



Informatica® Data Integration - Free & PayGo

# SuccessFactors ODATA Connector

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# Preface

Use *SuccessFactors ODATA Connector* to learn how to read data from SuccessFactors by using Data Integration. Learn to create a SuccessFactors ODATA connection, develop mappings, and run mapping tasks in Data Integration.

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## CHAPTER 1

# Introduction to SuccessFactors ODATA Connector

You can use SuccessFactors ODATA Connector to connect to SuccessFactors from Data Integration.

Use SuccessFactors ODATA Connector to read data from SuccessFactors and integrate the data with other applications, databases, and flat files. You can read data from SuccessFactors or from other applications. You can use SuccessFactors objects as sources in mappings and mapping tasks.

When you run a mapping task, the agent uses the OData API to perform the specified operation and read data from SuccessFactors.

## SuccessFactors ODATA Connector assets

Create assets in Data Integration to integrate data using SuccessFactors ODATA Connector.

When you use SuccessFactors ODATA Connector, you can include the following Data Integration assets:

- Mapping
- Mapping task

For more information about configuring assets and transformations, see *Mappings, Transformations, and Tasks* in the Data Integration documentation.

## Introduction to SuccessFactors

SuccessFactors is a cloud-based human capital management software that organizations use to manage essential services related to human resource management.

You can use recruiting services of SuccessFactors to hire best talents. You can use SuccessFactors to manage the on-boarding process of new hires, track performance and goals of the employees, and manage employee compensation details. You can use the learning management services provided by SuccessFactors to improve the skills and productivity of your employees, reduce compliance risks, and cater to the needs of external audiences. The succession and development services help you to increase organizational strength by identifying and recognizing potential talents in your company. You can increase communication and collaboration between individuals and teams in your company by using the social networking services provided by SuccessFactors.

SuccessFactors tables are called entities or SFOjects. SuccessFactors integrates with external systems through SuccessFactors SOAP API (SFAPI), Open Data Protocol (OData) API, Employee Central Compound (ECC) API, or file-based communication.

You can choose one of the following deployment models of SuccessFactors:

- Talent Hybrid
- Full Cloud HCM
- Side-by-Side

## SuccessFactors ODATA Connector example

You are a Human Resource Manager in a pharmaceutical company. The business of your company has grown but it has introduced a range of HR policies and tools. You are finding it difficult to manage the recruiting, onboarding, leave policies, travel policies, performance management, and appraisal process.

Your company uses SuccessFactors to automate the human capital management system.

You can now use SuccessFactors ODATA Connector to configure a mapping task and read performance management data from SuccessFactors. Your team can then analyze the data and provide feedback, direction, or recognition to respective employees.

## CHAPTER 2

# Connections for SuccessFactors ODATA

Create a SuccessFactors ODATA connection to connect to SuccessFactors so that the Secure Agent can read data from SuccessFactors. You can use SuccessFactors ODATA connections to specify sources in mappings or mapping tasks.

You can create a SuccessFactors ODATA connection on the **Connections** page. Use the connection when you create a mapping task.

## SuccessFactors ODATA connection properties

When you set up a SuccessFactors ODATA connection, configure the connection properties.

The following table describes the SuccessFactors ODATA connection properties:

Property	Description
Connection Name	Name of the connection. Each connection name must be unique within the organization. Connection names can contain alphanumeric characters, spaces, and the following special characters: _ . + -, Maximum length is 255 characters.
Description	Description of the connection. Maximum length is 4000 characters.
Type	The SuccessFactors ODATA connection type.
Runtime Environment	The name of the runtime environment where you want to run the tasks. Specify a Secure Agent or a Hosted Agent.
User name	The user name to access the SuccessFactors ODATA account. For example, enter username@companyID.
Password	The password to access the SuccessFactors ODATA account. <b>Important:</b> Even if you use OAuth 2.0 authentication, you must still enter the user name and password of the SuccessFactors ODATA account.
URL	SuccessFactors service root URL. For example, enter <a href="https://apisalesdemo8.successfactors.com/odata/v2">https://apisalesdemo8.successfactors.com/odata/v2</a> .



Property	Description
Security Type	Security protocol that you can use to establish a secure connection with the SuccessFactors server. Select SSL or TLS.
TrustStore File Name	Applies to security type. Name of the truststore file that contains the public certificate for the SuccessFactors server.
TrustStore Password	Applies to security type. Password for the truststore file that contains the public certificate for the SuccessFactors server.
KeyStore File Name	Applies to security type. Name of the keystore file that contains the private key for the SuccessFactors server.
KeyStore Password	Applies to security type. Password for the keystore file that contains the private key for the SuccessFactors server.
Authentication Type	Method to authenticate the user. Select one of the following authentication types: <ul style="list-style-type: none"> <li>- HTTP Basic Authentication. Requires administrator access to the OData API and credentials for a valid account.</li> <li>- OAuth 2.0. Requires a valid token and a registered OAuth 2.0 client application.</li> </ul>
API KEY	Enter the API key that the OAuth Utility returns when you register your OAuth 2.0 client application. For more information about API key, see SuccessFactors documentation.
PRIVATE KEY	Enter the private key that the OAuth Utility returns when you generate the X.509 certificate. For more information about private key, see SuccessFactors documentation.
COMPANY ID	If you select OAuth 2.0 authentication, enter your company ID that SuccessFactors returns when you create an account in SuccessFactors.

## Troubleshooting a SuccessFactors ODATA connection

The solution to the following situation might help you troubleshoot SuccessFactors ODATA connections:

### Failed to authenticate to the SuccessFactors instance.

SuccessFactors does not allow unauthorized IPs to access the SuccessFactors instance. When you use mappings or mapping tasks to access SuccessFactors instance through SuccessFactors APIs, the following error might appear:

```
FAILED_AUTHENTICATION</errorCode><errorMessage>Authentication failed. Attempted
login from unauthorized ip: xxx.xxx.xxx.xxx
to company id: xxxx by username: user(status code = 8)
```

Perform the following steps to authorize an IP address:

1. Log in to SuccessFactors.
2. Go to **Admin Center > Company Settings > Password & Login Policy Settings**.

The following image shows the Admin Center page:

## Admin Center



The Password & Login Policy Settings: Applied to All Employees page appears.

## Admin Center

Back to [Admin Center](#)

### Password & Login Policy Settings : Applied to All Employees

Use this page to set the Password Policy.

Minimum Length	2
Maximum Length	18
Minimum Password Age (in days)	-1
Maximum Password Age (in days)	-1

Enabling or disabling this feature will force ALL users to change their passwords  
Set to -1 to keep passwords from expiring (not recommended)

[Set API login exceptions...](#)

Apply different maximum password age for the following users when they login to the API:

Items per page: 10    Displaying 0 records

3. Select **Set API login exceptions...** and click **Add**.

The Create New User Security Setting dialog box appears.

Create New User Security Setting - Mozilla Firefox

https://pmsalesdemo8.successfactors.com/singleStep?step\_name=generic&stepFB=editUserSecurity&fbStepUserSecurity

## Create New User Security Setting

Use this page to create a new user security setting

Username: *	<input type="text"/>
Maximum password age(days): *	<input type="text"/> Set to -1 keep password not expiring (not recommended)
IP address restrictions: *	Apply the maximum password age only when user is accessing from the following IP address(es) (for example 10.20.30.41, 10.20.30.40-10.20.30.50): <input type="text"/>

Cancel Save & Close

4. Enter a username with sfapi permissions, maximum password age, and IP address restrictions. Add the IP from the error message in IP address restrictions field.
5. Click **Save & Close**.

## CHAPTER 3

# Mappings and mapping tasks with SuccessFactors ODATA Connector

Use the Data Integration Mapping Designer to create a mapping. When you create a mapping, you configure a source to represent a single SuccessFactors object.

Describe the flow of data from the source to the target along with the required transformations. When you create a mapping task, select the mapping that you want to use. Use the Mapping Task wizard to create a mapping task. The mapping task processes data based on the data flow logic you define in the mapping.

## SuccessFactors sources in mappings

In a mapping, you can configure a Source transformation to represent a SuccessFactors source.

The general properties display the name and description of the SuccessFactors source. Configure the source and advanced properties for the source object.

The following table describes the source properties that you can configure in a Source transformation:

Property	Description
Connection	Name of the source connection.
Source Type	Type of source object. Select Single or Parameter as the source type.
Object	Name of the object. You can choose a source object when you read data from SuccessFactors.
Parameter	The parameter for the source object. Create or select the parameter for the source object. <b>Note:</b> The parameter property appears only if you select parameter as the source type.
Filter	Adds conditions to filter records. You can add multiple conditions for each object.
Sort	Adds conditions to sort records. You can add multiple conditions for each object.

The following table describes the advanced properties that you can configure in a Source transformation:

Property	Description
Data Serialization Format	The format of the data that is transferred over the network. Select ATOM/XML or JSON.
Maximum Number of Rows	Determines the maximum number of rows that you can fetch.
Number of Rows to Skip	Sets the number of rows you can skip.
Enable Data Validation	Determines whether the constraints expressed in the facets of properties are validated.
Tracing Level	Amount of detail that appears in the log for this transformation. You can choose terse, normal, verbose initialization, or verbose data. Default is normal.

## Rules and guidelines for SuccessFactors tasks

- When you configure a task to read data from SuccessFactors objects, consider the following factors before you can add multiple objects in the Source transformation:
  - Do not add child and sibling objects simultaneously in a mapping task.
  - Do not add sibling objects that are of the same type in a mapping task.
  - Do not add sibling objects beyond the first hierarchy level in a mapping task.
- When you configure mappings at runtime, you cannot write to an object where the PropertyRef Field or key fields property is **sap:creatable = 'false'**.

**Note:** You can set the property to true at the SuccessFactors endpoint.

# APPENDIX A

## Data type reference

Data Integration uses the following data types in mappings and mapping tasks with SuccessFactors:

### SuccessFactors Data Types

SuccessFactors native data types appear in the Fields tab for Source transformation when you choose to edit metadata for the fields.

### Transformation Data Types

Set of data types that appear in the transformations. They are internal data types based on ANSI SQL-92 generic data types, which the agent uses to move data across platforms. Transformation data types appear in all transformations in a mapping.

When Data Integration reads source data, it converts the native data types to the comparable transformation data types before transforming the data.

## SuccessFactors data types and transformation data types

The following table lists the SuccessFactors data types that Data Integration supports and the corresponding transformation data types:

SuccessFactors Data Type	Transformation Data Type	Description
Binary	Binary	1 to 104,857,600 bytes
Boolean	String	1 to 104,857,600 characters
Byte	Integer	-2,147,483,648 to 2,147,483,647 Precision 10, scale 0
DateTime	Date/Time	-9,223,372,036,854,775,808 to 9,223,372,036,854,775,807 Precision 19, scale 0
DateTimeOffset	Date/Time	Jan 1, 0001 A.D. to Dec 31, 9999 A.D. (precision to the nanosecond)
Decimal	Decimal	Precision 1 to 28, scale 0 to 28

SuccessFactors Data Type	Transformation Data Type	Description
Double	Double	Precision 15
Float	Double	Precision 15
Guid	String	1 to 104,857,600 characters
Int16	Integer	-2,147,483,648 to 2,147,483,647 Precision 10, scale 0
Int32	Integer	-2,147,483,648 to 2,147,483,647 Precision 10, scale 0
Int64	Bigint	-9,223,372,036,854,775,808 to 9,223,372,036,854,775,807 Precision 19, scale 0
SByte	Integer	-2,147,483,648 to 2,147,483,647 Precision 10, scale 0
Single	Double	Precision 15
String	String	1 to 104,857,600 characters
Time	Date/Time	Jan 1, 0001 A.D. to Dec 31, 9999 A.D. (precision to the nanosecond)

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