



Smart Import Tool

Data Validation in Detail

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1. Overview

The Smart Import Tool automatically maps the columns to the Salesforce fields of the object and validates the data immediately after uploading a data file in CSV, XLSX and other formats. There are several types of checks used. The Smart Import Tool follows next principles during validation:

1. Fix everything that can be fixed and that's definitely correct. No notifications in this case. For example, remove empty columns and rows, leading and trailing spaces.
2. Correct data automatically using fuzzy logic or rules. User-friendly messages draw attention to the change and show the old and new values. So, the user can double-check the correction.
3. Warn if the data can be imported with an error. For example, warn if a non-existent option is used to import into a non-restricted picklist field. This option can be imported and will appear as a new inactive picklist option. Is this exactly what the user wanted?
4. Highlight the incorrect data. Error messages draw attention to data that cannot be imported. For example, you cannot insert a blank value into a required field.
5. Notify with a pop-up message if the process goes wrong for any reason or if the data provided is incomplete. For example, notify if a required field is not mapped to a column so there is no way to populate it.

This document describes each type of validation in detail.

2. Column completeness

There are several checks to ensure a document has enough columns.

When insert data:

- All required fields which do not have default value are mapped (a user must provide a value to the field).
- Controlling fields are mapped if dependent picklist fields are mapped (a user must provide a value to the controlling field to enter dependent field).

When update data:

- Id column which is required for the update is mapped.
- Otherwise, either Name, Email or External ID field is mapped to use the "Lookup values" feature to find record IDs.

When both insert or update data:

- Duplicate fields are not mapped (each field must be assigned to a single column).

When an error happens, you will see an error message at the top of the screen. The tool validates the data after matching columns including manual mapping and unmapping fields, and before it imports the data.

3. Column validation

Each column is validated based on the field it's mapped to. If no field is assigned, the column is not validated. For mapped columns, the tool validates each cell's value according to the rules of the assigned field type and may generate one of the following message types:

- **Error** – (red) serious error, fix the error before importing the record.
- **Warning** – (yellow) caution, the record can be imported with the value, but you may want to correct it.
- **Info** – (green) auto-correction, the tool changed the value of the cell, and you can see the old and new value.

The tool marks cells with errors, warnings, or info messages with colors. The most significant issue is an error, followed by a warning, and then info. You can see the specific message for each cell by moving your cursor over the lower right corner of the cell.

3.1. Validation of a required field

The tool verifies that each required field has a value. If a required field is empty, it shows an error message. If the field has a default value, it shows a warning message instead of an error.

3.2. Validation based on the field type

Each field type has its own validation rules.

BOOLEAN

The Salesforce Checkbox is a Boolean type that only allows true or false values.

The tool recognizes these values as TRUE (case-insensitively): TRUE, YES, T, Y, ON, 1.

The tool recognizes these values as FALSE (case-insensitively): FALSE, NO, F, N, OFF, 0.

The tool automatically changes the cell value to True/False if it matches one of these values and shows an Info message with the change. The tool shows an Error message for any other value except an empty string. Empty value is inserted as true or false based on the field settings in Salesforce.

COMBOBOX

The Salesforce Combobox is a text field that can have a list of options to choose from. The tool handles it as a regular text field. The tool shows an Error message if the text is longer than the field length.

CURRENCY

The tool validates this as a Number, like the Double type (see Double validation). The tool also deletes any currency symbols (\$ € ¥ £) in the data if they are present.

DATE

The tool accepts dates in both ISO format (e.g., 2000-12-31) and in formats based on the browser's language settings. For example, 08/31/2025 (US) and 31/08/2025 (UK) are both recognized as 2025-08-31.

If a date includes a time component, the time is automatically truncated.

Dates in national formats are automatically converted to ISO format and marked with an Info message. Invalid dates or dates in unsupported formats are flagged with an Error message.

Due to Salesforce limitations, only dates between 1700-01-01 and 4000-12-31 are accepted.

DATETIME

The tool accepts dates with or without time in both ISO format (e.g., 2000-12-31T00:00:00Z) and in formats based on the browser's language settings. For example, 08/31/2025 05:00 PM (US) and 31/08/2025 17:00 (UK) are both recognized as 2025-08-31T17:00:00.000Z.

If the time component is missing, it defaults to 00:00:00.000Z (UTC).

If the time is provided without a time zone, it's assumed to be in your system's local time. The tool then converts it to ISO format in GMT and marks with an Info message.

Invalid dates or dates in unsupported formats are flagged with an Error message.

Due to Salesforce limitations, only dates between 1700-01-01 and 4000-12-31 are accepted.

DOUBLE

The tool accepts numbers with optional decimal parts, using either a dot (.) or the decimal separator defined by the browser's language settings. Grouping separators (e.g., commas or spaces) are also supported.

Grouping separators are automatically removed, and the decimal separator is converted to a dot. This transformation is flagged with an Info message.

Invalid numbers or values that exceed the field's allowed size are marked with an Error message.

EMAIL

The tool shows an Error message if the value is not a valid email address or if the text is too long, so it can't be inserted into the Email field.

Salesforce does not prohibit insertion of some invalid emails, such as [info@a---b.cd](#), [a@1.2.3](#), so the tool marks such emails with a warning, but does not prevent insertion.

ID

The tool shows an Error message if the value is not a valid Salesforce Id (15 or 18 chars). The user cannot insert the Id himself as Salesforce creates the Id when it imports the data.

INTEGER

Integer values are validated using the same logic as for other numbers (see Double validation). If a decimal part is present, it is automatically discarded, and the adjustment is flagged with an Info message.

MULTIPICKLIST

The Salesforce Multipicklist accepts a list of options, separated by semicolon (;). Be careful, a comma-separated list is treated as a single option.

The tool checks each option in the list like a picklist. The tool skips empty and duplicate values. The tool shows an Info message with the old and new value if the list changes after validation.

The tool shows an Error message if at least a single option is not found and the mulipicklist is restricted. If the mulipicklist is not restricted, the tool shows a Warning message instead of Error as the new option can be inserted.

PERCENT

The tool validates Percent as a Number, like the Double type (see Double validation). The tool also deletes the percent symbol (%) in the data if it is present.

PHONE

The tool handles Phone field as a regular text field. The tool shows an Error message if the text is longer than the field length. The tool does not check if the phone number is correct because there are many ways to write it.

PICKLIST

The tool verifies that the value matches one of the active options in the picklist. The tool uses fuzzy logic to search for the option by its value or label.

The tool shows an Info message with the old and new value if it finds an option that is similar but not identical to the value.

The tool shows an Error message if it cannot find a matching option and the picklist is restricted. If the picklist is not restricted, the tool shows a Warning message instead of Error as the new option can be inserted.

The tool also checks if the value is compatible with the controlling picklist option if the picklist is dependent. The tool shows an Error message if controlling field is not mapped, or it is empty, or its value does not fit the dependent picklist value

REFERENCE

The tool shows an Error message if the value is not a valid Salesforce Id (15 or 18 chars).

The "Lookup values" feature can find the correct records and show their Id in a new column if you enter their Names instead of their IDs. The tool will use this new column for insertion instead of the original one.

STRING

The tool handles the String field as a regular text field. The tool shows an Error message if the text is longer than the field length.

TEXTAREA

The tool handles the Textarea field as a regular text field. The tool shows an Error message if the text is longer than the field length.

TIME

The tool accepts time values in ISO format (e.g., 00:00:00Z) as well as simpler formats like 17:00 or 05:00 PM. At minimum, hours and minutes must be specified.

If no time zone is provided, the time is assumed to be in your system's local time. The tool then converts it to ISO format in GMT and marks with an Info message.

Time values in unsupported formats are flagged with an Error message.

URL

The tool displays a Warning message if the value is not a valid URL address. Some valid URLs are considered suspicious and marked with the warning as well: URLs containing basic authorization, a specified port or IP address, domains containing Unicode or national characters. Also, only HTTP and HTTPS protocols are considered valid.

Salesforce doesn't validate URLs. If you are sure that the link is correct and can be opened in the browser, just ignore the warning.

The tool shows an Error if the value is too long and can't be inserted.

3.3. Country/State validation

If the "State and Country/Territory Picklists" are enabled in the org, the tool checks the Country and State/Province values of complex Address fields like picklist fields. In this case, Country is the controlling picklist and State/Province is the dependent picklist. Custom Address fields are supported as well.

3.4. Record Type validation

The Record Type is a Reference field. You can enter the Record Type Name or Developer Name instead of Record Type Id, and the tool will automatically add their ID in an additional column. You don't have to Lookup Values to retrieve their ID, unlike other reference columns.

4. Contact us

If you have any questions, please reach out to smart.import.tool@dataart.com where a member of our team will be happy to assist.