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Appian

# Data Type Impact Analysis

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The impact analysis feature allows you to:

- Select a custom data type used by an application.
- View the objects where that data type is used or referenced.
- Automatically update any objects that use an old version of the type so that they use the latest version.



## Running the Report

Running impact analysis on a production environment can tell you if you accounted for all the applications, process models, rules, etc. that use the custom data type you're working with; however, you should not update references directly in the production environment. If you want to update references after running impact analysis, do so in your development environment, then export the application, and import it to your product environment.

See below: Updating References

## Accessing the Report

You can view the impact analysis report from the Data Types tab of the Data Management page. It also appears automatically whenever you **Save & Publish** a CDT that you edit using the Data Type Designer and the edit has the potential for having an impact on process models, data stores, or other data types.

To access the report from the Data Management page, select the **System** tab in the Designer interface and open the Data Management page. Then select one or more data types to add them to the analysis and click **Impact Analysis**.

All objects associated with the data type within an application are listed, so long as you have at least editor rights to the associated object.

See also: Data Type Designer

## Reading the Report

Whenever you update a CDT, all of the existing references are retained by your processes, process models, and other application objects such as data store entities. The report lists objects of the following type that reference the selected data type if the object is included in an application:

- Applications
- Process models
- Data stores
- Data types
- Rules

Each item lists either the referenced CDT or the deleted version of the CDT that is currently in use. These references (deleted versions) list the version number of the CDT, which is still in use.

Old versions of CDT references appear as deleted versions.

Deleted type versions appear in bold. Click a bold type to display its structure. If the type is nested, only the selected data type appears (without its parent structure.)

If you expected an item to be listed, but the message **No applications contain references to the data type ... ** displays, add the missing object to an (existing or new) application.

The report results may be up to a minute out of date. The report lists a date and time that indicate how current the shown results are. If an expected item is not listed and you confirm that the design object in question is part of an application, it could be because the object was recently created or updated to reference the data type.

See also: Managing Custom Data Types

### Nested Indirect References

It is possible that unexpected application objects may appear in your report due to indirect references. When a type is indirectly referenced, the image appears next to it.

You can view the CDT hierarchy that references a deleted version of the CDT by resting your pointer on the image next to the item.

If there are multiple paths that lead to the data type from indirect references, only the first is shown.

For example:

Given a data store named **Newsletter** that contains an entity built using custom data type named **NewsItem** - AND - Given that the **NewsItem** CDT references **Customer** and **Customer** is scanned using the impact analysis tool, resting your pointer on the image next to the deleted version of **Customer** displays the following chain of references:

```
Newsletter > NewsItem > Customer
```

If the process model **Create Mail Entry** has a CDT process variable named **Person** that references **Address**, when analyzing the **Address** data type, the following chain of references appears when you rest your pointer on the indirect reference image:

```
Create Mail Entry > Person > Address
```

# Updating References

You can update all listed items that reference a deleted data type to use the current version by clicking the **Update** button.

Report items that appear in bold font are ones that use a deleted type.

Objects that may need updating are those that list a deleted version of the updated data type. Deleted versions are indicated by listing the type's versic number after its name.

Click **Update** to update all bold types to use the latest data type definitions.

- You cannot select an individual item to update. An update is applied to all outdated items.
- If you do not update the outdated items, they continue to use a previous version of the data type definition.
- The **Update** button does not appear, if all listed items are up to date.

You can individually update data types by viewing the object that uses the data type, and selecting the latest version of the data type (which does not list `^#` after its name).

## Update Process

The update process automatically exports and imports all items in each application that reference the deleted data types.

The applications that contain these objects are not exported and imported.

Only the process models, data stores, and data types that are included in the applications are exported and imported.

All updated objects list changes to who last saved the object, and when it was saved and published.

**NOTE**: When you update the process models that reference the CDT, a new version is published. Be sure that any draft process model you are currently working on is published before you update it. Otherwise, the most recent changes to your process model will be lost.

## Update Issues

Some items may not be able to be updated, or not update fully, due to issues encountered during the import process.

For example, process models that use stored passwords for the Query Database Smart Service do not export the password. In such cases, an updatec process model is saved but not published due to this export restriction. - Other export and import issues may be encountered that prevent the update from occurring. See Application Deployment Guidelines for additional details.

## Update Results

Editing a CDT causes it to be deleted and republished using its new structure. This triggers a number of automatic changes to your application.

After each data type is updated, existing objects (models and data stores) that reference the data type are automatically updated to reference the current version of the type (instead of the deleted type definition).

- Data stores must be republished for the update to be completed.
- Active process instances are not updated.
- Data stores used by active process instances may be updated, once the data store is republished.

When the update is completed, a message indicating success and/or failure is displayed. This message provides links to the import log (the update is applied as an application import) and your import logs folder.

If you are editing a process model that is updated, saving that process model may overwrite the changes.

We recommend closing any process models that you may be editing in the process modeler before updating the data types they are using.

This behavior may also occur if you import an application while editing a process model that is in the application.