetically before b2). The first step is always “a – Initiation” and cannot be changed.



## ACTIVITY 4.1 (OPTIONAL) – TRIGGER AN INTEGRATION FROM THE HIRE BUSINESS PROCESS

Business Case: The IT HelpDesk Department has a need to synchronize filled positions with an external directory immediately upon completion of a new hire.

- WDINST RW Positions by Worker is already RaaS-enabled for this purpose.
- The instructor will create a new EIB using that report and configure an Integration step on the Hire for IT HelpDesk Department business process to trigger it.

### TASK #1: CREATE A NEW EIB

1. Sign in to your tenant as Logan McNeil (*lmcneil*).
2. Search for and select the **Create EIB** task, and enter the following:

<i><b>Field Name</b></i>	<i><b>Entry Value</b></i>
Name	WICT EIB Position - BP
Outbound	Selected

3. Click **OK** and enter the following Get Data information:

<i><b>Field Name</b></i>	<i><b>Entry Value</b></i>
Custom Report	WDINST RW EIB Position by Worker
Alternate Output Format (under Details)	JSON

**Get Data**

**Data Source**

**Data Source Type \***  
Custom Report

**Custom Report**  
X WDINST RW EIB  
Position by Worker

**Web Service**  
(empty)

**Details**

**Alternate Output Format**  
JSON

**Run As System User**

95 - Get Data step with Alternate Output Format selected

4. Click **Next** to save the Get Data step.
5. Click **Next** to skip the Transform step.

- Enter a **File Name** of *position\_filled.txt* in the Deliver step.

**Deliver**

Deliver

**Delivery Method \***

Workday Attachment

**Delivery Details**  
(Workday Attachment)

**File Name \***

position\_filled.txt

**Document Retention Policy (in Days) \***

1

96 - Deliver step with File Name configured for text output

- Click **Next** to save the Deliver step and review the Summary.

## TASK #2: ADD INTEGRATION TO BUSINESS PROCESS

- Search for *bp:hire* and select the **Hire for IT HelpDesk Department** business process definition.
- Use its related actions to select **Business Process > Edit Definition**.
- Add** a Step and enter the following:

<b>Field Name</b>	<b>Entry Value</b>
Step	c
Type	Integration

Business Process Steps		Notifications	Allowed Actions by Role	Allowed Services	Related Links	Available Rules & Fields
Business Process Steps 3 items						
	Step	*Order	Parallel Step Inbox Order	Notes	*Type	Specify
+		c			Integration	
-	Q	a				
-	Q	b			Action	Propose Compensation Hire

### 97 - Added Integration Step

- Click **OK** and review the error.

## Error

- Page Error

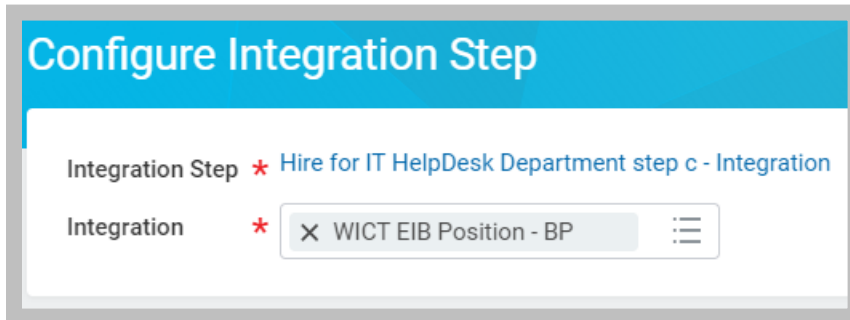
Invalid Integration Setup for Integration Workflow Step. Use related task of Configure Integration Step.

### 98 - Integration Setup error

Business Process Steps		Notifications	Allowed Actions by Role
Business Process Steps 3 items			
Step		Order	Type
Q		a	Initiation
Q		b	Action
Q	Configure Integration System	c	Integration

### 99 - Configure Integration System button on Integration Step

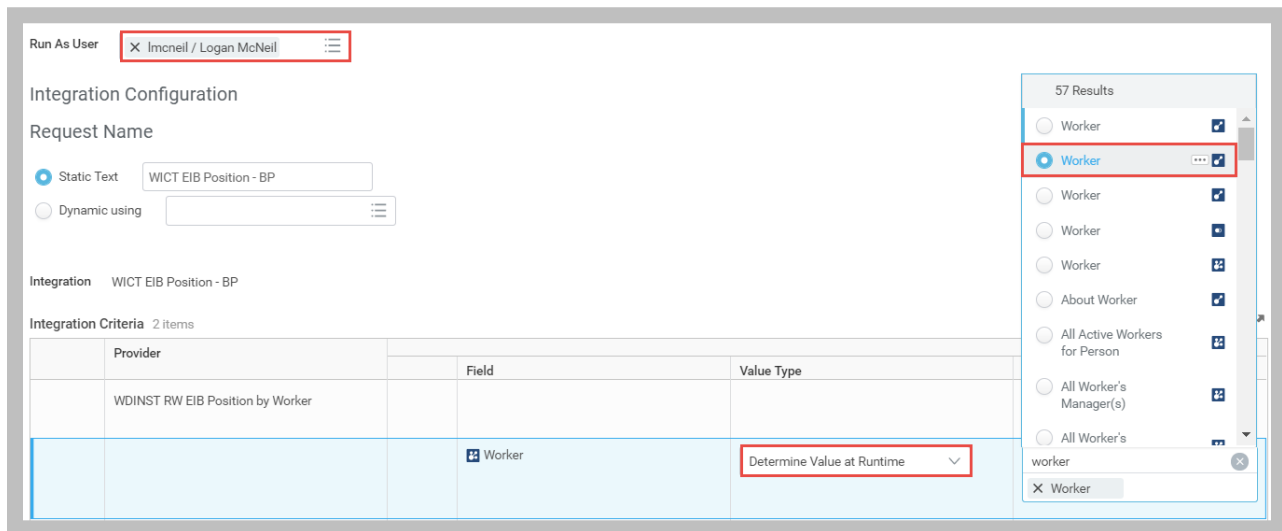
5. Click **Configure Integration System** and select **WICT EIB Position – BP** in the Integration prompt.



100 - Configure Integration Step with EIB selected

6. Click **OK** and enter the following:

<i><b>Field Name</b></i>	<i><b>Entry Value</b></i>
Run As User	Imcneil / Logan McNeil
Field	Worker
Value Type	Determine Value at Runtime
Value	Worker (second in list)



101 - Integration Step configured with Run As User defined and RaaS prompt mapped to event data

7. Click **OK** to save the Integration Step configuration.

## TASK #3: HIRE AN EMPLOYEE

1. Sign in to your tenant (or start a proxy session) as Jack Taylor (*jtaylor*).
2. Search for *org: it help* and select the **IT HelpDesk Department**.
3. Click the **Staffing** tab.
4. Use one of the **Senior IT Analyst (Unfilled)** positions' related actions to select **Hire > Hire Employee**.
5. Select **Existing Pre-Hire**, enter **Dion Jackson**, and click **OK** to proceed.

The screenshot shows the 'Hire Employee' interface in Workday. At the top, there's a search bar with 'org:it help' and the Workday logo. The user is logged in as 'Jack Taylor'. The main heading is 'Hire Employee'. Below it, the 'Supervisory Organization' is set to 'IT HelpDesk Department'. The 'Position' dropdown shows 'P-00030 Senior IT Analyst'. Under the 'Existing Pre-Hire' section, 'Dion Jackson' is entered in the search field. There are also options for 'Existing Pre-Hire' (selected) and 'Create a New Pre-Hire'.

## 102 - Hire Employee using an Existing Pre-Hire

6. Enter the following hire information:

<i><b>Field Name</b></i>	<i><b>Entry Value</b></i>
Hire Date	[Today's Date]
Hire Reason	New Hire > Fill Vacancy



**Hire Employee Dion Jackson** Actions

Hire Date \* 04 / 06 / 2018

Reason X New Hire > Fill Vacancy

**Job Details**

Position \* X P-00030 Senior IT Analyst

Job Requisition R-00018 Senior IT Analyst (Open)

Employee Type \* X Regular

Job Profile \* X Senior IT Analyst

Time Type \* X Full time

Location \* X San Francisco

Work Space

Pay Rate Type X Salaried

> Additional Information

**Submit** Save for Later Cancel

#### 103 – Completed Hire Initiation Step

7. Click **Submit** to initiate the hire process.

**You have submitted**  
**Hire: Dion Jackson - P-00030 Senior IT Analyst** [Actions](#)

**Up Next**  
 Jack Taylor  
Propose Compensation Hire  
Due Date 04/08/2018  
**Open**  
> Details and Process

**Do Another**  
[Convert to Employee](#)  
[Hire Employee](#)

**Related Links**  
[Business Policy Document](#)

104 - Submitted Initiation Step

8. Click **Open** to proceed to the Propose Compensation Hire step.
9. Click **Submit** to accept the defaults and complete the Propose Compensation action.

**Propose Compensation Hire Dion Jackson** [Actions](#)  
**P-00030 Senior IT Analyst (Unfilled)** [Actions](#)

**Compensation**

**Effective Date & Reason**

Effective Date  
04/06/2018

Reason  
Hire Employee > New Hire > Fill Vacancy

**Total Base Pay**

Total Base Pay  
● 60,000.00 USD Annual added

**Submit** Deny More ▾

105 - Completing the Propose Compensation action

## TASK #4: VERIFY INTEGRATION LAUNCH

1. Search for and run the **Integration Events** report.
2. Confirm that **WICT EIB Position - BP** was launched.
3. Select the integration event link in the report.
4. Select the **Output Files** tab of the View Background Process page and select the **position\_filled.txt** file. Verify that it contains Dion's information in JSON format.

```
{
  "Report_Entry": [{
    "Position": "P-00030",
    "Title": "P-00030 Senior IT Analyst - Dion Jackson-P-00030",
    "Pay": "60000",
    "Available": "0",
    "AvailabilityDt": "2000-01-01",
    "Restrictions-Location": "Dallas; Atlanta; San Francisco",
    "Worker": "Dion Jackson",
    "Location": "San Francisco",
    "Type": "Employee"
  }]
}
```

106 - JSON output of new hire position data

5. Search for **Dion Jackson** and select the **All of Workday** category.
6. Click the **Hire: Dion Jackson** link to open the business process event.
7. Click **Process** to review the entire event.

## View Event Hire: Dion Jackson

Actions

For P-00030 Senior IT Analyst

Overall Process [Hire: Dion Jackson](#)

Overall Status Successfully Completed

Due Date 04/09/2018

Calendars In Use Consecutive Days (No Calendars Selected)

Details
Process
Related Links

Process History 4 items

Process	Step
<a href="#">Hire</a>	<a href="#">Hire</a>
<a href="#">Propose Compensation Hire</a>	<a href="#">Propose Compensation Hire</a>
<a href="#">Integration Process: WICT EIB Position - BP</a>	<a href="#">Integration Process Event</a>
<a href="#">Integration Process: WICT EIB Position - BP</a>	<a href="#">Service: Fire Integration</a>

### 107 - Hire event process details including Integration steps

8. Sign in to your tenant as Logan McNeil (*lmcneil*) (or stop proxy).

## CHALLENGE TASK: LAUNCH CONNECTOR WITH CHANGE DETECTION

1. Search for and select the **WICT CC Positions** integration system.
2. Launch the integration for the **IT HelpDesk Department** with **Full Extract** cleared. (Note the date-time field values.)
3. Review the **output.xml** file.



## INTEGRATION PROCESS EVENT

Workday supports integration-specific business processes using the **Integration Process Event** business process type. This business process type allows you to:

- Separate the execution of the integration itself from the act of retrieving or delivering files. Configuring the retrieval or delivery action separately allows you to add additional steps between these actions and the integration execution, or add multiple retrieval or delivery actions before or after the integration execution.
- Chain together several integration systems, allowing a subsequent integration system to consume the integration file(s) produced by one or more, earlier integration systems.

The Integration Process Event default definition is usually delivered with your tenant. The default Integration Process Event consists of two steps, **Initiation** and **Service (Fire Integration)**.

**View Business Process Definition Integration Process Event (Default Definition)**

Effective Date 04/07/2018  
 Time Zone GMT-08:00 Pacific Time (Los Angeles)  
 Most Recent Used Date 04/07/2018  
 Due Date 1 Day

[View Diagram](#)

Business Process Steps						Notifications	Allowed Actions by Role	Allowed Services	Related Links
Business Process Steps 2 items									
Step	Order	Type	Specify	Optional	Group				
Q	a	Initiation		No					
Q	aa	Service	Fire Integration	No					

### 108 - Integration Process Event Default Definition

Before you can create an Integration Process Event for a specific integration system, your tenant must have a default definition for the Integration Process Event business process. If this

default definition does not exist in your tenant, you will be unable to access the Launch/Schedule Integration task for any integration system in your tenant. You must also have created the integration system that will use the Integration Process Event business process.

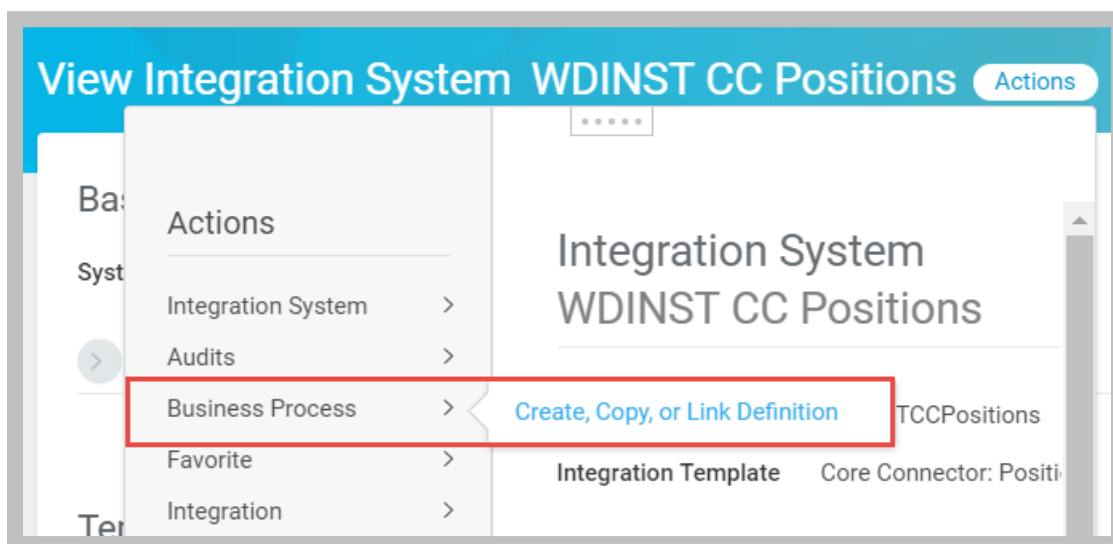
### INTEGRATION PROCESS EVENT STEPS

The Integration Process Event allows the following step types:

- **Initiation**
- **Approval**
- **To Do**
- **Integration** – This step triggers an additional integration process. This integration can be of any type, including EIB, Connector, or Workday Studio.
- **Service** – The Integration Process Event supports three service types:
  - **Document Delivery** delivers integration files from outbound integration systems to external endpoints.
  - **Document Retrieval** imports integration files either from an external endpoint (such as an FTP server) or by running a custom report.
  - **Fire Integration** executes the integration system itself, to either generate an output file (for outbound integrations) or load data from a file into Workday (for inbound integrations).

### CONFIGURE THE INTEGRATION PROCESS EVENT

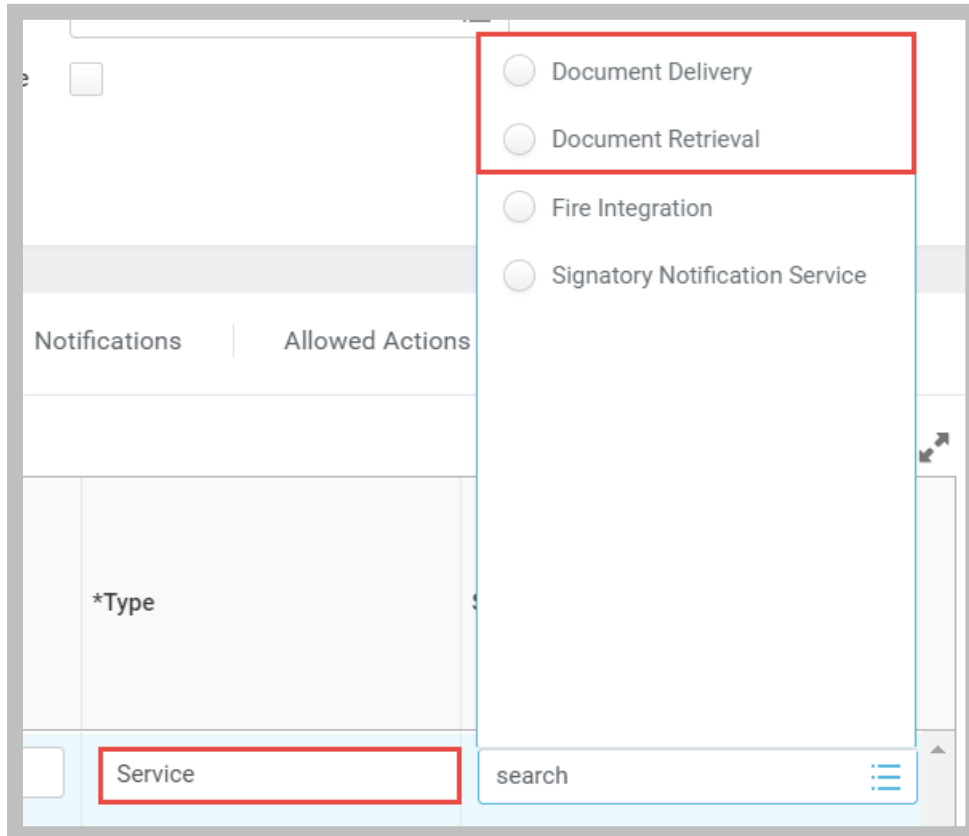
To create an integration system-specific business process, select **Business Process > Create, Copy, or Link Definition** from its Related Actions.



109 - Creating a custom Integration Process Event

## TRANSPORT SERVICES

Configure a business process to transfer integration files with an external location by configuring Document Delivery and Retrieval Service steps, which describe file selection, transport, and encryption options for the integration file(s).



110 - Adding a Service Step

## Delivery Service

← Configure Document Delivery

Workflow Step Integration Process Event for WDINST CC Positions (TOP LEVEL) step d - Service [Document Delivery]

Event Service Document Delivery

Effective Date 04/07/2018

Document(s)

☒ From this Integration Process

☐ Derived Using

Document Filter(s)

Tagged

Delivery Settings

Delivery Attempts \*

☐ Existing Transport from

☐ Derive Transport using

☒ Define Transport Explicitly

Transport

Transport Type \*

### 111 - Configuring Document Delivery

In the **Document(s)** section, select the source of the document to be delivered.

In the **Document Filter(s)** section, specify tags that Workday should filter on when selecting documents to deliver. Available tags are specific to the integration template. By default, the Document Delivery service transports any files labelled as **Deliverable**

In the **Delivery Settings** section, set delivery attempts and whether to derive or reuse existing settings.

In the **Transport** section, select a transport protocol and specify details about the endpoint.



## MAINTAIN INTEGRATION PROCESS EVENTS

Access the integration business process to correct or maintain Document Delivery or Retrieval steps. You can search for the definition using the *bp:* prefix and the name of the integration system, or use the actionable link on the Business Process Definitions section of the integration system itself.

Integration Attributes	Integration Maps	Business Process Definitions	Security
Business Process Definitions 1 item			
Organization	Business Process Definition		
	<a href="#">Integration Process Event for WDINST CC Positions (TOP LEVEL)</a>		

112 - Business Process Definitions section showing configured Integration Process Event(s)



Note: Once a custom Integration Process Event exists for an integration system, only use the **Business Process > Create, Copy, or Link Definition** related action to create new, organization-specific versions of the process.

### TEST TRANSPORT

Use the **Test Transport** task to verify and troubleshoot the configured Delivery or Retrieval Service. When testing your integration system's configured Delivery transport, you can either use a 10KB test file, or select a file from a previous integration event.

Use the integration system's related actions to select **Integration > Test Transport**. Select a configured transport and then one of the Available Actions:

- **Connect** – tests connectivity to the endpoint using the provided credentials.
- **List Files** – tests read access to the server and existence of file(s) by pattern.
- **Deliver File** – tests write access to the endpoint using a test file or repository document.

← Test Transport for Integration System

Transport (SFTP) sftp://[redacted]

Available Actions

☒ Connect

☐ List Files

☐ Deliver Files

List Files Pattern

Deliver Files Options

Block Size 32K

☒ Use Default Test File

☐ Deliverable Repository Document (empty)

#### 113 - Test Transport of (S)FTP Configurations



**Note:** The Connect action will attempt to create folders if the directory path is incomplete on the server.

## VIEW RESULT AND VERIFY DELIVERY

The Integration Events report lists each execution of an integration system separately from any transport services. As such, the integration event will not indicate whether the file delivery was successful—the integration is just one step in the overall business process. View the “Parent Event” to see the status of all of the steps defined in the business processes associated with that integration system.

**View Background Process WDINST CC Positions** Actions

Process	WDINST CC Positions
Request Name	WDINST CC Positions
Status	Completed
Current Processing Time (hour:min:sec)	00:00:17

Integration Details | Process Info | Process History | Output Files (4)

### Integration Process

Parent Event [Integration: WDINST CC Positions - 04/07/2018 13:21:39.384](#)

114 - Parent Event link on the View Background Process page

Subsequent Processes 3 items <span>✕ 🔍 📅</span>					
Process	Step	Status	Completed On	Comment	Sub Integration Event
Integration Process: WDIST CC Positions	Integration Process Event for WDIST CC Positions (TOP LEVEL) step b - Service [Fire Integration]	Step Completed	04/07/2018 01:21:56 PM	Logan McNeil: Integration Completed.	
Integration Process: Document Delivery	Integration Process Event for Document Delivery (TOP LEVEL) step a - Initiation	Automatic Complete	04/07/2018 01:21:56 PM		<div> <b>Integration Event</b>  Document Delivery - 04/07/2018 13:21:56.468 (Completed) </div> <div> <b>Request Name</b>  Document Delivery </div> <div> <b>Status</b>  Completed </div> <div> <b>Percent Complete</b>  <div style="width: 100%;"></div> 100.00% </div> <div> <b>Total Processing Time (hour:min:sec)</b>  00:00:10 </div>
Integration Process: Document Delivery	Integration Process Event for Document Delivery (TOP LEVEL) step aa - Service [Fire Integration]	Step Completed	04/07/2018 01:22:07 PM	Logan McNeil: Delivered 1 document(s).	

115 - Subsequent Processes section of the View Event page showing Document Delivery status



## ACTIVITY 4.2 – CONFIGURE A DELIVERY SERVICE FOR AN INTEGRATION

**Business Case:** You are ready to deliver Workday position data to an SFTP server that will serve as a staging area for your integration. You will create a business process for the WICT CC Positions system to add a Delivery Service step.

- As all student files will be delivered to the same SFTP server, you will include your initials in the path to create your own folder.
- Your instructor will provide SFTP connection details.

**Note:** If you used the shortcut in Activity 3.2 instead of creating a new integration system, continue to use **WDINST CC Positions** instead of WICT CC Positions in this activity.

### TASK #1: CREATE BUSINESS PROCESS AND CONFIGURE DELIVERY SERVICE

1. Sign in as Logan McNeil (*lmcneil*).
2. Search for and select the **WICT CC Positions** integration system.
3. Use the **Related Actions** to select **Business Process > Create, Copy, or Link Definition**.
4. Click **OK** to accept the defaults and create a new business process definition with today's date as the Effective Date.
5. Click the **Add** button to add a new step and enter the following:

<i><b>Field Name</b></i>	<i><b>Entry Value</b></i>
Order	d
Type	Service
Specify	Document Delivery

6. Click **OK**.

Business Process Steps 3 items					
Step		Order	If	Type	Specify
Q		a		Initiation	
Q		b		Service	Fire Integration
Q	Configure Document Delivery	d	Document(s) and Configured Delivery available for Delivery Service? (Workday Owned)	Service	Document Delivery

#### 116 - Integration Process Event with Document Delivery Service Step

- Click the **Configure Document Delivery** button.
- Click **OK** to accept today as the Effective Date and enter the following:

Field Name	Entry Value
Document(s)	From this Integration Process
Delivery Settings	Define Transport Explicitly
Transport Type	SFTP
SFTP Address	[provided by instructor]
Directory	/home/[your initials]
Authentication Method	User Name / Password
User Id	[provided by instructor – NOT Imcneil]
New Password / Verify Password	[provided by instructor – NOT your tenant password]

The screenshot shows a 'Transport' configuration window. At the top, 'Transport Type' is set to 'SFTP'. Below this, 'SFTP Address' is filled with a masked string, and 'Directory' is set to '/home/XYZ'. The 'Use Temp File' checkbox is checked. An 'Advanced Settings' section is collapsed. Under 'Authentication Method', 'User Name / Password' is selected. The 'Authentication Details' section contains 'User Id' (masked), 'New Password' (masked), and 'Verify Password' (masked).

Transport

Transport Type \* SFTP

SFTP Address \* sftp://[masked]

Directory /home/XYZ

Use Temp File ☒

> Advanced Settings

Authentication Method

☒ User Name / Password

☐ SSH Authentication

☐ Dual Authentication

Authentication Details

User Id \* [masked]

New Password \* .....

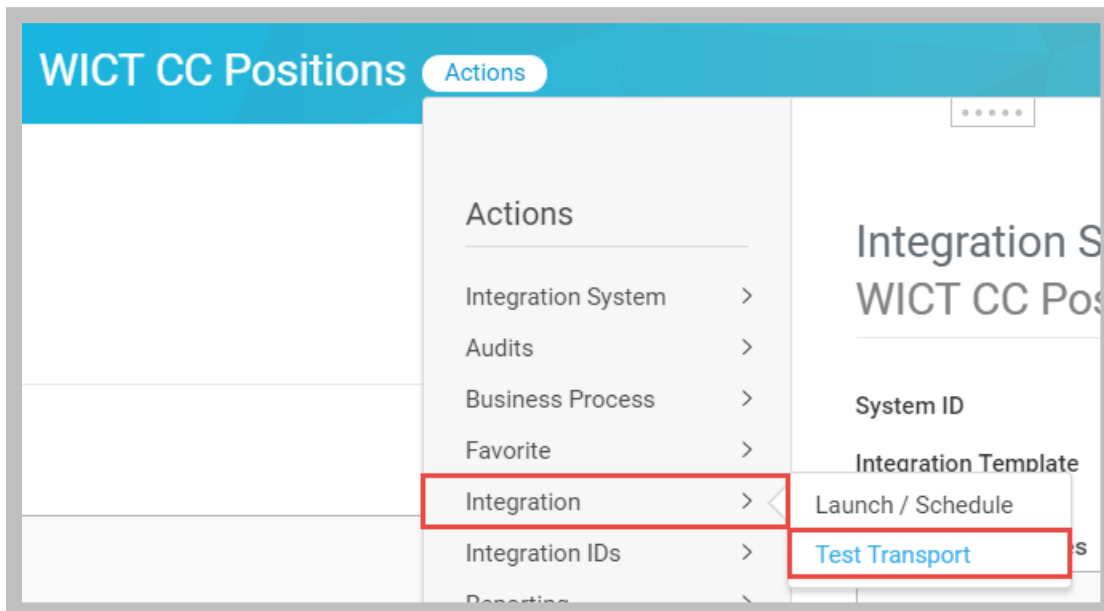
Verify Password \* .....

117 - Configured SFTP Transport

9. Click **OK** and **Done**.

## TASK #2: TEST DELIVERY AND LAUNCH INTEGRATION

1. Search for and select the **WICT CC Positions** integration system.
2. Use the **Related Actions** to select **Integration > Test Transport** and verify connectivity to the SFTP server.



### 118 - Test Transport related action

3. Launch WICT CC Positions, using its **Related Actions** to select **Integration > Launch Schedule**.
4. Click **OK** to accept the default Run Frequency and enter the following:

<i>Field</i>	<i>Entry Value</i>
Supervisory Organization(s)	IT HelpDesk Department
Full Extract	Selected

5. There is no Refresh button on the View Event page, so click on the **View Event** or **Overall Process** links to refresh the page until processing is complete.



**View Event** Integration: WICT CC Positions - 04/07/2018 13:44:45.419 Actions

Overall Process [Integration: WICT CC Positions - 04/07/2018 13:44:45.419](#)

Overall Status In Progress




Details | Process | Related Links

### Initial Integration Event

Integration Event	<a href="#">WICT CC Positions - 04/07/2018 13:44:45.419 (Processing)</a>	Date Parameter
Integration System	<a href="#">WICT CC Positions</a>	As Of Effective Date
Initiated By	<a href="#">Logan McNeil</a>	As Of Entry DateTime
Initiated at	04/07/2018 01:44:45.419 PM	Begin Effective Date
Ran As	lmcneil / Logan McNeil	Begin Entry DateTime

119 – Refresh the View Event page by using the top two links

6. To view the output file, scroll to the bottom of the page to **Reports and Other Output Files**.

Reports and Other Output Files		
4 items <span>📄 📁 📊 📋</span>		
Date and Time Created	File	Type
04/07/2018 01:21 PM	 <a href="#">DiagnosticAudit.html</a>	XML Document (XML)
04/07/2018 01:21 PM	 <a href="#">MessagesAudit_1.zip</a>	Compressed Archive (ZIP)
04/07/2018 01:21 PM	 <a href="#">output.xml</a>	XML Document (XML)
04/07/2018 01:21 PM	<a href="#">positions.xsd</a>	Text Document (TXT)

## 120 - Integration Process Reports and Other Output Files

- In the **Initial Integration Event** section, use the **Related Actions** of the WICT CC Positions integration system to select **Integration > Test Transport**.
- Select **List Files** and click **OK** to verify that your file was delivered to the SFTP server.

### Test Transport for Integration System

(SFTP) sftp://[redacted] (/home/XYZ) Actions

Completed

output.xml

## 121 - Test Transport with List Files option



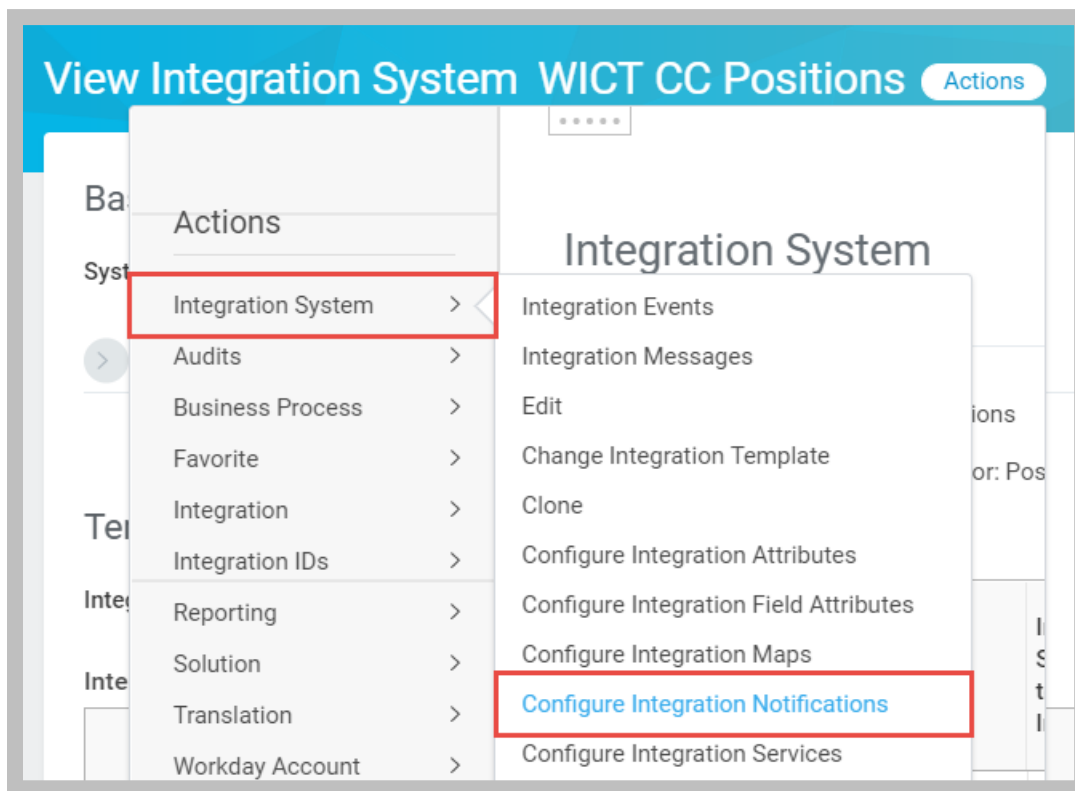
## INTEGRATION NOTIFICATIONS

To help monitor integration events, you can create one or more notification messages to send to groups of people based on integration event status. You can configure notifications to send to a Workday Inbox, email address, or both.

The default integration notification can include text and content from external fields, as well as a link to the integration process event.

The maximum size of a Workday email notification is 20 MB. Workday does not process email notifications larger than 20 MB and does not display error messages in this situation.

To configure a notification for an integration system, used its related actions to select **Integration System > Configure Integration Notifications**.



### 122 - Configure Integration Notifications related action

Integration notifications can be triggered based on launch, change of status (e.g., from Initiated to Processing), or custom conditions.

Recipients can be Workday users and/or external email addresses.

## Integration Notifications WICT CC Positions Actions

Integration Template Core Connector: Positions

### Notifications

Trigger(s)
> Conditions and Rules

☐ Trigger on Launch
   
☒ Trigger on Status
 

✕ Failed
✕ Completed With Errors
✕ Completed with Warnings
✕ Completed

Repeat On

Related Instance(s)

Recipient(s)

Recipient(s) ✕ by Person
 Group(s) ✕ Integration Administrator

### 123 – Integration Notification Triggers and Recipients

You configure Message content (Subject and Body) by adding static text and dynamic field elements that Workday will assemble into a message when the notification is triggered.

### Message Content

Subject 1 item

Order	*Text / External Field
1	<div> <input type="radio"/> Text                             <input checked="" type="radio"/> External Field                             <span>✕ Integration Event</span> </div>

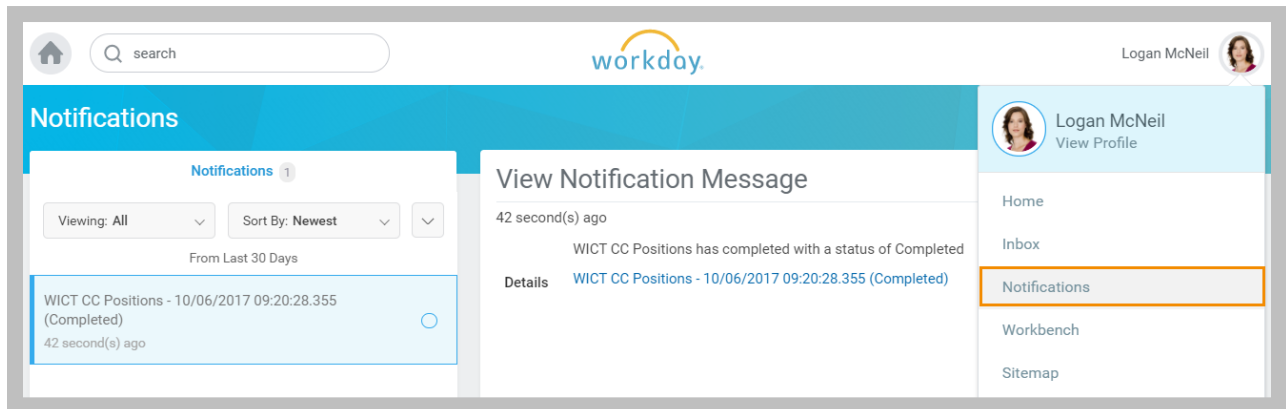
Body 3 items

Order	*Text / Field
1	<div> <input type="radio"/> Text                             <input checked="" type="radio"/> Field                             <span>Integration System</span> </div>
2	<div> <input checked="" type="radio"/> Text                             <input type="radio"/> Field                             <span>has completed with a status of</span> </div>
3	<div> <input type="radio"/> Text                             <input checked="" type="radio"/> Field                             <span>✕ Integration Event Status</span> </div>

### 124 - Integration Notification Message Content

## NOTIFICATION RESULTS

Integration Notifications appear to Workday recipients along with other system notifications. Click your profile icon and select Notifications to review these messages.



### 125 - Integration Notifications in the Workday tenant



**Note:** The default email notification template for integrations includes a link to the integration event and any included documents. Users clicking a link need to sign in to Workday to view the event or document(s). While you can also attach documents produced in the event right to the email, this is not recommended for security reasons.

### TRANSFORMATION

A transformation is the process whereby data is converted from one system so that an external system can understand it, and vice versa. In Workday, business processes allow for the configuration of a transformation step independent of the transport and integration of data.

#### WORKDAY TRANSFORMATION OPTIONS

Workday supports three types of integration transformations:

- Custom report transformations
- Delivered transformations
- XSLT attachment transformations

##### **Delivered Transformations**

Delivered transformations are provided by Workday, and include the alternate output formats of RaaS reports. Some delivered transformations are specific to spreadsheet uploads using EIB. If your integration data source is based on a spreadsheet import template generated in Workday, the transformation is linked to a template model. You can edit the template model to change the spreadsheet details and Workday applies your changes to the transformation during the upload.

##### **Custom Report Transformations**

Custom Report Transformations are custom transformations that you define in outbound EIBs that use RaaS as their data source. They enable you to include or exclude report fields, define output order, format individual reports, and add headers and footers to output files.



**Important:** Custom Report Transformations cannot be migrated between Workday tenants. Expert users in production use them to rapidly produce non-XML output from RaaS-based EIBs that they build in production.

##### **XSLT Transformations**

XSLT attachment transformations are custom transformations that you create by using **Extensible Stylesheet Language Transformation (XSLT)**.

## EXTENSIBLE STYLESHEET LANGUAGE TRANSFORMATION (XSLT)

There are times when Workday does not present output in the desired format for simple integration tasks. One example is uppercase and lowercase letters. Workday stores names in mixed-case, but another system might require the last name appear as all uppercase letters. Another example might be the Social Security Number (SSN). SSN is typically formatted as a 9-digit numeric value (if unmasked). Another system could require that the data be passed, but only the last 4 digits.

In this case, you could implement an Extensible Stylesheet Language Transformation (XSLT) with your integration system. XSL stands for Extensible Stylesheet Language, a style sheet language for XML documents.

- **Formatting:** If Workday data comes out of the system and is not compatible with the external system, XSLT can be used to transform the data. Some common examples are date fields – many external systems require a different date format from Workday. XSLT can be used to reformat the data to suit the endpoint's needs.
- **Conditional Logic:** You might want to produce a different output format based on the value of a particular data element. An example might be a contingent worker vs. a full time employee. Using if/then logic, you can tailor the output to the type of worker the XSLT is attempting to transform.
- **Custom Output:** You may have a need to convert the document structure to support a legacy system (e.g. fixed column format), a business-to-business standard (e.g. EDI), or a portal use case (e.g. HTML5).



Note: Workday does not generate or validate your XSLT attachments. These attachments can be used in EIB, Studio, and Document Transformation.

### Example: Source XML

When creating your stylesheets, you must use the XML document you want to change as your starting point. The original document is not changed; rather, a new document is created based on the content of an existing one.

You must reference the namespace of the original XML document that you are transforming in your stylesheet. You must also reference all of the elements and attributes as they appear in the document you are transforming. Space and case count!

Below is the output of a Core Connector: Positions integration system. Notice the namespace of `ps="urn:com.workday/coreconnector/positions"` and the xml element names (start/end tags).

```
<?xml version="1.0" encoding="UTF-8"?>
<ps:Positions xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:ps="urn:com.workday/coreconnector/positions">
  + <ps:Header>
  + <ps:Position>
  + <ps:Position>
  - <ps:Position>
    - <ps:Position_Data>
      <ps:Position_ID>P-00035</ps:Position_ID>
      <ps:Supervisory_Organization>IT_HelpDesk_supervisory</ps:Supervisory_Organization>
      <ps:Job_Posting_Title>IT HelpDesk Specialist</ps:Job_Posting_Title>
      <ps:Available_For_Hire>true</ps:Available_For_Hire>
      <ps:Availability_Date>2018-02-07</ps:Availability_Date>
      <ps:Location>San_Francisco_site</ps:Location>
      <ps:Worker_Type>EE</ps:Worker_Type>
    </ps:Position_Data>
    - <ps:Qualification_Data>
      - <ps:Education_Qualification>
        <ps:Education_Degree>299.3</ps:Education_Degree>
      </ps:Education_Qualification>
    </ps:Qualification_Data>
  </ps:Position>
  + <ps:Position>
  + <ps:Position>
  + <ps:Position>
  + <ps:Position>
  + <ps:Position>
</ps:Positions>
```

126 - Core Connector example XML output



### Example: Standard XSLT

The xml stylesheet below is an example of using standard XSLT to transform the sample xml output above. Make note of the declared namespace and the “XPath” syntax used to select values from the original xml document.

```
<?xml version="1.0" ?>
<xsl:stylesheet version="2.0"
  xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
  xmlns:ps="urn:com.workday/coreconnector/positions">

  <xsl:template match="/">
    <PositionData>
      <xsl:for-each select="ps:Positions/ps:Position">
        <PositionSummary>
          <!-- Position ID as attribute -->
          <xsl:attribute name="id">
            <xsl:value-of select="ps:Position_Data/ps:Position_ID" />
          </xsl:attribute>
          <!-- Organization -->
          <Organization>
            <xsl:value-of select="ps:Position_Data/ps:Supervisory_Organization" />
          </Organization>
          <!-- Availability Date -->
          <DateAvailable>
            <xsl:value-of select="ps:Position_Data/ps:Availability_Date" />
          </DateAvailable>
          <!-- Time Type -->
          <WorkerType>
            <xsl:value-of select="ps:Position_Data/ps:Worker_Type" />
          </WorkerType>
          <!-- Degree -->
          <Degree>
            <xsl:value-of select="ps:Qualification_Data/ps:Education_Qualification/ps:Education_Degree" />
          </Degree>
        </PositionSummary>
      </xsl:for-each>
    </PositionData>
  </xsl:template>
</xsl:stylesheet>
```

127 - XSLT to transform Core Connector example XML output

### Example: Result

```
<?xml version="1.0"?>
<PositionData xmlns:ps="urn:com.workday/coreconnector/positions">
  + <PositionSummary id="P-00030">
  + <PositionSummary id="P-00031">
  - <PositionSummary id="P-00035">
    <Organization>IT_HelpDesk_supervisory</Organization>
    <DateAvailable>2017-01-25</DateAvailable>
    <WorkerType>EE</WorkerType>
    <Degree>299.3</Degree>
  </PositionSummary>
  + <PositionSummary id="P-00036">
  + <PositionSummary id="P-00043">
  + <PositionSummary id="P-00044">
  + <PositionSummary id="P-00274">
  + <PositionSummary id="P-00275">
</PositionData>
```

128 - Result of standard XSLT



## ACTIVITY 4.3 – COMPARE WORKDAY OUTPUT TO XSLT

**Business Case:** Transformations often fail because of mismatches between the source document and the transformation logic. You have been asked to review an XSLT stylesheet that is not transforming the XML output of your RaaS report as expected.

- As a form of XML, XSLT files must also be well-formed.
- XML is space and case-sensitive.
- Find three errors in the XSLT document.

Note: If you used the pre-built report **WDINST RW EIB Positions with RBOs** in Activity 2.2, use that in place of **WICT RW Positions** in this activity..

### TASK #1: COMPARE REPORT OUTPUT TO XSLT

1. Search for and select the report definition for **WICT RW Positions**.
2. Open the XSLT stylesheet provided by the instructor in a text or XML editor.
3. Review the XSLT file and compare to the report definition. Find four errors.

```
<?xml version="1.0" encoding="UTF-8"?>
<wd:Report_Data xmlns:wd="urn:com.workday.report/WICT_RW_Positions">
  - <wd:Report_Entry>
    <wd:Position>P-00030</wd:Position>
    <wd>Title>P-00030 Senior IT Analyst (Unfilled)-P-00030</wd>Title>
    <wd:Pay>0</wd:Pay>
    <wd:Available>1</wd:Available>
    <wd:AvailabilityDt>2018-02-07-08:00</wd:AvailabilityDt>
    + <wd:Restrictions-Location wd:Descriptor="San Francisco">
    + <wd:Restrictions-Type wd:Descriptor="Employee">
  </wd:Report_Entry>
  + <wd:Report_Entry>
  + <wd:Report_Entry>
  + <wd:Report_Entry>
  + <wd:Report_Entry>
  + <wd:Report_Entry>
  + <wd:Report_Entry>
  + <wd:Report_Entry>
  + <wd:Report_Entry>
</wd:Report_Data>
```

129 - Sample RaaS Output

```

<?xml version="1.0" encoding="UTF-8"?>
<xsl:stylesheet
  xmlns:xsl="http://www.w3.org/1999/XSL/Transform" version="2.0"
  xmlns:wd="urn:com.workday.report/WICT_EIB_Positions">

  <xsl:template match="/">
    <FILE>
      <xsl:for-each select="/wd:Report_Data/wd:Report_Entry">

        <ID><xsl:value-of select="wd:Position"/>

        <TITLE><xsl:value-of select="wd:Title"/></TITLE>

        <DATE><xsl:value-of select="wd:AvailabilityDT"/></DATE>

        <BASEPAY><xsl:value-of select="wd:Pay"/></BASEPAY>

        <!-- Worker Type Restriction -->
        <TYPE>
          <xsl:value-of select="wd:Restrictions-Type/@wd:Descriptor"/>
        </TYPE>

      </xsl:for-each>
    </FILE>
  </xsl:template>
</xsl:stylesheet>

```

130 - Example XSLT



## DOCUMENT TRANSFORMATION

The Document Transformation integration system template is part of the Cloud Connect Catalog. Using this template, you can attach an XSLT file that contains Workday-specific transformation attributes to apply transformations and validations to an integration system's output documents. These attributes are referred to as **Element Transformation and Validation (ETV)** and **XML to Text (XTT)**. ETV and XTT provide a number of different ways to transform and validate elements in an XML document.

Document Transformation only applies a transformation to a source file. It does not retrieve data, nor can it update Workday. As such, these integration systems will always run in an Integration step as part of a larger integration business process.



**Note:** XSLT transformations using ETV/XTT are available to integration systems built using the Document Transformation template and in Workday Studio assemblies. These stylesheets cannot be attached to an EIB integration system.

ETV and XTT allow Workday-specific processing instructions to be included in an XSLT file's elements using attributes. After adding the XSLT file that generates XML with ETV and/or XTT attributes to a Document Transformation integration system, Workday applies transformations and validations to the integration system's output documents. ETV and XTT provide a number of different ways to transform and validate elements, but still require that the XML defined in the XSLT file be valid XML.

There are two separate namespaces, one for ETV, which outputs XML, and a second for XTT, which outputs non-XML. Both steps provide similar features that include:

- Validation
- Number/date formatting
- Data mapping
- Truncation
- Counting and summing of Values

ETV and XTT need to be declared in the namespace of the XSLT.

```
xmlns:xtt="urn:com.workday/xtt"
```

```
xmlns:etv="urn:com.workday/etv"
```

They may be used together in the same XSLT document, but best practice is to separate them into two transformation steps.



**Tip:** Once you declare that you are using XML to Text (XTT), Workday automatically strips XML tags out of the final document, producing flat files without the need for complicated schemas.

## EXAMPLE: DOCUMENT TRANSFORMATION – XTT

Below is an example of an XSLT stylesheet that uses XTT to transform the original XML output about to a fixed length file. Notice the XTT attributes, including **separator**, **startTag**, **severity**, **fixedLength**, **dateFormat**, and **required**.

```
<?xml version='1.0'?>
<xsl:stylesheet version="2.0" xmlns:xsl="http://www.w3.org/1999/XSL/Transform"
  xmlns:ps="urn:com.workday/coreconnector/positions"
  xmlns:xtt="urn:com.workday/xtt">

  <xsl:template match="/">
    <File xtt:separator="##xd;##xa;">
      <xsl:apply-templates/>
      <Footer xtt:startTag="Total Records Processed = ">
        <Count>
          <xsl:value-of select="/ps:Positions/ps:Header/ps:Position_Count"/>
        </Count>
      </Footer>
    </File>
  </xsl:template>







  <xsl:template match="/ps:Positions/ps:Position">
    <Position xtt:severity="warning">
      <Position xtt:fixedLength="10"><xsl:value-of select="ps:Position_Data/ps:Position_ID"/></Position>
      <Organization xtt:fixedLength="10"><xsl:value-of select="ps:Position_Data/ps:Supervisory_Organization"/>
      </Organization>
      <Date xtt:fixedLength="10" xtt:dateFormat="yyyy/MM/dd"><xsl:value-of select="
ps:Position_Data/ps:Availability_Date"/></Date>
      <Type xtt:fixedLength="2"><xsl:value-of select="ps:Position_Data/ps:Worker_Type"/></Type>
      <Degree xtt:fixedLength="5" xtt:required="true"><xsl:value-of select="
ps:Qualification_Data/ps:Education_Qualification/ps:Education_Degree"/></Degree>
    </Position>
  </xsl:template>
</xsl:stylesheet>
```

131 - XSLT to transform Core Connector example XML output using XTT

```
P-00030 IT_HelpDes2000/01/01
P-00031 IT_HelpDes2018/02/07EE
P-00035 IT_HelpDes2018/02/07EE299.3
P-00036 IT_HelpDes2018/02/07EE299.3
P-00043 IT_HelpDes2000/01/01 299.3
P-00044 IT_HelpDes2014/10/15EE299.3
P-00274 IT_HelpDes2000/01/01CW299.3
P-00275 IT_HelpDes2000/01/01CW299.3
Total Records Processed = 8
```

132 - Result of XSLT with XTT

Additionally, ETV/XTT enables us to introduce simple validations. For example, the Education Degree is marked as required. If a value is missing, it will display as a warning on the event.

Process Messages 6 items		
Date and Time	Severity	Message
04/07/2018 08:56:17.555 PM	 Info	Launch Request, Log files and Consolidated Report.
04/07/2018 08:56:15.136 PM	 Info	Attached Messages Audit. See Output Files.
04/07/2018 08:56:14.866 PM	 Info	Attaching output document
04/07/2018 08:56:14.571 PM	 Warning	No value output for required field Degree.
04/07/2018 08:56:14.226 PM	 Info	Retrieved input document. Processing document transformation ...
04/07/2018 08:56:12.647 PM	 Info	Reading stylesheet XTT_Position.xml

133 - ETV/XTT validation messages appear in the integration event



**Additional Training:** Document Transformation's primary purpose is to transform Connector data. The Core Connector and Document Transformation (2-day VILT) course details ETV and XTT options, and the steps to chain these systems together in a business process.

## SEQUENCE GENERATORS

Integration systems support the use of the Integration Sequence Generator service to generate unique filenames. This is most useful when delivering output to servers via file transfer protocols (SFTP, FTP) where there is a risk of overwriting data.

Document Transformation systems have a Sequence Generator service enabled as part of their template. Configure the service by using the related actions to select **Integration System > Configure Integration Sequence Generators**.

**Sequence Definition**

Increment by ★

1

Restart Every

Use Time Zone

Restart at Number

0

Padding with '0'

0

**Format/Syntax ★**

Positions\_FixedWidth\_[seq].txt

> Sequence Generator II

Define the Format using any string constant plus any of the follo  
(Note: each Pattern needs to be surrounded by square brackets.

Sequence Generator Patterns:  
Seq - next Sequence Number

Date/Time Patterns:

y	-	Year	(e.g. 08; 2008)
M	-	Month in Year	(e.g. 07; Jul; July)
w	-	Week in Year	
W	-	Week in Month	

134 - Configured Sequence Generator Format

The sequence number is incremented at each launch of the integration. You can also make use of date/time patterns to construct unique, dynamic filenames.

**Test Transport for Integration System**

(SFTP) sftp://... (/home/XYZ) Actions

**Completed**

Positions\_FixedWidth\_1.txt  
output.xml

135 - Unique output filename produced by sequence generator





## ACTIVITY 4.4 – LAUNCH INTEGRATION WITH DOCUMENT TRANSFORMATION

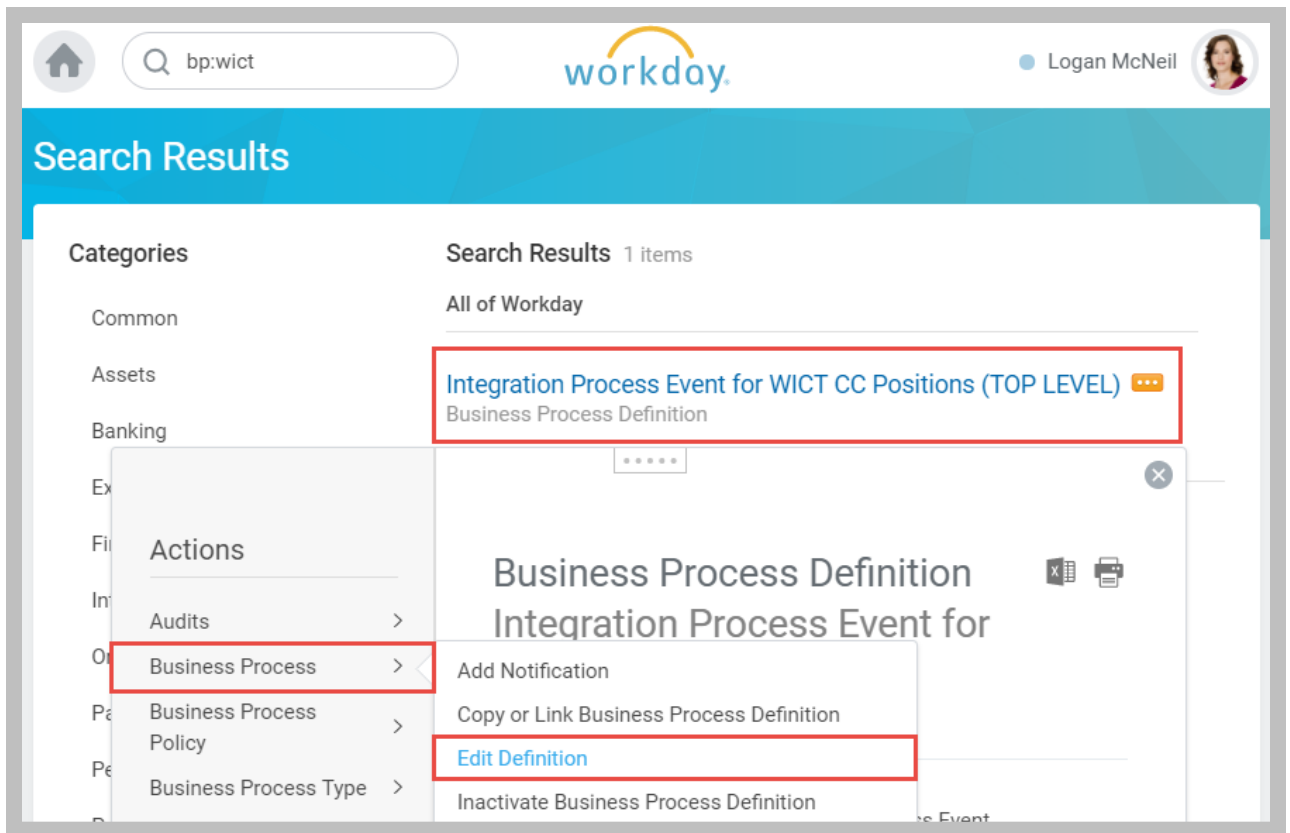
**Business Case:** Our external application needs position data to be in fixed columns in order to interpret it. You will apply a Document Transformation to convert the data into a readable format as well as perform some simple validation.

- The WDINST DT Positions XTT Fixed integration system already contains the XSLT you need.
- You will add an Integration step in the WICT CC Positions integration process event to transform the connector output before delivery.

**Shortcut:** Use the pre-built integration **WDINST CC Positions with DT** instead of WICT CC Positions and complete **Task #3** and **Task #4** only.

### TASK #1: ADD INTEGRATION STEP TO INTEGRATION PROCESS EVENT

1. Sign in as Logan McNeil (*lmcneil*)
2. Search for *bp:wict* and use the related actions of the **Integration Process Event for WICT CC Positions (TOP LEVEL)** to select **Business Process > Edit Definition**.

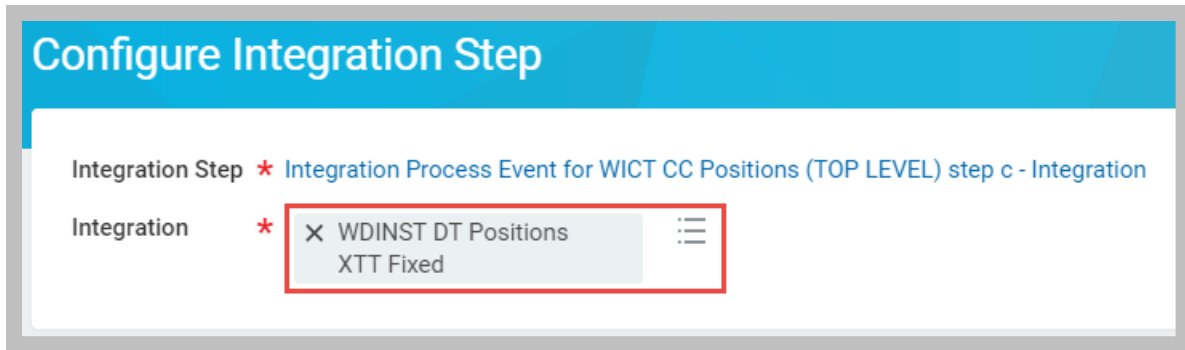


**136 - Edit Business Process Definition for the Integration Process Event**

3. Click **OK** to accept the default Effective Date.
4. **Add** a new Step with the following details:

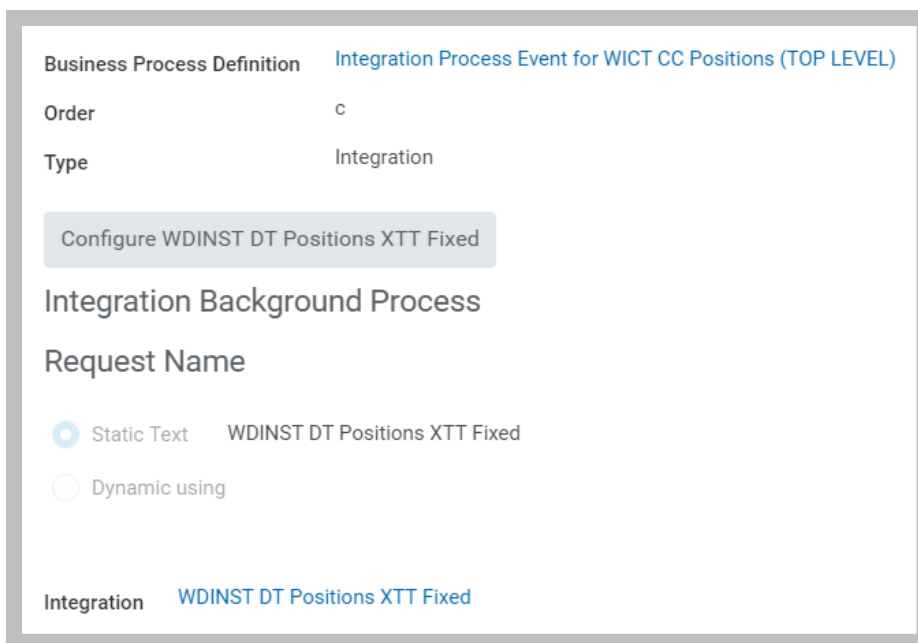
<i>Field Name</i>	<i>Entry Value</i>
Order	c
Type	Integration

5. Click the **Configure Integration System** button and use the **Integration** prompt to select **WDINST DT Positions XTT Fixed**.



#### 137 - Configure Integration Step with Document Transformation

- Click **OK** to proceed and **OK** again to accept the default request details.



#### 138 - Completed Integration Step configuration

### TASK #2: ADJUST DOCUMENT DELIVERY SERVICE STEP

- Search for *bp:wict* and select the **Integration Process Event for WICT CC Positions (TOP LEVEL)**.

Business Process Steps 4 items

Step		Order	If	Type	Specify
Q		a		Initiation	
Q		b		Service	Fire Integration
Q	Configure WDINST DT Positions XTT Fixed	c		Integration	
Q	Configure Document Delivery	d	Document(s) and Configured Delivery available for Delivery Service? (Workday Owned)	Service	Document Delivery

### 139 - Integration Process Event with Document Transformation and Document Delivery

- Click the **Configure Document Delivery** button and click **OK** to accept the default Effective Date.
- In the Document(s) section, select **From Specific Integration Step(s)** and use the prompt to select the newly configured Integration Step.

**Document(s)**

☐ From this Integration Process  
☐ From All Previous Integration Steps  
☒ From Specific Integration Step(s)  
☐ Derived Using

**Delivery Settings**

Delivery Attempts \*

☐ Integration Process Event  
 for WICT CC Positions  
 (TOP LEVEL) step c -  
 Integration (WDINST DT  
 Positions XTT Fixed)

### 140 - Delivering Documents From Specific Integration Step

- Click **OK** and **Done**.

### TASK #3: LAUNCH INTEGRATION WITH TRANSFORMATION

- Search for and launch the **WICT CC Positions** integration using its related actions with the following Integration Criteria:

<i><b>Field</b></i>	<i><b>Entry Value</b></i>
Supervisory Organization(s)	IT HelpDesk Department
Full Extract	Selected

- Refresh the View Event page using the **Overall Process** link until the event is Successfully Completed.
- Scroll down to the Event Document(s) section and download the **output.xml** and **Positions\_FixedWidth\_1.txt** files to compare them.

```
P-00030    IT_HelpDes2000/01/01
P-00031    IT_HelpDes2018/02/07EE
P-00035    IT_HelpDes2018/02/07EE299.3
P-00036    IT_HelpDes2018/02/07EE299.3
P-00043    IT_HelpDes2000/01/01  299.3
P-00044    IT_HelpDes2014/10/15EE299.3
P-00274    IT_HelpDes2000/01/01CW299.3
P-00275    IT_HelpDes2000/01/01CW299.3
Total Records Processed = 8
```

141 - Fixed Width XTT output

### TASK #4: REVIEW DOCUMENT TRANSFORMATION EVENT STATUS

- Scroll to the Subsequent Processes section and locate the **Integration Process: WDIST DT Positions XTT Fixed** link in the Subsequent Process section, or search for it in the Integration Events report.

Subsequent Processes 5 items

Process	Step	Status	Completed On	Comment	Sub Integration Event
Integration Process: WDINST DT Positions XTT Fixed	Integration Process Event (Default Definition) step a - Initiation	Automatic Complete	04/07/2018 09:46:20 PM		<p>Integration Event</p> <p><a href="#">WDINST DT Positions XTT Fixed - 04/07/2018 21:46:20.589 (Completed with Warnings)</a> ...</p> <p>Request Name</p> <p>WDINST DT Positions XTT Fixed</p> <p>Status</p> <p>Completed with Warnings</p> <p>Number of Warnings</p> <p>1</p> <p>Percent Complete</p> <p><div style="width: 100%;"></div> 100.00%</p> <p>Total Processing Time (hour:min:sec)</p> <p>00:00:06</p>

142 - Subsequent Processes section with Sub Integration Event details

- Click the link under Number of Warnings to see the warning.

1 item

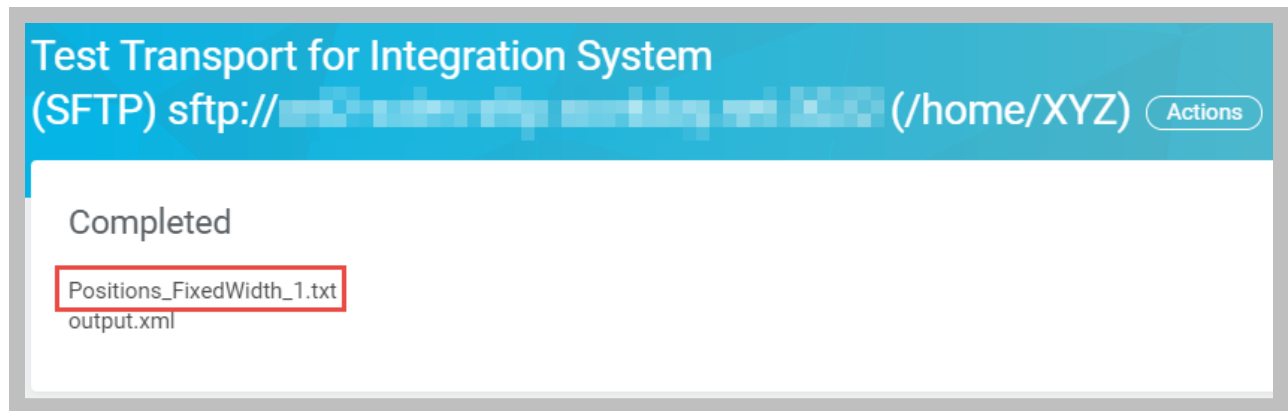
Date and Time	Severity	Message	Background Process
04/07/2018 09:46:26.629 PM	Warning	No value output for required field Degree.	Integration ESB Invocation (WDINST DT Positions XTT Fixed - 04/07/2018 21:46:20.589 (Completed with Warnings))

143 - Document Transformation XTT Warning

## TASK #5: CONFIRM DELIVERY OF TRANSFORMED OUTPUT

- Scroll to the **Integration System link** (Initial Integration Event section) or search for **WICT CC Positions**, and use its related actions to select **Integration > Test Transport**.
- Use the **List Files** action to confirm the fixed width .txt file is on the SFTP server.

Note: The output.xml file from previous activities will also appear in the results.



144 - Test Transport results with Fixed Width file.



## CHAPTER 5 – SECURITY FOR INTEGRATIONS

### OVERVIEW

Workday has separate security requirements to set up and launch integration systems based on the integration type. Before you can create, edit, or launch an integration system, you must be in a security group that has access to the Integration security domain and permission to access the underlying integration system or template.

### OBJECTIVES

By the end of this chapter, you will be able to:

- Identify the requirements to configure and launch integration systems.
- Create an Integration System User to automate the execution of integration events.
- Schedule an integration system.



## INTEGRATION SYSTEM SECURITY

Workday's security model for integrations is as follows:

**Access to systems and output:** Workday provides several security domains that secure your users' access to integration templates and integration systems. These domains separate the permissions needed to configure an integration from the permissions needed to run an integration and view the integration's output documents. You can also segment integration templates and systems and then grant access separately for each segment.

**Access to Workday data:** All access to Workday data is through web service operations and Reports-as-a-Service.

**Access to external endpoints:** Workday provides encryption, decryption, and signature options using PGP. Workday provides encryption (for AS2), SFTP authentication, SAML logout, and web service authentication using X.509.

### SECURITY FOR ACCESS TO INTEGRATION TEMPLATES, SYSTEMS, AND EVENTS

Workday has separate security requirements to set up and launch integration systems (including EIBs) based on the integration type.

Security Domain	Allows
<b>Integration Build</b>	<ul style="list-style-type: none"> <li>• Create or edit an EIB.</li> <li>• Create or edit an integration system.</li> <li>• Deploy a Workday Studio integration.</li> <li>• View an integration system or EIB.</li> </ul>
<b>Integration Configure</b>	<ul style="list-style-type: none"> <li>• Configure an EIB.</li> <li>• Configure one or more integration services.</li> </ul>
<b>Integration Debug</b>	<ul style="list-style-type: none"> <li>• Debug a Workday Studio integration.</li> </ul>
<b>Integration Event</b>	<ul style="list-style-type: none"> <li>• Launch an integration.</li> <li>• Schedule an integration.</li> <li>• View resulting integration events, including integration output documents.</li> </ul>
<b>Integration Process</b>	<ul style="list-style-type: none"> <li>• View details of processes that are commonly executed as part of an integration.</li> </ul>

Security Domain	Allows
<b>Integration Reports</b>	<ul style="list-style-type: none"> <li>View integration reports, including reports for integration events, exception audits, messages, and integration IDs.</li> </ul>
<b>Integration Subscriptions</b>	<ul style="list-style-type: none"> <li>Edit integration subscriptions.</li> <li>View integration subscriptions.</li> </ul>
<b>Integrations: EIBs</b>	<ul style="list-style-type: none"> <li>Set up EIB-specific options (e.g. template model, custom report transformation).</li> </ul>

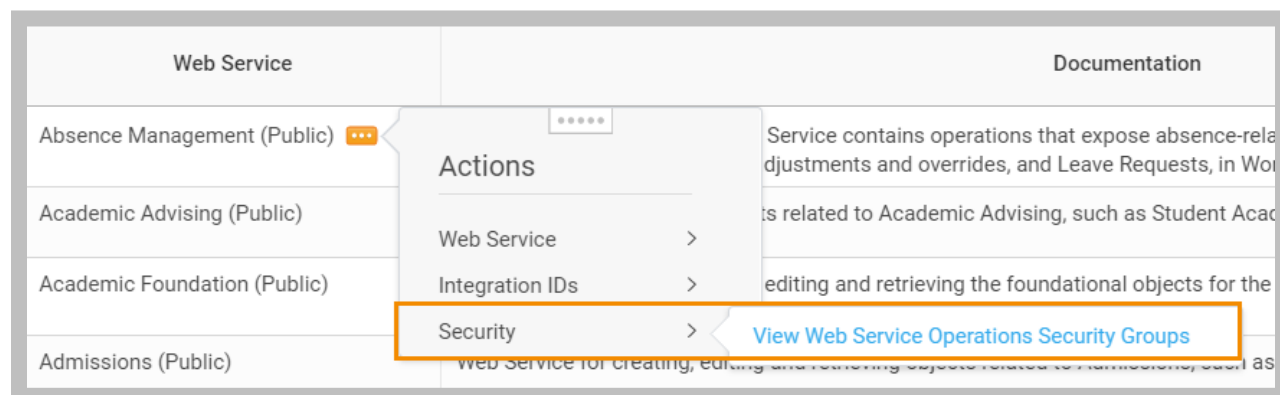


**Resource:** Review the Workday Administrator Guide “Reference: Security Domains for User Access to EIBs and Integrations” for the specific security requirements to configure and launch different integration system types.

## ACCESS TO WORKDAY DATA

All access to Workday data is through web service operations and Reports-as-a-Service; these web service operations, report data sources, class report fields, and custom reports are secured to various security domains. For custom integrations, your developer must provide a list of the web service tasks and/or reports used by the integration.

The Public Web Services report provides easy access to the permissions granted for web service operations:



### 145 - Viewing Web Service Operations Security Groups from the Public Web Services report



**Resource:** For delivered integrations, the complete list of connectors and their security requirements is available in the Workday Administrator Guide “Reference: Security Domains for Integration System Data Access”.

## INTEGRATION SYSTEM USER

Integrations systems require either a Workday user account or an Integration System User (ISU) account for authentication and access to web service tasks. While user accounts are useful for testing, and organization-specific data and business process requirements, you should adopt ISUs for the majority of your integrations. If you secure an integration with an ISU, changes to Workday user accounts won't affect normal processing of your integration.

You give ISUs access to data by making them members of Integration System Security Groups. In order for inbound integrations to work correctly, these security group(s) must have Put and/or Get access to the domains that contain the web service operations that interact with the necessary data.

### INTEGRATION SYSTEM USER

Access the [Create Integration System User](#) task and enter a User Name and New Password. An ISU represents a system, not a person. It is not intended that this user will launch the integration system from the tenant UI. As such, unless the ISU is for external access to Workday web services, the password should be complex and does not need to be memorable.

**Create Integration System User**

**Account Information**

User Name \* CC Positions ISU

Generate Random Password ☐

Password Rules Your new password must not be the same number of characters required: 8. The following alphabetic characters, uppercase character special characters !\"#\$%&()\*+,-./:;>?@[\]^\_

New Password \* .....

New Password Verify \* .....

Require New Password at Next Sign In ☐

Session Timeout Minutes Enforced 120

Session Timeout Minutes 0

Do Not Allow UI Sessions ☒

#### 146 - Creating an Integration System User



**Security Note:** A user with Get or Put access to a domain also has View and Modify access to reports and tasks in that domain. The Do Not Allow UI Sessions setting prevents this user from being able to log in to the tenant to perform UI tasks.

### INTEGRATION SYSTEM SECURITY GROUP

Access the [Create Security Group](#) task and create an *Integration System Security Group (Unconstrained)*. (Unconstrained security groups are not limited by organization.)

147 - Creating an Integration System Security Group

Once the group is created, you may add integration users.

148 - Adding an ISU to an Integration System Security Group



**Security Note:** Although security groups are reusable, Workday recommends having a single ISU per integration system security group. This mitigates “privilege creep”, the tendency to accumulate permissions above what each individual in the group needs.

## SECURITY POLICIES

Data access in Workday is organized by functional area (e.g., Resource Management). Each functional area includes Domain security policies that give access to UI tasks and fields (e.g., business asset report fields), and Business Process security policies that control many data entry transactions (e.g., Create Expense Report).



**Tip:** Use the Domain Security Policies for Functional Area and Business Process Security Policies for Functional Area reports to review and configure the permissions of each domain or business process in a Workday application.

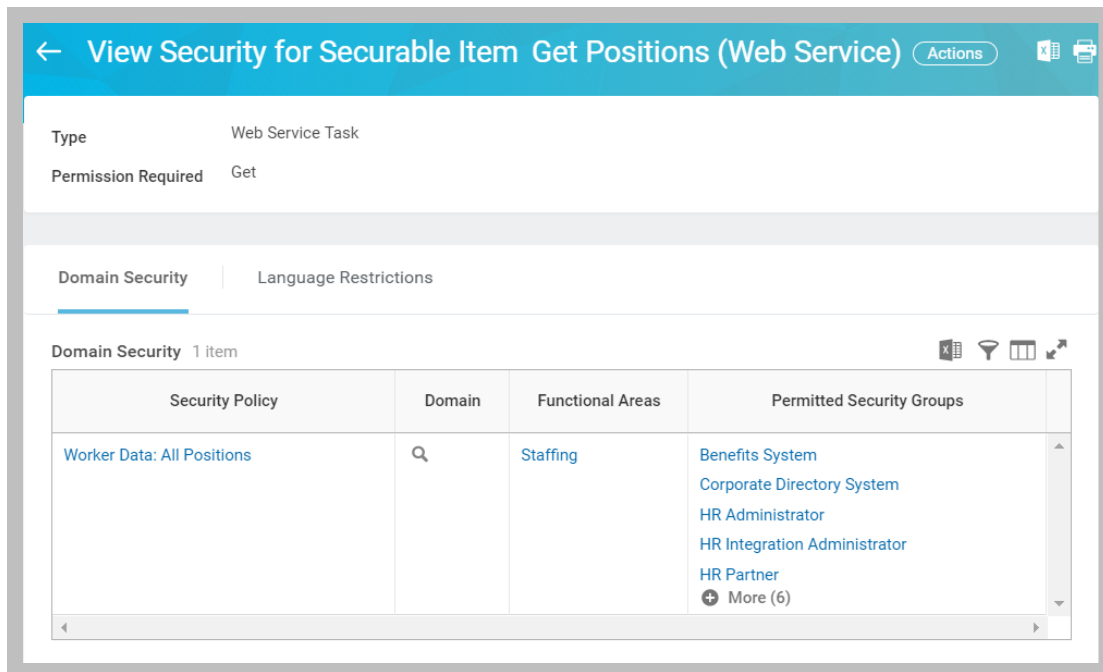
You must first determine which web service tasks your integration system needs to access. Once you have identified the domains and/or business processes for those operations, assign the integration system security group to the appropriate security policies.



**Security Note:** Security policy updates do not take effect immediately and are not effective dated. You must activate any pending policy changes at the moment when you want them to take effect.

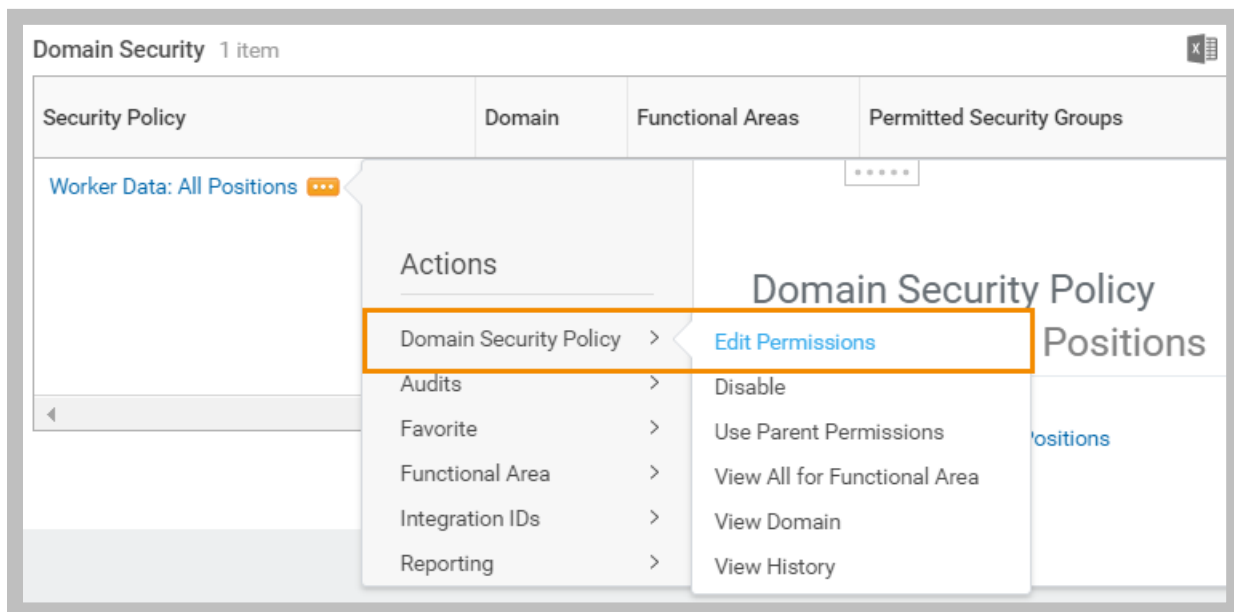
## Maintaining Security Policies

For each web service operation required by your integration system, access the View Security for Securable Item report and enter the web service task name, then note the security domain or business process security policy to which the operation is secured.

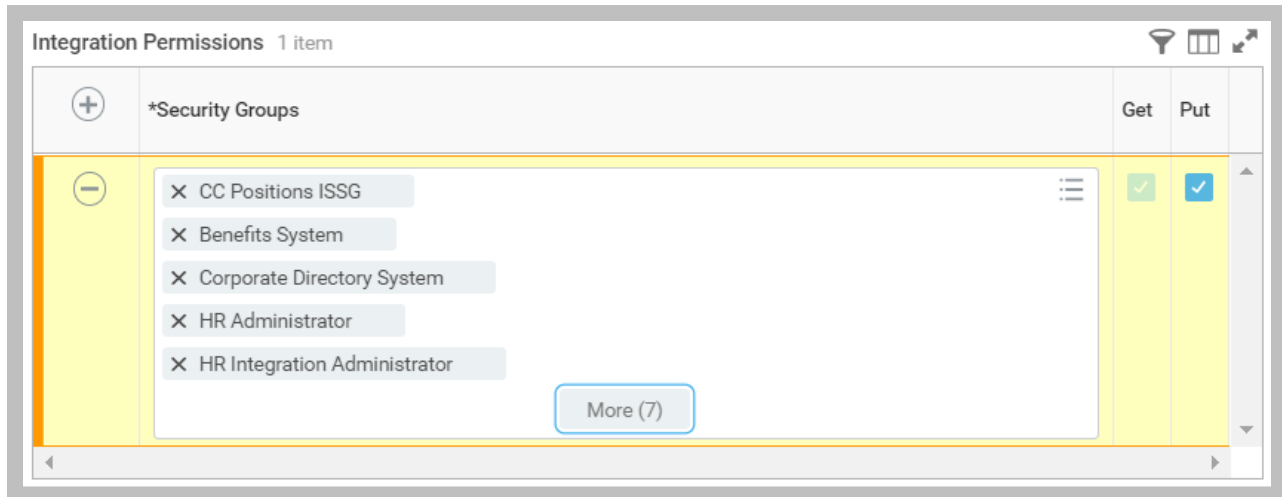


### 149 - View Security for Securable Item report

Modify the security policy identified using the Related Actions of the policy or domain to include your integration system security group.

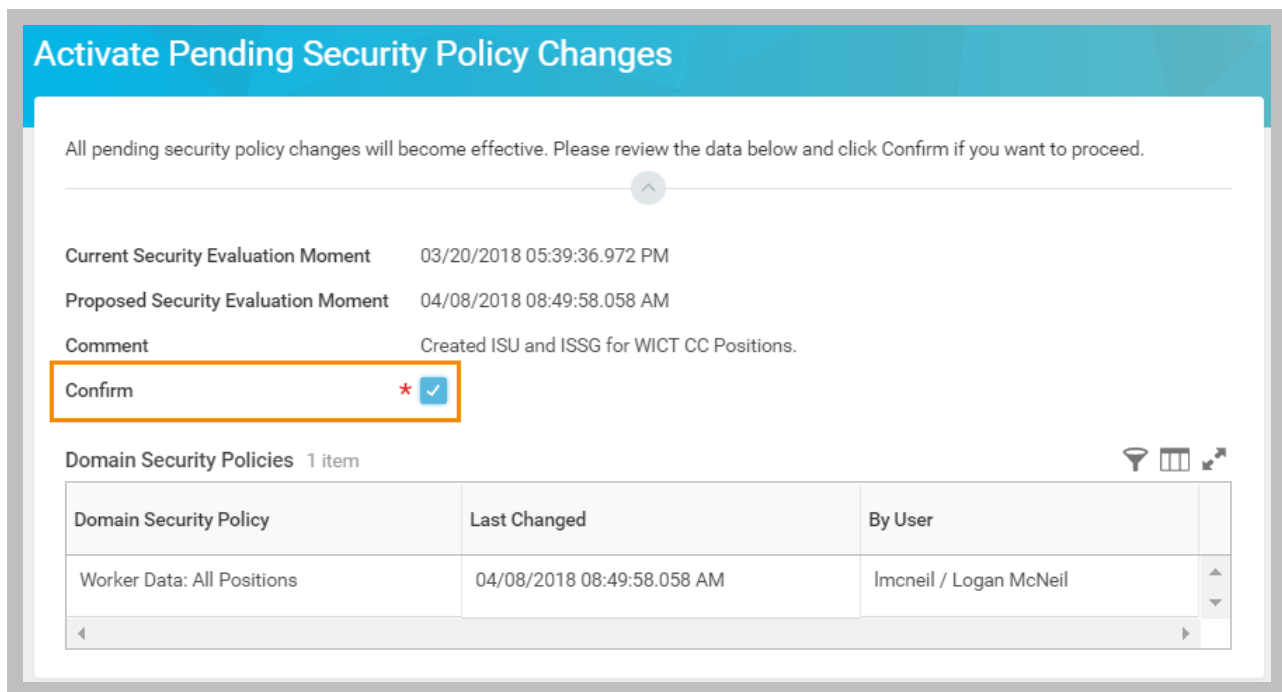


### 150 - Editing the Permissions of a Domain Security Policy



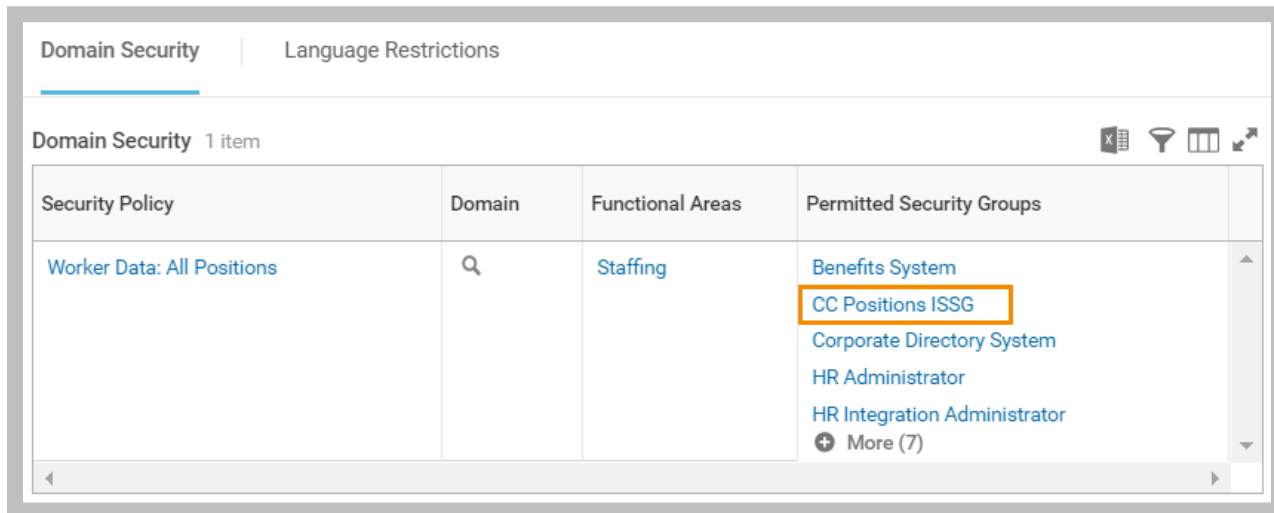
#### 151 - Adding a Security Group to a Domain's Integration Permissions

Next, run the Activate Pending Security Policy Changes task.



#### 152 - Confirming the Activation of Pending Security Policy Changes

Run the [View Security for Securable Item](#) report to confirm that your Integration Security Group is now a Permitted Security Group for that web service operation.

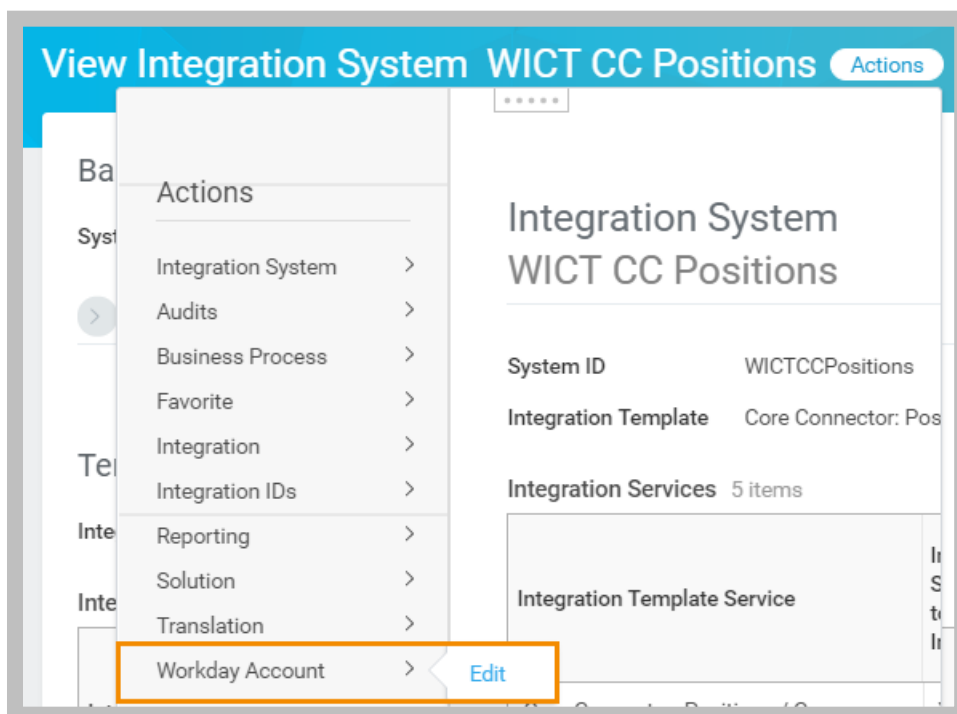


Security Policy	Domain	Functional Areas	Permitted Security Groups
Worker Data: All Positions		Staffing	Benefits System CC Positions ISSG Corporate Directory System HR Administrator HR Integration Administrator + More (7)

153 - Domain Security Permitted Security Groups with Integration System Security Group included

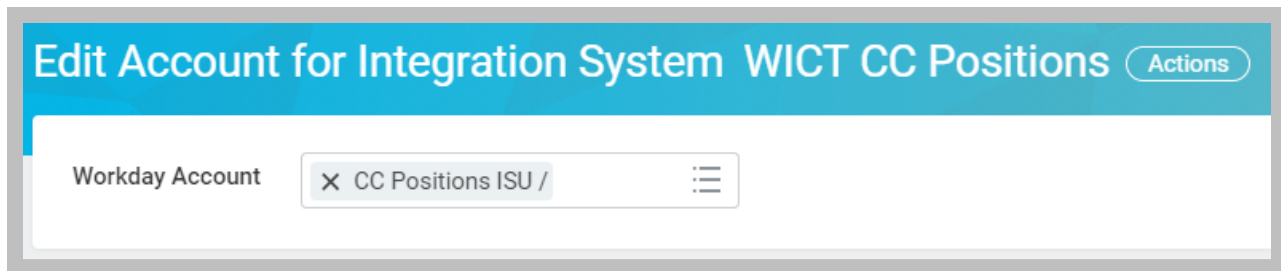
### Editing Integration System Workday Account

Add the ISU to the integration system by using its Related Actions to select **Workday Account** > **Edit**.



154 - Editing the Workday Account of an Integration System





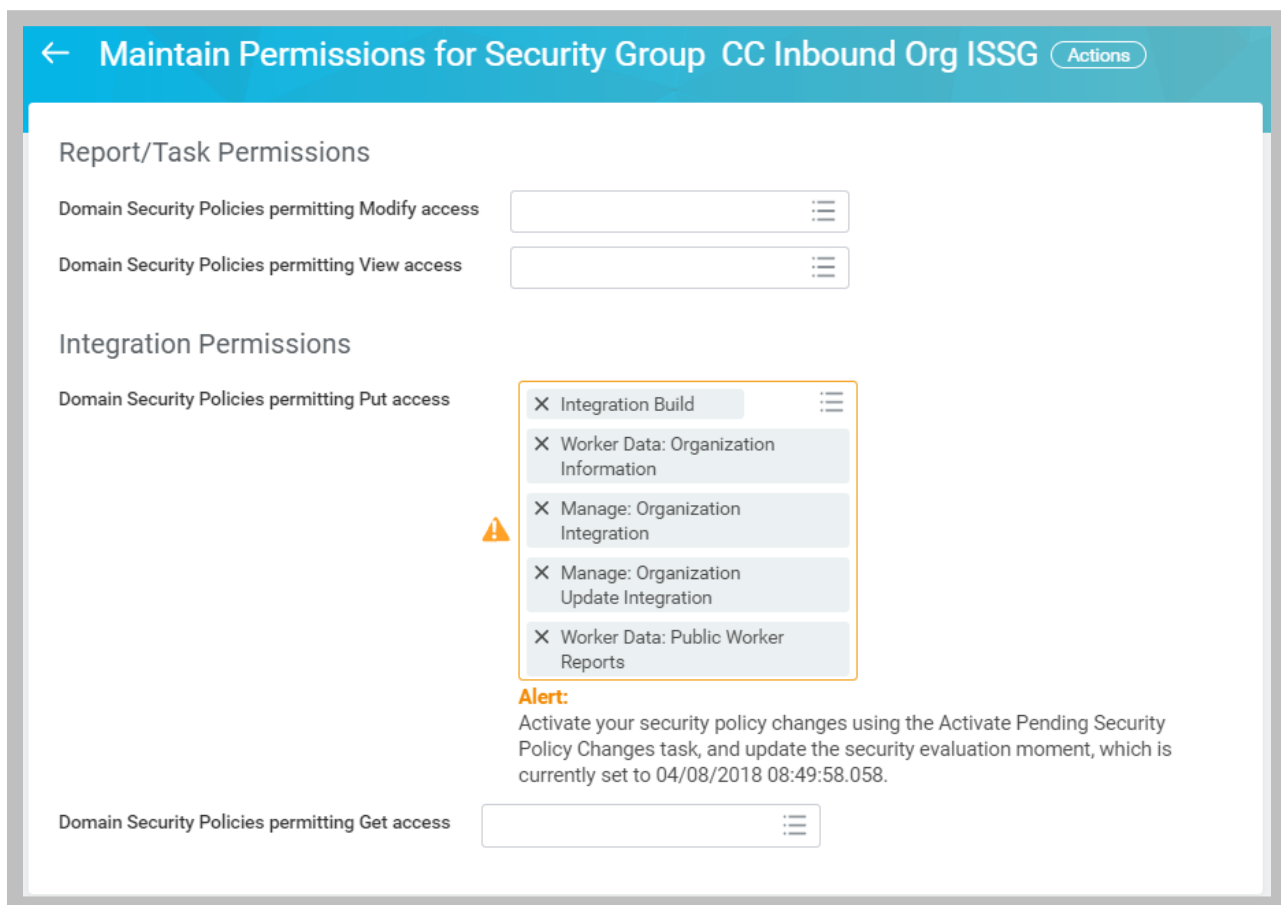
#### 155 - Assigning the ISU as the Workday Account for Integration System



**Important:** Once an ISU has been assigned as a Workday Account, it is no longer available for other integration systems.



**Tip:** Customers can leverage the Maintain Permissions for Security Group task to assign domain security policies to security groups in bulk. This can be useful when you have a known list of domains, such as those provided for integration system templates in the Workday Administration Guide.



#### 156 - Maintaining Integration Permissions for Security Group

### Workday Integration System Fundamentals for Workday 30



## ACTIVITY 5.1 – CREATE AN INTEGRATION SYSTEM USER

**Business Case:** You now need to synchronize positions on a regular schedule. You will create a new integration system user and unconstrained integration security group, update (and activate) the appropriate security policies, and assign the ISU to your connector.

- **Core Connector:** Positions only needs access to the Worker Data: All Positions domain if you are not including job information in the output.

**Note:** If you used the shortcut in Activity 4.4, continue to use “WDINST CC Positions with DT” instead of “WICT CC Positions” in this activity.

### TASK #1: CREATE INTEGRATION SYSTEM USER AND EDIT PERMISSIONS

1. Sign in as Logan McNeil (*lmcneil*).
2. Search for and select the Create Integration System User task and enter the following:

<b>Field Name</b>	<b>Entry Value</b>
User Name	CC Positions ISU
New Password / New Password Verify	P@ssw0rd

3. Click **OK** and **Done**.
4. Search for and select the Create Security Group task and enter the following:

<b>Field Name</b>	<b>Entry Value</b>
Type of Tenanted Security Group	Integration System Security Group (Unconstrained)
Name	CC Positions ISSG

- A. Click **OK** to continue.
  - B. Select the *CC Positions ISU* account for Integration System Users.
  - C. Click **OK** and **Done**.
5. Run the View Security for Securable Item report for the Domain Item of *Get Positions (Web Service) (Web Service Task)*.

6. Use the Related Actions of the Worker Data: All Positions security policy to select Domain Security Policy > Edit Permissions.
  - A. Under Integration Permissions, use the prompt on the existing Get/Put record to select your *CC Positions ISSG* security group (do not add another row).
  - B. Click **OK** and **Done**.
7. Search for and select the Activate Pending Security Policy Changes task.
  - A. Enter a Comment and click **OK**.
  - B. Select the **Confirm** check box and click **OK**.
8. Run the View Security for Securable Item report for the Domain Item of *Get Positions (Web Service) (Web Service Task)* to confirm your new security group was added.

## TASK #2: EDIT INTEGRATION SYSTEM WORKDAY ACCOUNT

1. Search for and select the WICT CC Positions integration system.
2. Use the Related Actions to select Workday Account > Edit.
  - A. Select *CC Positions ISU* for the Workday Account.
  - B. Click **OK** to save the Workday Account.
  - C. Click **OK** to accept the default account preferences.

**View Integration System WICT CC Positions**

**Basic Details**

System Name WICT CC Positions

> System ID

Workday Account CC Positions ISU /

157 - View Integration System with Workday Account

### TASK #3: SCHEDULE INTEGRATION

1. Use the WICT CC Positions' Related Actions to select Integration > Launch/Schedule.
2. For Run Frequency, select *Hourly Recurrence* and click **OK**.
3. Accept the default Integration Criteria, select **Schedule** and enter the following:

<b>Field Name</b>	<b>Entry Value</b>
Recurrence Interval	Every 1 Hour (default)
Start Time	[Next possible 15-minute interval]
Start Date	[Today's date]
End Date	[Tomorrow's date]


Integration System WICT CC Positions

Run Frequency Hourly Recurrence

---

Integration Criteria | **Schedule**

---

**Hourly Recurrence Criteria**

Recurrence Interval \*

Start Time \*

Time Zone \*

---

**Range of Recurrence**

Start Date \*

End Date \*

## 158 - Hourly Recurrence Schedule

4. Click **OK**.
5. Wait until after your runtime and view the Integration Events report.

TIP: The Scheduled Future Processes report includes a **Refresh** button.

Scheduled Future Processes										
Background Processes 58 items										
Process Type	Process	Request Name	Run Frequency	Owned By	Restricted to Environment	Start Date	End Date	Status	Number of Times Run	Next Scheduled Date and Time
Integration	Daily Xignite Currency Load	Daily Xignite Currency Load	Monthly Recurrence	Teresa Serrano	TM	02/01/2016	01/01/2020	Active	48	04/15/2018 00:00 PDT
Integration	Daily Xignite Currency Load	Daily Xignite Currency Load	Monthly Recurrence	Teresa Serrano	TM	12/08/2014	01/01/2020	Active	24	04/30/2018 00:00 PDT
Integration	Monthly Currency Rate Load (EIB)	Monthly Currency Rate Load (EIB)	Monthly Recurrence	Teresa Serrano	TM	02/01/2014	01/01/2020	Active	24	05/01/2018 02:00 PDT
Integration	Quarterly Currency Rate Load (EIB)	Quarterly Currency Rate Load (EIB)	Monthly Recurrence	Teresa Serrano	TM	04/01/2014	01/01/2020	Active	8	07/01/2018 02:00 PDT
Integration	WICT CC Positions	WICT CC Positions	Hourly Recurrence	Logan McNeil		04/08/2018	04/14/2018	Active	1	04/08/2018 12:30 PDT
Job	Ad Hoc Campaign Run Scheduled Process	Daily New Hire Campaign Run	Daily Recurrence	Logan McNeil	TM	03/04/2018	09/15/2018	Active	0	04/09/2018 00:00 PDT

## 159 - Scheduled Future Process report filtered by Process

6. View the **Integration Details** of the integration event to confirm that it Ran As the ISU.

Integration Details

Process Info

Process History

Output Files (0)

Messages

Initiated From

Trigger    [Scheduled / WICT CC Positions / Imcneil / Logan McNeil / Next Fire Time: 04/08/2018 12:30:00.000 PDT](#)

Integration Process

Parent Event    [Integration: WICT CC Positions - 04/08/2018 11:30:01.513](#)

Integration Event    [WICT CC Positions - 04/08/2018 11:30:01.513 \(Processing\)](#)

Event Type    Integration Event

Integration System    [WICT CC Positions](#)

Initiated By    [Logan McNeil](#)

Initiated at    04/08/2018 11:30:01.513 AM

Ran As

CC Positions ISU /

160 - Integration Event for a scheduled integration



## CHAPTER 6 – WORKDAY STUDIO

### OVERVIEW

Workday Studio is a powerful, Eclipse-based development tool enabling customers and partners to build sophisticated and highly customizable integrations to and from Workday.

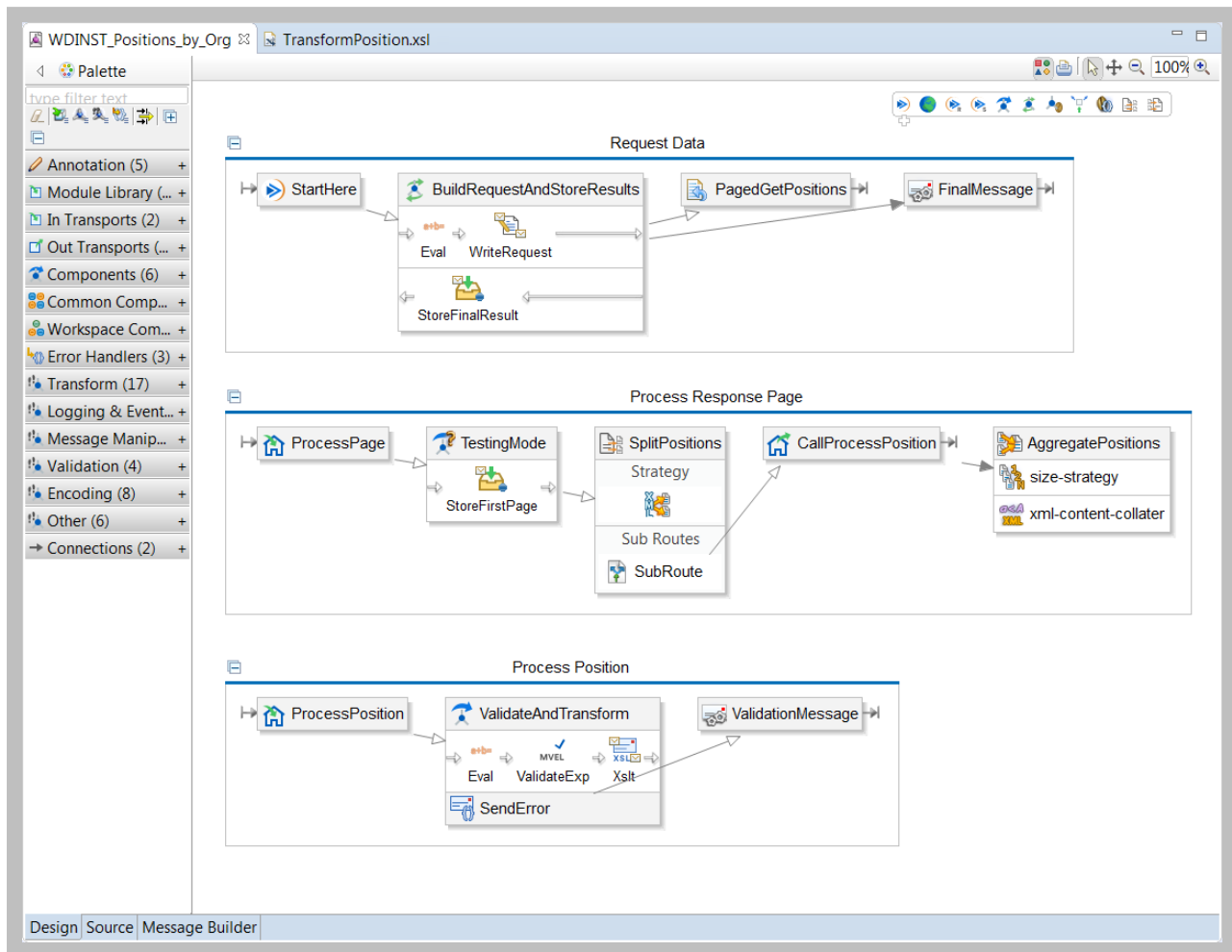
### OBJECTIVES

By the end of this chapter, you will be able to:

- Identify the integration requirements that are best solved with Workday Studio.
- Configure sequence generator, maps, and attribute services for a deployed Workday Studio collection.
- Launch and monitor a Studio integration system.

## COMPLEX INTEGRATIONS – WORKDAY STUDIO PLATFORM

Studio is a module build on top of the open-source Eclipse IDE (Integrated Development Environment) that helps developers design and build integrations. With this development tool, you create assemblies of reusable components that include transport, routing, configuration, and mediation steps. These assemblies form the basis of your integration.



### 161 - Example Workday Studio Assembly

Studio assemblies provide much tighter control over the flow of your integration, allowing for conditional branching and iteration, flexible exception handling and logging, and highly scalable processing of multiple data sources and endpoints. As an Eclipse module, Studio also supports custom Java.



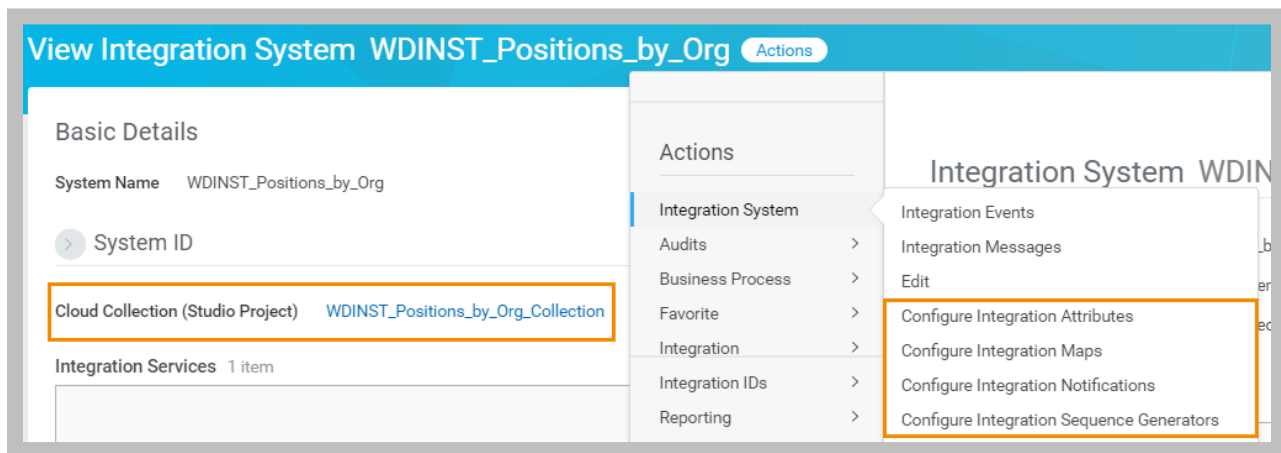
**Resource:** Visit the Workday Studio Community site to learn more about the platform and to download and install Studio: <https://community.workday.com/studio>.



## WORKDAY STUDIO DEVELOPMENT

Studio integrations are developed in distinct phases:

- **Design:** Developers build assemblies in the Studio IDE installed on their workstations.
- **Deploy:** Studio users with Integration Build permissions deploy those assembly projects as archived collections into the Workday tenant.
- **Configure:** Integration administrators then use the Workday UI to configure any services needed by the Studio integration system, such as integration maps and transports.
- **Launch and Monitor:** Once configured, these integration systems are ready to be tested and eventually scheduled in production.



162 - Deployed Studio Integration System with configurable services



**Note:** Although developers can test their assemblies by launching and monitoring their progress in Studio itself, the integrations actually run on an Enterprise Service Bus (ESB) in the Workday Cloud. You cannot test a Studio integration without tenant access.



**Additional Training:** The Introduction to Workday Studio (2-day VILT) course provides an overview of Studio capabilities and introduces key concepts in managing and deploying Workday projects, and in understanding integration message flow. Advanced Workday Studio (3-day VILT) covers more detailed programmatic concepts, including routing, scalability, error handling, and collections.

## CONSOLIDATED REPORT AND LOGS

Integration events include a set of logs used for troubleshooting integrations. These include the launch request, server console log, and a performance profile log in CSV format. The consolidated report summarizes all of these in an XML format. It is available for EIB and some Connectors, but is most useful for troubleshooting Studio integrations.

Consolidated Report and Logs

4 items

Date and Time Created	Document	Document Tag
04/08/2018 12:23 PM	<a href="#">request-87282aa5e8b5017a863b01e41000af00.log</a>	Cloud Request
04/08/2018 12:23 PM	<a href="#">server-87282aa5e8b5017a863b01e41000af00.log</a>	Log File
04/08/2018 12:23 PM	<a href="#">profile-87282aa5e8b5017a863b01e41000af00.log</a>	Log File
04/08/2018 12:23 PM	<a href="#">consolidated-report-87282aa5e8b5017a863b01e41000af00.xml</a>	Consolidated Report

View Consolidated Report and Logs

View Performance Log

163 – Consolidated Report and Logs section of the View Background Process report

### VIEW CONSOLIDATED REPORT AND LOGS

Click **View Consolidated Report and Logs** to see the overall event status and performance. Use the table to review detailed messages by component (item view) or a grid of components with status and processing times (tabular view).

WDINST\_Positions\_by\_Org

Service: WDINST\_Positions\_by\_Org


Start Date and Time: 04/08/2018 12:22:44.919 PDT


End Date and Time: 04/08/2018 12:22:57.843 PDT



Total Processing Time (ms): 10105

Status: Completed

Priority: Medium

Launch Request:  [request-87282aa5e8b5017a863b01e41000af00.log](#)

Log File:  [server-87282aa5e8b5017a863b01e41000af00.log](#)

Viewing:  

140 items

Order	Source	Event Type	Status	Processing Time (ms)	Component	Endpoint	Description
000	WDINST_Positions_by_Org.workday-in.StartHere.local-out	TRANSPORT	COMPLETED	1119		vm://wcc/GetIntegrationSystems	
001	wcc.local-in.GetIntegrationSystems	TRANSPORT	COMPLETED	168			
002	GenerateRequestAndParseIntSys.request.0.CreateRequest	STEP	COMPLETED	2	WriteStep		
003	UseMetadataAccountToken.request.0.AddAuthToken	STEP	COMPLETED	1	CustomStep		
004	WccDetermineEndpoint	ROUTE	COMPLETED	934			

#### 164 - View Consolidated Report and Logs in tabular format

### VIEW PERFORMANCE LOG

Click **View Performance Log** to review the more detailed profile information from the consolidated report. This report allows you to identify components that run poorly or have excessive memory usage.

WDINST\_Positions\_by\_Org

60 items

Integration	System Name	Component	Type	Calls	Total Time in Milliseconds	Average Time (ms)	Minimum Time (ms)	Maximum Time (ms)	Standard Deviation Time (ms)	Total Request Size (B)	Average Request Size (B)
WDINST_Positions_by_Org		PagedGetPositions	assembly	1	2863	2863	2863	2863	0	1424	1424
wcc		ParallelRouter	assembly	1	2854	2854	2854	2854	0		
wcc		PagedIteratorRouter	assembly	1	2852	2852	2852	2852	0		
wcc		LogCondition	assembly	1	2852	2852	2852	2852	0		
wcc		ProcessOrAggregatePages	assembly	1	2071	2071	2071	2071	0		
wcc		ProcessEachPage	assembly	1	2071	2071	2071	2071	0	89078	89078
WDINST_Positions_by_Org		WDINST_Positions_by_Org.workday-in.StartHere.local-out	assembly	1	1119	1119	1119	1119	0	4806	4806
WDINST_Positions_by_Org		SplitPositions	assembly	8	1082	135.25	24	393	137.47		
wcc		EarlyCompleteOrContinue	assembly	4	996	249	229	279	20.24		
WDINST_Positions_by_Org		TestingMode.request.0.StoreFirstPage	assembly	1	958	958	958	958	0		

#### 165 - View Performance Log



## ACTIVITY 6.1 – LAUNCH WORKDAY STUDIO INTEGRATION

Business Case: Your integration requirements have moved beyond the capabilities of delivered connectors, and you have engaged a resource to build a Workday Studio integration. You are now responsible for administering this integration system.

- The WDINST\_Positions\_by\_Org integration has already been deployed to your tenant.
- You will review the configured sequence generators, integration maps, and attributes before testing.

### TASK #1: REVIEW INTEGRATION SERVICES CONFIGURATION

1. Sign in as Logan McNeil (*lmcneil*).
2. Search for and select the WDINST\_Positions\_by\_Org integration system.
3. Review the Custom Integration Services and make note of any Integration Attributes, Integration Maps, and Launch Parameters.

Custom Integration Services 2 items

Integration System Service
WDINST_Positions_by_Org / Positions by Org Filenames*
WDINST_Positions_by_Org / Positions by Org Maps and Attributes*

Integration Attributes | Integration Maps | Launch Parameters

Integration Attributes 2 items

Attribute Provider	Attribute	Description
Cloud Integration Broker	WorkdayIn Connector ID	
Positions by Org Maps and Attributes	Testing Mode	

#### 166 - Custom Integration Services

4. Answer the following:
  - A. What is the value of the Testing Mode attribute?
  - B. What is the name of the Integration Map? What values are being mapped?
  - C. What is the Launch Parameter? Is it Required?
5. Use the related actions to select Integration System > Configure Integration Sequence Generators.
6. Answer the following:
  - A. How many Integration Sequencers have been configured?
  - B. What are their Format/Syntax values?

## TASK #2: LAUNCH A STUDIO INTEGRATION

1. Launch the integration using its related actions to select Integration > Launch/Schedule.
2. Click **OK** to Run Now.
3. Select *IT HelpDesk Department* for Supervisory Organization and click **OK**.
4. **Refresh** the Integration Event until processing is complete.
  - A. What is the Status?
  - B. Are there any Error or Warning messages?
  - C. Which tab shows the launch parameter value?
  - D. What files were output?
  - E. Are any of the files Deliverable?

Process: [WDINST\\_Positions\\_by\\_Org](#)  
 Request Name: [WDINST\\_Positions\\_by\\_Org](#)  
 Status: **Completed With Errors**  
 Current Processing Time (hour:min:sec): 00:00:19  
 Number of Errors: [2](#)

Integration Details | Process Info | Process History | Output Files (2) | **Messages (5)** | Child Processes (2)

Process Messages 5 items

Date and Time	Severity	Message	Background Process
04/08/2018 12:23:00.011 PM	Info	Launch Request, Log files and Consolidated Report.	Integration ESB Invocation (WDINST_Positions_by_Org - 04/08/2018 12:22:41.263 (Completed With Errors))
04/08/2018 12:22:57.302 PM	Info	Positions by Organization complete!	Integration ESB Invocation (WDINST_Positions_by_Org - 04/08/2018 12:22:41.263 (Completed With Errors))
04/08/2018 12:22:56.691 PM	Error	No Worker Type restriction for filled position: P-00043	Integration ESB Invocation (WDINST_Positions_by_Org - 04/08/2018 12:22:41.263 (Completed With Errors))
04/08/2018 12:22:55.922 PM	Error	No Worker Type restriction for filled position: P-00030	Integration ESB Invocation (WDINST_Positions_by_Org - 04/08/2018 12:22:41.263 (Completed With Errors))
04/08/2018 12:22:55.662 PM	Info	Positions_Original_2018-04-08_1.xml	Integration ESB Invocation (WDINST_Positions_by_Org - 04/08/2018 12:22:41.263 (Completed With Errors))

## 167 - Studio Integration Event Messages

5. Download and view the output files.
  - A. How are the files different?
  - B. Where do you see the value of the Integration Attribute?

#### CHALLENGE TASK #1: DISABLE TESTING MODE

1. Use the Configure Integration Attributes related action to clear Testing Mode.
2. Relaunch the integration and compare the results.

#### CHALLENGE TASK #2: DELIVER OUTPUT

1. Create a custom integration process event to add a Delivery Service step.
2. Configure the Delivery to send the final output (only) to your SFTP folder using the same credentials as provided for WICT CC Positions.

#### CHALLENGE TASK #3: SCHEDULE INTEGRATION

1. Create an ISU and give it the appropriate permissions to launch WDINST\_Positions\_by\_Org.

Hint: The only operation used by this assembly is Get Positions.

2. Assign the ISU as the Studio Workday Account and schedule the integration to run with a daily recurrence.



## CHAPTER 7 – COMMON DESIGN PATTERNS

### OVERVIEW

Workday provides several types of integration tools that can address a wide range of data interchange problems. Often, a solution may require a combination of integration systems to fulfill a requirement.

### OBJECTIVES

By the end of this chapter, you will be able to:

- Explain Workday's recommendations for inbound and outbound integrations.
- Compare the strengths and limitations of the different integration tools.
- Determine the appropriate design pattern(s) for common use cases.



## RECOMMENDATIONS

### FULL FILE RECOMMENDATIONS

Use a full data extract when your integration is not dependent on changes since the last run.

Connector	EIB	Studio
<ul style="list-style-type: none"> <li>• Use when available</li> <li>• Performance-tested</li> <li>• Use Document Transformation or Studio to enrich output</li> </ul>	<ul style="list-style-type: none"> <li>• Low complexity</li> <li>• Low volume</li> </ul>	<ul style="list-style-type: none"> <li>• Allows complex, conditional logic</li> <li>• Scales to large data sources (paging)</li> </ul>

### CHANGE FILE RECOMMENDATIONS

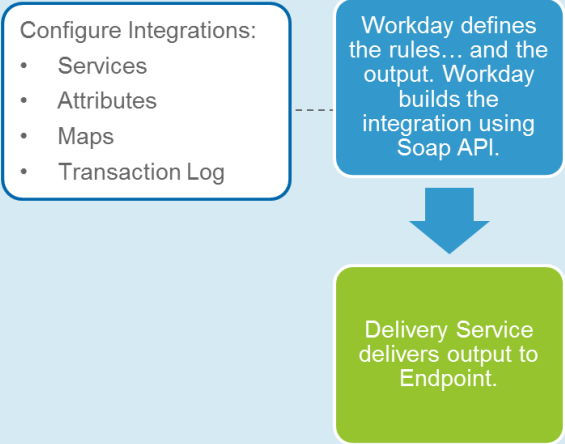
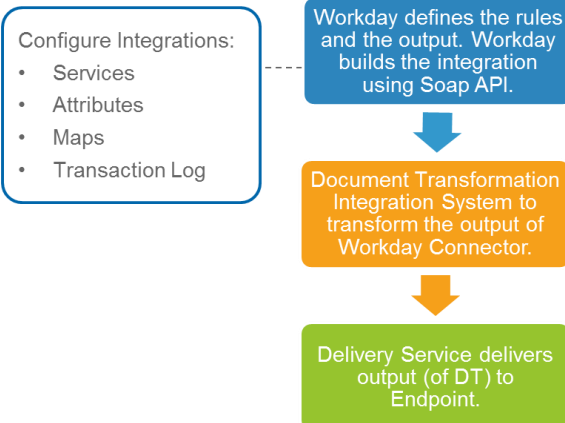
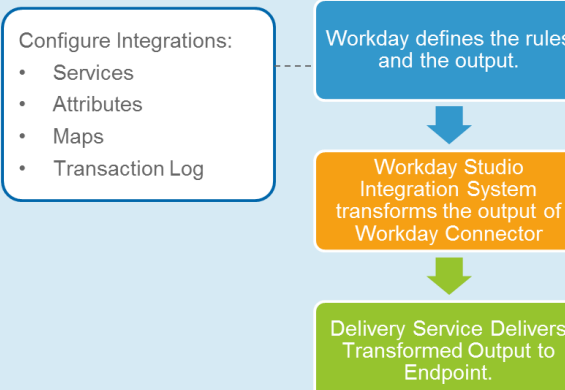
Some Workday tools are better than others at detecting changes between integration events.

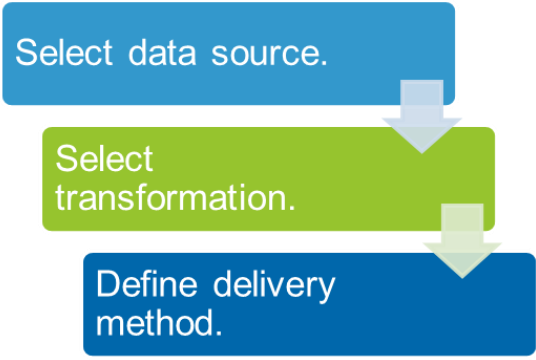
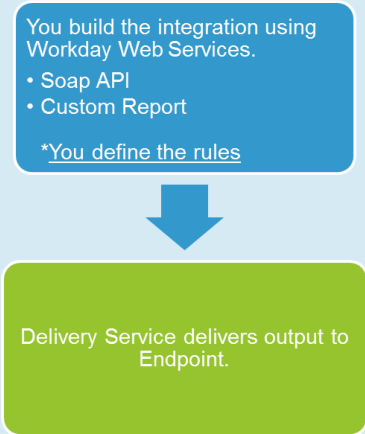
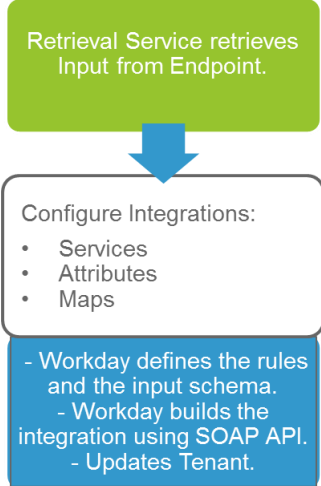
Connector	Studio	Avoid EIB
<ul style="list-style-type: none"> <li>• Use when available</li> <li>• Built-in Change Detection</li> <li>• Transaction Log Service</li> <li>• Performance-tested</li> <li>• Use Document Transformation or Studio to enrich output</li> </ul>	<ul style="list-style-type: none"> <li>• Supports Transaction Log</li> <li>• Allows complex logic</li> <li>• Scales to large data sources (paging)</li> </ul>	<ul style="list-style-type: none"> <li>• Requires complex calculated fields</li> <li>• Computing differences with calc fields is costly</li> <li>• Would need to maintain multiple calc fields</li> </ul>

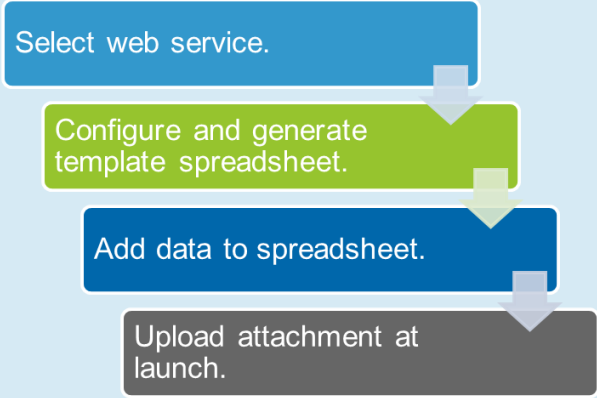
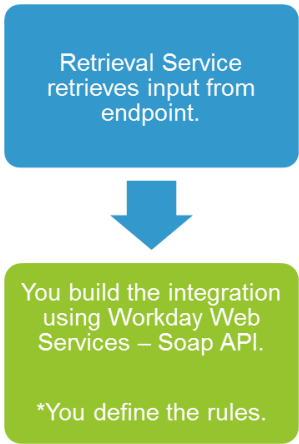
### INBOUND RECOMMENDATIONS

Connector	EIB	Studio
<ul style="list-style-type: none"> <li>• Use when available</li> <li>• Performance-tested</li> <li>• Generally supports XML and CSV schemas without transformation</li> <li>• Can use DT to transform XML</li> </ul>	<ul style="list-style-type: none"> <li>• Supports spreadsheet templates for user loads</li> <li>• Supports Import Web Services</li> <li>• Scheduling possible, but not recommended</li> </ul>	<ul style="list-style-type: none"> <li>• Supports Import Web Services</li> <li>• Scales to large data sources (splitting, document iteration)</li> <li>• Can transform multiple formats</li> </ul>

## DESIGN PATTERNS

Pattern	Benefits/Limitations
<p><b>Outbound Connector</b></p>  <pre> graph TD     A[Configure Integrations: • Services • Attributes • Maps • Transaction Log] -.- B[Workday defines the rules... and the output. Workday builds the integration using Soap API.]     B --&gt; C[Delivery Service delivers output to Endpoint.]   </pre>	<ul style="list-style-type: none"> <li>• Delivered</li> <li>• Built-in change detection</li> <li>• Works for Full File and Changed File</li> <li>• Can filter by the Transaction Log</li> <li>• Reasonable if only a restricted number of field overrides (&lt; 30)</li> <li>• Avoid overrides that use calculated field prompts</li> <li>• Out of the box support for the required output format</li> <li>• Delivery service supports the file delivery requirements</li> </ul>
<p><b>Outbound Connector with Document Transformation</b></p>  <pre> graph TD     A[Configure Integrations: • Services • Attributes • Maps • Transaction Log] -.- B[Workday defines the rules and the output. Workday builds the integration using Soap API.]     B --&gt; C[Document Transformation Integration System to transform the output of Workday Connector.]     C --&gt; D[Delivery Service delivers output (of DT) to Endpoint.]   </pre>	<ul style="list-style-type: none"> <li>• Document Transformation specifically designed to work with Connectors</li> <li>• ETV and XTT availability</li> <li>• Document Transformation can include integration maps and attributes</li> <li>• Reasonable if only a restricted to 3 or fewer transformations (otherwise, use Studio)</li> <li>• Runs in 2 hours or less</li> <li>• Delivery service supports the file delivery requirements</li> </ul>
<p><b>Outbound Connector with Studio</b></p>  <pre> graph TD     A[Configure Integrations: • Services • Attributes • Maps • Transaction Log] -.- B[Workday defines the rules and the output.]     B --&gt; C[Workday Studio Integration System transforms the output of Workday Connector]     C --&gt; D[Delivery Service Delivers Transformed Output to Endpoint.]   </pre>	<ul style="list-style-type: none"> <li>• Connector exists and outputs most of the required data fields</li> <li>• Use Studio to enrich output of Workday Connector</li> <li>• Reasonable if multiple and complex XSLT stylesheets are required (ETV/XTT available as of WD28)</li> <li>• Integration can complete in less than 2 hours</li> </ul>

Pattern	Benefits/Limitations
<p><b>Outbound EIB</b></p>  <pre> graph TD     A[Select data source.] --&gt; B[Select transformation.]     B --&gt; C[Define delivery method.]   </pre>	<ul style="list-style-type: none"> <li>• Fully Custom</li> <li>• Low complexity; no error handling</li> <li>• No change detection</li> <li>• No integration maps or attributes</li> <li>• Reasonable if all data can be retrieved in a single data source</li> <li>• No paging logic (Soap API)</li> <li>• One transformation only (ETV/XTT not supported)</li> <li>• One destination endpoint</li> <li>• 2 hour XSLT limit</li> </ul>
<p><b>Outbound Workday Studio</b></p>  <pre> graph TD     A["You build the integration using Workday Web Services. • Soap API • Custom Report *You define the rules"] --&gt; B[Delivery Service delivers output to Endpoint.]   </pre>	<ul style="list-style-type: none"> <li>• Fully Custom</li> <li>• Integration maps, attributes, and launch parameters</li> <li>• Split large input files</li> <li>• Aggregate data</li> <li>• More than one data source (multiple calls to Workday and/or externally)</li> <li>• Multiple output files</li> <li>• Multiple transformations (ETV/XTT supported as of WD28)</li> <li>• Support for non-XML schemas</li> <li>• Conditional logic and complex error handling capabilities</li> </ul>
<p><b>Inbound Connector</b></p>  <pre> graph TD     A[Retrieval Service retrieves Input from Endpoint.] --&gt; B["Configure Integrations: • Services • Attributes • Maps"]     B --&gt; C["- Workday defines the rules and the input schema. - Workday builds the integration using SOAP API. - Updates Tenant."]   </pre>	<ul style="list-style-type: none"> <li>• Connector interface includes all the data elements that need to be imported into Workday</li> <li>• Supports XML and CSV schemas</li> <li>• Retrieved file could be transformed by document transformation if XML</li> </ul>

Pattern	Benefits/Limitations
<p><b>Inbound EIB</b></p>  <pre> graph TD     A[Select web service.] --&gt; B[Configure and generate template spreadsheet.]     B --&gt; C[Add data to spreadsheet.]     C --&gt; D[Upload attachment at launch.] </pre>	<ul style="list-style-type: none"> <li>• User-driven, bulk data import</li> <li>• Single file is imported</li> <li>• Single web service is invoked</li> <li>• Manual upload</li> <li>• External file size &lt; 300 MB (attachments &lt; 30 MB; images &lt;1MB)</li> </ul>
<p><b>Inbound Workday Studio</b></p>  <pre> graph TD     A[Retrieval Service retrieves input from endpoint.] --&gt; B[You build the integration using Workday Web Services – Soap API. *You define the rules.] </pre>	<ul style="list-style-type: none"> <li>• Iterate through multiple files</li> <li>• Invoke multiple service operations</li> <li>• Supports any Public WWS</li> <li>• Conditional logic</li> <li>• Complex validation and error handling</li> </ul>



**Resource:** This guide is a static document; limitations may change between updates. Refer to the Workday Administration Guide “Reference: Integrations and Web Service Limits” for the most up-to-date integration system resource limits.



## Reference: Integrations and Web Service Limits

### Reference: Integrations and Web Service Limits

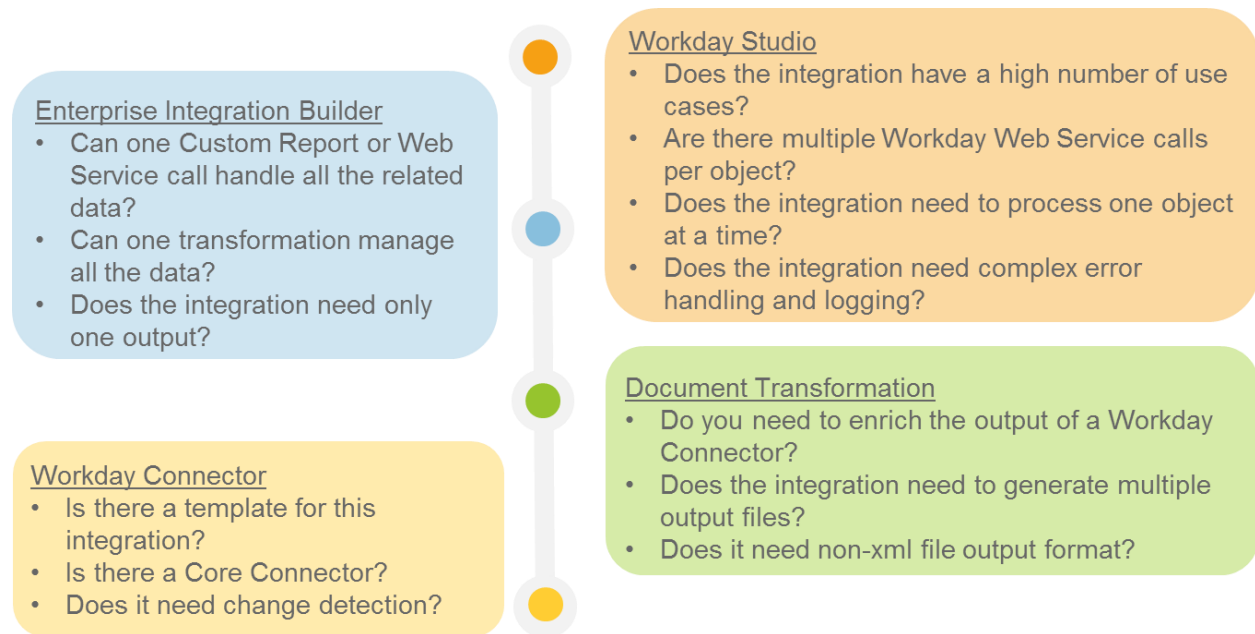
Workday limits processing of integration and web service requests as a guard against requests whose excessive processing time and/or web service calls cause a reduction in a customer's overall throughput and/or performance. The limits documented here are based on years of analysis and billions of transactions and don't normally impinge on well-functioning customer processing.

The customer can open a support case and Workday will work directly with any customer pushing up against these processing limits to understand their business requirements and to determine how to optimize their overall throughput.

Category	Limits/Boundaries
<b>API Requests</b>	<p>API requests throttled under high load:</p> <ul style="list-style-type: none"> <li>• Workday Web Services (WWS) API.</li> <li>• Workday REST API.</li> <li>• Workday Reports-as-a-Service (RaaS).</li> </ul> <p>Recommendation: Implement an exponential back-off retry mechanism for the process that generates the API requests.</p>
<b>Connectors: Runtime (including Document Transformation)</b>	<ul style="list-style-type: none"> <li>• Total for all files generated during the integration run: 3 GB (compressed).</li> <li>• Any single file generated during the integration run: 500 MB (compressed).</li> <li>• Memory used during processing: 27 GB.</li> <li>• Processing time: 30 hours. Any pause in processing doesn't count toward the 30-hour limit.</li> </ul>

168 - Reference: Integrations and Web Service Limits

### ORDER OF CONSIDERATION





## ACTIVITY 7.1 – DISCUSS INTEGRATION SCENARIOS

Business Case: Workday supports several integration options that perform similar functions but have distinct advantages and limitations. As a group, we will discuss the following scenarios to decide which tool(s) is the best for the job.

- We are not asking you to build these scenarios, just to discuss which technology potentially fits best.
- In some cases, there may be more than one possibility.
- Do not hesitate to consider “what-if” conditions. E.g., EIB would work if a certain assumption were true.

### SCENARIO 1

I need to output a list of active employees that have changes to either their position and/or compensation data in the past week.

### SCENARIO 2

I have an integration that I need to merge the results of a call to get position and job profiles in Workday. I need to transform the output into a .csv file and deliver to an SFTP server. This integration may process 1 position, or 100 positions, or more.

### SCENARIO 3

I need to process an incoming a plain text file to update locations in Workday.

### SCENARIO 4

I need to output a list of active employees. The output will include position and compensation data about each employee. The output must be a .csv file that is comma separated with each value in double quotes. If there is a value missing in the required Social Security Number field, I need an error message to be displayed on the integration event.

### SCENARIO 5

I need to process an inbound xml file that contains a list of positions. It is mostly formatted correctly but needs a couple of changes to the source XML before updating Workday. This small file will never contain more than 25 positions at a time.

### SCENARIO 6

I need to process an XML file that contains time off requests. I need to go through each request off and validate the worker’s status, state of residence, and social security number. Once validated, I will update Workday. If a worker fails any of the validations, their record will not be updated in Workday, but will be written out to a log error file.

### SCENARIO 7

I have a small group of Workers that are happy to manually enter a time off request but do not have access to Workday. If I can provide them with a template, they can populate it and email the file back to me.

### SCENARIO 8

Our Financials department needs to send us new organizations, updates to existing organizations, as well as be able to inactivate organizations. They are internal and are agreeable to the format of the file.

### SCENARIO 9

Run a report to get a list of active employees from a specified supervisory organization hired between a set of dates, generate a .csv file and deliver it to secured endpoint.

### SCENARIO 10

I need to process the Hire Employee process on an inbound xml file. I need to verify the position is available for each future employee and that each one has an existing pre-hire ID. If the position is not available for hire, I need to generate an error log for that record. If the position is available and they do not have an existing pre-hire ID, I need to create the pre-hire record before I process the hire. If the position is available and the pre-hire exists, I need to hire in Workday.

### SCENARIO 11

I need to send position information to a system of record.

What do I need to consider for this outbound integration?

### SCENARIO 12

I am receiving a file with a list of workers that have personal data updates.

What do I need to consider for this inbound integration?

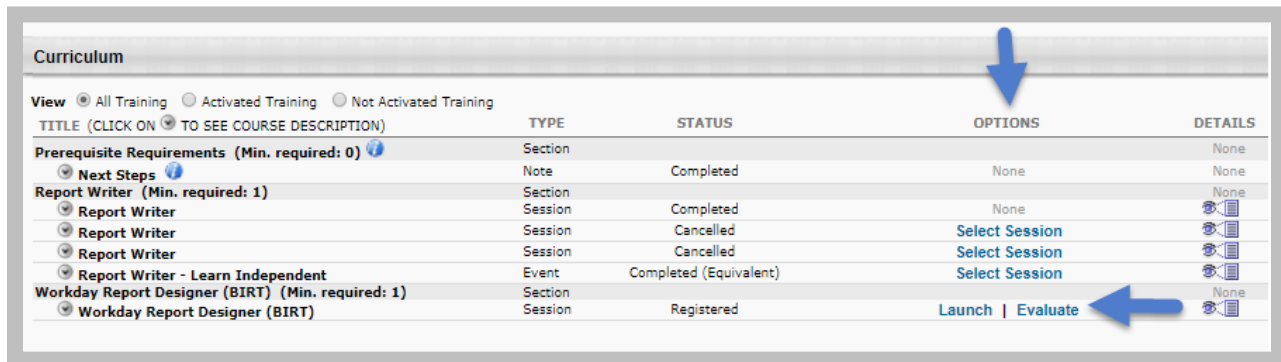




## APPENDIX A – CLASS EVALUATIONS

### CLASS EVALUATION (SESSION WITHIN A CURRICULUM): AVAILABLE AT THE START OF THE LAST DAY OF CLASS

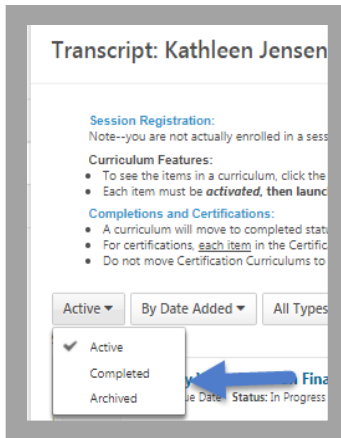
1. Log in to the Learning Center: <https://workday.csod.com>
2. Select **View Transcript**.
3. Locate the training session within the curriculum in your Active tab. (Use the search field to quickly find your training session and select the Curriculum Training Tile link to open the curriculum.)
4. Select **Evaluate** under the Options column.



Curriculum				
View <input checked="" type="radio"/> All Training <input type="radio"/> Activated Training <input type="radio"/> Not Activated Training				
TITLE (CLICK ON ⓘ TO SEE COURSE DESCRIPTION)				
	TYPE	STATUS	OPTIONS	DETAILS
Prerequisite Requirements (Min. required: 0) ⓘ	Section			None
Next Steps ⓘ	Note	Completed	None	None
Report Writer (Min. required: 1)	Section			None
Report Writer	Session	Completed	None	ⓘ ⓘ
Report Writer	Session	Cancelled	Select Session	ⓘ ⓘ
Report Writer	Session	Cancelled	Select Session	ⓘ ⓘ
Report Writer - Learn Independent	Event	Completed (Equivalent)	Select Session	ⓘ ⓘ
Workday Report Designer (BIRT) (Min. required: 1)	Section			None
Workday Report Designer (BIRT)	Session	Registered	Launch   Evaluate	ⓘ ⓘ

### CLASS EVALUATION (WITHIN A CURRICULUM): AVAILABLE AFTER CLASS ENDS AND ROSTER SUBMITTED

1. Log in to the Learning Center: <https://workday.csod.com>
2. Select **View Transcript**.
3. Select the **Active** tab to toggle to your **Completed** training.



**Note:** If the curriculum is still Active, meaning the curriculum requirements have not been met, the curriculum will remain on the Active tab.

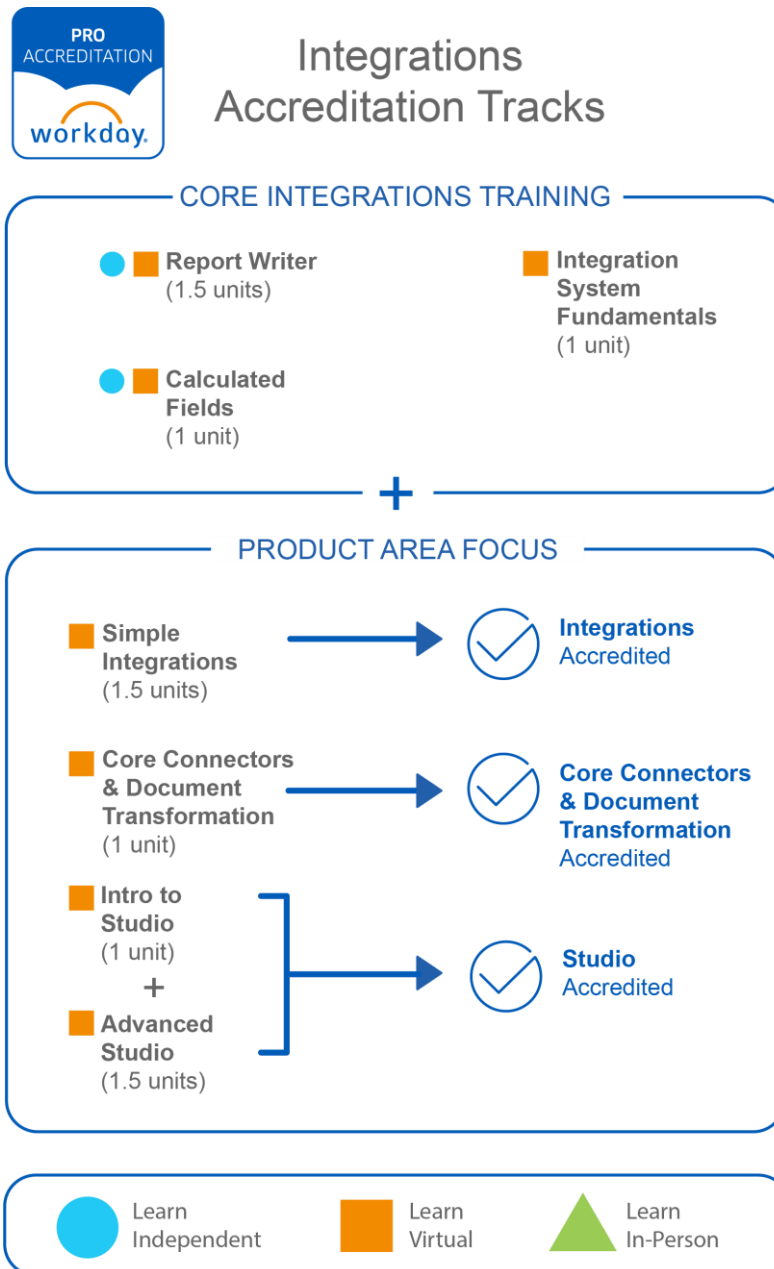
- Locate and select the completed training curriculum. Select the Training Title link to open the curriculum and locate the session. (Use the search field to quickly find your training session.)
- Click **Evaluate**.

Curriculum				
View <input checked="" type="radio"/> All Training <input type="radio"/> Activated Training <input type="radio"/> Not Activated Training				
TITLE (CLICK ON TO SEE COURSE DESCRIPTION)	TYPE	STATUS	OPTIONS	DETAILS
<b>Prerequisite Requirements (Min. required: 0)</b>	Section			None
Next Steps	Note	Completed	None	None
<b>Report Writer (Min. required: 1)</b>	Session			None
Report Writer	Session	Completed	None	
Report Writer	Session	Cancelled	Select Session	
Report Writer	Session	Cancelled	Select Session	
Report Writer - Learn Independent	Event	Completed (Equivalent)	Select Session	
<b>Workday Report Designer (BIRT) (Min. required: 1)</b>	Session			None
Workday Report Designer (BIRT)	Session	Completed	Evaluate	

## APPENDIX B – WORKDAY PRO

### CUSTOMER ACCREDITATION PROGRAM

Workday Pro is a customer-focused accreditation program targeted at customers who want to actively engage and work side-by-side with the ecosystem on a path to develop a similar level of knowledge and expertise. It consists of several tracks, each with relevant courses, plus a written test.



Learn more: [community.workday.com/pro](https://community.workday.com/pro)

## APPENDIX C: ACTIVITY ANSWER KEY

### INTRODUCTION

This section contains answers to questions posed throughout the activities in this course.

### CHAPTER 2 ANSWERS

#### ACTIVITY 2.2 – ADD BUSINESS OBJECTS TO RAAS

##### Task #2: Compare Simple XML to Workday XML

- 6A. Compare the Simple XML to the Workday XML. What do you notice about the business objects? Simple XML only contains object descriptors; no Integration IDs; multiple instances are collapsed into a single element; dates don't include time zone offset.
- 6B. Compare the actual URLs of the Workday XML and the Simple XML. What is the difference between them? The Simple XML URL includes &format=simplexml.
- 6C. What is controlling the element names of the fields in the Workday XML? For example, if you wanted to change the value of <wd:AvailabilityDt> to <wd:AvailabilityDate>, where is that action performed? Report definition – Column Heading Override XML Alias.
- 6D. When viewing the Workday XML, the document contains a namespace of wd="urn:com.workday.report/WICT\_RW\_Positions". Where in the report definition is that defined? Report definition – Advanced tab.

#### ACTIVITY 2.3 – FIND INTEGRATION IDS

##### Task #1: Use the UI to view Reference IDs

Object	Integration ID Type	Value
Organization	Organization_Reference_ID	Human_Resources_supervisory
Position	WID	ae5982654df8420dacc5f530e096215b
Time Type	Position_Time_Type_ID	Full_time
Location	Location_ID	San_Francisco_site

##### Task #2: Use the Integration IDs report to view Integration IDs

Business Object	Instance	Integration ID Type	Value
Language	French	WID	67327bff5f014925a36d37d2ef380159
Language	Russian	Language_ID	234.4
Country	United States	WID	bc33aa3152ec42d4995f4791a106ed09

Business Object	Instance	Integration ID Type	Value
Country	Canada	ISO_3166-1_Alpha-2_Code	CA
Employee Type	Regular	WID	9459f5e6f1084433b767c7901ec04416
Supervisory Organization	IT HelpDesk Department	WID	af6d7f10878340d186121b9d88ae1b5d
Supervisory Organization	Field Sales – North American Group	Organization_Reference_ID	Field_Sales_NA_supervisory
General Event Subcategory	Request Compensation Change > Adjustment > Performance	General_Event_Subcategory_ID	Request_Compensation_Change_Adjustment_P erformance

**Task #3: Use the View Reference IDs report to view Reference IDs**

Business Object	Instance	Reference ID Type	Value
Absence Plan	Floating Holiday Plan	Absence_Plan_ID	FH_USA
Compensation Plan	General Salary Plan	Compensation_Plan_ID	SALARY_Salary_Plan

**CHAPTER 3 ANSWERS****DEMO 3.1 – REVIEW SOAP REQUESTS AND RESPONSES USING SOAPUI****Task #3: Create Request to Get Positions**

7A. How many positions (Total Results) did Workday find based on our request? 570.

7B. How many total pages of results does this represent? 6.

7C. How many results were returned to SoapUI based on our request? 100.

7D. Which page was returned? 1.

7E. What types of positional data are included in the response? Position Reference, Supervisory Organization, Effective Date, Position Definition Data, and Closed.

**Task #4: Modify Request to Retrieve 5 IT HelpDesk Positions, including Qualification Data**

6A. How many positions (Total Results) did Workday find based on our request? 8

6B. How many total pages of results does this represent? 2

6C. How many results were returned to SoapUI based on our request? 5

6D. What is a friendlier alternative to the WID to specify an organization?

Organization Reference ID

6E. What Response Groups are now included in the output? Position Definition Data and Qualification Data

6F. Are any Response Groups missing that were in the first response?

Position Reference

## CHAPTER 4 ANSWERS

### ACTIVITY 4.3 – COMPARE WORKDAY OUTPUT TO XSLT

#### Task #1: Compare Report Output to XSLT

- Review the XSLT file and compare to the report definition. Find four errors. Incorrect namespace, ID element missing closing tag, wd:AvailabilityDt misspelled, wd:Restrictions-Type uses a period instead of a colon.

## CHAPTER 6 ANSWERS

### ACTIVITY 6.1 – LAUNCH WORKDAY STUDIO INTEGRATION

#### Task #1: Review Integration Services Configuration

- What is the value of the **Testing Mode** attribute? Yes.
- What is the name of the Integration Map? Worker Type.  
What values are being mapped? Contingent Worker (Casual) and Employee (Emp).
- What is the Launch Parameter? Supervisory Organization. Is it Required? Yes.
- How many Integration Sequencers have been configured? 2.
- What are their Format/Syntax values? Positions Final [yyyy]-[MM]-[dd] [seq].xml and Positions Original [yyyy]-[MM]-[dd] [seq].xml.

#### Task #2: Launch a Studio Integration

- What is the Status? Completed With Errors.

- 4B. Are there any Error or Warning messages? 2 Errors.
- 4C. Which tab shows the launch parameter value? Integration Details.
- 4D. What files were output? Positions\_Orig\_1-\_\_\_\_.xml and Positions\_Final\_1-\_\_\_\_.xml.
- 4E. Are any of the files Deliverable? Positions\_Final\_1-\_\_\_\_.xml only.
- 5A. How are the files different? Positions\_Final has a simpler structure with uppercase tags, no namespaces, external mapped Worker Types, and Position ID and Availability values as attributes.
- 5B. Where do you see the value of the Integration Attribute? As an attribute in the Final file only.

## CHAPTER 7 ANSWERS

### ACTIVITY 7.1 – DISCUSS INTEGRATION SCENARIOS

#### Scenario 1

I need to output a list of active employees that have changes to either their position and/or compensation data in the past week.

Core Connector: Position is delivered and has built-in change detection.

#### Scenario 2

I have an integration that I need to merge the results of a call to get position and job profiles in Workday. I need to transform the output into a .csv file and deliver to an SFTP server. This integration may process 1 position, or 100 positions, or more.

Workday Studio can make multiple web service calls and is the best tool to scale to an unknown number of records.

#### Scenario 3

I need to process an incoming a plain text file to update locations in Workday.

Workday Studio. There is no connector for inbound locations, and document transformation and EIB can only process an XML input.

#### Scenario 4

I need to output a list of active employees. The output will include position and compensation data about each employee. The output must be a .csv file that is comma separated with each value in double quotes. If there is a value missing in the required Social Security Number field, I need an error message to be displayed on the integration event.

Connector + Document Transformation. Core Connector: Worker can provide the employee data (including position and compensation). Document Transformation can easily convert XML to the specific CSV format and apply simple validation.

Workday Studio would only be necessary if you wanted to *handle* the error.

### **Scenario 5**

I need to process an inbound xml file that contains a list of positions. It is mostly formatted correctly but needs a couple of changes to the source XML before updating Workday. This small file will never contain more than 25 positions at a time.

Inbound EIB can apply XSLT for transformation and is a good option to import a small volume of “trusted” data that does not need additional processing.

### **Scenario 6**

I need to process an XML file that contains time off requests. I need to go through each request off and validate the worker’s status, state of residence, and social security number. Once validated, I will update Workday. If a worker fails any of the validations, their record will not be updated in Workday, but will be written out to a log error file.

Studio is the only Workday option for conditional, branching logic (including file processing) based on custom validation.

### **Scenario 7**

I have a small group of workers that are happy to enter time off requests manually but do not have access to Workday. If I can provide them with a template, they can populate it and email the file back to me.

Inbound EIBs can produce spreadsheet templates that allow users to bulk load data into a web service without developing a complicated transformation.

### **Scenario 8**

Our Financials department needs to send us new organizations, updates to existing organizations, as well as be able to inactivate organizations. They are internal and are agreeable to the format of the file.

The Organization Inbound Connector can perform all of those functions, and supports both a CSV and an XML schema.

An Inbound EIB based on the Add Update Organization operation could perform the same function. You would have less support but gain the use of spreadsheet templates.

### **Scenario 9**

Run a report to get a list of active employees from a specified supervisory organization hired between a set of dates, generate a .csv file and deliver it to secured endpoint.



Outbound EIB using RaaS with CSV as the alternate output format is the simplest option to deliver the file to a single endpoint.

Core Connector: Worker could also provide the data if a report was not a requirement. (You would need to configure Document Transformation [XTT] and Document Delivery steps in the business process.)

### **Scenario 10**

I need to process the Hire Employee process on an inbound xml file. I need to verify the position is available for each future employee and that each one has an existing pre-hire ID. If the position is not available for hire, I need to generate an error log for that record. If the position is available and they do not have an existing pre-hire ID, I need to create the pre-hire record before I process the hire. If the position is available and the pre-hire exists, I need to hire in Workday.

Workday Studio could handle the multiple service calls and conditional processing in a single assembly.

However, all of the listed requirements can be handled by an Inbound EIB using a spreadsheet template based on the Hire Employee web service operation. This would require that the user launch the EIB multiple times with the “Add Errors to Attachment” option.

### **Scenario 11**

I need to send position information to a system of record.

What do I need to consider for this outbound integration?

Data source and criteria, change detection, data structure and mapping, transport protocol, data volume, etc.

### **Scenario 12**

I am receiving a file with a list of workers that have personal data updates.

What do I need to consider for this inbound integration?

Which Workday web service operation, data structure and mapping, transport protocol, data volume, etc.

## APPENDIX D – ADDITIONAL SOAPUI ACTIVITIES

### IMPORT WWS AND RAAS REQUESTS USING SOAPUI

The following activities provide more examples of using a third-party application to execute both SOAP and REST Workday service requests.



## ACTIVITY D.1 – IMPORT CURRENCY UPDATES USING SOAPUI

**Business Case:** We are going to use SoapUI to test the Import Currency Conversion Rates web service operation. This operation is in the Financial Management web service.

### TASK #1: DETERMINE WWS ENDPOINT

1. Sign in to your tenant as Logan McNeil (*lmcneil*).
2. Search for and run the **Public Web Services** report.
3. Review the list of available web services.
4. Use the **Financial Management** service's related actions to select **Web Service > View WSDL**.
5. In the new browser tab or window that opened, scroll to the bottom of the downloaded WSDL document.
  - A. Locate the value of the **soapbind:address location** attribute.
  - B. Select and copy (Ctrl-C) the address location (only select the value in quotes).

```


<wsdl:service name="Financial_ManagementService">
  <wsdl:port name="Financial_Management" binding="wd-wsdl:Financial_ManagementBinding">
    <soapbind:address location="https://[redacted]
    host01.workdayeducation.com/ccx/service/crossappgms01/Financial_Management/v31.0"/>
  </wsdl:port>
</wsdl:service>

```

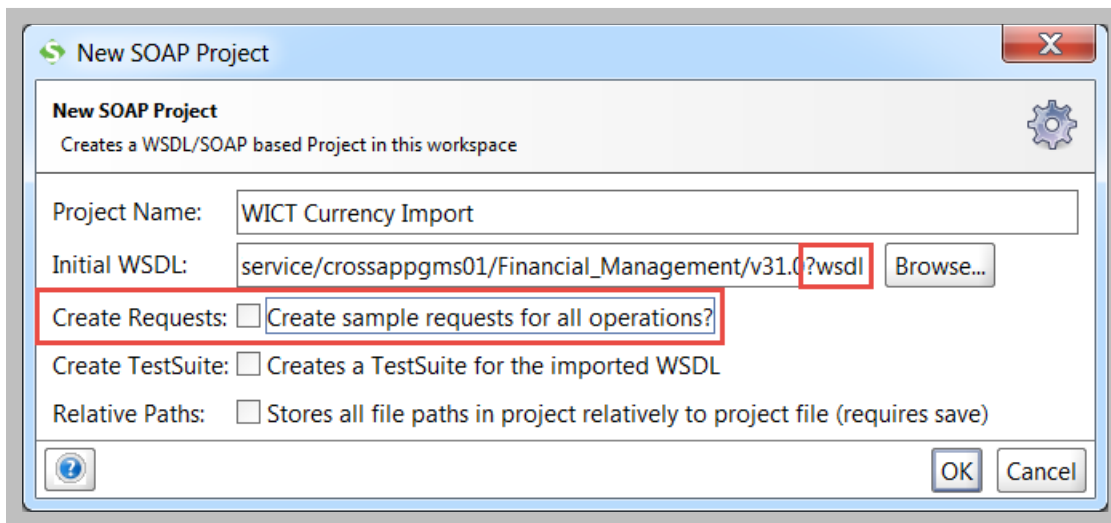
169 - SOAP binding address location for Financial Management WWS

6. Close the new browser window or tab.

### TASK #2: CREATE WWS TEST PROJECT WITH SOAPUI

1. Launch **SoapUI** using its desktop icon  or Start menu shortcut (under SmartBear).
2. Create a new SoapUI project for your tests by selecting **File > New SOAP Project**.
3. Enter the details for your new project:

<b>Field Name</b>	<b>Entry Value</b>
Project Name	WICT Currency Import
Initial WSDL	[service address location from previous task + “?wsdl” suffix]
Create Requests	Unchecked

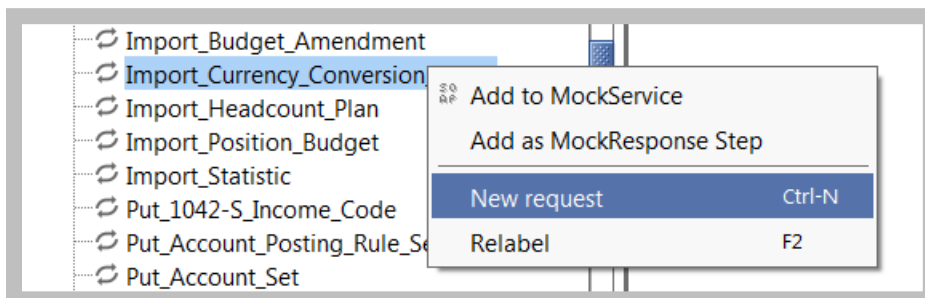


170 - SoapUI New SOAP Project

- Click **OK** to retrieve the WSDL into the SoapUI project.

### TASK #3: CREATE REQUEST TO IMPORT CURRENCY CONVERSIONS

- Right-click on the **Import\_Currency\_Conversion\_Rates** operation and select **New Request**.



171 - SoapUI New Request command

- Enter **WICT Import Currency** as the name for your new request and click **OK**.

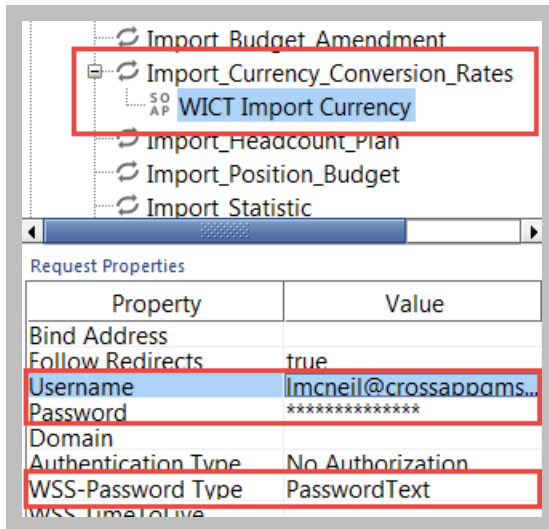
- Replace the XML with the contents of the **SoapUI\_Import\_Currency\_Conversion\_Rates\_Request.txt** class file.

```
<soapenv:Envelope xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/" xmlns:bsvc="urn:com.wor
  <soapenv:Header>
  </soapenv:Header>
  <soapenv:Body>
    <bsvc:Import_Currency_Conversion_Rates_Request>
      <bsvc:Currency_Conversion_Rate_Data>
      <bsvc:Currency_Conversion_Rate_Data>
      <bsvc:Currency_Conversion_Rate_Data>
      <bsvc:Currency_Conversion_Rate_Data>
      <bsvc:Currency_Conversion_Rate_Data>
      <bsvc:Currency_Conversion_Rate_Data>
      <bsvc:Currency_Conversion_Rate_Data>
      <bsvc:Currency_Conversion_Rate_Data>
      <!-- Invalid Target Currency Code -->
      <bsvc:Currency_Conversion_Rate_Data>
        <bsvc:Effective_Timestamp>2018-04-01T07:00:00.000-08:00</bsvc:Effective_Timestamp>
        <bsvc:From_Currency_Reference>
          <bsvc:ID bsvc:type="Currency_ID">USD</bsvc:ID>
        </bsvc:From_Currency_Reference>
        <bsvc:Target_Currency_Reference>
          <bsvc:ID bsvc:type="Currency_ID">XYZ</bsvc:ID>
        </bsvc:Target_Currency_Reference>
        <bsvc:Currency_Rate_Type_Reference>
          <bsvc:ID bsvc:type="Currency_Rate_Type_ID">CURRENT</bsvc:ID>
        </bsvc:Currency_Rate_Type_Reference>
        <bsvc:Currency_Rate>99.999</bsvc:Currency_Rate>
      </bsvc:Currency_Conversion_Rate_Data>
    </bsvc:Import_Currency_Conversion_Rates_Request>
  </soapenv:Body>
</soapenv:Envelope>
```

#### 172 - Import Currency Conversion Rates request

- In the Project Navigator, expand the Import Currency Conversion Rates operation and select the **WICT Import Currency** request.
- Enter the following information into the Request Properties sheet:

Property	Value
Username	Imcneil@crossappgmsXX (where XX are the digits of your tenant)
Password	[your tenant password]
WSS-Password Type	PasswordText



173 - Request Properties

- Click the **Submit** button ► to send the request.

```
<env:Envelope xmlns:env="http://schemas.xmlsoap.org/soap/envelope/">
  <env:Body>
    <wd:Put_Import_Process_Response wd:version="v31.0" xmlns:wd="urn:com.workday/bsvc">
      <wd:Import_Process_Reference>
        <wd:ID wd:type="WID">128482d8d31c015a4728b42714005d00</wd:ID>
      </wd:Import_Process_Reference>
    </wd:Put_Import_Process_Response>
  </env:Body>
</env:Envelope>
```

174 - Get Positions Response with no criteria

- Review the response.

#### TASK #4: VERIFY IMPORT

- Sign in to your tenant as Logan McNeil (*lmcneil*).
- Search for and run the **Process Monitor** report.
  - Enter a **Process Type** of **Web Service**.
  - Click the **OK** button.

## Process Monitor

From Date and Time: 04 / 05 / 2018 12 : 00 : 00 AM

To Date and Time: 04 / 07 / 2018 12 : 00 : 00 AM

Process:

Process Type: \* **X Web Service**

Status:

Maximum Rows: 100

## 175 - Process Monitor search criteria

- Click the **Import Currency Conversion Rates** Request link.

From Date and Time: 04/05/2018 12:00:00.000 AM To Date and Time: 04/07/2018 12:00:00.000 AM Process Type: Web Service Maximum Rows: 100

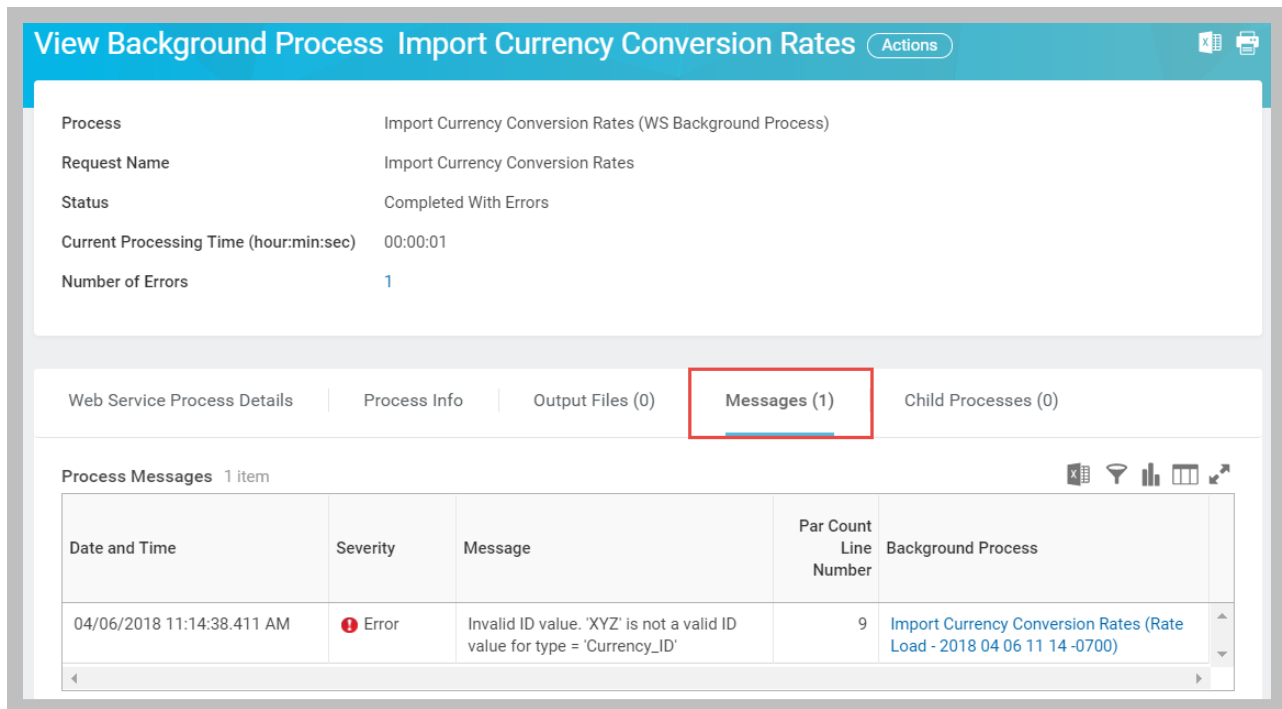
Refresh

Background Processes 1 item

Started Date and Time	Process Type	Process	Request	Status
04/06/2018 11:14 AM	Web Service	Import Currency Conversion Rates (WS Background Process)	<a href="#">Import Currency Conversion Rates</a>	Completed With Errors

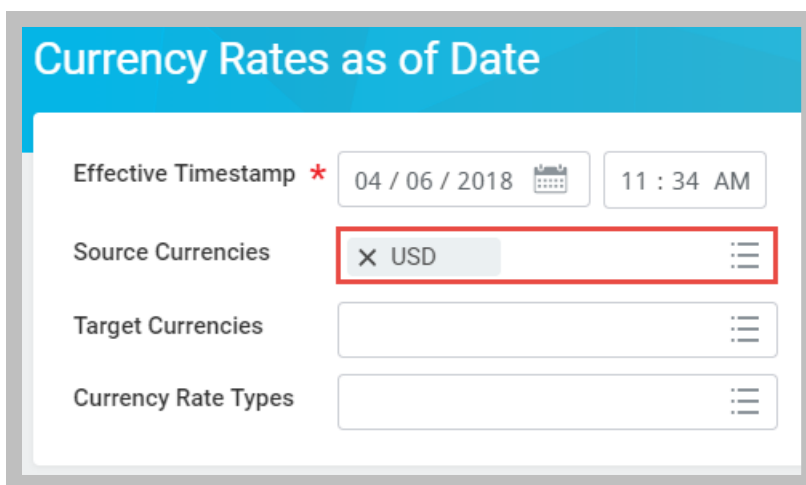
## 176 - Process Monitor results

- Review the **Messages** section to verify that the import process completed with one error.



177 - Import Currency Conversion Rates Background Process Messages

5. Search for and run the **Currency Rates as of Date** report.
  - A. Enter **USD** in **Source Currencies**.
  - B. Click **OK** to run the report.



178 - Currency Rates as of Date report prompt



6. Sort the report by **Currency Rate Timestamp** in **Descending** order and verify that 8 new rates were imported.

← Currency Rates as of Date ⌂ 🖨

Effective Date 04/06/2018 11:34 AM

Currency Rates 135 items ⌂ 📶 📊 📅 ↕

Source Currency	Target Currency	Currency Rate Type	Currency Rate Timestamp	Currency Rate
USD	AUD	Current	04/01/2018 08:00 AM	1.30517
USD	CAD	Current	04/01/2018 08:00 AM	1.33689
USD	EUR	Current	04/01/2018 08:00 AM	0.92985
USD	GBP	Current	04/01/2018 08:00 AM	0.8046
USD	INR	Current	04/01/2018 08:00 AM	64.8751
USD	JPY	Current	04/01/2018 08:00 AM	110.954
USD	NZD	Current	04/01/2018 08:00 AM	1.42288
USD	ZAR	Current	04/01/2018 08:00 AM	12.9137

179 - Currency Rates as of Date report with imported results



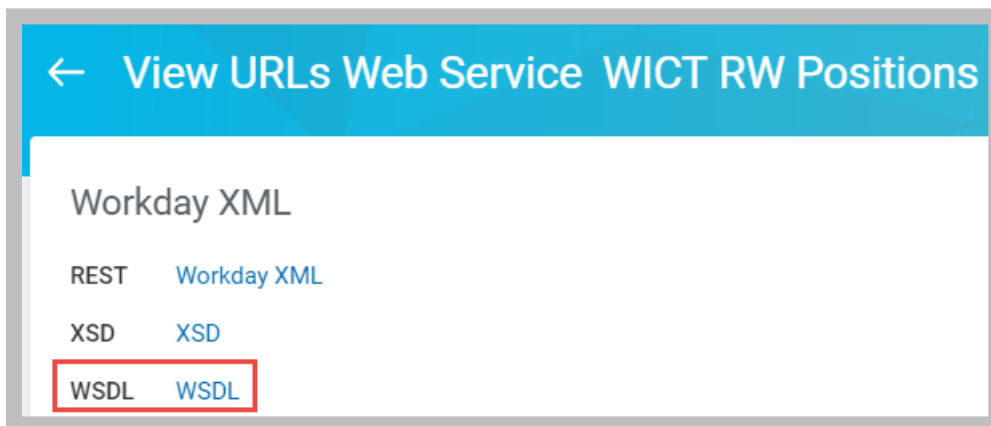


## ACTIVITY D.2 – RAAS-BASED REST AND SOAP API REQUESTS USING SOAPUI

**Business Case:** We are going to use SoapUI to create a REST and SOAP API projects for our custom RaaS.

### TASK #1: DETERMINE REST ENDPOINT

1. Sign in to your tenant as Logan McNeil (*lmcneil*).
2. Search for the **WICT RW Positions** report.
3. In the All of Workday section, use the report's related actions to select **Web Service > View URLs**.
4. At the prompt, leave the criteria blank and click **OK**.
5. On the View URLs Web Service page, select the **WSDL** link.



180 - View URLs Web Service page with WSDL link


- A. Locate the value of the **httpbind:address location** attribute.
- B. Select and copy (Ctrl-C) the address location (only select the value in quotes).

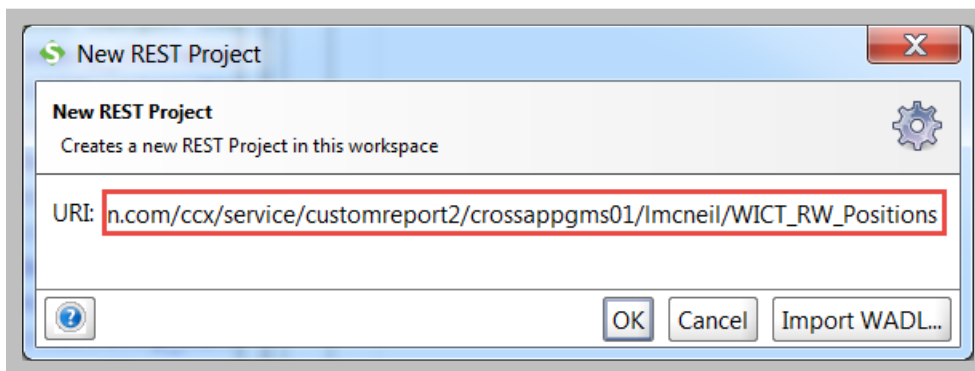
```
<wsdl:service name="ReportService">
  <wsdl:port name="Report" binding="wd:ReportBinding">
    <soapbind:address location="https://[redacted]
    host01.workdayeducation.com/ccx/service/Report2/crossappgms01/lmcneil/WICT_RW_Positions"/>
  </wsdl:port>
  <wsdl:port name="ReportREST" binding="wd:ReportRESTBinding">
    <httpbind:address location="https://[redacted]
    host01.workdayeducation.com/ccx/service/customreport2/crossappgms01/lmcneil/WICT_RW_Positions"/>
  </wsdl:port>
</wsdl:service>
```

#### 181 – REST API httpbind:address location

**NOTE:** The WSDL also includes SOAP bind address information, which we will use in a later task. Keep the tab open.

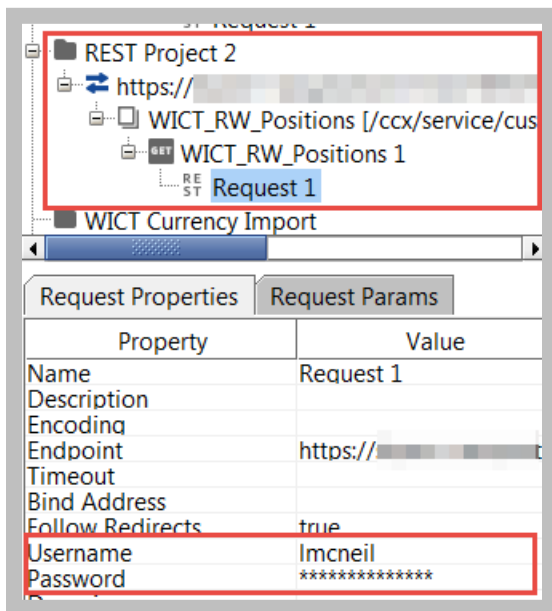
### TASK #2: CREATE RAAS REST PROJECT WITH SOAPUI

1. Launch **SoapUI** using its desktop icon  or Start menu shortcut (under SmartBear).
2. Create a new SoapUI project for your tests by selecting **File > New REST Project**.
  - A. Enter the httpbind:address location into the URI field
  - B. Click **OK**.



#### 182 - SoapUI New REST Project dialog

- Enter the your tenant **Username** and **Password** into the **Request Properties** sheet:



183 – SoapUI REST Request Properties

- Use the **Add** button **+** to add the following parameters to the request:

**Name**

**Value**

Start

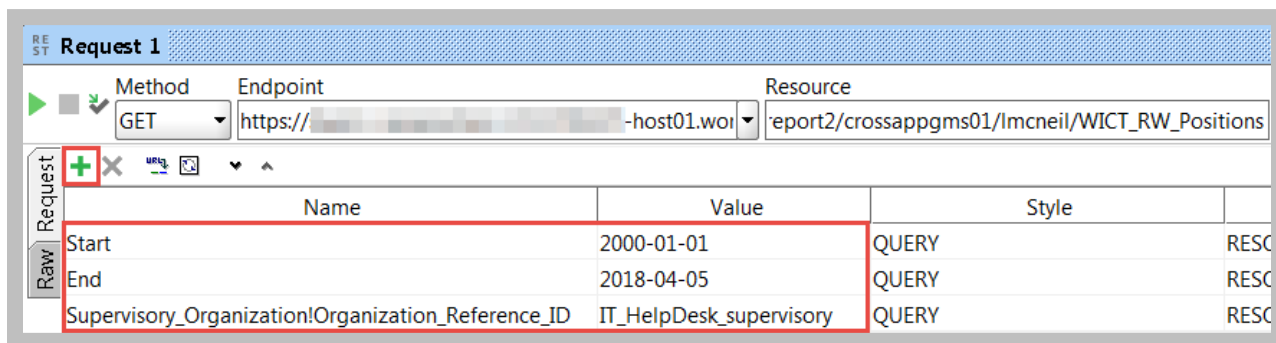
2000-01-01

End


[Today's Date]

Supervisory\_Organization!Organization\_Reference\_ID

IT\_HelpDesk\_supervisory



184 - SoapUI REST Request Parameters

5. Click the **Submit** button  to send the request, and review the response.

```
<wd:Report_Data xmlns:wd="urn:com.workday.report/WICT_RW_Positions">
  <wd:Report_Entry>
    <wd:Position>P-00030</wd:Position>
    <wd>Title>P-00030 Senior IT Analyst (Unfilled)-P-00030</wd>Title>
    <wd:Pay>0</wd:Pay>
    <wd:Available>1</wd:Available>
    <wd:AvailabilityDt>2018-02-07-08:00</wd:AvailabilityDt>
    <wd:Restrictions-Location wd:Descriptor="San Francisco">
      <wd:ID wd:type="WID">d13a7c46a06443c4a33c09afbdf72c73</wd:ID>
      <wd:ID wd:type="Location_ID">San_Francisco_site</wd:ID>
    </wd:Restrictions-Location>
    <wd:Restrictions-Type wd:Descriptor="Employee">
      <wd:ID wd:type="WID">d588c41a446c11de98360015c5e6daf6</wd:ID>
      <wd:ID wd:type="Worker_Type_ID">EE</wd:ID>
    </wd:Restrictions-Type>
  </wd:Report_Entry>
  <wd:Report_Entry>
    <wd:Position>P-00031</wd:Position>
    <wd>Title>P-00031 Senior IT Analyst (Unfilled)-P-00031</wd>Title>
    <wd:Pay>0</wd:Pay>
    <wd:Available>1</wd:Available>
    <wd:AvailabilityDt>2018-02-07-08:00</wd:AvailabilityDt>
    <wd:Restrictions-Location wd:Descriptor="San Francisco">
      <wd:ID wd:type="WID">d13a7c46a06443c4a33c09afbdf72c73</wd:ID>
```

185 - SoapUI REST Response

### TASK #3: CREATE A RAAS SOAP REQUEST

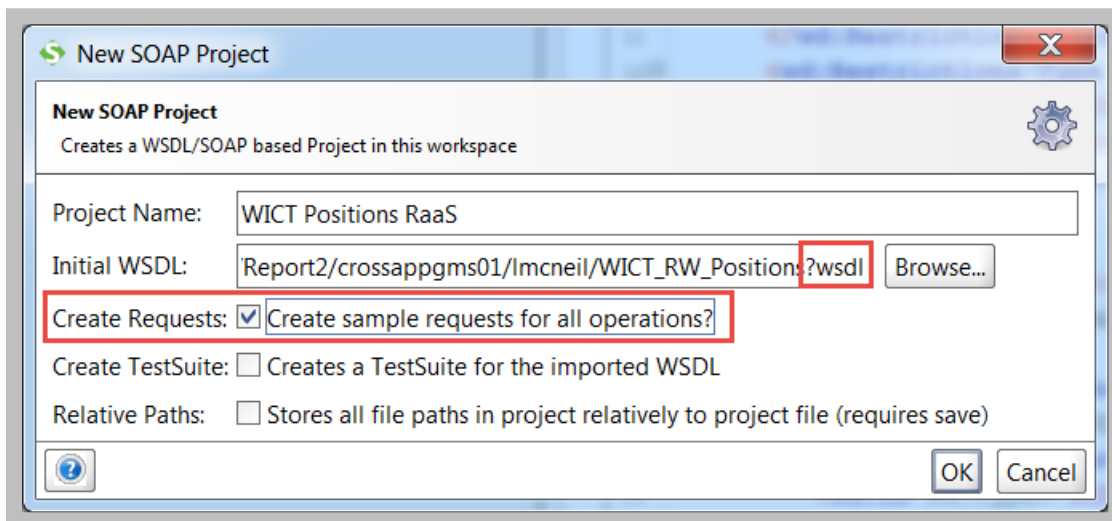
1. View the WSDL from Task #1, Step 5.
  - A. Locate the value of the **soapbind:address location** attribute.
  - B. Select and copy (Ctrl-C) the address location (only select the value in quotes).

```
<wsdl:service name="ReportService">
  <wsdl:port name="Report" binding="wd:ReportBinding">
    <soapbind:address location="https://
    host01.workdayeducation.com/ccx/service/Report2/crossappgms01/lmcneil/WICT_RW_Positions"/>
  </wsdl:port>
  <wsdl:port name="ReportREST" binding="wd:ReportRESTBinding">
    <httpbind:address location="https://
    host01.workdayeducation.com/ccx/service/customreport2/crossappgms01/lmcneil/WICT_RW_Positions"/>
  </wsdl:port>
</wsdl:service>
```

186 - SOAP API soapbind:address location

1. In SoapUI, create a new SoapUI project for your tests by selecting **File > New SOAP Project**.
2. Enter the details for your new project:

Field Name	Entry Value
Project Name	WICT Positions RaaS
Initial WSDL	[service address location from Step 1 + "?wsdl" suffix]
Create Requests	Checked



187 - New SoapUI SOAP Project with Create Requests selected

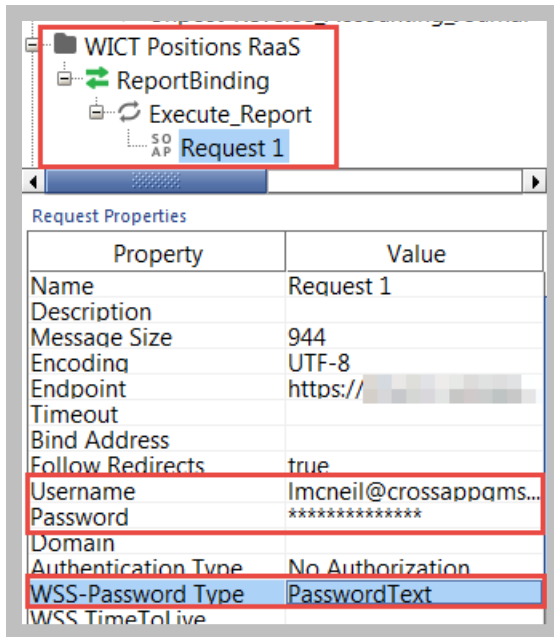
3. In the project folder, expand **ReportBinding** and **Execute\_Report**, and double-click **Request 1**.

4. Modify the XML to submit a test request:


```
<soapenv:Envelope
xmlns:soapenv="http://schemas.xmlsoap.org/soap/envelope/"
xmlns:wict="urn:com.workday.report/WICT_RW_Positions">
  <soapenv:Header/>
  <soapenv:Body>
    <wict:Execute_Report>
      <!--Optional:-->
      <wict:Report_Parameters>
        <!--Zero or more repetitions:-->
        <wict:Supervisory_Organization wict:Descriptor="true">
          <!--Zero or more repetitions:-->
          <wict:ID
wict:type="Organization_Reference_ID">IT_HelpDesk_supervisory</wict:ID>
          </wict:Supervisory_Organization>
          <!--Optional:-->
          <wict:Start>2000-01-01</wict:Start>
          <!--Optional:-->
          <wict:End>2018-04-05</wict:End>
        </wict:Report_Parameters>
      </wict:Execute_Report>
    </soapenv:Body>
  </soapenv:Envelope>
```

5. With Request 1 still selected in the Project Navigator, enter the following information into the **Request Properties** sheet:

<i>Property</i>	<i>Value</i>
Username	Imcneil@crossappgmsXX (where XX are the digits of your tenant)
Password	[your tenant password]
WSS-Password Type	PasswordText



188 - SoapUI SOAP Request Properties

6. Click the **Submit** button  to send the request and review SOAP response.

```
<env:Envelope xmlns:env="http://schemas.xmlsoap.org/soap/envelope/">
  <env:Body>
    <wd:Report_Data xmlns:wd="urn:com.workday.report/WICT_RW_Positions">
      <wd:Report_Entry>
        <wd:Position>P-00030</wd:Position>
        <wd>Title>P-00030 Senior IT Analyst (Unfilled)-P-00030</wd>Title>
        <wd:Pay>0</wd:Pay>
        <wd:Available>1</wd:Available>
        <wd:AvailabilityDt>2018-02-07-08:00</wd:AvailabilityDt>
        <wd:Restrictions-Location wd:Descriptor="San Francisco">
          <wd:ID wd:type="WID">d13a7c46a06443c4a33c09afbd72c73</wd:ID>
          <wd:ID wd:type="Location_ID">San_Francisco_site</wd:ID>
        </wd:Restrictions-Location>
        <wd:Restrictions-Type wd:Descriptor="Employee">
          <wd:ID wd:type="WID">d588c41a446c11de98360015c5e6daf6</wd:ID>
          <wd:ID wd:type="Worker_Type_ID">EE</wd:ID>
        </wd:Restrictions-Type>
      </wd:Report_Entry>
    </wd:Report_Data>
  </env:Body>
</env:Envelope>
```

189 - SoapUI SOAP Response from RaaS

