

CONVERCENT EMPLOYEE DATA INTEGRATION:

CSV IMPORT GUIDE

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# Overview

Convercent enables you to harness your organization and employee data from external systems and databases by importing CSV files. This guide is to help you understand the CSV import formats that are available, along with the fields supported by those import options. Ultimately, integrating and employing these various data sources in Convercent will arm you with more cohesive reporting and analytics that more closely align to your organizational data and metrics.

## Definitions

|  |  |
| --- | --- |
| Term | Definition |
| CSV | Comma Separated Values |
| SFTP | Secure File Transfer Protocol |

## References

|  |  |
| --- | --- |
| Document | Location |

CSV RFC http://www.rfc-editor.org/rfc/rfc4180.txt

SFTP http://www.opengroup.org/security/sso/sso\_intro.htm

# Human Resource Format

The Convercent platform supports a range of common employee data fields from various Human Resource systems and other software solutions via CSV import. The import table below indicates the supported data values, their data types and allowable field values if an enumerated pick list is required. There are a few data values that are very important to properly anchor on very specific keys that will now change. This will help with reporting and general Convercent Platform use over time.

# What we create on HRIS imports

When the Human Resource format is used for import we create a few things in the platform. This is done so that you can better manage your information. These are the things we create on import.

* An Employment Record that is anchored on the **EmploymentIdentifier**
* A user account for People to login to the platform using the **UserName** supplied. Since Convercent is a multi-tenant application, we require all usernames be unique across the application. We suggest using email address for usernames, however, if your employees do not have email addresses, work with your Customer Success Manager to identify another unique value that will work for your organization.
* A location relationship based on the **LocationIdentifier, if does not already exist in the Convercent platform.**
* A department relationship based on the **DepartmentIdentifier, if does not already exist in the Convercent platform.**
* The system used to login is tied to the **AuthenticationMethod**. That will use the name used in the configuration of the authentication provider in the Convercent portal

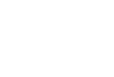
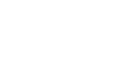
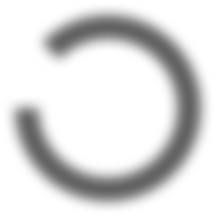
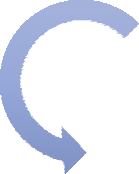
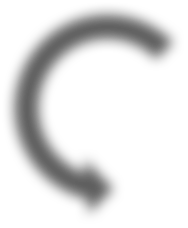
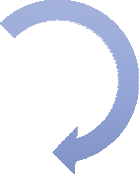
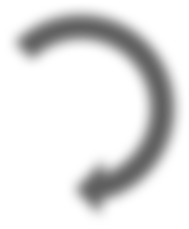
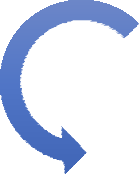
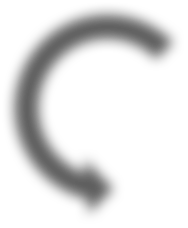
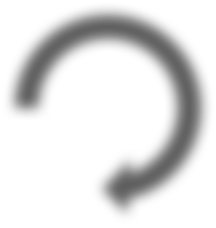
These are some important key fields that will anchor the information together. You should use identifiers that will not change for those data anchors. This could cause some unexpected results in your reporting if they change.

|  |
| --- |
| **EmployeeIdentifier** cannot be changed. Changing the **EmployeeIdentifier** for an existing record will result in a duplicate record being created. |

## File processing

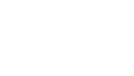
The file processing methods are very sophisticated to ensure that the integrity of the information on import is of the highest quality. Please see the diagram that lays out the general steps in file processing from your system to the time it is available for use.

Create the file from your source system following the format instructions provided in this document. Connect with an SFTP account provided by Convercent and upload the file to us. If you do not have an SFTP account, you will need to reach out to your Customer Success Manager to acquire one. Convercent will monitor for the file drop and pick it up from disk for processing

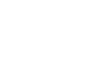


Drop

Monitor



Import



Data

The monitoring service will hand off the file for processing to the import routines. Here is where deeper validations of the content will happen. When all the validations are passed and the data is processed, it will be available for use. If errors are produced from the import, there will be details on how it can be corrected.

It is important that you work with your Account Manager on the initial setup of the automated file processing. There are specific values in your organization setup that will need to be set in advance. Processing rules that are laid out below will also need to be chosen for the import logic to create the records correctly.

## Header Row

A row that has the Header Values, which is required to process the import file. It is important that the header row be exact and follow the precise values in the “Header Value” column below.

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| It is important to use the header values listed below. They define a data contract from your system to ours. Some of the fields are required when using the Human Resource import format. If you chose to use Location or Department information, then the Identifier fields and Name are required. | | | | | |
| Header Value | | Sample Data Value | Data Type | Allowed Values | **Length** | Required | | | Usable in Campaigns |
| **EmploymentIdentifier** | | EMP12345 | string |  | 2-128 | X | | |  |
| **AlternateTrackingIdentifier** | |  | string |  | 2-128 |  | | | X |
| **UserName** | | bobsmith@abcsample.com | string |  | 2-256 | X | | |  |
| **AuthenticationMethod** | | Convercent Password | string |  | 2-128 | X | | |  |
| **IsActive** | | true | boolean | true, false |  | X | | |  |
| **EmploymentType** | |  | enum | None,  Fulltime, Parttime,  Intern,  Temporary,  Contract |  |  | | | X |
| **EmploymentClass** | |  | string |  | 2-128 |  | | | X |
| **NamePrefix** | |  | string |  | 2-50 |  | | | X |
| **NameSuffix** | |  | string |  | 2-50 |  | | | X |
| **FirstName** | | Robert | string |  | 2-128 | X | | | X |
| **MiddleName** | |  | string |  | 2-128 |  | | | X |
| **LastName** | | Smith | string |  | 2-128 | X | | | X |
| **FullName** | | Robert M Smith | string |  | 2-1024 |  | | | X |
| **BusinessTitle** | | Director of  International  Compliance | string |  | 2-128 |  | | | X |
| **JobCode** | | 13-104 | string |  | 2-128 |  | | | X |
| **JobTitle** | | Compliance Officer | string |  | 2-128 |  | | | X |
| **HireDate** | | 10-04-2001 (formats allowed: MM/DD/YYYY, YYYY-MM-DD, MM-DD-YYYY) | date |  |  |  | | | X |
| **RehireDate** | | 10-04-2001 (formats allowed: MM/DD/YYYY, YYYY-MM-DD, MM-DD-YYYY) | date |  |  |  | | | X |
| **TerminationDate** | | 10-04-2001 (formats allowed: MM/DD/YYYY, YYYY-MM-DD, MM-DD-YYYY) | date |  |  |  | | | X |
| **ContactEmail** | | bobsmith@abcsample.com | string |  | 2-128 | X | | |  |
| **CostCenter** | | Management and Admin | string |  | 2-256 |  | | X | |
| **DepartmentIdentifier** | | 0001 | string |  | 2-128 | X | | X | |
| **DepartmentName** | | Management and Administration | string |  | 2-128 | X | | X | |
| **LocationIdentifier** | | US-DEN | string |  | 2-128 | X | | X | |
| **LocationName** | | US-Denver | string |  | 2-128 | X | | X | |
| **LegalEntityIdentifier** | |  | string |  | 2-128 |  | | X | |
| **LegalEntityName** | |  | string |  | 2-128 |  | | X | |
| **ManagesPeople** | | true | boolean | true, false |  |  | | X | |
| **SeniorityDate** | | 10-04-2001 (formats allowed: MM/DD/YYYY, YYYY-MM-DD, MM-DD-YYYY) | date |  |  |  | | X | |
| **SupervisorIdentifier** | | EMP222645 | string |  | 2-128 |  | | X | |
| **CompensationFrequency** | |  | enum | Hourly, Annual |  |  | | X | |
| **CompensationGroup** | |  | string |  | 2-256 |  | | X | |
| **CompensationRate** | |  | decimal |  | 19,2 |  | | X | |
| **CompensationGrade** | | G-21 | string |  | 2-256 |  | | X | |
| **StandardWeeklyHours** | |  | integer |  |  |  | | X | |
| **IsExempt** | | true | boolean | true, false |  |  | | X | |
| **EthnicGroup** | |  | string |  | 2-256 |  | | X | |
| **Citizenship** | |  | string |  | 2-256 |  | | X | |
| **Birthdate** | | 10-04-2001 (formats allowed: MM/DD/YYYY, YYYY-MM-DD, MM-DD-YYYY) | date |  |  |  | | X | |
| **Gender** | | Male | enum | Unspecified,  Male,  Female |  |  | | X | |
| **MaritalStatus** | | Married | enum | Undeclared,  Married,  Single |  |  | | X | |
| **MilitaryStatus** | |  | string |  | 2-128 |  | | X | |

File Conditions

* A column does not need to be included in the file if it is not being used. Only the required columns **MUST** be completed. All other columns can be in the file, but if they are not being used, they will need to be left blank. The required fields are as follows: **EmploymentIdentifier**, **UserName**, **AuthenticationMethod**, **IsActive**, **FirstName**, **LastName**, **ContactEmail.**
* The contact address is the account holder’s personal contact address and will ***not*** be associated with the **LocationName** or **LocationIdentifier.**
* Since Convercent is a multi-tenant application, we require all **UserName** values be unique across the application. Because of this, we suggest using email address for usernames. If your employees do not have an email address, work with your Customer Success Manager to identify a unique value that will work for your organization.
* When **LocationName** gets updated for a user record, it will override the prior **LocationName.**

Required vs Conditionally Required Fields

It is ***not*** required that **LocationName**, **LocationIdentifier, DepartmentName**, or

**DepartmentIdentifier** are used. However, if they are used, there are some conditions that must be met. If **LocationName** is provided and the **LocationIdentifier** is ***not*** provided, the record will fail. If a **LocationIdentifier *is*** provided and the **LocationName** is ***not***, the load will not fail and the LocationName will automatically be given a null (blank). This condition also acts the same with **DepartmentName** and **DepartmentIdentifier**.

SSO Dependencies

If you are planning on using SSO as your method of authentication, the **AuthenticationMethod** field will need to the utilize your SSO Authentication Name as listed in your Convercent SSO Authentications settings. Some examples:

* SAML SSO
* SAML 2.0
* Organization Name SSO

# Import Rules

When the file is imported using the SFPT process, Convercent will process the file with the import rules listed below. The rule configuration that you prefer will need to be communicated with the Account Manager. The system we run under the defaults if these are not defined. It is important that this is assigned to get the best results from the load. These values can be changed at any time and the platform will handle these changes naturally.

|  |  |  |
| --- | --- | --- |
| Import Rule | Description | Default |
| locale formatting | This value is to set the import formatting and impact dates  and times. This is to account for our imports to handle the conversions of source locale information to target local information. | en-US |
| Location Processing | We can append or replace these items. This will have a direct impact on how campaigns and reporting are run, as an example.    Append will tell the importer to add locations, departments or groups to the Person as new ones are identified by the import.    Replace will tell the importer to use what is specified in the import file to be the only location, department or group that the person belongs to. | Replace |
| Department Processing | We can append or replace these items. This will have a direct impact on how campaigns and reporting are run, as an example.    Append will tell the importer to add locations, departments or groups to the Person as new ones are identified by the import.    Replace will tell the importer to use what is specified in the import file to be the only location, department or group that the person belongs to. | Replace |
| Group Processing | Append |
|  |  |

# Single Sign-On (SSO) Considerations

If you are expecting to use Single Sign-on, then you will want to co-ordinate with the technology group that handles your security and logins for your company. There is a link between the **UserName** field in the imports and what the SSO platforms need to send to Convercent. This is needed for access to work correctly from the identity provider. The **AuthenticationMethod** is also linked to SSO and the name that was supplied on the provider configuration page. This can be found in the security section of the Convercent portal.

Convercent supports three independent modes of authentication, which can be managed at the account. This is to provide flexibility in how account access is managed to the Convercent platform and to support flexibility in how you configure you organization.

# Import Methods

Convercent currently supports secure file transport protocol (SFTP) for automated file processing. This is to guarantee that you information is transmitted safely to the platform. The file conventions must be followed for file processing to properly pick up and process your files.

## Secure File Transport Protocol

Files that are transferred to Convercent and from Convercent will always use SFTP. If you need access to this please contact your Account Manager to get the proper credentials and file system setup. The account information provided, will be used for the secure transfer of data from your platform to Convercent.

## File Naming Conventions

Following the proper file naming convention is required for our processing service to pick up and process your files.

The first component of the naming is date and time indicator from the source system that is generating and dropping the file on FTP. We will process the file/files in order based on the date and time in the file name. This will help in cases where two files need to be dropped, but processed in a specific order.

The “Org Source Identifier” is a field that you will configure inside your organization management setup screens. Please be careful in changing that value, once you have file automation setup. It is used as a part of the naming conventions of your files and can cause imports to not process if this value does not match.

For importing, there is a minimal requirement in the name of the files. Please follow this convention specifically.

Minimum File Format:

YYYYMMdd\_HHmmss\_{Org Source Identifier}\_{Facet Name}.csv File Example:

20150709\_023000\_TRUCYCLES\_CompositeUser.csv

## Optional customer tracking for file naming

We also support an optional parameter if there are internal tracking needs from your source system. This is a value called the “OFI” or “Org File Identifier”. A practical use is detailed below. In this situation, TruCyles would want to process files from potentially two separate HR systems and append to the file for audit purposes, a tracking identifier to the file.

File format with an OFI:

YYYYMMdd\_HHmmss\_{Org Source Identifier}\_{Facet Name}[\_{Org File

Identifier}].csv

File Example with OFI:

20150709\_021000\_TRUCYCLES\_CompositeUser\_Oracle1.csv 20150709\_021000\_TRUCYCLES\_CompositeUser\_WebMethods3.csv

## Supported Encoding

Any import files that are dropped on FTP for import must be encoded in CSV UTF-8. If the encoding is not correct the file will fail to process and need to be re- encoded and dropped for processing again.

# CSV Processing Rule Samples

It’s important to note that successful CSV file imports require a very specific process to be followed for file creation. Below are some common scenarios you may run into when preparing your CSV file for import and some guidance on how to handle them.

Each record is one line, except fields that contain embedded line breaks.

A record separator may consist of a line feed (ASCII/LF=0x0A), or a carriage return and line feed pair (ASCII/CRLF=0x0D 0x0A). However, fields that contain embedded line breaks may allow the record to span more than one line.

Fields are delimited with commas.

*Example:* John,Doe,120 any st.,"Any town, WW",08123

Leading and trailing space-characters adjacent to comma field separators are ignored.

John , Doe ,... resolves to "John" and "Doe", etc. This behavior applies to both spaces and tabs.

Fields may also be delimited with double quotes.

Double quote delimiters will always be discarded.

Fields with embedded commas must be delimited with double-quote characters.

*Example:* John,Doe,120 any st.,"Any town, WW",08123

"Any town, WW" had to be surrounded by double quotes because it had an embedded comma.

Fields that contain double quote characters must be surrounded by a consecutive set of double quotes, and the embedded double quotes must each be represented by a pair of consecutive double quotes.

*Example:* Bart "Da Man" Simpson would convert to "Bart ""Da Man"" Simpson", “120 Any St.,...”

A field that contains embedded line breaks must be surrounded by double quotes.

# *Example:*

Field 1: Conference room 1

Field 2: John,

Please bring the B. Simpson file for review -J.L.

Field 3: 10/18/2002

Would convert to:

Conference room 1, "John,

Please bring the B. Simpson file for review -J.L.",10/18/2002

Note that this is a single CSV record, even though it takes up more than one line in the CSV file. This works because the line breaks are embedded inside the double quotes of the field.

*\*\*Implementation note: In Excel, leading spaces between a comma used for a field separator and a double quote will sometimes cause fields to be read in as unquoted fields, even though the first non-space character is a double quote. To avoid this quirk, simply remove all leading spaces after the field-separator comma and before the double quote character in your CSV export files.*

Fields with leading or trailing spaces that are delimited with double quote characters will have the leading or trailing spaces discarded. In this case, spaces, tabs, carriage returns and lines feeds (CRLF) all qualify as “space”.

*Example:* John ," Doe " resolves to “John” and “Doe”.

The first record in a CSV file *may* be a header record containing column (field) names.

There is no mechanism for automatically discerning if the first record is a header row, so in the general case, this will have to be provided by an outside process (such as prompting the user). The header row is encoded just like any other CSV record in accordance with the rules above. A header row for the multi-line example below, might be:

“First Name”, “Last Name”, Address, City, State, PostalCode

 Example Data

Here is a small set of records that demonstrate some of the constructs discussed above. These can be pasted directly into the form provided in the next section to see how our conversion form works.

John,Doe,120 Jefferson st.,Riverside, NJ, 08075

Jack,Guiness,220 hobo Av.,Philadelphia, PA,09119

"Bart""Da Man""",Simpson,120 Jefferson St.,Riverside, NJ,08075

Stephen,Tyler,"7452 Terrace ""At the Plaza"" road",SomeTown,SD, 91234

,Doe,,SomeTown,, SD, 00298

Joan ""the helper"",Jet,"9th, at Terrace plc",Colorado Springs,CO,00123

These records show how the CSV format behaves under a variety of conditions, such as using quotes to delimit a field with embedded quotes and embedded commas; leaving some fields blank (Mr. Doe, for example, has no First Name field); as well as combinations ('Joan, "the helper", Ann' for example, whose middle name is included along with her first name and nickname).

# Import Problems and Handling

It is possible that errors can occur during the import process. This may be caused by a number of conditions. The common ones will be called out, so that they can be prevented. Much of this is ensuring the rules and data types are considered for the values from the source system.

All data that is imported into the Convercent platform is validated. Each row is checked for import integrity and each column is validated for consistency so that we keep information in the platform as rich and clean as possible.

There are numerous things that are checked and can produce errors on import. Also data conditions that may not be expected are created.

Employee showing up more than once with the same name:

Cause: Changing employment identifier field. The employment identifier field is a root anchor for a person. If the import gets the same person with two different employment identifier over time, it will treat that as a new person, even if all other fields match

Symptom: You may see two John Smith people in the system with different employment identifiers, even though it is the same person.

People are receiving emails that their account name changed:

Cause: when an import is done and a username changes for a person, we will notify that person that they have a new username to login to the platform with. This is an important security function to keep an account owner in the platform informed that a username assigned to them has changes

Symptom: An employee may receive an email that was triggered by a load to the system that their username has changed. This can happen in a situation where a name change occurred due to marriage or some other life changing event. Locations and/or Departments keep adding to my employees:

Cause: The process to import is using Append and not replace rule. This will tell the import routines to ignore existing location and department setting for a person and add the ones it has in the import record that are new.

Symptom: You may see departments or location in the portal screens that a person no longer works at or is assigned to.

# Error Output

All CSV import files processed by the system can output an error file. This will contain the records that do not import. The file will have the exact row that failed and why it did not import. It is import that this be kept up with so that your imports are as accurate as they can be. There may be cases where either our technical support or your own internal support staff need to make some adjustments to data in the import file. They generally run very smoothly, but there can be cases where content in a particular field may not be encoded for CSV and needs to be fixed. This can cause one or more rows of data to not import. At import time we will always import the rows that are properly formatted. A row error will not cause the entire import to fail. It will mark that record as bad and continue to the next one.

# Summary

It may be necessary to transform the data coming in from the source system to conform to the import needs. Some of the fields that are either required or are listed as enum have little flexibility in what the values can be. So please be sure to do an audit of the data and its values to ensure you have good imports to the platform. The automation pipeline needs specific encoding and file naming conventions to get the data into the system for processing to begin.