
Driver for Workday Implementation Guide

NetIQ Identity Manager

September 2020

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We are a global, enterprise software company, with a focus on the three persistent challenges in your environment: Change, complexity and risk—and how we can help you control them.

Our Viewpoint

Adapting to change and managing complexity and risk are nothing new

In fact, of all the challenges you face, these are perhaps the most prominent variables that deny you the control you need to securely measure, monitor, and manage your physical, virtual, and cloud computing environments.

Enabling critical business services, better and faster

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1 Understanding the Workday Driver

The Workday driver for Identity Manager can seamlessly provision users from the Workday cloud application, keeping the user identity information consistent across the Identity Vault (IDV). This driver is also capable of updating some of the connected system attributes such as User ID, contact information etc., back to the Workday application.

This document provides the detailed use cases that are required to be solved by the Workday driver to establish a seamless connectivity between Identity Manager and Workday.

IMPORTANT: The Workday driver shim is supported on Identity Manager 4.7 SP4 and above. The driver supports Workday version v32.0 and above.

This section provides the following information on the Workday driver:

- ◆ [“Driver Concepts” on page 7](#)
- ◆ [“Support for Standard Driver Features” on page 9](#)

Driver Concepts

This section provides the following information:

- ◆ [“Data Management” on page 7](#)
- ◆ [“How the Driver Works” on page 8](#)

Data Management

The Workday driver communicates with Workday using the Workday SOAP API; especially the Human_Resource API. Some of the important Human resource APIs used in the driver, are mentioned below:

- ◆ Get_Workers
- ◆ Get_Worker_Photos
- ◆ Get_Locations
- ◆ Get_Organizations
- ◆ Get_Job_Profiles
- ◆ Get_Job_Families
- ◆ Update_Workday_Account
- ◆ Maintain_Contact_Information
- ◆ Change_Other_IDs
- ◆ Get_Server_Timestamp

SOAP

SOAP (Simple Object Access Protocol) is an XML-based protocol for exchanging messages. It defines the message exchange but not the message content. The driver supports SOAP 1.1.

SOAP documents are organized into three elements:

- ♦ **Envelope:** The root XML node.
- ♦ **Header:** Provides context knowledge such as a transaction ID and security information.
- ♦ **Body:** The method-specific information.

SOAP follows the HTTP request/response message model, which provides SOAP request parameters in an HTTP request and SOAP response parameters in an HTTP response.

XML

XML (Extensible Markup Language) is a generic subset of Standard Generalized Markup Language (SGML) that allows for exchange of structured data on the Internet.

HTTP

HTTP is a protocol used to request and transmit data over the Internet or other computer network. The protocol works well in an Internet infrastructure and with firewalls.

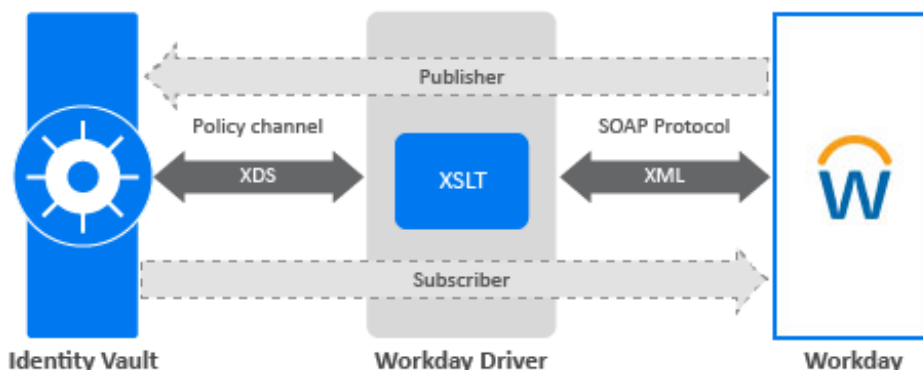
HTTP is a stateless request/response system because the connection is usually maintained only for the immediate request. The client establishes a TCP connection with the server and sends it a request command. The server then sends back its response.

NOTE: Workday communication always happens over HTTPS.

How the Driver Works

The following diagram illustrates the data flow from Workday service to Identity Manager and *vice-versa*:

Figure 1-1 Workday Driver Data Flow



The Workday driver polls data from Workday as SOAP request. Workday processes the request, and returns a SOAP response to the driver shim. The driver processes the response, converting it into appropriate XDS, a specialized form of XML, using XSLT style sheets. The driver stores the response

data in a cache file. The Publisher channel periodically polls for additions and modifications to the objects in Workday. On a successful retrieval of the changes, it stores the polling time for use in the next polling cycle. Driver uses the cache file to submit the optimized XDS modify document to the Identity Manager Engine.

The Identity Manager engine uses XDS to represent events in the Identity Vault. On the Subscriber channel, the Identity Manager engine passes the XDS event to the driver policy channel, which consists of basic policies, DirXML Script, and XSLT style sheets. The driver shim receives the XDS document from the policy channel. The driver shim uses XSLT style sheets to convert the XDS document to appropriate SOAP request.

The Publisher channel uses two different ways of polling the Workday server for fetching the changes:

- ♦ **Recurring Polling:** Recurring polling happens at a fixed interval. This type of polling happens for Worker, Relation and Job Profile object classes. Recurring polling queries the Workday server for changes from the last successful recurring polling cycle.
- ♦ **Scheduled Polling:** Scheduled polling happens once in a day at a fixed time. This type of polling happens for Terminated Workers, Location, Worker Photo, Job Family and Organization object classes.

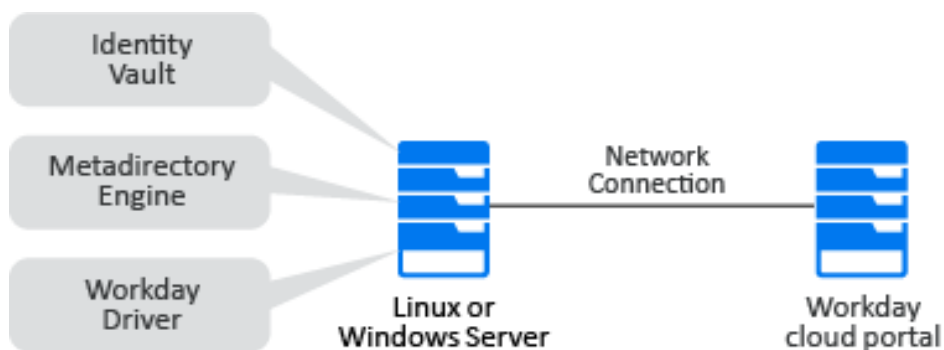
Support for Standard Driver Features

The following sections provide information about how the Workday driver supports these standard driver features:

Local Platforms

A local installation is an installation of the driver on the Metadirectory server. You can install the Workday driver on the operating systems supported for the Metadirectory server.

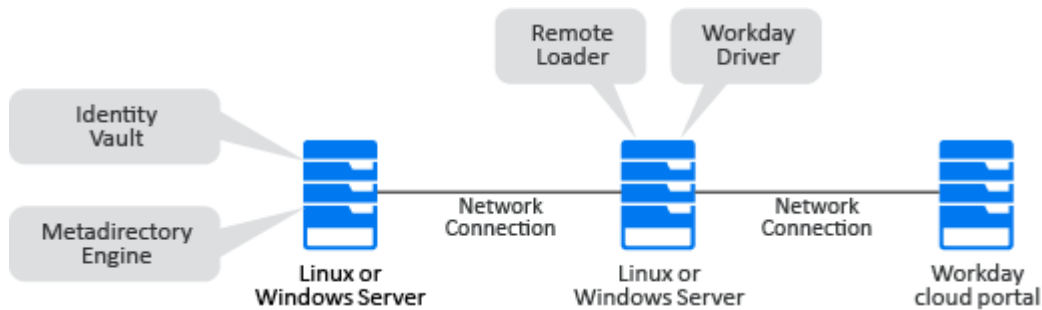
For information about the operating systems supported for the Metadirectory server, see [Considerations for Installing Drivers with the Identity Manager Engine](#) in the [NetIQ Identity Manager Overview and Planning Guide](#).



Remote Platforms

The Workday driver can use the Remote Loader service to run on a server other than the Metadirectory server. You can install the Workday driver on the operating systems supported for the Remote Loader.

For information about the supported operating systems, see [NetIQ Identity Manager Setup Guide for Linux](#).



Supported Operations

The Workday driver supports the following operations on the Subscriber channel:

- ◆ Update user ID

When a user is renamed in IDV, the driver updates the user ID back in the Workday.
- ◆ Update user attributes such as email id, phone number, Custom IDs in IDV.

When a user is updated in IDV, the updated user information can be synchronized with Workday.

NOTE: Workday driver does not support the following:

- ◆ Creating and deleting users in Workday
- ◆ Password synchronization

The following operations are supported on the Publisher channel:

- ◆ Users Object:
 - ◆ Add users (Employee and Contingent Worker Both)
 - ◆ Modify users

When a user is updated in Workday, the updated user information is synchronized with the IDV.
 - ◆ Delete users

Users cannot be deleted in Workday, hence there will be no delete event from workday.
 - ◆ Position or Relation object: Each job /position is treated as relation irrespective of primary position or non-primary position. The primary position information is also stored as part of the user object.
 - ◆ Location Object: Driver synchronizes locations and creates a separate object in IDV.
 - ◆ Job Family Object: Driver synchronizes job family and creates a separate object in IDV.
 - ◆ Job Profile Object: Driver synchronizes job profile and creates a separate object in IDV.

- ◆ Organization Object: Driver synchronizes organizations and creates a separate object in IDV. Organization is configurable and can have different values such as Cost Center, Company, and HR Company etc.
- ◆ Photo: Driver can also poll worker's photo from workday.

2 Installing and Configuring the Workday Driver

This section contains information about installing and configuring the Workday driver.

The installation and configuration process for the driver varies depending on whether you want to install the driver with the Identity Manager server or with the Remote Loader. After installing the driver, you must manually activate it. For more information, see [“Activating the Driver” on page 28](#). The following packages are created for this driver:

- ◆ Workday Base: Base Package
- ◆ Workday Default Configuration: For User Object
- ◆ Workday Position Relation: For Relation object
- ◆ Workday Job Profile Synchronization: For Job Profile object
- ◆ Workday Job Family Synchronization: For Job Family Object
- ◆ Workday Location Synchronization: For Location Object
- ◆ Workday Organization Synchronization: For Organization Object including Cost Center, Company and HR Company etc.
- ◆ Workday Photo synchronization: For User's Photo.
- ◆ Workday Retry Events: For configuring Retry Events.

The following sections provide instructions to create the driver:

- ◆ [“Checklist for Installing and Configuring the Driver” on page 13](#)
- ◆ [“Creating Integration System Group\(s\) and User\(s\) in Workday Application” on page 14](#)
- ◆ [“Installing the Driver Files” on page 16](#)
- ◆ [“Creating the Driver Object” on page 17](#)
- ◆ [“Deploying the Driver Object” on page 27](#)
- ◆ [“Starting the Driver” on page 28](#)
- ◆ [“Activating the Driver” on page 28](#)
- ◆ [“Advanced Synchronization of Worker Photos from the Workday Portal” on page 29](#)

Checklist for Installing and Configuring the Driver

Use the following checklist to ensure that you complete all of the tasks required to set up and use the Workday driver:

- ◆ Create Integration System Security Group(s) and Integration System User(s) in the Workday application. For more information, see [“Creating Integration System Group\(s\) and User\(s\) in Workday Application” on page 14](#).
- ◆ Ensure that your environment meets the requirements for installing and configuring the Workday driver. For more information, see [Chapter 1, “Understanding the Workday Driver,” on page 7](#).

- ◆ Install the driver files on the Identity Manager engine or on a Remote Loader server. For more information, see [“Installing the Driver Files” on page 16](#).
- ◆ Ensure that you have the appropriate packages installed and imported for the driver. For more information, see [“Importing the Current Driver Packages” on page 18](#).
- ◆ Deploy the driver to the Identity Vault. For more information, see [“Deploying the Driver Object” on page 27](#).
- ◆ Start the driver. For more information, see [“Starting the Driver” on page 28](#).

Creating Integration System Group(s) and User(s) in Workday Application

Before you can install and configure the Workday driver, you must create Integration System Security Group(s) containing Integration System User(s) in the Workday application. Ensure that the Integration System User has all the required permissions before installing the driver. Perform the following steps to create Integration System Groups and Users:

- ◆ [“Creating Integration System Security Group\(s\)” on page 14](#)
- ◆ [“Creating Integration System User\(s\)” on page 15](#)

Creating Integration System Security Group(s)

- 1 Access the **Create Security Group** task and create an Integration System Security Group.
- 2 To grant the security group access to the domains required by your integration, perform the following steps for each domain:
 - ◆ Access the **View Domain** report and find the domain.
 - ◆ Select **Domain > Edit Security Policy Permissions**.
 - ◆ Add the security group that you created in [Step 1 on page 14](#) to the Integration Permissions and select **Get** and **Put**.
 - ◆ Access the **Activate Pending Security Policy Changes** task and activate the changes that you made in previous step.

Once the Integration System Security Group has been created, you must provide the following rights to the group:

Domain Rights for the Security Group:

You can provide the following domain read rights to the security group based on your requirements:

Domain Rights	Description
Job Information	Provide this right if you want to synchronize the job information for the group users. Select only Get option for this right.
Manage: Location	Provide this right if you want to synchronize the location data for the group users. Select only Get option for this right.
Manage: Organization Integration	Provide this right if you want to synchronize the Organization data. Select only Get option for this right.

Domain Rights	Description
Person Data: Date of Birth	Provide this right if you want to synchronize the worker's date of birth. Select only Get option for this right.
Person Data: Gender	Provide this right if you want to synchronize the worker's gender information. Select only Get option for this right.
Person Data: ID Information	Provide this right if you want to synchronize the worker's other IDs. Select both Get and Put options for this right.
Person Data: Personal Photo	Provide this right if you want to synchronize the worker's photo. Select only Get option for this right.
Workday Accounts	This right should be provided to the security group by default. Select both Get and Put options for this right.
Worker Data: All Positions	Provide this right if you want to synchronize all position data help by the worker. Select both Get and Put options for this right. Select only Get option for this right.
Worker Data: Current Job Profile Information	Provide this right if you want to synchronize the worker's current job profile information. Select only Get option for this right.
Worker Data: Organization Information	Provide this right if you want to synchronize the worker's Organization information. Select only Get option for this right.
Worker Data: Public Worker Reports	Provide this right if you want to synchronize the public worker reports. Select only Get option for this right.

Business Process Types Rights for the Security Group

You can provide the initiate access to the following business process types rights based on your requirements:

Business Process Types Rights	Description
Contact Change	Provide this right if you want to synchronize the contact change information of the worker.
Edit Other IDs	Provide this right if you want to synchronize the edit other IDs information of the worker.

Creating Integration System User(s)

- 1 Access the **Create Integration System User** task and configure a system user account for the integration. Set the **Session Timeout Minutes** to its default value of 0 to prevent session expiration. An expired session can cause the integration to time out before it successfully completes.
- 2 Select **Security Profile > Assign Integration System Security Groups**.

- 3 In the **Integration System Security Group to Assign** screen, select the security group that you created in [“Creating Integration System Security Group\(s\)” on page 14](#).
- 4 Access **View Integration System report > Connector or Studio integration**.
- 5 Select **Workday Account > Edit Account for Integration System** and select the Workday account that you created in [Step 1 on page 15](#).
- 6 (Optional) Under the **Global Preferences** option, select a preferred locale and display language for the integration system user.
- 7 Access the **Maintain Password Rules** task and add the integration system user to the **System Users exempt from password expiration** field.

Installing the Driver Files

The Workday driver is a Java-based driver and can be run on the Identity Manager engine or on a Remote Loader server. It works only with native and Java Remote Loader.

Installing the Driver Files as a Root User

You must install the driver files manually. It does not create the driver in the Identity Vault or upgrade an existing driver's configuration. For information about creating the driver, see [“Creating the Driver Object” on page 17](#).

If you want to run the driver with Remote loader, verify that the `WDDriverShim.jar` file is present in the following directories for the Remote Loader:

- ♦ **Linux:** `/opt/novell/eDirectory/lib/dirxml/classes`
- ♦ **Windows:** `C:\novell\remoteloader\lib`

Otherwise, copy the file from the Identity Vault server to the appropriate directory for your operating system.

On Windows, copy `workdayShim.jar` in the `{IDM-Install-Folder\nds\lib}` directory of the Identity Manager Engine. If you want to run the driver with Remote loader on Windows, verify that the `WDDriverShim.jar` file is present in the `{remoteloader\lib}` directory.

Installing the Driver Files as a Non-Root User

1. Verify that the `/rpm` directory exists and contains the `_db.000` file.
2. The `_db.000` file is created during a non-root installation of the Identity Manager engine. The absence of this file indicates that the Identity Manager is not installed properly. In such a case, reinstall the Identity Manager to correctly place the file in the mentioned directory.
3. To set the root directory to the location of non-root in Identity Manager, enter the following command in the command prompt:

```
ROOTDIR=<non-root eDirectory location>
```

This will set the environmental variables to the directory where Identity Manager is installed as a non-root user.

4. For example, to install the Workday driver rpm, use this command:


```
rpm --dbpath $ROOTDIR/rpm -Ivh --relocate=/usr=$ROOTDIR/opt/novell/eDirectory
--relocate=/etc=$ROOTDIR/etc --relocate=/opt/novell/eDirectory=$ROOTDIR/opt/
novell/eDirectory --relocate=/opt/novell/dirxml=$ROOTDIR/opt/novell/dirxml --
relocate=/var=$ROOTDIR/var --badreloc --nodeps --replacefiles /home/user/
novell-DXMLWday.rpm
```

NOTE: In the above command `/opt/novell/eDirectory` is the location where non-root Identity Manager is installed, and `/home/user/` is the home directory of the non-root user.

You must configure the driver to use an SSL connection between the Remote Loader and the Identity Manager server. For more information, see [Creating a Secure Connection to the Identity Manager Engine](#) in the *NetIQ Identity Manager Driver Administration Guide*.

For more information on configuring the Remote Loader, see “[Configuring Remote Loader for the Driver Instance](#)” on page 17.

Configuring Remote Loader for the Driver Instance

For more information about specifying values for these parameters, see [Configuring the Remote Loader and Drivers](#) in the *NetIQ Identity Manager Driver Administration Guide*.

Below is an example of a configuration file with some sample values.

```
-description "Workday Driver"
-commandport 8000
-connection "port=8090"
-trace 3
-tracefile "/opt/netiq/workdaydriver.log" (or
"C:\novell\remoteloader\64bit\WorkdayDriver-Trace.log" on Windows)
-tracefilemax 100M
-class "com.netiq.dirxml.driver.workday.WDDriverShim"
```

Once the driver instance is running, you can use the command line on Linux or Remote Loader Console on Windows to instruct the Remote Loader to perform a function. For example, turn the trace on or off on Windows or stop the driver instance.

Creating the Driver Object

To create a Workday driver object you must install the driver packages and then modify the configuration to suit your environment. After you create and configure the driver object, you need to deploy it to the Identity Vault and start the driver.

- ♦ “[Importing the Current Driver Packages](#)” on page 18
- ♦ “[Installing and Configuring the Driver Packages](#)” on page 18
- ♦ “[Configuring the Driver to Include Additional Transaction Type References](#)” on page 27

Importing the Current Driver Packages

The driver packages contain the items required to create a driver, such as policies, entitlements, filters, and Schema Mapping policies. These packages are only available in Designer and can be updated after they are initially installed.

To verify that you have the most recent version of the driver packages in the Package Catalog:

- 1 Open Designer.
- 2 In the Outline view, right-click the Package Catalog.
- 3 Click **Import Package**.
- 4 Browse to the location where you downloaded the Workday packages.
- 5 Select all the packages available for Workday.
- 6 Click **Select All** to import all of the packages displayed.
- 7 Click **OK** to import the selected packages, then click **OK** in the successfully imported packages message.
- 8 After the current packages are imported, continue with [“Installing and Configuring the Driver Packages” on page 18](#).

Installing and Configuring the Driver Packages

- 1 In **Designer**, open your project.
- 2 From the **Palette**, drag-and-drop the Workday driver to the desired driver set in the **Modeler**.
The Workday driver is under the **Enterprise** category in the Palette.
- 3 Select **Workday Base**, then click **Next**.
- 4 Select the optional features to install for the Workday driver, then click **Next**.

The options are:

All options are selected by default. The options are:

Default Configuration: These packages contain the default configuration information for the Workday workers (users). Always leave this option selected.

Workday Position Relation: This option is used for synchronizing relation objects.

Workday Job Profile Synchronization: This option is used for synchronizing job profile.

Workday Job Family Synchronization: This option is used for synchronizing job family.

Workday Location Synchronization: This option is used for synchronizing locations.

Workday Organization Synchronization: This option is used for synchronizing Organization.

Workday Photo Synchronization: This option is used for synchronizing worker’s photo.

Workday Retry Event Settings: This option is used for configuring retry events.

- 5 Click **OK** on the **Package Dependencies** screen.
- 6 Fill the **Driver Name** field, then click **Next**.
- 7 On the new Install Workday Base page, fill in the following fields, then click **Next**:

Show Authentication Parameters: Fill the following authentication parameters:

- ♦ **Workday Login ID:** Specify the user ID that is used to login to Workday. The format should be `serviceaccount@tenantName`. Ensure that the user has required permission to fetch and modify data from Workday. Perform the following steps to find the tenant name:
 1. Log in to the Workday sandbox.
 2. On the first page, find the tenant details appearing in the upper left corner of the page.
- ♦ **Workday Login Password:** Specify the password that is used to login to Workday.
- ♦ **Authentication Type:** Specify the authentication type. Only option available is **Basic**.

Show Connection Parameters: Fill the following authentication parameters:

- ♦ **Workday Login URL:** Specify the login URL of Workday. The format should be `https://HOST_NAME/ccx/service/TENANT_NAME/Human_Resources/VERSION`. Perform the following steps to find the Host Name:
 1. Log in to the Workday sandbox or production instance.
 2. Search for Public Web Service in the search box.
 3. Select **Public Web Services** from the search results.
 4. Scroll down to Human Resources (Public) and click on the ellipsis (3 dots). Then click the **Web Services** list and select **View WSDL**.
 5. Scroll down to the end to find the `soapbind:address location` value assigned to the location element in the WSDL file.
 6. Copy and save the Workday `soapbind:address location` part of the value. For example, `location="https://wd5-impl-services9.workday.com/...."`
- ♦ **Workday Version:** v32.0 onwards

NOTE: This value should not be changed.

- ♦ **Set Proxy Authentication Parameter:** Proxy authentication enables you enhance the secure your environment by placing a middleware layer between the Workday driver and the Identity Vault. If you decide to use a proxy authentication, then specify Proxy host, port, user ID and password. Leave these fields blank while using anonymous authentication.

SSL Parameters: Fill the following parameters:


- ♦ **Keystore File:** Specify the path and the name of the keystore file that contains the trusted certificates for the remote server to provide server authentication. For example, `C:\security\keystore` in Windows or `/var/opt/novell/eDirectory/workday/idmworkday.jks` in Linux. To obtain a Workday tenant root CA certificate and import it to the Java keystore. see [Chapter 5, “Securing Communication,” on page 65](#).
- ♦ **Keystore Password:** Specify the password for the keystore file.

Paging Parameters: Fill the following parameters:

- ♦ **Paging Size:** Driver collects data from Workday in chunks. Each chunk is a page with records not more than the specified page size. Specify the page size in this field. By default, the paging size is set to 200. For more information on setting paging size value see, [“Setting Paging Size Parameter Value” on page 75](#)
- ♦ **Query Ex-timeout(minutes):** Specify the timeout in minutes for Query Ex.

General Parameters: Fill the following parameters:


- ♦ **Cache Files Directory:** Specify the absolute path of the directory where the driver has to create cache files which is required for its operations. As cache files can be large in size, it is recommended to provide the directory with no size limit.

Transformation Parameters: Set the following parameters on the Publisher channel and select the required values for each of them from the list of default values or you can create custom values by clicking on the  icon.

- ◆ `wdOrgList` - The values here indicate the types of Organizational data that will be returned from a call of the `Get_Worker` SOAP API.

The following default values are available to select for the `wdOrgList` transformation parameters:

- ◆ `Supervisory`
- ◆ `Cost_Center`
- ◆ `Company`
- ◆ `Cost_Center_Hierarchy`
- ◆ `Matrix`
- ◆ `Region`

Custom values for this parameter can also be added by clicking on the  icon. You can collect such Organization values from the Workday implementation team.

- ◆ `wdIntFieldAttrList` - Add the names of any custom, override fields created in Workday for Workers and that should be synchronized to the Identity Vault. This option can be used to synchronize data to the Identity Vault that is not currently synchronized by the shim.
- ◆ `wdAutoCompleteBP` - Set this to **true** to mark the business process for the modification as complete and immediately commit the update to the Worker.
- ◆ `wdCustomIdList` - Add the names of any Other/Custom IDs that the driver should synchronize to the Identity Vault and/or which should have data from the Identity Vault written back to Workday using the `Change_Other_IDs` API.
- ◆ `wdFetchPrivatePhoneInformation` - When set to **true**, the driver will retrieve phone information if that number has been marked `private` in Workday. By default this is set to **false** which means meaning only the phone numbers marked `public` will be published.
- ◆ `wdTransactionLimit` - This parameter indicates maximum number of transactions that the `wd-TransactionLog` attribute can hold. The following values are available to select:
 - ◆ 3
 - ◆ 5
 - ◆ 10
 - ◆ 15
 - ◆ 30

For more information, see [“Configuring Dynamic Attributes Using the Workday Driver” on page 67](#).

Publisher Options: Enable this option and fill the following fields under Recurring API:

- ◆ **Poll Worker:** Select to enable/disable the worker polling.
 - ◆ **Response Filter List:** Provide a list of response groups to be collected from Workday. The allowable values are documented in the [Worker_Response_Group](#) section of the [Workday Get_Workers API](#) documentation available on the Workday Community web site. If it is determined that no data is needed from a particular block of the `Get_Workers_Response`, this response group value can be removed from the Response Filter List to reduce the amount of data being sent to the driver shim from Workday. This list has the following default values:
 - ◆ `Include_Reference`

- ◆ Include_Additional_Jobs
- ◆ Include_User_Account
- ◆ Include_Personal_Information
- ◆ Include_Employment_Information
- ◆ Include_Organizations
- ◆ Exclude_Company_Hierarchy
- ◆ Exclude_Matrix_Organizations
- ◆ Include_Transaction_Log_Data
- ◆ Include_Management_Chain_Data
- ◆ **Field and Parameter Criteria Provider Reference List:** Provide integration system IDs for the override fields that will be used. The integration system IDs will be placed in the `Field_And_Parameter_Criteria_Data` section of the GET SOAP API request.
- ◆ **Transaction Log Criteria Reference List for Normal Polling:** Enter the transaction type references to be checked for changes during normal polling. The following `Business_Process_Type` references are configured by default:
 - ◆ Hire Employee
 - ◆ Change Job
 - ◆ Demote Employee
 - ◆ Promote Employee
 - ◆ Edit ID Information
 - ◆ Change Personal Information
 - ◆ Edit Other IDs for Worker
 - ◆ Contact Information Event
 - ◆ Terminate Employee
 - ◆ Contract Contingent Worker
 - ◆ End Contingent Worker Contract
 - ◆ Transfer Employee
 - ◆ Transfer Contingent Worker
 - ◆ Request Leave of Absence
 - ◆ Change Business Title
 - ◆ Change Legal Name
 - ◆ Add Additional Job
 - ◆ Assign Matrix Organization
 - ◆ Change Organization Assignments for Worker
 - ◆ Change Organization Assignments for Workers by Organization
 - ◆ Assign Workers
 - ◆ Change Preferred Name
 - ◆ Request Return from Leave of Absence

For more information on Additional transaction type references, see [“Configuring the Driver to Include Additional Transaction Type References” on page 27](#).

These are primarily `Business_Process_Type` transaction type references. To see changes for additional business processes, add the `Business_Process_Type` to this list.

- ◆ **Poll Job Profile:** Select to enable/disable the job profile polling.
 - ◆ **Response Filter List:** Provide a list of response groups to be collected from Workday. This list has the following default values:
 - ◆ `Include_Reference`
 - ◆ `Include_Job_Profile_Compensation_Data`
 - ◆ `Include_Job_Profile_Basic_Data`
- ◆ **Poll Interval (minutes):** Number of minutes between the polling cycles. This is applicable for both worker and job profile. By default, the interval is set to 10 minutes.
- ◆ **Migrate on Startup:** If you set this option to **true**, it will initiate Migration on driver startup for the Recurring APIs (i.e Worker and Job Profile) that are enabled in the configuration. After migration is completed, driver will continue with regular polling. When set to **false**, it will initiate regular polling for Recurring APIs that are enabled in the configuration. This parameter can force migration by clearing the cache files. Hence do not restart the driver with this parameter set to true on a migration completed driver, unless re-migration is required. This parameter is valid only at driver startup. Driver will continue with regular polling after the task at startup is completed. If driver shuts down unexpectedly during migration, just restart the driver and migration will continue from where it stopped.
- ◆ **Effective Polling:** Set the time interval for the effective polling. This polling is applicable for Worker and Job Profile. The effective polling can be performed once in a day at a selected time slot.
- ◆ **Scheduled Polling:** Fill the following options for Scheduled polling.
 - ◆ **Poll Terminated Workers:** Select to enable/disable for polling terminated workers.
 - ◆ **Termination Business Types to Poll:** List of worker business termination types to poll. Available options are:
 - ◆ `Terminate Employee`
 - ◆ `End Contingent Worker Contract`
 - ◆ **Number of Days to fetch:** Specify the number of days to be queries for terminated workers. By default, it is set to 5 days.
 - ◆ **Poll Location:** Select to enable/disable the polling of terminated workers.
 - ◆ **Location Types to Poll:** List of location types to poll.
 - ◆ **Location Usage Types to Poll:** List of location usage types to poll.
 - ◆ **Response Filter List:** Provide a list of response groups to be collected from Workday. This list has the following values:
 - ◆ `Include_Reference`
 - ◆ `Include_Location_Data`
 - ◆ **Poll Worker Photo:** Select to enable/disable the polling of worker’s photo.
 - ◆ **Resize Worker Photo:** Set this to **Yes** to resize worker photo received from Workday. You can use this option to store worker photo in `photo` attribute to avoid error in case of over-sized images.
 - ◆ **Maximum Photo Height:** Specify the maximum height of the worker photo.

- ◆ **Maximum Photo Width:** Specify the maximum width of the worker photo.
- ◆ The following three parameters helps you to fetch only the changes made to the worker's photo since last polling:

NOTE: The examples mentioned for the below attributes are for reference purposes only. You must ensure not to use them directly in your production environment.

- ◆ **Photo Update Report URL:** Specify the Web Services URL of the custom report that you created in [Step 7](#) in “[Advanced Synchronization of Worker Photos from the Workday Portal](#)” on page 29.
For example, `https://wd2-impl-services1.workday.com/ccx/service/customreport2/microfocus_pt1/lmcneil2/Employee_Photo_Change?wsdl1`
- ◆ **Photo Update Calculated Field:** Specify the calculated field information from [Step 2](#) in “[Advanced Synchronization of Worker Photos from the Workday Portal](#)” on page 29. This field consists of date/time value of the last photo update event of the workers.
For example,
`CF_RPT_Completion_Date_and_Time_of_Latest_Photo_Event`
- ◆ **Photo Report Namespace:** Specify the Namespace that you created in [Step 5](#) in “[Advanced Synchronization of Worker Photos from the Workday Portal](#)” on page 29. This is the Namespace of the custom report located under the Web Services options.
For example, `urn:com.workday.report/Employee_Photo_Change`
- ◆ **Poll Job Family:** Select to enable/disable the job profile.
 - ◆ **Response Filter List:** Provide a list of response groups to be collected from Workday. This list has the following values:
 - ◆ `Include_Reference`
 - ◆ `Include_Job_Profile_Info_Data`
- ◆ **Poll Organizations:** Select to enable/disable Organizational polling.
 - ◆ **Organization Types to Poll:** List of Organization types to poll. The available options are:
 - ◆ `Supervisory`
 - ◆ `Cost Center`
 - ◆ `Company`
 - ◆ `Cost_Center_Hierarchy`
 - ◆ `Matrix`
 - ◆ `Region`
 - ◆ **Response Filter List:** Provide a list of response groups to be collected from Workday. This list has the following values:
 - ◆ `Include_Hierarchy_Data`
 - ◆ `Include_Supervisory_Data`
- ◆ **Scheduler:** Specify the time to run the scheduled jobs.
- ◆ **Publisher Heart Beat Interval:** This option is used to configure the driver shim to send a periodic status message on the Publisher channel when there has been no Publisher traffic for the given number of minutes. By default, this is set to 10 minutes.

8 Fill in the following fields for the Remote Loader information, then click **Next**:

Connect To Remote Loader: Select **Yes** or **No** to determine if the driver will use the Remote Loader. For more information, see [Configuring the Remote Loader and Drivers in the *NetIQ Identity Manager Setup Guide for Linux*](#) or [Configuring the Remote Loader and Drivers in the *NetIQ Identity Manager Setup Guide for Windows*](#).

If you select **No**, skip to Step 8. If you select **Yes**, use the following information to complete the configuration of the Remote Loader:

Host Name: Specify the IP address or DNS name of the server where the Remote Loader is installed and running.

Port: Specify the port number for this driver. Each driver connects to the Remote Loader on a separate port. The default value is 8090.

KMO: Specify the Key Name (for example, `kmo=remotecert`) of the Key Material Object (KMO) containing the keys and certificate to be used for SSL.

If you used spaces in the certificate name, you need to enclose the KMO object nickname in single quotation marks.

Remote Loader Password: Specify a password to control access to the Remote Loader. It must be the same password that is specified as the Remote Loader password on the Remote Loader.

Driver Password: Specify a password for the driver to authenticate to the Identity Manager server. It must be the same password that is specified as the Driver Object Password on the Remote Loader.

9 On the Install Workday Default Configuration page, fill in the following fields for publisher settings, then click **Next**:

Merge Employee and Contingent workers in IDV: This option maintains single user object in IDV for converted employee from contingent worker or converted contingent worker from an employee. Can be set to **true** or **false**.


User Search Container in IDV: This global configuration value is used to get a reference to the container where Workday users are stored. This value is used for all workers (both Employee and Contingent workers). If you want separate containers for different type of users, then use custom option in `matching/creation/placementpolicy`. The DN provided here should in slash-format, such as `Data\users`.

Default Password Policy: Provide a path to the password policy which generates random password for the user. A sample policy `NETQWDDCFG-pub-cp-user-default-password` is added in the default configuration package. This policy adds a random password to new users created in Identity Vault. The password generated confirms to the password policy configured in the GCV (`default.password.policy`). This policy has to be added to the creation policy set to get executed.

Show Worker Matching Settings: If this option is set to **show**, fill the following fields:

- ◆ **User match settings:** Select a method for matching the users in IDV. Select Custom, if you want you own policy. The system provide following options to match the user under publisher matching policy:
 - ◆ Match WorkforceID
 - ◆ Match CN
 - ◆ Match all above in order
 - ◆ Match Custom-Define yourself

Show User Creation Settings: If this option is set to **show**, fill the following fields:

- ◆ **Required Attributes:** Lists all the required attributes for creating a new user object. Each of the specified attributes must be included in the Publisher filter. By default, the following attribute are available to select. You can add any custom attribute by clicking on the  icon:
 - ◆ Given Name
 - ◆ Surname
 - ◆ WorkforceID
 - ◆ wd-WorkerIDType
 - ◆ wd-UserName
- ◆ **User Name Mapping Attribute:** Specify the name of an attribute to be used for creating CN of user. If custom policy is defined to create CN, mention the value as custom.

Show User Placement Settings: If this option is set to **show**, fill the following fields:

- ◆ **User Placement Container in IDV:** This global configuration value is used to get a reference to the container IDV where new users will be created. It may be different than user search container. The DN is expected in slash-format such as `Data\users`. If you want to configure a custom container, specify custom as the value and define a custom placement policy.

Show Contact Settings: If this option is set to **show**, fill the following fields:

- ◆ **Default Country ISO Code:** Specify the default country ISO Code for modifying the contact data.
- ◆ **Work Contact Communication Usage Type:** Specify the value of communication usage type as configured in Workday for work contact information.
- ◆ **Home Contact Communication Usage Type:** Specify the value of communication usage type as configured in Workday for home contact information.
- ◆ **Work Phone Contact Details:** Specify the mapping attributes for different types of contact devices used at work.
 - ◆ **Device Type:** Specify the ID of the contact type as configured in Workday. For example, Landline, Mobile etc.
 - ◆ **Attribute Name:** Specify the name of an attribute, which holds the contact values for the given device type. If there is only a single value for th given device type, you can specify a single-value or a multi-value type. In case, there are multiple values for the given device type, you must only specify multi-value attribute.
- ◆ **Home Phone Contact Details:** Specify the mapping attributes for different types of contact devices used at home.
 - ◆ **Device Type:** Specify the ID of the contact type as configured in Workday. For example, Landline, Mobile etc.
 - ◆ **Attribute Name:** Specify the name of an attribute, which holds the contact values for the given device type. If there is only a single value for th given device type, you can specify a single-value or a multi-value type. In case, there are multiple values for the given device type, you must only specify multi-value attribute.

- 10 On the subsequent installation pages, fill the following fields for Publisher settings, then click **Next**:

Object Search Container: This global configuration value is used to get a reference to the container where Workday objects are stored. This value is used for all types of objects including relation, job family, location, photo, job profile and Organization. The DN should be in slash-format. For example:

- ◆ Relation Objects: `data\reference\workday\relation`

- ◆ Job Family Objects: data\reference\workday\jobfamily
- ◆ Location Objects: data\reference\workday\location
- ◆ Photo Objects: data\reference\workday\photo
- ◆ Job Profile Objects: data\reference\workday\jobprofile
- ◆ Organization Objects: data\reference\workday\organization

Show Object Matching Settings: If this option is set to **show**, fill the following fields:

- ◆ **Match Attribute:** Specify the Identity Vault attribute name mapped to the application's key field. The attribute specified here will be used for matching and must be added to the list of Required User Attributes. The following attributes are created by default:
 - ◆ Relation Objects: wd-RelationID
 - ◆ Job Family Objects: wd-JobFamilyID
 - ◆ Location Objects: wd-LocationID
 - ◆ Photo Objects: wd-photoID
 - ◆ Job Profile Objects: wd-JobCode
 - ◆ Organization Objects: wd-OrganizationID

Show Object Creation Settings: If this option is set to **show**, fill the following fields:

- ◆ **Required Attributes:** List of required attributes for creating an Object. Each of the attributes specified must be included in the Publisher filter.

Object Name Mapping Attribute: Specify the name of an attribute to be used for creating CN of objects. If custom policy is defined to create CN, mention the value as Custom.

Show Object Placement Settings: If this option is set to **show**, fill the following fields:

- ◆ **Object Placement Container in IDV:** This global configuration value is used to get a reference to the container IDV where new objects will be created. It may be different than object search container. The DN is expected in slash-format such as Data\appref\relation. If you want to configure a custom container, specify custom as the value and define a custom placement policy. The following containers are created by default:
 - ◆ Relation Objects: data\reference\workday\relation
 - ◆ Job Family Objects: data\reference\workday\jobfamily
 - ◆ Location Objects: data\reference\workday\location
 - ◆ Photo Objects: data\reference\workday\photo
 - ◆ Job Profile Objects: data\reference\workday\jobprofile
 - ◆ Organization Objects: data\reference\workday\organization

- 11 Review the summary of tasks that will be completed to create the driver, then click **Finish**.
- 12 After you have installed the driver, you can change the configuration for your environment. or more information, see [“Creating the Driver Object” on page 17](#).

Configuring the Driver to Include Additional Transaction Type References

Additional transaction type references can be configured in the Publisher driver parameter **Transaction Log Criteria Reference List for Normal Polling** (`wdWorkerTransactLogCritList`). By default, if a simple value is added to this parameter, this will become a `Business_Process_Type` transaction type reference.

In this case the transaction reference types for each business process types must be obtained from the Workday application. To obtain the business process type values from Workday, login to the Workday application > Goto **Transaction Types available for Subscription** report > click on the required event > click on **Integration IDs** > collect the value for the **Business Process Types** ID as displayed. For example, if the Business Process Type is **Termination** in the Workday application, the corresponding `wdWorkerTransactLogCritList` driver configuration transaction type value will be **Terminate Employee**.

If a transaction type reference other than `Business_Process_Type` is needed, the format of the value entered in **Transaction Log Criteria Reference List for Normal Polling** should have the name of the transaction type reference, a colon and then the value for that transaction type reference. For example,

```
Event_Lite_Type_ID:Custom Object Non-Effective-Dated Change
```

or

```
WID:08e574a19f6b400fac5dbe71ea854f1d
```


As per the above examples, any values without a colon will default to a `Business_Process_Type`. Values with a colon will be parsed with the value of the transaction type reference on the left of the colon and the value for that transaction type reference on the right of the colon.

Apart from `Business_Process_Types`, Workday 32.0 provides the following transaction type references:

- ◆ WID
- ◆ Event_Lite_Type_ID
- ◆ Rorganization_Activity_Type

Deploying the Driver Object

After the driver object is created in Designer, it must be deployed into the Identity Vault.

- 1 In Designer, open your project.
- 2 In the Modeler, right-click the driver icon  or the driver line, then select **Live > Deploy**.
- 3 If you are authenticated to the Identity Vault, skip to Step 5; otherwise, specify the following information:
 - ◆ **Host:** Specify the IP address or DNS name of the server hosting the Identity Vault.
 - ◆ **Username:** Specify the DN of the user object used to authenticate to the Identity Vault.
 - ◆ **Password:** Specify the user's password.
- 4 Click **OK**.
- 5 Read through the deployment summary, then click **Deploy**.
- 6 Read the successful message, then click **OK**.

- 7 Click **Define Security Equivalence** to assign rights to the driver.

The driver requires rights to objects within the Identity Vault. The Admin user object is most often used to supply these rights. However, you might want to create a DriversUser (for example) and assign security equivalence to that user.

7a Click **Add**, then browse to and select the object with the correct rights.

7b Click **OK** twice.

For more information about defining a Security Equivalent User in objects for drivers in the Identity Vault, see [Establishing a Security Equivalent User](#) in the [NetIQ Identity Manager Security Guide](#).

- 8 Click *Exclude Administrative Roles* to exclude users that should not be synchronized.

You should exclude any administrative User objects (for example, Admin and DriversUser) from synchronization.

8a Click **Add**, then browse to and select the user object you want to exclude.

8b Click **OK**.

8c Repeat Step 8a and Step 8b for each object you want to exclude.


8d Click **OK**.

- 9 Click **OK**.

Starting the Driver

When a driver is created, it is stopped by default. To make the driver work, you must start the driver and cause events to occur. Identity Manager is an event-driven system, so after the driver is started, it won't do anything until an event occurs.

To start the driver:

- 1 In Designer, open your project.
- 2 In the Modeler, right-click the driver icon  or the driver line, then select **Live > Start Driver**.

The driver cannot initialize completely unless it successfully connects to the Remote Loader and loads the Workday driver shim.

For information about management tasks for the driver, see [Chapter 6, "Managing the Driver,"](#) on [page 67](#).

Activating the Driver

To activate the Workday driver, activate the Metadirectory engine, then activate the driver by using the separate Workday activation key. If you created the driver in a driver set that has not been activated, you must activate the Metadirectory engine and the driver within 90 days. Otherwise, the driver stops working.

If driver activation has expired, the following error message is displayed in the ndstrace window:

```
DirXML Log Event -----  
Driver: \METADIRECTORY\system\DriverSet\WorkdayDriver  
Channel: Subscriber  
Status: Error  
Message: Code(-9075) Shutting down because DirXML engine evaluation period has  
expired. Activation is required for further use.
```

To use the driver, you must reactivate it.

For more information on activation, see [Activating Identity Manager](#) in the *NetIQ Identity Manager Overview and Planning Guide*.

Advanced Synchronization of Worker Photos from the Workday Portal

The photo synchronization between Workday and the driver happens once in every 24-hours. If any Organization has a large number of worker base, the driver takes longer than usual to fetch all the worker's photo. Sometimes in such cases, the process might fail due to timeout.

The Workday system stores the date/time value of each change in worker's photo. These date/time values can be used via calculated fields and custom reports (created using the calculated fields) to improve driver's performance while performing photo synchronization. The Workday driver uses this custom report to compare the photo related details based on the last date/time value of the worker's photo since the previous polling.

NOTE: The following configuration is not mandatory and only recommended to improve the driver's performance.

Perform the following steps to create calculated fields and custom report in the Workday portal:

- 1 Create the following calculated fields using the **Create Calculated Field** option in the Workday portal:
 - 1a Create a calculated field. For example, we've created a field named **CF_TF_RPT_Is Action Event Photo Change**.

Calculated Field - True/False Condition

CF_TF_RPT_Is Action Event Photo Change Actions

Field Name: CF_TF_RPT_Is Action Event Photo Change

Business Object: Action Event

Calculation: Additional Info: Where Used

Returns a boolean field indicating if the condition is true or false.

1 item

And/Or	(Field	Operator
And		<input checked="" type="checkbox"/> Business Process Type	in the selection list

- 1b Create another calculated field using the field created in the previous step as a **Condition**. For example, we've created the second field with the name **CF_ESI_RPT Latest Photo Change Event**.

Calculated Field - Extract Single Instance


CF_ESL_RPT Latest Photo Change Event [Actions](#)

Field Name CF_ESL_RPT Latest Photo Change Event

Business Object Worker

Calculation Additional Info Where Used

Extracts a single instance of a related business object based on a condition. Will return zero or one instance.

Source Field  Worker History
Related Business Object Action Event
Condition  CF_TF_RPT_Is Action Event Photo Change
Sort Field  Date and Time Completed
Sort Direction (empty)

Ascending (A to Z)
 Descending (Z to A)

Instance to be Returned (empty)
 First occurrence
 Last occurrence
 Specific occurrence

- 1c Create a third calculated field using the field created in previous step as a **Lookup Field**. For example, we have created the field named **CF_LRV_RPT Completion Date and Time of Latest Photo Event**.

Calculated Field - Lookup Related Value



CF_LRV_RPT Completion Date and Time of Latest Photo Event [Actions](#)

Field Name CF_LRV_RPT Completion Date and Time of Latest Photo Event

Business Object Worker

Calculation Additional Info Where Used

Looks up the value of a field associated with a single instance of a related business object.

Lookup Field  CF_ESL_RPT Latest Photo Change Event
Related Business Object Action Event
Return Value  Date and Time Completed

- 2 Create a custom report using the **Create Custom Report** option in Workday portal. You must ensure that the integration user has access to this report or the report is created as an integration user.

Create a custom report with the following mandatory fields:

- ◆ Employee ID
- ◆ Worker is Contingent Worker
- ◆ The calculated field created (**CF_LRV_RPT Completion Date and Time of Latest Photo Event**) in [Step 1c](#).

Note down the calculated field name appearing under **Column Heading Override XML Alias** as shown in the below image and specify the same in the **Photo Update Calculated Field** in Designer while configuring the driver.

NOTE: You can add additional fields as per your requirement.

View Custom Report
Worker Last Photo Change Date [Actions](#)

Report Name: Worker Last Photo Change Date

Report Type: Advanced

Data Source: Workers for HCM Reporting

Data Source Filter: All Workers

Data Source Type: Indexed

Primary Business Object: Worker

> **Additional Info**

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

4 Items

Business Object	Field	Column Heading Override XML Alias
Worker	Full Legal Name	Full_Legal_Name
Worker	Employee ID	Employee_ID
Worker	Worker is Contingent Worker	Worker_is_Contingent_Worker
Worker	CF_LRV_RPT Completion Date and Time of Latest Photo Event	CF_LRV_RPT_Completion_Date_and_Time_of_Latest_Photo_Event

- 3 Click on the **Sort** tab to enable **Sorting Field** for the newly created custom report based on alphabetical descending order. This helps to display the latest changes at the top of the report.

View Custom Report

Worker Last Photo Change Date Actions

Report Name Worker Last Photo Change Date
Report Type Advanced
Data Source Workers for HCM Reporting
Data Source Filter All Workers
Data Source Type Indexed
Primary Business Object Worker

> Additional Info

Columns **Sort** Filter Prompts Output Share Advanced

Specify how the results should be sorted

Sort and Group

Sort by first accessible column

1 item	
Field	Sort Direction
CF_LRV_RPT Completion Date and Time of Latest Photo Event	Alphabetical - Descending

4 Create prompts for the report under the **Prompts** tab.

Provide default values for **Worker Types** as **Contingent Worker** and **Employee**. This will ensure that both types of Workers are included in the report.

Data Source Workers for HCM Reporting
Data Source Filter All Workers
Data Source Type Indexed
Primary Business Object Worker

> Additional Info

Columns Sort Filter **Prompts** Output Share Advanced

Specify the prompt defaults that should be used

Prompt Instructions

Instructions (empty)

Display Prompt Values in Subtitle No

Prompt Defaults 4 items					
Field	Prompt Qualifier	Label for Prompt	Label For Prompt XML Alias	Default Type	Default Value
Worker Types			Worker_Types	Specify default value	Contingent Worker Employee
Include Terminated Workers			Include_Terminated_Workers	No default value	
Contingent Worker Type			Contingent_Worker_Type	No default value	
Employee Type			Employee_Type	No default value	

5 Enable the report as Web Service under the **Advanced** tab.

NOTE: Note down the **Namespace** value and specify the same in the **Photo Report Namespace** field in Designer while configuring the driver.

> Additional Info

Columns Sort Filter Prompts Output Share **Advanced**

Specify advanced options for the report (empty)

✓ **Report Performance**
Optimized for Performance Yes

✓ **View Options**
Freeze First Column
Enable Preferred Currency
Enable Save Parameters
Exclude Execution Link from Search

✓ **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	Yes
Web Service API Version	v33.2
Namespace	urn:com.workday.report/Worker_Last_Photo_Change_Date

✓ **Worksheets**
Enable for Worksheets

6 Click on **Actions > Web Service > View URLs** to get the Web Service URL of the report.

View Custom Report
Worker Last Photo Change Date

Report Name: Worker Last Photo Change Date
Report Type: Advanced
Data Source: Workers for HCM Reporting
Data Source Filter: All Workers
Data Source Type: Indexed
Primary Business Object: Worker

✓ **Additional Info**

Columns Sort Filter Prompts

Specify advanced options for the report (empty)

✓ **Report Performance**

Actions

- Custom Report >
- Audits >
- Calculated Field for Re... >
- Favorite >
- Integration IDs >
- Layout >
- Reporting >
- Reports >
- Solution >
- Translation >
- Web Service > **View URLs**

Custom Report
Worker Last Photo Change Date

Brief Description (empty)
Data Source: Workers for HCM Reporting
Primary Business Object: Worker

- 7 Copy the URL for **Workday XML > WSDL** option and save it. You need to specify this URL in the **Photo Update Report URL** field in Designer while configuring the driver.

The screenshot shows a web interface with a blue header bar containing a back arrow, the text 'View URLs Web Service', and 'Worker Last Photo Change Date' with an 'Actions' button. Below the header is a section titled 'Report Parameters' with a table of settings:

Worker Types	Contingent Worker Employee
Include Terminated Workers	No
Contingent Worker Type	(empty)
Employee Type	(empty)

Below the parameters is a section titled 'Workday XML' with a list of options: REST Workday XML, XSD XSD, WSDL WSDL (highlighted with a red box), and Simple XSD. A 'Copy URL' button is positioned over the 'WSDL WSDL' option. Below this is a section titled 'Simple XSD' with a list of options: Simple XML Simple XML and XSD XSD. A second 'Copy URL' button is positioned over the 'Simple XML Simple XML' option.

3 Attributes Mapping & Filtering

This chapter provides information about mapping of various attributes available for the Workday driver:

- ◆ “User Attributes” on page 35
- ◆ “Job Profile Attributes” on page 48
- ◆ “Job Family Attributes” on page 49
- ◆ “Relation Attributes” on page 49
- ◆ “Photo Attributes” on page 53
- ◆ “Location Attributes” on page 54
- ◆ “Organization Attributes” on page 56
- ◆ “Attribute Filter Settings” on page 57

User Attributes

The below table lists Identity Vault user attributes. These attributes can be retrieved using the `Get_Workers` API.

Table 3-1 Mapping of User Attributes

Attribute Name	NDS-Name	Workday SOAP Response Path	Description
wd-LegalFirstName	Given name	wd:Worker_Data// wd:Legal_Name_Data// wd:First_Name	First name for a person
wd-LegalMiddleName	Initials	wd:Worker_Data// wd:Legal_Name_Data// wd:Middle_Name	Middle name for a person
wd-LegalLastName	Surname	wd:Worker_Data// wd:Legal_Name_Data// wd>Last_Name	Last name for a person
wd-LegalPersonalTitle	personalTitle	wd:Worker_Data// wd:Legal_Name_Data// wd:Title_Reference/ @wd:Descriptor	Description of the reference to the title of a person
wd-LegalGenerationQualifier	Generational Qualifier	wd:Worker_Data// wd:Legal_Name_Data// wd:Social_Suffix_Reference/ @wd:Descriptor	Description of social suffix for a person
workforceID	workforceID	wd:Worker_Data/wd:Worker_ID	The ID for the employee or the contingent worker

Attribute Name	NDS-Name	Workday SOAP Response Path	Description
wd-WorkerType	wd-WorkerType	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data// wd:Worker_Type_Reference/ wd:ID[@wd:type='Employee_Type_ID']	Unique identifier of the worker type for the position
wd-AddressType	wd-AddressType	wd:Worker_Data/ wd:Personal_Data// wd:Address_Data/ wd:Usage_Data/wd:Type_Data/ wd:Type_Reference/ wd:ID[@wd:type='Communication_Usage_Type_ID']	Reference ID for the communication usage type
wd-BirthDate	wd-BirthDate	wd:Worker_Data/wd:Birth_Date	Birth date of the person
wd-Country	co	wd:Worker_Data/ wd:Personal_Data// wd:Address_Data/ wd:Country_Reference/ wd:ID[@wd:type='ISO_3166-1_Alpha-3_Code']	Three character code for the country of the primary work address of the person
wd-StreetAddress	SA	wd:Worker_Data/ wd:Personal_Data// wd:Address_Data/ wd:Address_Line_Data	The address line of the primary work address of the person
wd-City	Physical Delivery Office Name	wd:Worker_Data/ wd:Personal_Data// wd:Address_Data/ wd:Municipality	City part of the primary work address of the person
wd-State	S	wd:Worker_Data/ wd:Personal_Data// wd:Address_Data/ wd:Country_Region_Descriptor	The region part of the primary work address of the person. For example, state/province information
wd-PostalCode	Postal Code	wd:Worker_Data/ wd:Personal_Data// wd:Address_Data/ wd:Postal_Code	The postal code part of the primary work address of the person.
wd-BusinessAddressLine1	wd-BusinessAddressLine1	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data// wd:Address_Data/ wd:Address_Line_Data[@wd:Type='ADDRESS_LINE_1']	Address line 1 of the primary address of the person
wd-BusinessCity	wd-BusinessCity	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data// wd:Address_Data/ wd:Municipality	City part of the primary address of the person

Attribute Name	NDS-Name	Workday SOAP Response Path	Description
wd-BusinessCountry	wd-BusinessCountry	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data// wd:Address_Data/ wd:Country_Reference/ wd:ID[@wd:type='ISO_3166-1_Alpha-3_Code']	Three character code of the country of the primary address of the person
wd-BusinessPostalcode	wd-BusinessPostalcode	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data// wd:Address_Data/ wd:Postal_Code	Postal code part of the primary address of the person
wd-ManagementLevel	wd-ManagementLevel	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data/ wd:Job_Profile_Summary_Data/ wd:Management_Level_Reference/ wd:ID[@wd:type='Management_Level_ID']	Unique identifier for the management level of the position of the person
wd-ManagerWorkforceID	managerWorkforceID	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Organizations_Data// wd:Organization_Support_Role/ wd:Organization_Role_Data/ wd:Worker_Reference/ wd:ID[@wd:type='Employee_ID' or @wd:type='Contingent_Worker_ID']	Workforce ID of the manager of the person
wd-TransactionLog	wd-TransactionLog	wd:Worker_Data/ wd:Transaction_Log_Entry_Data/ wd:Transaction_Log_Entry/ wd:Transaction_Log_Data	Transaction log entry data of the person
wd-isManager	isManager	wd:Worker_Data//wd:Role_Data/ / wd:Organization_Role_Reference/ wd:ID[@wd:type='Organization_Role_ID' and text()='Manager']	Boolean attribute indicating if the person is a manager
wd-BusinessState	wd-BusinessState	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data// wd:Address_Data/ wd:Country_Region_Descriptor	Region part of the primary address of the person. For example, state/province information

Attribute Name	NDS-Name	Workday SOAP Response Path	Description
wd-BusinessTitle	Title	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data/ wd:Business_Title	Business title for the position of the primary job of the person
wd-C-Active	wd-C-Active	wd:Worker_Data// wd:Worker_Status_Data/ wd:Active	Boolean attribute identifying whether the contingent worker is active
wd-C-ActivePositionIDs	wd-C-ActivePositionIDs	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data[@wd:Primary_Job='1']	Text attribute identifying position ID of a contingent worker
wd-C-Hiredate	wd-C-Hiredate	wd:Worker_Data// wd:Worker_Status_Data/ wd:Hire_Date	The most recent hire date for the contingent worker
wd-C-Home_Countries	wd-C-Home_Countries	wd:Worker_Data// wd:Home_Country_Reference/ wd:ID[@wd:type='ISO_3166-1_Alpha-2_Code']	Three character code of the home country for contingent worker' primary jobs
wd-C-Host_Countries	wd-C-Host_Countries	wd:Worker_Data// wd:Host_Countries_Reference/ wd:ID[@wd:type='ISO_3166-1_Alpha-2_Code']	Three character code of the host country for contingent worker's international assignment jobs
wd-C-International_Assignment	wd-C-International_Assignment	wd:Worker_Data// wd:Has_International_Assignment	Boolean attribute indicating that the contingent worker has international assignments
wd-C-OriginalHiredate	wd-C-OriginalHiredate	wd:Worker_Data// wd:Worker_Status_Data/ wd:Original_Hire_Date	Earliest hire date of the contingent worker
wd-C-Rehire	wd-C-Rehire	wd:Worker_Data// wd:Worker_Status_Data/ wd:Rehire	Boolean attribute indicating whether the contingent worker is a rehire based on the most recent hire event
wd-C-Retired	wd-C-Retired	wd:Worker_Data// wd:Worker_Status_Data/ wd:Retired	Boolean attribute identifying whether the contingent worker is currently retired
wd-C-Terminated	wd-C-Terminated	wd:Worker_Data// wd:Worker_Status_Data/ wd:Terminated	Boolean attribute identifying whether the contingent worker is currently terminated
wd-C-TerminationDate	wd-C-TerminationDate	wd:Worker_Data// wd:Worker_Status_Data/ wd:Termination_Date	Most recent termination date of the contingent worker
wd-C-HireRescinded	wd-C-HireRescinded	wd:Worker_Data// wd:Worker_Status_Data/ wd:Hire_Rescinded	Boolean attribute indicating whether the contingent worker's hire was rescinded

Attribute Name	NDS-Name	Workday SOAP Response Path	Description
wd-E-Active	wd-E-Active	wd:Worker_Data// wd:Worker_Status_Data/ wd:Active	Boolean attribute identifying whether the employee is active
wd-E-ActivePositionIDs	wd-E-ActivePositionIDs	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data/wd:Position_ID	Text attribute identifying position ID of an employee
wd-E-Hiredate	wd-E-Hiredate	wd:Worker_Data// wd:Worker_Status_Data/ wd:Hire_Date	The most recent hire date for the employee
wd-E-Home_Countries	wd-E-Home_Countries	wd:Worker_Data// wd:Home_Country_Reference/ wd:ID[@wd:type='ISO_3166-1_Alpha-3_Code']	Three character code of the home country for employee's primary jobs
wd-E-Leave	wd-E-Leave	wd:Worker_Data// wd:Worker_Status_Data/ wd:Leave_Status_Data/ wd:On_Leave	Boolean attribute identifying whether the employee is currently on leave
wd-E-LeaveDate	wd-E-LeaveDate	wd:Worker_Data// wd:Worker_Status_Data/ wd:Leave_Status_Data/ wd:Leave_Start_Date	Start date of the current leave event of the employee
wd-E-LeaveEndDate	wd-E-LeaveEndDate	wd:Worker_Data// wd:Worker_Status_Data/ wd:Leave_Status_Data/ wd:Estimated_Leave_End_Date	Estimated end date of the current leave event of the employee
wd-E-LeaveType	wd-E-LeaveType	wd:Worker_Data// wd:Worker_Status_Data/ wd:Leave_Status_Data/ wd:Leave_of_Absence_Type_Reference/ wd:ID[@wd:type='Leave_of_Absence_Type_ID']	Unique identifier for the leave type of the current leave event of the employee
wd-E-HireReason	wd-E-HireReason	wd:Worker_Data// wd:Worker_Status_Data/ wd:Hire_Reason_Reference/ wd:ID[@wd:type='Event_Classification_Subcategory_ID']	Unique identifier of reason for hire from the most recent hire event of the employee
wd-E-TerminationReason	wd-E-TerminationReason	wd:Worker_Data// wd:Worker_Status_Data/ wd:Primary_Termination_Reason_Reference/ wd:ID[@wd:type='Event_Classification_Subcategory_ID']	Unique identifier of the primary reason for the employee's most recent termination
wd-E-Host_Countries	wd-E-Host_Countries	wd:Worker_Data// wd:Host_Countries_Reference/ wd:ID[@wd:type='ISO_3166-1_Alpha-3_Code']	Three character code of the host country for employee's international assignment jobs

Attribute Name	NDS-Name	Workday SOAP Response Path	Description
wd-E-International_Assignment	wd-E-International_Assignment	wd:Worker_Data// wd:Has_International_Assignment	Boolean attribute indicating that the employee has international assignments
wd-E-OriginalHiredate	wd-E-OriginalHiredate	wd:Worker_Data// wd:Worker_Status_Data/ wd:Original_Hire_Date	Earliest hire date of the employee
wd-E-Rehire	wd-E-Rehire	wd:Worker_Data// wd:Worker_Status_Data/ wd:Rehire	Boolean attribute indicating whether the employee is a rehire based on the most recent hire event
wd-E-Retired	wd-E-Retired	wd:Worker_Data// wd:Worker_Status_Data/ wd:Retired	Boolean attribute identifying whether the employee is currently retired
wd-E-Terminated	wd-E-Terminated	wd:Worker_Data// wd:Worker_Status_Data/ wd:Terminated	Boolean attribute identifying whether the employee is currently terminated
wd-E-TerminationDate	wd-E-TerminationDate	wd:Worker_Data// wd:Worker_Status_Data/ wd:Termination_Date	Most recent termination date of the employee
wd-HomeCity	homeCity	wd:Worker_Data/ wd:Personal_Data// wd:Address_Data/ wd:Municipality	City part of the primary home address of the person
wd-HomeCountry	wd-HomeCountry	wd:Worker_Data/ wd:Personal_Data// wd:Address_Data/ wd:Country_Reference/ wd:ID[@wd:type='ISO_3166-1_Alpha-3_Code']	Three character country code of the primary home address of the person
wd-HomePostalCode	homeZipCode	wd:Worker_Data/ wd:Personal_Data// wd:Address_Data/ wd:Postal_Code	The postal code part of the primary home address of the person.
wd-HomeState	homeState	wd:Worker_Data/ wd:Personal_Data// wd:Address_Data/ wd:Country_Region_Descriptor	The region part of the primary home address of the person. For example, state/province information
wd-HomeStreetAddresses	wd-HomeStreetAddresses	wd:Worker_Data/ wd:Personal_Data// wd:Address_Data/ wd:Address_Line_Data	The address line of the primary home address of the person
wd-JobClassificationType	wd-JobClassificationType	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data// wd:Job_Classification_Reference/@wd:Descriptor	Description for the job classification of the position

Attribute Name	NDS-Name	Workday SOAP Response Path	Description
wd-JobGroupReference	wd-JobGroupReference	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data// wd:Job_Group_Reference/ @wd:Descriptor	Description for the job group of the position
wd-JobProfileID	jobCode	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data// wd:Job_Profile_Reference/ wd:ID[@wd:type='Job_Profile_ID']	Unique identifier for the job profile of the position
wd-JobProfileName	wd-JobProfileName	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data// wd:Job_Profile_Name	The name of the job profile of the position
wd-LocationID	wd-LocationID	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data// wd:Business_Site_Summary_Data/wd:Location_Reference/ wd:ID[@wd:type='Location_ID']	Unique identifier for the location data of the user
wd-LocationName	L	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data// wd:Business_Site_Summary_Data/wd:Name	Name of the location of the person
wd-NationalID	wd-NationalID	wd:Worker_Data// wd:National_ID_Data/wd:ID	National identifier ID
wd-PayRateType	wd-PayRateType	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data// wd:Pay_Rate_Type_Reference/ wd:ID[@wd:type='Pay_Rate_Type_ID']	Unique identifier to the pay rate type for the position
wd-PositionEffectiveDate	wd-PositionEffectiveDate	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data/ @wd:Effective_Date	Effective date for position of the primary job of the person
wd-PositionEndDate	wd-PositionEndDate	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data//wd:End_Date	The effective date of end employment business process

Attribute Name	NDS-Name	Workday SOAP Response Path	Description
wd-PositionID	wd-PositionID	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data// wd:Position_ID	Text attribute identifying position ID of the primary job the person
wd-PositionStartDate	wd-PositionStartDate	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data//wd:Start_Date	Date the worker first started working in the primary job position
wd-PositionTimeType	wd-PositionTimeType	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data// wd:Position_Time_Type_Reference/ wd.ID[@wd:type='Position_Time_Type_ID']	Unique identifier to the position time type
wd-PositionTitle	wd-PositionTitle	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data// wd:Position_Title	Text attribute identifying position title of the primary job the person
wd-PreferredFirstName	wd-PreferredFirstName	wd:Worker_Data// wd:Preferred_Name_Data// wd:First_Name	First name of the preferred name of the person
wd-PreferredGenerationQualifier	wd-PreferredGenerationQualifier	wd:Worker_Data// wd:Preferred_Name_Data// wd:Social_Suffix_Reference/ @wd:Descriptor	Description of social suffix of the preferred name for a person
wd-PreferredLastName	wd-PreferredLastName	wd:Worker_Data// wd:Preferred_Name_Data// wd:Last_Name	Last name of the preferred name of the person
wd-PreferredMiddleName	wd-PreferredMiddleName	wd:Worker_Data// wd:Preferred_Name_Data// wd:Middle_Name	Middle name of the preferred name of the person
wd-PreferredPersonalTitle	wd-PreferredPersonalTitle	wd:Worker_Data// wd:Preferred_Name_Data// wd:Title_Reference/ @wd:Descriptor	Description of the reference to the title of the preferred name of a person
wd-WID	wd-WID	wd:Worker_Reference/ wd.ID[@wd:type="WID"]	Unique identifier of the employee or contingent worker

Attribute Name	NDS-Name	Workday SOAP Response Path	Description
wd-JobFamily	wd-JobFamily	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data/ wd:Job_Profile_Summary_Data/ wd:Job_Family_Reference/ wd:ID[@wd:type='Job_Family_ID'] wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data/ wd:Job_Profile_Summary_Data/ wd:Job_Family_Reference/ @wd:Descriptor	Unique identifier and description for the job family of the person
wd-WorkerIDType	wd-WorkerIDType	wd:Worker_Data/wd:Worker_ID/ wd:Worker_Reference[w:ID[@wd:type='Employee_ID']]	Employee ID / Contingent Worker ID
wd-BusinessAddressLine2	wd-BusinessAddressLine2	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data/ wd:Address_Data/ wd:Address_Line_Data[@wd:Type='ADDRESS_LINE_2']	Address line 2 of the primary address of the person
wd-BusinessAddressLine3	wd-BusinessAddressLine3	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data/ wd:Address_Data/ wd:Address_Line_Data[@wd:Type='ADDRESS_LINE_3']	Address line 3 of the primary address of the person
wd-InternetEmailAddress	Internet EMail Address	wd:Worker_Data/ wd:Personal_Data// wd:Email_Address_Data/ wd:Email_Address	Work email address of the person
wd-HomeInternetEmailAddress	homeEmailAddress	wd:Worker_Data/ wd:Personal_Data// wd:Email_Address_Data/ wd:Email_Address	Home email address of the person
wd-UserName	wd-UserName	wd:Worker_Data// wd:User_Name	User name that is used to sign onto the Workday application
wd-orgManagerWorkforceID	wd-orgManagerWorkforceID	wd:Worker_Data/ wd:Organization_Data// wd:Organization_Support_Role/ wd:Organization_Role_Data/ wd:Worker_Reference/ wd:ID[@wd:type='Employee_ID']	Workforce ID of the manager of the Organization for the person

Attribute Name	NDS-Name	Workday SOAP Response Path	Description
wd-JobClassificationSummaryData	wd-JobClassificationSummaryData	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data/ wd:Job_Classification_Summary_Data/ wd:Job_Group_Reference/ wd:ID[@wd:type='Job_Classification_Group_ID'] wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data/ wd:Job_Classification_Summary_Data/ wd:Job_Classification_Reference/@wd:Descriptor wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data/ wd:Job_Classification_Summary_Data/ wd:Job_Classification_Reference/ wd:ID[@wd:type='Job_Classification_Reference_ID']	Contains job classification from the job profile for the position and additional job classification specified for the position
wd-Gender	wd-Gender	wd:Worker_Data/ wd:Personal_Data/ wd:Gender_Reference/ wd:ID[@wd:type='Gender_Code']	Unique identifier for the gender of the person
wd-StandardHours	wd-StandardHours	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data/ wd:Scheduled_Weekly_Hours	Scheduled weekly hours for position of the primary job of the person
wd-FullTimeEquivalent	wd-FullTimeEquivalent	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data/ wd:Full_Time_Equivalent_Percentage	Full time equivalent percentage for position of the primary job of the person
wd-ShortCountryCode	wd-ShortCountryCode	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data/ wd:Address_Data/ wd:Country_Reference/ wd:ID[@wd:type='ISO_3166-1_Alpha-2_Code']	Two character code for the country of the primary address of the person

Attribute Name	NDS-Name	Workday SOAP Response Path	Description
wd-C-ContractorRefID	wd-C-ContractorRefID	wd:Worker_Data// wd:Worker_Contract_Data/ wd:Supplier_Reference/ wd:ID[@wd:type='Supplier_Reference_ID']	Unique identifier of the supplier for the contingent worker
wd-ShortStateCode	wd-ShortStateCode	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data// wd:Address_Data/ wd:Country_Region_Reference/ wd:ID[@wd:type='ISO_3166-2_Code']	Two character code for region of the primary address of the person
wd-ReportingHierarchy	wd-ReportingHierarchy	wd:Worker_Data/ wd:Management_Chain_Data/ wd:Worker_Supervisory_Management_Chain_Data/ wd:Management_Chain_Data/ wd:Manager_Reference/wd:ID	Sequence of manager references of the management chain data
wd-DepartmentHierarchy	wd-DepartmentHierarchy	wd:Worker_Data/ wd:Management_Chain_Data/ wd:Worker_Supervisory_Management_Chain_Data/ wd:Management_Chain_Data/ wd:Organization_Reference/ wd:ID	Sequence of Organization IDs of the management chain data
wd-E-HireRescinded	wd-E-HireRescinded	wd:Worker_Data// wd:Worker_Status_Data/ wd:Hire_Rescinded	Boolean attribute indicating whether the employee's hire was rescinded
wd-E-ContinuousServiceDate	wd-E-ContinuousServiceDate	wd:Worker_Data// wd:Worker_Status_Data/ wd:Continuous_Service_Date	Continuous service date for the employee
wd-C-ContinuousServiceDate	wd-C-ContinuousServiceDate	wd:Worker_Data// wd:Worker_Status_Data/ wd:Continuous_Service_Date	Continuous service date for the contingent employee
wd-HostCompanyRefID	wd-HostCompanyRefID	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data[wd:Position_Data[wd:International_Assignment_Data]]/ wd:Position_Organizations_Data/ wd:Position_Organization_Data/ wd:Organization_Data[wd:Organization_Type_Reference/ wd:ID='COMPANY']/ wd:Organization_Reference_ID/	Unique identifier for the host Organization of the worker's international assignment job

Attribute Name	NDS-Name	Workday SOAP Response Path	Description
wd-HostCompanyCode	wd-HostCompanyCode	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data[wd:Position_Data[wd:International_Assignment_Data]]/ wd:Position_Organizations_Data/ wd:Position_Organization_Data/ wd:Organization_Data[wd:Organization_Type_Reference/ wd:ID='COMPANY']/ wd:Organization_Code	Organization code for the host Organization of the worker's international assignment job
wd-HostLocation	wd-HostLocation	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data[wd:Position_Data[wd:International_Assignment_Data]]/wd:Position_Data/ wd:Business_Site_Summary_Data/wd:Name	Name of the location for the host Organization of the worker's international assignment job
wd-HostCompanyName	wd-HostCompanyName	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data[wd:Position_Data[wd:International_Assignment_Data]]/ wd:Position_Organizations_Data/ wd:Position_Organization_Data/ wd:Organization_Data[wd:Organization_Type_Reference/ wd:ID='COMPANY']/ wd:Organization_Name	Organization name for the host Organization of the worker's international assignment job
wd-Home_Country_ISO_2	wd-Home_Country_ISO_2	wd:Worker_Data// wd:Home_Country_Reference/ wd:ID[@wd:type='ISO_3166-1_Alpha-2_Code']	Two character code for the worker's home country
wd-Host_Country_ISO_2	wd-Host_Country_ISO_2	wd:Worker_Data// wd:Host_Country_Reference/ wd:ID[@wd:type='ISO_3166-1_Alpha-2_Code']	Two character code for the worker's host country for international assignments
wd-VisaID	wd-VisaID	wd:Worker_Data// wd:Visa_ID_Data/wd:ID	Visa identifier
wd-GovernmentID	wd-GovernmentID	wd:Worker_Data// wd:Government_ID_Data/wd:ID	Government ID
wd-PassportID	wd-PassportID	wd:Worker_Data// wd:Passport_ID_Data/wd:ID	Passport ID
wd-LicenseID	wd-LicenseID	wd:Worker_Data// wd:License_ID_Data/wd:ID	License identifier
wd-DisabilityID	wd-DisabilityID	wd:Worker_Data/ wd:Personal_Data/ wd:Disability_Status_Data/ wd:Disability_Reference/ wd:ID[@wd:type='Disability_ID']	Person's disability identifier

Attribute Name	NDS-Name	Workday SOAP Response Path	Description
wd-ArmedForcesID	wd-ArmedForcesID	wd:Worker_Data/ wd:Personal_Data/ wd:Military_Service_Data/ wd:Status_Reference/ wd:ID[@wd:type='Armed_Forces_Status_ID']	Person's military status identifier
wd-WorkPrimaryDeviceType	wd-WorkPrimaryDeviceType	wd:Worker_Data/ wd:Personal_Data// wd:Phone_Data/ wd:Phone_Device_Type_Reference/ wd:ID[@wd:type='Phone_Device_Type_ID']	Unique identifier for primary work phone device type
wd-HomePrimaryDeviceType	wd-HomePrimaryDeviceType	wd:Worker_Data/ wd:Personal_Data// wd:Phone_Data/ wd:Phone_Device_Type_Reference/ wd:ID[@wd:type='Phone_Device_Type_ID']	Unique identifier for primary home phone device type
wd-WorkPrimaryPhone	wd-WorkPrimaryPhone	wd:Worker_Data/ wd:Personal_Data// wd:Phone_Data/ @wd:International_Formatted_Phone	Formatted international phone number with extension of the primary work phone of the person
wd-HomePrimaryPhone	wd-HomePrimaryPhone	wd:Worker_Data/ wd:Personal_Data// wd:Phone_Data/ @wd:International_Formatted_Phone	Formatted international phone number with extension of the primary home phone of the person
wd-C-ContractEndDate	wd-C-ContractEndDate	wd:Worker_Data// wd:Worker_Contract_Data/ wd:Contract_End_Date	That date the contingent worker's contract ends
wd-Merge	wd-Merge		This attribute when set on worker object, triggers the synchronization of the workers with IDV.
wd-Merge-effectiveDate	wd-Merge-effectiveDate		If the wd-Merge-effectiveDate is set on the worker object class prior to setting wd-Merge to true, the query for the sync event will use the value for wd-Merge-effectiveDate as the effective date provided it is in the future.
wd-E-TerminationLastDayOfWork	wd-E-TerminationLastDayOfWork	wd:Worker_Data// wd:Worker_Status_Data/ wd:Termination_Last_Day_of_Work	Last day worked for the employee's termination event.

Attribute Name	NDS-Name	Workday SOAP Response Path	Description
wd-C-TerminationLastDayOfWork	wd-C-TerminationLastDayOfWork	wd:Worker_Data/ wd:Worker_Status_Data/ wd:Termination_Last_Day_of_Work	Last day worked for the contingent worker's termination event.
wd-C-SupplierID	wd-C-SupplierID	wd:Worker_Data/ wd:Worker_Contract_Data/ wd:Supplier_Reference/ wd:ID[@wd:type='Supplier_ID']	Unique identifier of the supplier for the contingent worker.

Job Profile Attributes

The below table lists Identity Vault Job Profile attributes. These attributes can be retrieved using the `Get_Job_Profiles` API.

Table 3-2 Mapping of Job Profile Attributes

Attribute Name	nds-name	Workday SOAP Response Path	Description
wd-CompensationGradeID	wd-CompensationGradeID	wd:Job_Profile_Data/ wd:Job_Profile_Compensation_Data/ wd:Compensation_Grade_Reference/ wd:ID[@wd:type='Compensation_Grade_ID']	Unique identifier for the compensation grade
wd-CompensationGradeProfileID	wd-CompensationGradeProfileID	wd:Job_Profile_Data/ wd:Job_Profile_Compensation_Data/ wd:Compensation_Grade_Profile_Reference/ wd:ID[@wd:type='Compensation_Grade_Profile_ID']	Unique identifier for the compensation grade profile
wd-Inactive	wd-Inactive	wd:Job_Profile_Basic_Data/ wd:Inactive	Boolean attribute indicating if job profile is inactive
wd-JobCode	wd-JobCode	wd:Job_Profile_Data/ wd:Job_Code	Job code for the job profile
wd-JobFamilyID	wd-JobFamilyID	wd:Job_Profile_Basic_Data/ wd:Job_Family_Data/ wd:Job_Family_Reference/ wd:ID[@wd:type='Job_Family_ID']	Unique identifier for the job family of the job profile
wd-JobProfileID	wd-JobProfileID	wd:Job_Profile_Data/ wd:Job_Code	Job code for the job profile
wd-JobTitle	wd-JobTitle	wd:Job_Profile_Basic_Data/ wd:Job_Title	Name of the job profile
wd-WID	wd-WID	wd:Job_Profile_Reference/ wd:ID[@wd:type='WID']	Unique identifier for the job profile

Job Family Attributes

The below table lists Identity Vault Job Family attributes. These attributes can be retrieved using the `Get_Job_Families` API

Table 3-3 Mapping of Job Family Attributes

Attribute Name	nds-name	Workday SOAP Response Path	Description
wd-Inactive	wd-Inactive	wd:Job_Family_Data/wd:Inactive	Boolean attribute indicating if job family is inactive
wd-JobFamilyID	wd-JobFamilyID	wd:Job_Family_Data/wd:ID	Unique identifier for the job family
wd-JobFamilyName	wd-JobFamilyName	wd:Job_Family_Data/wd:Name	Text attribute identifying job family name
wd-WID	wd-WID	wd:Job_Family_Reference/wd:ID[@wd:type='WID']	Unique identifier for the job family

Relation Attributes

The below table lists Identity Vault Relation attributes. These attributes can be retrieved using the `Get_Workers` API.

Table 3-4 Mapping of Relation Attributes

Attribute Name	NDS-Name	Workday SOAP Response Path	Description
wd-ManagerWorkforceID	managerWorkforceID	wd:Worker_Data/wd:Employment_Data/wd:Worker_Job_Data/wd:Position_Organizations_Data//wd:Organization_Support_Role/wd:Organization_Role_Data/wd:Worker_Reference/wd:ID[@wd:type='Employee_ID' or @wd:type='Contingent_Worker_ID']	Workforce ID of the manager of the position
wd-BusinessTitle	Title	wd:Worker_Data/wd:Employment_Data/wd:Worker_Job_Data/wd:Position_Data//wd:Business_Title	Business title for the position
wd-BusinessAddressLine1	wd-BusinessAddressLine1	wd:Worker_Data/wd:Employment_Data/wd:Worker_Job_Data/wd:Position_Data//wd:Address_Data/wd:Address_Line_Data	Address line 1 of the position

Attribute Name	NDS-Name	Workday SOAP Response Path	Description
wd-BusinessCity	wd-BusinessCity	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data// wd:Address_Data/ wd:Municipality	City part of address of the position
wd-BusinessCountry	wd-BusinessCountry	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data// wd:Address_Data/ wd:Country_Reference/ @wd:Descriptor	Description for the country of the position
wd-BusinessPostalcode	wd-BusinessPostalcode	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data// wd:Address_Data/ wd:Postal_Code	Postal code part of the address of the position
wd-BusinessState	wd-BusinessState	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data// wd:Address_Data/ wd:Country_Region_Reference/@wd:Descriptor	Region part of the address for the position. For example, state/province information
wd-JobClassificationType	wd-JobClassificationType	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data// wd:Job_Classification_Reference/@wd:Descriptor	Display information for the job classification of the position
wd-JobGroupReference	wd-JobGroupReference	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data// wd:Job_Group_Reference/@wd:Descriptor	Display information for the job group of the position
wd-JobProfileName	wd-JobProfileName	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data// wd:Job_Profile_Name	The name of the job profile
wd-JobProfileID	jobCode	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data// wd:Job_Profile_Reference/ wd:ID[@wd:type='Job_Profile_ID']	Unique identifier for the job profile

Attribute Name	NDS-Name	Workday SOAP Response Path	Description
wd-LocationID	wd-LocationID	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data// wd:Location_Reference/ wd:ID[@wd:type='Location_ID ']	Unique identifier for the location of the position
wd-LocationName	L	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data/ wd:Business_Site_Summary_ Data/wd:Name	Name of the location for the position
wd-PayRateType	wd-PayRateType	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data// wd:Pay_Rate_Type_Reference/ @wd:Descriptor	Text attribute identifying the pay rate type for the position
wd-PositionEffectiveDate	wd-PositionEffectiveDate	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data/ @wd:Effective_Date	Effective date for position
wd-PositionEndDate	wd-PositionEndDate	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data// wd:End_Date	The effective date of the end employment business process
wd-PositionID	wd-PositionID	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data/ wd:Position_ID	Text attribute identifying the position
wd-PositionstartDate	wd-PositionstartDate	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data// wd:Start_Date	Date the worker first started working in this position
wd-PositionTimeType	wd-PositionTimeType	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data// wd:Position_Time_Type_Reference/ @wd:Descriptor	Text attribute identifying the position time type
wd-PositionTitle	wd-PositionTitle	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data// wd:Position_Title	Text attribute identifying the position title

Attribute Name	NDS-Name	Workday SOAP Response Path	Description
wd-RelationID	wd-RelationID	wd:Worker_Data/ wd:Worker_ID-C/ E:wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data/ wd:Position_ID	Unique identifier for the relation based on the worker ID, worker type and position ID
wd-WorkerIDType	wd-WorkerIDType	wd:Worker_Data/ wd:Worker_ID/ wd:Worker_Reference[wd:ID[@wd:type='Employee_ID']]	Employee ID / Contingent Worker ID
wd-WorkerType	wd-WorkerType	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data// wd:Worker_Type_Reference/ @wd:Descriptor	The worker type for the position
workforceID	workforceID	wd:Worker_Data/ wd:Worker_ID	The ID for the employee or the contingent worker
wd-WID	wd-WID	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data/ wd:Position_Reference/ wd:ID[@wd:type='WID']	Unique identifier for the position of the worker
wd-Primary	wd-Primary	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ @wd:Primary_Job	Boolean attribute indicates whether the position is the primary position for a worker
wd-ShortCountryCode	wd-ShortCountryCode	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data// wd:Address_Data/ wd:Country_Reference/ wd:ID[@wd:type='ISO_3166-1_Alpha-2_Code']	To character code representing country of the position

Attribute Name	NDS-Name	Workday SOAP Response Path	Description
wd-JobClassificationSummaryData	wd-JobClassificationSummaryData	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data/ wd:Job_Classification_Summary_Data/ wd:Job_Group_Reference/ wd:ID[@wd:type='Job_Classification_Group_ID'] wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data/ wd:Job_Classification_Summary_Data/ wd:Job_Classification_Reference/@wd:Descriptor wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data/ wd:Job_Classification_Summary_Data/ wd:Job_Classification_Reference/ wd:ID[@wd:type='Job_Classification_Reference_ID']	Contains job classification from the job profile for the position and additional job classification specified for the position
wd-StandardHours	wd-StandardHours	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data/ wd:Scheduled_Weekly_Hours	Scheduled weekly hours for the position
wd-FullTimeEquivalent	wd-FullTimeEquivalent	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data/ wd:Full_Time_Equivalent_Percentage	Full time equivalent percentage for position
wd-ShortStateCode	wd-ShortStateCode	wd:Worker_Data/ wd:Employment_Data/ wd:Worker_Job_Data/ wd:Position_Data// wd:Address_Data/ wd:Country_Region_Reference/ wd:ID[@wd:type='ISO_3166-2_Code']	Two character code representing region part of the address

Photo Attributes

The below table lists Identity Vault Photo attributes. These attributes can be retrieved using the `Get_Worker_Photos` API.

Table 3-5 Mapping of Photo Attributes

Attribute Name	nds-name	Workday SOAP Response Path	Description
photo	photo	wd:Worker_Photo_Data/wd:File	Photo file content in base64Binary format
wd-photoFilename	wd-photoFilename	wd:Worker_Photo_Data/wd:Filename	File name of the photo
wd-photoID	wd-photoID	For employee photo: wd:Worker_Photo_Reference/ wd:ID[@wd:type='Employee_ID'] - E For contingent worker's photo: wd:Worker_Photo_Reference/ wd:ID[@wd:type='Contingent_Worker_ID'] -C	For employee, the SOAP response path is appended with -E option and for contingent workers, the SOAP response path is appended with -C option.

Location Attributes

The below table lists Identity Vault Location attributes. These attributes can be retrieved using the `Get_Locations` API.

Table 3-6 Mapping of Location Attributes

Attribute Name	nds-name	Workday SOAP Response Path	Description
wd-AddressType	wd-AddressType	wd:Location_Data/ wd:Contact_Data/ wd:Address_Data/ wd:Usage_Data/ wd:Type_Data/ wd:Type_Reference/ wd:ID[@wd:type='Communication_Usage_Type_ID']	Communication usage type ID for the address information of the location
wd-BusinessAddressLine1	wd-BusinessAddressLine1	wd:Location_Data/ wd:Contact_Data/ wd:Address_Data/ wd:Address_Line_Data[@wd:Type='ADDRESS_LINE_1']	Address line 1 of the address of the location
wd-BusinessCity	wd-BusinessCity	wd:Location_Data/ wd:Contact_Data/ wd:Address_Data/ wd:Municipality	City part of the address of the location
wd-BusinessCountry	wd-BusinessCountry	wd:Location_Data/ wd:Contact_Data/ wd:Address_Data/ wd:Country_Reference/ @wd:Descriptor	Text description of the country for the address of the location

Attribute Name	nds-name	Workday SOAP Response Path	Description
wd-BusinessPostalcode	wd-BusinessPostalcode	wd:Location_Data/ wd:Contact_Data/ wd:Address_Data/ wd:Postal_Code	The postal code part of the address of the location
wd-BusinessState	wd-BusinessState	wd:Location_Data/ wd:Contact_Data/ wd:Address_Data/ wd:Country_Region_Descriptor	The region part of the address of the location. For example, street name, street number, suite number, apartment etc.
wd-Inactive	wd-Inactive	wd:Location_Data/wd:Inactive	Boolean attribute indicates if the location is inactive
wd-LocationID	wd-LocationID	wd:Location_Data/ wd:Location_ID	The unique location ID
wd-LocationName	wd-LocationName	wd:Location_Data/ wd:Location_Name	Name of the location
wd-LocationUsageID	wd-LocationUsageID	wd:Location_Data/ wd:Location_Usage_Reference/ wd:ID[@wd:type='Location_Usage_ID']	Unique identifier for the usage of the location. For example, business site, workspace etc.
wd-BusinessAddressLine2	wd-BusinessAddressLine2	wd:Location_Data/ wd:Contact_Data/ wd:Address_Data/ wd:Address_Line_Data[@wd:Type='ADDRESS_LINE_2']	Address line 2 of the address of the location
wd-BusinessAddressLine3	wd-BusinessAddressLine3	wd:Location_Data/ wd:Contact_Data/ wd:Address_Data/ wd:Address_Line_Data[@wd:Type='ADDRESS_LINE_3']	Address line 3 of the address of the location
wd-StateCode	wd-StateCode	wd:Location_Data/ wd:Contact_Data/ wd:Address_Data/ wd:Country_Region_Reference/ wd:ID[@wd:type='ISO_3166-2_Code']	Unique identifier for the region part of the address of the location. For example, state/province information
wd-ShortCountryCode	wd-ShortCountryCode	wd:Location_Data/ wd:Contact_Data/ wd:Address_Data/ wd:Country_Reference/ wd:ID[@wd:type='ISO_3166-1_Alpha-2_Code']	Two digit code representing the country
wd-LongCountryCode	wd-LongCountryCode	wd:Location_Data/ wd:Contact_Data/ wd:Address_Data/ wd:Country_Reference/ wd:ID[@wd:type='ISO_3166-1_Alpha-3_Code']	Three digit code representing the country

Attribute Name	nds-name	Workday SOAP Response Path	Description
wd-WID	wd-WID	wd:Location_Reference/ wd:ID[@wd:type='WID']	Unique identifier for the location

Organization Attributes

The below table lists Identity Vault Organization attributes. These attributes can be retrieved using the `Get_Organizations` API.

Table 3-7 Mapping of Organization Attributes

Attribute Name	nds-name	Workday SOAP Response Path	Description
wd-Inactive	wd-Inactive	wd:Organization_Data/ wd:Inactive	Inactive indicator for the Organization
wd-OrganizationCode	wd-OrganizationCode	wd:Organization_Data/ wd:Organization_Code	Text attribute identifying Organization code
wd-OrganizationID	wd-OrganizationID	wd:Organization_Data/ wd:Reference_ID	Integration reference ID used for integration purposes
wd-OrganizationName	wd-OrganizationName	wd:Organization_Data/ wd:Name	Name of the Organization that appears on page and reports
wd-OrganizationSubType	wd-OrganizationSubType	wd:Organization_Data/ wd:Organization_Subtype_Reference/ wd:ID[@wd:type='Organization_Subtype_ID']	Unique identifier for the sub-type of the Organization
wd-OrganizationType	wd-OrganizationType	wd:Organization_Data/ wd:Organization_Type_Reference/ wd:ID[@wd:type='Organization_Type_ID']	Unique identifier for the type of the Organization
wd-SuperiorOrganizationID	wd-SuperiorOrganizationID	wd:Organization_Data/ wd:Hierarchy_Data/ wd:Superior_Organization_Reference/ wd:ID[@wd:type='Organization_Reference_ID']	Unique identifier for the immediately superior Organization to the Organization
wd-ManagerEID	wd-ManagerEID	wd:Organization_Data/ wd:Manager_Reference/ wd:ID[@wd:type='Employee_ID']	Unique identifier for the manager of the Organization
wd-OrganizationLevel	wd-OrganizationLevel	wd:Organization_Data/ wd:Supervisory_Data/ wd:Staffing_Restrictions_Data/ wd:Job_Profile_Restriction_Summary_Data/ wd:Management_Level_Reference/@Descriptor	Display information used to describe management level

Attribute Name	nds-name	Workday SOAP Response Path	Description
wd-WID	wd-WID	wd:Organization_Reference/ wd:ID[@wd:type='WID']	Unique identifier to reference an Organization

Attribute Filter Settings

This section provides information about the Identity Vault Filter settings in the driver. The Workday will be authoritative source for all the above attributes except user ID and Email address which are generated in the Identity Manager.

- ◆ [“Users Attributes Filter Settings” on page 57](#)
- ◆ [“Relations Attributes Filter Settings” on page 58](#)
- ◆ [“Job Family Attributes Filter Settings” on page 59](#)
- ◆ [“Location Attributes Filter Settings” on page 59](#)
- ◆ [“Photo Attributes Filter Settings” on page 60](#)
- ◆ [“Job Profile Attributes Filter Settings” on page 60](#)
- ◆ [“Organization Attributes Filter Settings” on page 61](#)

Users Attributes Filter Settings

The following table provides information about the Users Attributes Filter settings:

Table 3-8 *Users Attributes Filter Settings*

Attribute Name	Merge Authority	Publisher	Subscriber
Given Name	app	sync	reset
managerWorkforceID	app	sync	reset
Surname	app	sync	reset
wd-WorkerIDType	app	sync	reset
workforceID	app	sync	reset
wd-WID	app	sync	reset
wd-UserName	app	sync	reset
wd-E-Active	app	sync	reset
wd-C-Active	app	sync	reset
wd-HomePrimaryPhone	app	sync	sync
wd-HomePrimaryDeviceType	app	sync	reset
wd-WorkPrimaryPhone	app	sync	sync
wd-WorkPrimaryDeviceType	app	sync	reset

Attribute Name	Merge Authority	Publisher	Subscriber
Internet Email Address	app	sync	sync
homeEmailAddress	app	sync	sync

NOTE: Only the following attributes can be updated on Subscriber channel:

- ◆ User ID
- ◆ Phone Numbers
- ◆ E-Mail Address
- ◆ Custom IDs

Modifying any other attribute on the Subscriber channel is not supported.

Relations Attributes Filter Settings

The following table provides information about the Relations Attributes Filter settings:

Table 3-9 Relations Attributes Filter Settings

Attribute Name	Merge Authority	Publisher	Subscriber
L	app	sync	reset
managerWorkforceID	app	sync	reset
Title	app	sync	reset
wd-BusinessAddressLine1	app	sync	reset
wd-BusinessCity	app	sync	reset
wd-BusinessCountry	app	sync	reset
wd-BusinessPostalcode	app	sync	reset
wd-BusinessState	app	sync	reset
wd-FullTimeEquivalent	app	sync	reset
wd-JobClassificationType	app	sync	reset
wd-JobFamilyID	app	sync	reset
wd-JobGroupReference	app	sync	reset
wd-JobProfileName	app	sync	reset
wd-LocationID	app	sync	reset
wd-PayRateType	app	sync	reset
wd-PositionEffectiveDate	app	sync	reset
wd-PositionEndDate	app	sync	reset
wd-PositionID	app	sync	reset

Attribute Name	Merge Authority	Publisher	Subscriber
wd-PositionstartDate	app	sync	reset
wd-PositionTimeType	app	sync	reset
wd-PositionTitle	app	sync	reset
wd-Primary	app	sync	reset
wd-RelationID	app	sync	reset
wd-WorkerIDType	app	sync	reset
wd-WorkerType	app	sync	reset
workforceID	app	sync	reset
wd-WID	app	sync	reset

Job Family Attributes Filter Settings

The following table provides information about the Job Family Attributes Filter settings:

Table 3-10 Job Family Attributes Filter Settings

Attribute Name	Merge Authority	Publisher	Subscriber
wd-Inactive	app	sync	reset
wd-JobFamilyID	app	sync	reset
wd-JobFamilyName	app	sync	reset
wd-WID	app	sync	reset

Location Attributes Filter Settings

The following table provides information about the Location Attributes Filter settings:

Table 3-11 Location Attributes Filter Settings

Attribute Name	Merge Authority	Publisher	Subscriber
wd-AddressType	app	sync	reset
wd-BusinessAddressLine1	app	sync	reset
wd-BusinessCity	app	sync	reset
wd-BusinessCountry	app	sync	reset
wd-BusinessPostalcode	app	sync	reset
wd-BusinessState	app	sync	reset
wd-Inactive	app	sync	reset

Attribute Name	Merge Authority	Publisher	Subscriber
wd-LocationID	app	sync	reset
wd-LocationName	app	sync	reset
wd-LocationUsageID	app	sync	reset
wd-BusinessAddressLine2	app	sync	reset
wd-BusinessAddressLine3	app	sync	reset
wd-StateCode	app	sync	reset
wd-ShortCountryCode	app	sync	reset
wd-LongCountryCode	app	sync	reset
wd-WID	app	sync	reset

Photo Attributes Filter Settings

The following table provides information about the Photo Attributes Filter settings:

Table 3-12 Photo Attributes Filter Settings

Attribute Name	Merge Authority	Publisher	Subscriber
photo	default	sync	reset
wd-photoFilename	default	sync	reset
wd-photoID	default	sync	reset

Job Profile Attributes Filter Settings

The following table provides information about the Job Profile Attributes Filter settings:

Table 3-13 Job Profile Attributes Filter Settings

Attribute Name	Merge Authority	Publisher	Subscriber
wd-CompensationGradeID	app	sync	reset
wd-CompensationGradeProfileID	app	sync	reset
wd-Inactive	app	sync	reset
wd-JobCode	app	sync	reset
wd-JobFamilyID	app	sync	reset
wd-JobTitle	app	sync	reset
wd-WID	app	sync	reset

Organization Attributes Filter Settings

The following table provides information about the Organization Attributes Filter settings:

Table 3-14 Organization Attributes Filter Settings

Attribute Name	Merge Authority	Publisher	Subscriber
wd-Inactive	app	sync	reset
wd-OrganizationCode	app	sync	reset
wd-OrganizationID	app	sync	reset
wd-OrganizationName	app	sync	reset
wd-OrganizationSubType	app	sync	reset
wd-OrganizationType	app	sync	reset
wd-SuperiorOrganizationID	app	sync	reset
wd-ManagerEID	app	sync	reset
wd-OrganizationLevel	app	sync	reset
wd-WID	app	sync	reset

4 Upgrading an Existing Driver

This is the initial release of the driver so upgrade path is not available. For upgrading the driver packages, see the respective readme. Before upgrading your driver packages, ensure to perform the following actions:

- ◆ Backup the driver configuration by using the designer driver export or iManager driver export option.
- ◆ Backup the driver customizations such as driver configuration, GCVs, policies etc. from designer for post package upgrade and review.
- ◆ Follow package upgrade instructions and review GCVs / driver configuration settings in designer prior to reconcile to the Identity Vault.

5 Securing Communication

If the remote Web service you are accessing allows HTTPS connections, you can configure the driver to take advantage of this increased security.

IMPORTANT: Only certificates from Java keystore are accepted. So, make sure that the keystore of the certificates is a Java keystore and the Workday tenant SSL certificate is available in the Java keystore.

The Subscriber channel sends information from the Identity vault to Workday. To establish a secure connection for the Subscriber channel, you need a trust store containing a certificate issued by the certificate authority that signed the server's certificate.

It is recommended to import the chain of CA certificates from issuer's trusted URL. Workday instance uses certificates from a trusted CA. For example, if Workday is using the certificates from DigiCert (trusted CA), you must verify the authenticity of the certificates from the DigiCert's website before downloading and importing them into the Java Keystore.

For testing purposes, you can download the certificates from the browser directly but this is not recommended. In case you want to view and download the certificates from browser, perform the following steps:

- 1 Enter the Workday login URL in your browser (for example Chrome), and click **Enter**.

NOTE: Different browsers have different procedures to view the certificates. Steps 1 to 6 considers Chrome browser as an example.

- 2 Click the lock icon near the browser, and select **Certificate (Valid)**. The certificate is displayed.
- 3 Click **Certification Path**. The Certification Path displays the hierarchical structure of the structure of all the certificates.
- 4 Select the root certificate (the top most parent certificate), and click **View Certificate**. The root certificate is displayed.
- 5 To save the certificate to your system, click **Details > Copy to File > Next > Next**.
- 6 Enter a filename for the certificate and save it to a location as required.
- 7 Import the saved Workday tenant root CA certificate into your trust store or create a new trust store by entering the following command at the command prompt:

```
keytool -import -file name_of_cert_file -trustcacerts -noprompt -keystore filename -storepass password
```

For example:

```
keytool -import -file tree_ca_root.b64 -trustcacerts -noprompt -keystore dirxml.keystore -storepass novell
```

- 8 Configure the Subscriber channel to use the trust store you created in Step 1:
 - 8a In iManager, in the **Roles and Tasks** view, click **Identity Manager > Identity Manager Overview**.
 - 8b Locate the driver set containing the Workday driver, when click the driver's icon to display the Identity Manager Driver Overview page.

- 8c** On the Identity Manager Driver Overview page, click the driver's icon again, then scroll to **Subscriber Settings**.
- 8d** In the **Keystore File** setting, specify the path to the trust store you created in Step 1.
- 9** Click **Apply**, then click **OK**.

6 Managing the Driver

As you work with the Workday driver, there are several management tasks you might need to perform, including the following:

- ◆ Starting, stopping, and restarting the driver
- ◆ Viewing driver version information
- ◆ Using Named Passwords to securely store passwords associated with the driver
- ◆ Monitoring the driver's health status
- ◆ Backing up the driver
- ◆ Inspecting the driver's cache files
- ◆ Viewing the driver's statistics
- ◆ Using the DirXML Command Line utility to perform management tasks through scripts Securing the driver and its information

Because these tasks, as well as several others, are common to all Identity Manager drivers, they are included in the [NetIQ Identity Manager Driver Administration Guide](#).

Configuring Dynamic Attributes Using the Workday Driver

This section provides information on how to use various dynamic attributes provided by the Workday driver.

- ◆ [“Synchronizing Custom IDs Using the Workday Driver” on page 67](#)
- ◆ [“Configuring Derived Attributes for Worker” on page 69](#)
- ◆ [“Configuring Custom Fields Using the Workday Driver” on page 70](#)
- ◆ [“Adding New Attribute to the Filter” on page 70](#)

Synchronizing Custom IDs Using the Workday Driver

The driver can be configured to synchronize **Other IDs** displayed on the **IDs** tab of the **Personal** section in Workday. The driver and API refer to these other IDs as Custom IDs. Using the `Change_Other_IDs_Request` API, the driver can update custom ids in Workday. Perform the following steps to configure Custom IDs for the Workday driver:

- 1 Collect `Custom_ID_Type_ID` of the Custom IDs that need to be synchronized with Identity Manager. This information can be collected from the Workday implementation team. The IDs are case-sensitive.
- 2 In Designer, go to **Workday Driver Properties > Driver Configurations > Driver Parameters > Driver Options > Transformation Parameters** and specify the following:
 - ◆ **Parameter Name:** `wdCustomIdList`
 - ◆ **Parameter Value:** Multi valued list of all the IDs that are required to synchronize data between Workday and Identity Manager. For example, `CUSTOM_ID_TYPE-6-10` is a parameter value of one Custom ID in Workday driver.

- 3 In Designer, add a driver schema mapping for {IDV attribute name} to {WD Custom Attribute}_Custom_ID on the Workday driver. For example, CUSTOM_ID_TYPE-6-10 to CUSTOM_ID_TYPE-6-10_Custom_ID.
- 4 If multiple Custom IDs are being updated from Identity Manager on Subscriber channel, then for each custom ID, you must create wd-user auxiliary class attribute in Designer or iManager to hold the Workday Reference ID of the Custom ID. This stores an internal Workday reference which is needed in order to update the value of the Custom ID in Workday. These auxiliary class attributes should be created as single valued and can be case ignore string. For example, AUX_ID_WID.
- 5 In schema mapping policy, add a mapping of {WD Custom Attribute}_Custom_ID_Shared_Reference with the attribute created in the previous step. For example, CUSTOM_ID_TYPE-6-10_Custom_ID_Shared_Reference to AUX_ID_WID.
- 6 Once a custom ID is specified in the wdCustomIdList, the driver shim will also return an attribute of the format {WD Custom Attribute}_Description. For example, CUSTOM_ID_TYPE-6-10_Description.
- 7 In driver filter, add an entry for the Identity Manager attribute that is mapped to {WD Custom Attribute}_Custom_ID so that it flows to Workday on the subscriber and/or from Workday on the publisher channels. For example, AUX_ID.
- 8 If one or more custom IDs are updated from Identity Manager, then create a driver filter entry for each newly created attribute holding the custom ID attributes so they flow back to Identity Manager on the publisher channel. For example, AUX_ID, AUX_ID_WID, AUX_ID_Description.
- 9 If one or more custom IDs are updated from Identity Manager, then create an output transformation policy to append the Shared Reference of the custom ID that is changing to the driver-operation-data. Ensure that value which is appended to the driver-operation-data is prefaced with WD- even though the attribute name in the data mapping does not have WD-.
 - ♦ Append the XML element WD-{WD Custom Attribute}_Custom_ID_Shared_Reference to driver-operation-data. For example, WD-CUSTOM_ID_TYPE-6-10_Custom_ID_Shared_Reference.
 - ♦ Append the text from the IDV source attribute. For example, AUX_ID_WID.
 - ♦ Create a rule for each Custom ID attribute that you are sending to Workday. The policy should be added after NETQWDDCFG-otp-user output transformation policy. If the attribute holding the custom ID is not in the IDV, nothing will be appended to the driver-operation-data. A sample policy rule has been shown below:

```

<rule>
  <description>Add driver-operation-data element for modify AUX_ID
  events</description>
  <conditions>
    <and>
      <if-op-attr name="AUX_ID_Custom_ID" op="changing"/>

      <if-operation mode="nocase" op="equal">modify</if-operation>

      <if-class-name mode="nocase" op="equal">User</if-class-name>
    </and>
  </conditions>
  <actions>
    <do-if>
      <arg-conditions>
        <and>
          <if-attr name="AUX_ID_WID" op="available"/>
        </and>
      </arg-conditions>
    </do-if>
  </actions>
</rule>

```

```

        <arg-actions>
            <do-append-xml-element expression="driver-operation-data"
name="WD-CUSTOM_ID_TYPE-6-10_Custom_ID_Shared_Reference"/>
            <do-append-xml-text expression="driver-operation-data/WD-
CUSTOM_ID_TYPE-6-10_Custom_ID_Shared_Reference">
                <arg-string>
                    <token-attr name="AUX_ID_WID"/>
                </arg-string>
            </do-append-xml-text>
        </arg-actions>
    </arg-actions/>
</do-if>
</actions>
</rule>

```

Configuring Derived Attributes for Worker

When an organization is added to the `wdOrgList` transformation parameter of the Workday driver, the shim will automatically derive the following 3 attributes on worker object for each organization type/ organization sub-type combination:

- ◆ `_RefID` is used for data in the `Organization_Reference_ID` element
- ◆ `_Name` is used for data in the `Organization_Name` element
- ◆ `_Code` is used for data in the `Organization_Code` element
- ◆ `|RoleID_Employee_ID`
- ◆ `|RoleID_Contingent_Worker_ID`

The above derived attributes should be suffixed to the `Organization-type | Organization-sub-type`. These attributes are available to be added to the schema mapping policy and to the filter. For example:

```

Supervisory|Department_RefID
Supervisory|Department_Name
Supervisory|Department_Code

```

In the above example, `Supervisory` is the `Organization type` and `Department` is the `Organization sub-type`. The values for `Organization type` and `Organization sub-type` are derived from the following SOAP API response path of `Get_Workers` API:

```

wd:Worker_Data/wd:Organization_Data//
wd:Organization_Data[w:Organization_Type_Reference/
wd:ID[@wd:type='Organization_Type_ID'] | wd:Worker_Data/wd:Organization_Data//
wd:Organization_Data[w:Organization_Type_Reference/
wd:ID[@wd:type='Organization_Type_ID']/wd:Organization_Subtype_Reference/
wd:ID[@wd:type='Organization_Subtype_ID']

```

`RoleID` is derived from the following SOAP API response path of `Get_Workers` API:

```

wd:Worker_Data/wd:Organization_Data//
wd:Organization_Data[w:Organization_Type_Reference/
wd:iD[@wd:type='Organization_Type_ID']/wd:Organization_Support_Role_Data/
wd:Organization_Support_Role/wd:Organization_Role_Reference/
wd:iD[@wd:type='Organization_Role_ID']

```

Configuring Custom Fields Using the Workday Driver

Worker has a functionality where a Workday implementer can create override fields that have data calculated from the data in one or more other data fields. This option can be used to get data that the current driver shim does not return. For instance, one customer wanted to synchronize the pay grade which is a part of the compensation data returned if `Include_Compensation` were included in the response group data. However, since `Include_Compensation` includes all the salary information, the shim was purposely designed to not return that data. To get the pay grade for this customer, the Workday implementers set up an override field for just the pay grade.

In order to use Workday override calculated field information from the Worker data in the driver, you must take the following steps:

- 1 Obtain the Integration System ID from the Workday team. for more information, see [“Obtaining Integration System ID from Workday” on page 70](#).
- 2 Place the Integration System ID in the Publisher driver parameters in the **Field and Parameter Criteria Provider Reference List** of the corresponding class.
- 3 Obtain the override field name.
- 4 Once you have obtained the name of the override fields, the field names must be placed in the `wdIntFieldAttrList` transformation parameters.
- 5 The override fields are now available for data mapping or use in policies by appending `_CF` to the override field name. For example, the override field returned by the shim will be `mailStop_CF` for `mailstop` override field. This will be the application attribute name used in the schema mapping or input and output transformation policies.

Obtaining Integration System ID from Workday

Perform the following steps to obtain the integration system ID from Workday:

- 1 Search for the **View Integration Field Override Service** in Workday.
- 2 Select your **Integration Field Override Service** and click **OK**.
- 3 View your **Integration Field** and click on the value of **Integration System**. For example, **WorkDay_Driver**.
- 4 Collect the value from **System ID** field. Sample value for my tenant System ID is **WorkDay_Driver/WorkDay_Driver/StartHere**.
- 5 Place the Integration System ID in the Publisher driver parameters in the **Field and Parameter Criteria Provider Reference List** of the corresponding class

Adding New Attribute to the Filter

If you want the additional attributes (newly added to filter) to be populated on workers who are already migrated to the Identity Vault, You can perform one of the following steps:

- ◆ Migrate the workers again through the driver which in turn clears the cache.
- ◆ No changes required. The attributes will flow automatically as part of regular polling by the driver, provided that there is a change on that worker in Workday.

Another sync option is to set the `wd-Merge` attribute to **True** on the workers to sync. If the `wd-Merge-effectiveDate` is set before setting the `wd-Merge` to **True**, the sync will be according to the `wd-Merge-effectiveDate` if that is in the future. Otherwise, the current date will be used as the effective

date for the sync. However, for this option to work correctly, all workers that have the `wd-Merge` attribute set to true, must already have the correct value for the `wd-WorkerIDType` (`Employee_ID` or `Contingent_Worker_ID`).

If the worker has not been modified in Workday, the driver will never get that user data during polling and the new attributes will not be populated for that worker in Identity Vault. However, there will be delay in populating additional attributes until that worker gets modified in Workday.

Migrating Individual Object from Workday:

You may migrate individual user object either employee or Contingent worker with relation (Position). You may also migrate other object such as job profile, job family, location, organization including cost center, company, HR Company etc. This process will update the IDV object with latest information.

- ◆ Migrating user with relation:
 - ◆ Use iManager “**Migrate into Identity vault**” option to migrate individual employee or contingent worker.
 - ◆ Select **Edit List**
 - ◆ Select user as class and select **show all attributes**
 - ◆ Select workforce ID and `wd-workerIDType` and provide the required data
 - ◆ `wd-workerIDType` can be `Employee_ID` Or `Contingent_Worker_ID`
 - ◆ Workforce ID is the unique ID in the workday.
 - ◆ Select **OK** to migrate the worker record
- ◆ Migrating job profile:
 - ◆ Add `wd-JobProfileID` in the Filter list.
 - ◆ Use iManager **Migrate into Identity vault** option to migrate job profile
 - ◆ Select **Edit List**
 - ◆ Select `wd-Jobprofile` as class and select **show all attributes**
 - ◆ Select `wd-JobProfileID` and provide the `wd-JobProfileID` of the object to migrate
 - ◆ Select **OK** to migrate the job profile.
- ◆ Migrating job Family:
 - ◆ Use iManager **Migrate into Identity vault** option to migrate job family
 - ◆ Select **Edit List**
 - ◆ Select `wd-family` as class and select **show all attributes**
 - ◆ Select `wd-JobFamilyID` and provide the `wd-JobFamilyID` of the object to migrate
 - ◆ Select **OK** to migrate the job Family.
- ◆ Migrating Location:
 - ◆ Use iManager **Migrate into Identity vault** option to migrate job family
 - ◆ Select **Edit List**
 - ◆ Select `wd-location` as class and select **show all attributes**
 - ◆ Select `wd-LocationID` and provide the `wd-LocationID` of the object to migrate
 - ◆ Select **OK** to migrate the Location
- ◆ Migrating Organization – Cost center, company, HR company:
 - ◆ Use iManager **Migrate into Identity vault** option to migrate job family

- ◆ Select **Edit List**
- ◆ Select `wd-organization` as class and select **show all attributes**
- ◆ Select `wd-OrganizationID` and provide the `wd-OrganizationID` of the object to migrate
- ◆ Select **OK** to migrate the organization
- ◆ Migrating user's photo:
 - ◆ Use iManager **Migrate into Identity vault** option to migrate Photo
 - ◆ Select **Edit List**
 - ◆ Select `wd-photo` as class and select **show all attributes**.
 - ◆ Select `wd-workerIDType` and `workforce ID` and provide the required data.

NOTE: `wd-workerIDType` value can be `Employee_ID` or `Contingent_Worker_ID`.
`workforceID` is the `EmployeeID` for Employee or Contractor in the workday portal.

- ◆ Select **OK** to migrate the Photo.

7 Troubleshooting the Driver

You can log Identity Manager Events by setting the log level 5 at the driver and also at remote loader. Using this log in combination provides you with tracking control at a very granular level.

This section contains the following information on error messages:

- ◆ “Driver Cache File and Driver State Settings:” on page 73
- ◆ “Troubleshooting Driver Processes” on page 73
- ◆ “Workday Driver Fails to Start After Changing the Cache Directory” on page 73
- ◆ “Workday Driver Displays an Error Message While Shutting Down” on page 74
- ◆ “Workday Driver Displays an Error Message When Workday Is Under Maintenance” on page 74
- ◆ “Setting Paging Size Parameter Value” on page 75

Driver Cache File and Driver State Settings:

As part of cache management, the shim develops sets of cache files. It compares the attribute value after conversion from SOAP response and passes only changed value to the driver channel. The driver will develop these cache files either on the server where IDM engine is running (in Native setup) or at the remote loader server where the driver shim is running. You may delete these files in the case of corruption (If any). After deletion, the driver will redevelop these files but the driver will lose all caches and has to build up cache again from the beginning.

The Driver state setting file keeps the information about the last poll timestamp and also pages fetched in the initial migration. The state files will look like as following:

```
state__u5fTREEu5fSLES_system_driverset1_workdayu20v25.xml
```

Troubleshooting Driver Processes

Viewing driver processes is necessary to analyze unexpected behavior. To view the driver processing events, use DSTrace. You should only use it during testing and troubleshooting the driver. Running DSTrace while the drivers are in production increases the utilization on the Identity Manager server and can cause events to process very slowly. For more information, see [Viewing Identity Manager Processes](#) in the [NetIQ Identity Manager Driver Administration Guide](#).

Workday Driver Fails to Start After Changing the Cache Directory

Workday driver fails to start after changing the cache directory in the driver configuration parameters or removing the cache files from the existing location.

You can start the driver after some time of changing the cache directory.

Workday Driver Displays an Error Message While Shutting Down

Workday driver displays the following error message if it gets a shutdown command during the polling time or migration process when the cache update is going on.

```
<output>
    <status
level="error">com.netiq.dirxml.driver.workday.exception.PollException: Error
encountered while polling JobProfile
    at
com.netiq.dirxml.driver.workday.WDPublisherHandler.pollJobProfile(WDPublisherHandl
er.java:533)
    at
com.netiq.dirxml.driver.workday.WDPublisherHandler.doPoll(WDPublisherHandler.java:
256)
    at
com.netiq.dirxml.driver.workday.WDPublisherShim.doPoll(WDPublisherShim.java:140)
    at
com.netiq.dirxml.driver.workday.WDPublisherShim.start(WDPublisherShim.java:116)
    at com.novell.nds.dirxml.remote.loader.Driver.run(Driver.java:899)
    at java.lang.Thread.run(Thread.java:748)
Caused by: com.netiq.dirxml.driver.workday.exception.CacheException: Cache
shutdown in progress...
    at
com.netiq.dirxml.driver.workday.cache.MapDbCache.checkShutdown(MapDbCache.java:250
)
    at
com.netiq.dirxml.driver.workday.cache.CacheManager.openJobProfileCacheFiles(CacheM
anager.java:735)
    at
com.netiq.dirxml.driver.workday.WDPublisherHandler.pollJobProfile(WDPublisherHandl
er.java:505)
    ... 5 more
</status>
</output>
```

There is no workaround at this moment but you can ignore the error message and wait for the driver to shut down.

Workday Driver Displays an Error Message When Workday Is Under Maintenance

Workday driver displays the following error message when the driver requests for time stamp from the Workday server and if the server is under maintenance.

```
<SOAP-ENV:Envelope xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/envelope/"
"><SOAP-ENV:Body><SOAP-ENV:Fault xmlns:SOAP-ENV="http://schemas.xmlsoap.org/soap/
envelope/" xmlns:wd="urn:com.workday/bsvc"><faultcode>SOAP-
ENV:Client.validationError</faultcode><faultstring>Invalid request</faultstring></
SOAP-ENV:Fault></SOAP-ENV:Body></SOAP-ENV:Envelope>
```

This is assumed that the Workday server is under maintenance when you receive this error while requesting for time stamp.

Setting Paging Size Parameter Value

If Workday data is fetched using SOAP APIs such as `Get_Workers`, `Get_JobProfiles` etc., the data is fetched in chunks. The driver fetches data from Workday in pages to limit the number of records to be processed at a time. The Workday driver fetches one page at a time, processes and stores it in the cache, updates the driver storage, and then requests for the next page. The Paging Size value which is already set is directly proportional to the Java heap that is available to the driver, as it uses the heap for local storage of the data records returned by Workday until it is processed and stored in the driver cache as part of every poll request.

The Paging Size value is used for both the recurring and scheduled polling cycle and should be set as per the Java heap available to the driver.

If a smaller value is set as the page size, multiple pages with smaller chunks of data are processed as part of poll and the frequency of the driver processing and storing the data to the driver cache would increase.

You must also check and set the remote loader configuration for Java heap size and number of instances of remote loader running, as these parameter values would be limiting the actual virtual memory available for the Java heap.

A Driver Properties

This section provides information about the Driver Configuration and Global Configuration Values properties for the Workday driver. These are the only unique properties for drivers. All other driver properties (Named Password, Engine Control Values, Log Level, and so forth) are common to all drivers. Refer to [Driver Properties](#) in the [NetIQ Identity Manager Driver Administration Guide](#) for information about the common properties.

The information is presented from the viewpoint of iManager. If a field is different in Designer, it is marked with a Designer icon.

Driver Configuration

In iManager:

- 1 Login to iManager, select **Identity Manager Administration** if not defaulted already.
- 2 Select **Identity Manager Overview**, the Identity Manager Overview page appears:
- 3 Click **Driver Sets** tab, the configured drivers appear.

NOTE: If the driver set is not listed on the Driver Sets tab, use the Search In field to search for and display the driver set.

- 4 Click the driver name, the **Driver Set Overview** page appears.
- 5 Click the driver actions button and click **Edit Properties** to display the driver's properties page. By default, the Driver Configuration page is displayed.

In Designer:

- 1 Open a project in the Modeler.
- 2 Right-click the driver icon or line, then select click **Properties > Driver Configuration**.

The Driver Configuration options are divided into the following sections:

Driver Module

The driver module changes the driver from running locally to running remotely or the reverse.

Java: Used to specify the name of the Java class that is instantiated for the shim component of the driver. This class can be located in the `classes` directory as a class file, or in the `lib` directory as a `.jar` file. If this option is selected, the driver is running locally.

The Java class name is: `com.netiq.dirxml.driver.workday.WDDriverShim`

Native: Used when driver is connecting directly from the server where IDM engine is installed.

Connect to Remote Loader: Used when the driver is connecting remotely to the connected system. Designer includes two suboptions:

- ♦ **Driver Object Password:** Specifies a password for the Driver object. If you are using the Remote Loader, you must enter a password on this page. Otherwise, the remote driver does not run. The Remote Loader uses this password to authenticate itself to the remote driver shim.
- ♦ **Remote Loader Client Configuration for Documentation:** Includes information on the Remote Loader client configuration when Designer generates documentation for the driver.

Driver Object Password

Driver Object Password: Use this option to set a password for the driver object. If you are using the Remote Loader, you must enter a password on this page or the remote driver does not run. This password is used by the Remote Loader to authenticate itself to the remote driver shim.

Authentication

The authentication section stores the information required to authenticate to the connected system.

Authentication ID: This option is not used with the Workday driver.

Authentication Context: This option is not used with the Workday driver.

Remote Loader Connection Parameters: Used only if the driver is connecting to the application through the Remote Loader. The parameter to enter is `hostnamexxx.xxx.xxx.xxx portxxxx kmocertificatename`, when the host name is the IP address of the application server running the Remote Loader server and the port is the port the Remote Loader is listening on. The default port for the Remote Loader is 8090.

The `kmo` entry is optional. It is only used when there is an SSL connection between the Remote Loader and the Metadirectory engine.

Example: `hostname10.0.0.1 port8090 kmoIDMCertificate`

Cache limit (KB): Specify the maximum event cache file size (in KB). If it is set to zero, the file size is unlimited. Click **Unlimited** to set the file size to unlimited in Designer.

Application Password: This option is not used with the Workday driver.

Remote Loader Password: Used only if the driver is connecting to the application through the Remote Loader. The password is used to control access to the Remote Loader instance. It must be the same password specified during the configuration of the Remote Loader on the connected system.

Startup Option

The Startup Option section allows you to set the driver state when the Identity Manager server is started.

Auto start: The driver starts every time the Identity Manager server is started.

Manual: The driver does not start when the Identity Manager server is started. The driver must be started through Designer or iManager.

Disabled: The driver has a cache file that stores all of the events. When the driver is set to Disabled, this file is deleted and no new events are stored in the file until the driver state is changed to Manual or Auto Start.

Do not automatically synchronize the driver: This option only applies if the driver is deployed and was previously disabled. If this is not selected, the driver re-synchronizes the next time it is started.

Driver Parameters

The Driver Parameters section lets you configure the driver-specific parameters. When you change driver parameters, you tune driver behavior to align with your network environment. The parameters are divided into the following categories:

Driver Settings

Workday Login URL: Specify the URL of the Workday Login Server based on your choice of Workday WSDL. The default URL is `https://www.Workday/services/Soap/u/18.0`.

Workday Login ID: Specify the Login ID of the Workday administrator. Ensure that you create a unique administrator user to be solely used by the Workday driver for authentication and specify that user in this parameter. If you specify the same user with which you login and administer Workday, the driver ignores changes on the Publisher channel (loopback detection).

Workday Login Password: Specify the password for the Workday administrator. If you need to clear the password, select **Remove existing password**, then click **Apply**.

Workday Security Token: Specify the security token for your login account at Workday.

Proxy host and port: When an HTTP proxy is used, specify the host address and the host port. For example: `192.10.1.3:18180`.

Set Proxy Authentication parameters: Select Show to display the proxy authentication parameters.

- ◆ **Proxy User ID:** Specify the username of the proxy user for authentication. Leave the field blank for anonymous authentication.
- ◆ **Proxy User Password:** Specify the password of the proxy user, if proxy user authentication is used.

Truststore File: Specify the name and path of the keystore file containing the trusted certificates used when the remote server is configured to provide server authentication. For example: `c:\security\truststore`. Leave this field empty when server authentication is not used.

NOTE: A Workday client calling the Web service in the Publisher channel must specify a URL ending with a slash. For example, `http://1.1.1.1:9095/`. Without a context path (the slash), the driver does not process the request received.

Global Configuration Values

Global Configuration Values (GCVs) can be used by the driver to control its functionality. GCVs are defined in the driver or in the driver set. Driver set GCVs can be used by all drivers residing in the driver set.

The Workday driver includes predefined GCVs. You can also add your own GCVs as required for the additional policy implementation in the driver. For information on most of the GCVs, see [“Creating the Driver Object” on page 17](#). However, the following GCV should be configured after installing the driver:

- ◆ **Retry Event Config:** You can specify certain attributes in this field for which events get logged on the Workday portal and the driver might retry to configure them after activating the user. Mention the required list of attributes separated by comma in this field. The following attributes will be listed by default:
 - ◆ wd-HomePrimaryPhone
 - ◆ wd-WorkPrimaryPhone
 - ◆ Internet EMail Address
 - ◆ homeEmailAddress

NOTE

- ◆ If any secondary phone attributes are configured as part of the driver, you can add them to this retry event config list.
 - ◆ Ensure to extend the Schema to include `DirXML-WDSyncAttr` attribute in IDV for configuring the retry events. For more information, see [Appendix C, “IDV Schema Extension,” on page 83](#).
-

For more information on GCVs, see [When and How to Use Global Configuration Values in NetIQ Identity Manager Driver Administration Guide](#).

B Trace Level

The driver supports the following trace levels:

Table B-1 Supported Trace Levels

Level	Description
0	Provides error/warning/exception
1	Previous level and success messages.
2	Previous level and input/output trace
3	Previous level and policy processing/SOAP calls
4 & 5	More debug messages

For information about setting driver trace levels, see [Viewing Identity Manager Processes](#) in the [NetIQ Identity Manager Driver Administration Guide](#).

C IDV Schema Extension

As part of solution, we need to extend the schema of eDirectory so that the Workday driver can create these additional objects in the IDV. The proposed schema extension in Idif and sch formats are available for download. The following classes are added in IDV.

- ♦ Auxiliary Class for User: wd-User

The schema file should only be extended with the `ndssch` utility. Using any other method for importing the schema file fails for certain attributes. A sample syntax for importing the schema file has been provided below:

```
/opt/novell/eDirectory/bin/ndssch -h idv.server.DNS.name -F /tmp/wd-schema.log  
admin.services.data /tmp/wd-schema.sch
```

- ♦ Effective Class for Relation Objects: wd-Relation
- ♦ Effective Class for Job Family Objects: wd-Jobfamily
- ♦ Effective Class for Job Profile Objects: wd-Jobprofile
- ♦ Effective Class for Location Objects: wd-Location
- ♦ Effective Class for Organization Objects: wd-Organization
- ♦ Effective Class for Photo Objects: wd-Photo
- ♦ Effective Class for Retry Settings: DirXML-WDSyncAttr

D IDV Proposed Structure

As part of solution, it is proposed to have a different container for different objects in IDV. The proposed structure is as follow:

The screenshot displays the Identity Manager Administration interface. The top navigation bar includes 'Identity Manager Administration', 'Roles and Tasks', 'Objects', 'Configure', 'Favorites', and 'Preferences'. The 'Objects' tab is active, showing a tree view on the left and a detailed view on the right.

Tree View:

- .SLES12SP4_E47WORKDAY_TREE.
 - data (1)
 - reference (1)
 - workday (7)
 - jobfamily (48)
 - jobprofile (129)
 - location (60)
 - organization (233)
 - photo (324)
 - relation (365)
 - users (342)
 - system (3)
 - Security (11)

workday Object Detail View:

.SLES12SP4_E47WORKDAY_TREE. > data > reference > workday

workday [edit icon]

New | Edit | Delete | Actions

<input type="checkbox"/>	Name
<input type="checkbox"/>	..
<input type="checkbox"/>	(current level)
<input type="checkbox"/>	jobfamily (48)
<input type="checkbox"/>	jobprofile (129)
<input type="checkbox"/>	location (60)
<input type="checkbox"/>	organization (233)
<input type="checkbox"/>	photo (324)
<input type="checkbox"/>	relation (365)
<input type="checkbox"/>	users (342)



Understanding the Driver State Storage

The Workday driver periodically updates its current status in XML format in the `DirXML-DriverStorage` attribute which is stored in Identity Vault. Driver uses this XML document to resume its operation after a restart. Each element in the XML document is presented in the following format:

```
<Object Class-Poll Type-Status Type>Value</Object Class-Poll Type-Status Type>
```

For example,

```
<worker-regular-poll-start-timestamp>03-12-2019 14:37:20</worker-regular-poll-start-timestamp>
```

In the above example, **Worker** is the object class, **Regular Poll** is the poll type and **Start Timestamp** is the status type. The information related to the following object classes are stored in the XML document:

- ♦ Worker
- ♦ Terminated Worker
- ♦ Job Profile
- ♦ Job Family
- ♦ Location
- ♦ Organization
- ♦ Photo

The following Poll Types are stored in the XML document:

- ♦ Migration
- ♦ Migration_Restart
- ♦ Regular_Poll

The following table explains the various status types that are stored in the XML document:

Table E-1 Explanation of Status Types

Status Type	Description
start-timestamp	Start timestamp of the specified latest poll type
end-timestamp	End timestamp of the specified latest poll type
restart-timestamp	Restart timestamp of the specified latest poll type
last-page-poll-start-timestamp	Start timestamp of the last page that is fetched during the specified latest poll type
last-page-poll-end-timestamp	End timestamp of the last page that is fetched during the specified latest poll type

Status Type	Description
last-poll-timestamp	The last timestamp for which the polling was requested to the Workday server
last-effective-poll-timestamp	The last timestamp for which the effective polling was requested to the Workday server
migration-completed	Timestamp of the migration completion
last-request-doc	The last request that was sent to the Workday server. This request is stored in Base64 format.
page-count	The number of pages fetched during the specified latest poll type
total-page	The total number of pages in the Workday response during the specified latest poll type
entry-time	The entry timestamp for which the polling was requested to the Workday server

NOTE

- ◆ The `last-request-doc` status type will not be stored in the conventional format. It stores the last request that was made to the Workday server irrespective of object class or poll type.
 - ◆ The effective polling happens once in a day and happens for worker and job profile.
-