Robust Transform Map

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CONTENTS

01. What is Robust Transform Map

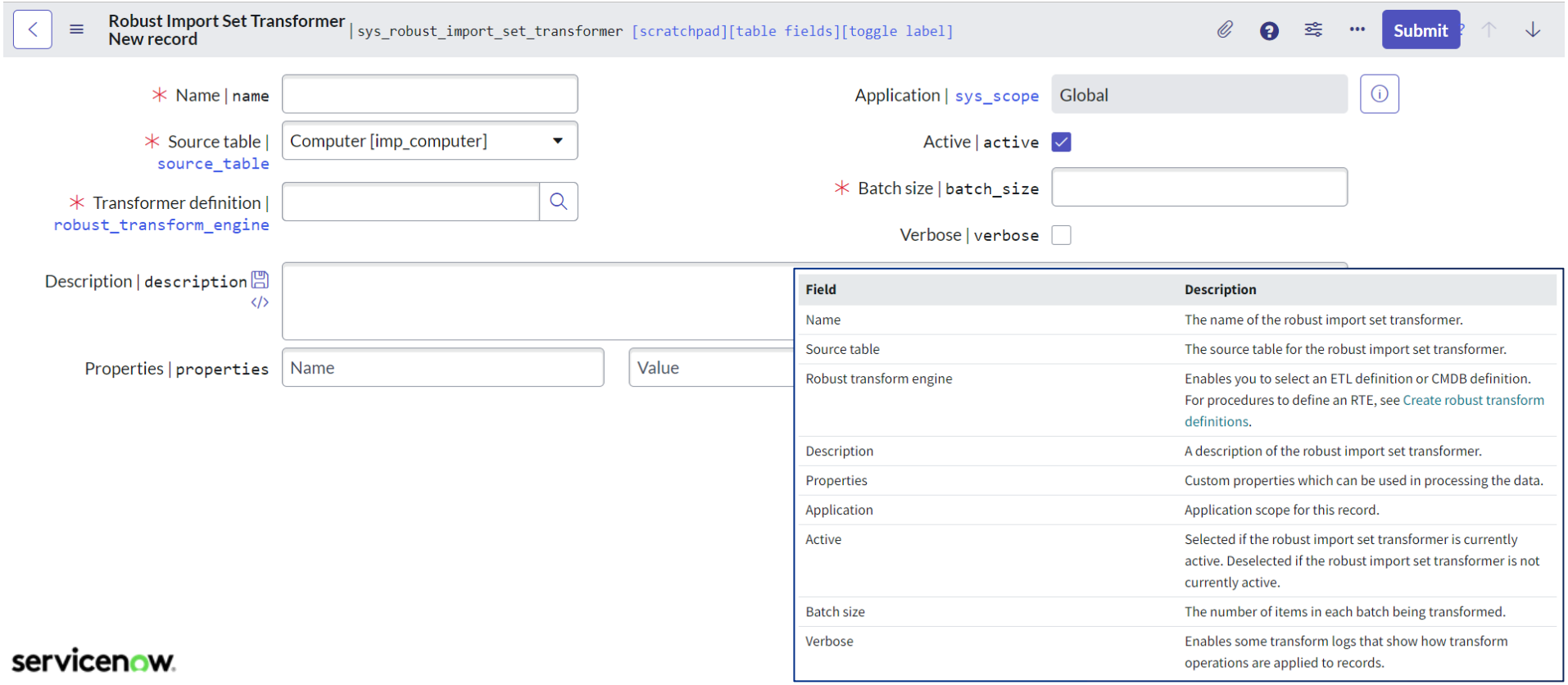
Use robust import set transformers instead of transform maps if you want to extract, transform, and load data to one or more target tables.

Difference between Robust Transform Map & Transform Map

Transform Map	Robust Transform Map
Transform maps define the mapping from **imported data stored in a staging table to a single target table** in the Now Platform. Transform maps also insert data into target tables, performing both transform and processing functions. You can define **multiple table mappings with multiple transform maps**.	The Robust Transform Engine (RTE) and the robust import set transformer separate the transform and processing functions, providing a more flexible alternative to transform maps. The robust import set transformer allows you to **extract data from a source table into an intermediary data structure**. You can transform the data as desired and then **load that data to one or more target tables**. Records are processed as **batches** to enhance performance.

02. Create a Robust Import Set Transformer

Define how information is sent from the source table to target tables via a Robust Transform Engine (RTE).



Field	Description
Name	The name of the robust import set transformer.
Source table	The source table for the robust import set transformer.
Robust transform engine	Enables you to select an ETL definition or CMDB definition. For procedures to define an RTE, see Create robust transform definitions.
Description	A description of the robust import set transformer.
Properties	Custom properties which can be used in processing the data.
Application	Application scope for this record.
Active	Selected if the robust import set transformer is currently active. Deselected if the robust import set transformer is not currently active.
Batch size	The number of items in each batch being transformed.
Verbose	Enables some transform logs that show how transform operations are applied to records.

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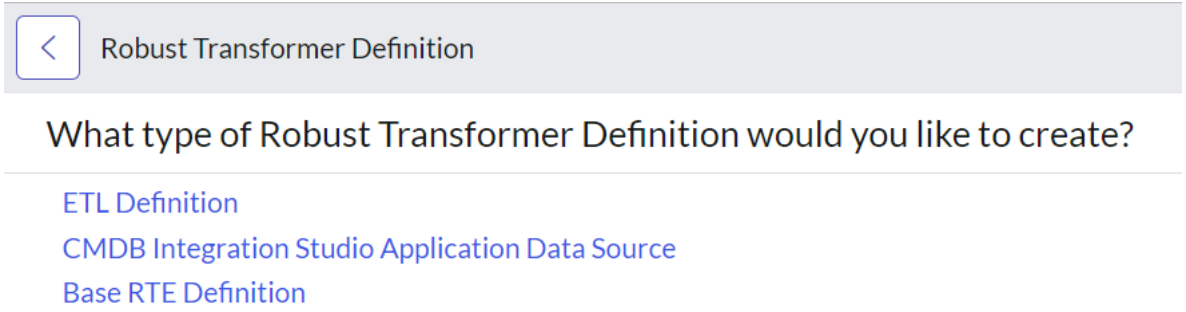
03. Robust Transfrom Definition

Robust Transform Definition (sys_rte_definition)



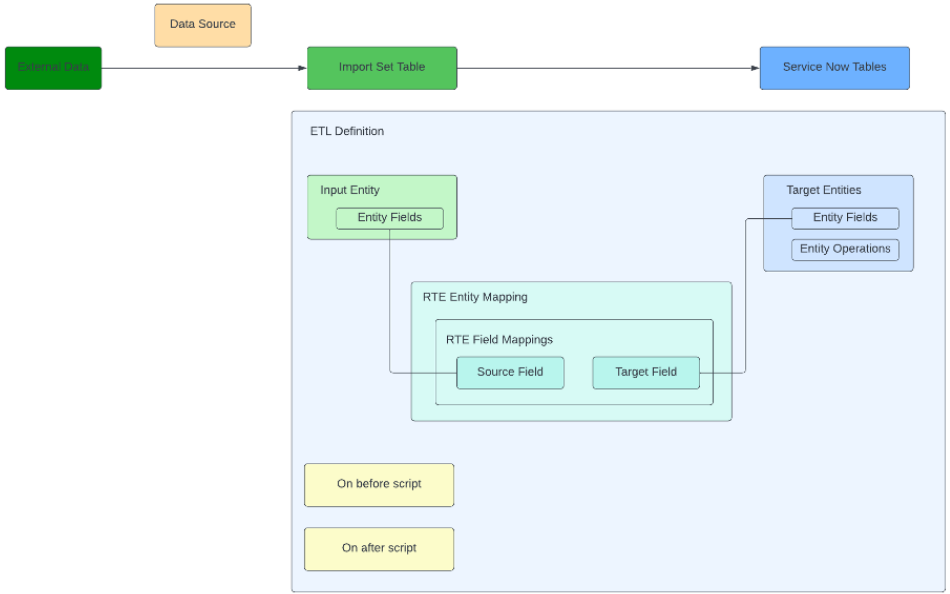
- ETL definitions extract data from a source table, transform the data as desired, and load the data into one or more target tables. ETL definitions also support nested data structures.

04. Extract Transform Load (ETL) definition overview

ETL definitions extract data from a source table, transform the data as desired, and load the data into one or more target tables. ETL definitions also support nested data structures.

ETL definitions specify how to map data

Importing data starts with a data source. A data source specifies the type of data that you want to extract and its location. After the data is extracted, it's loaded into a staging, or import set, table. Then an ETL definition specifies how to map the data into one or more target tables in ServiceNow. You can create ETL definitions that map data to ServiceNow tables while still maintaining the foreign key and unique key constraints.



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05. ETL Definition Entities Overview

- ETL entities represent input data and target tables
- Input entities
- Target entities
- Robust Transform Engine (RTE) entity operations modify data
- RTE entity mappings specify field mappings
- Nested data in ETL definitions

ETL entities represent input data and target tables

ETL definitions are based on entities. Every ETL definition that you create must have entities associated with it. Entities represent input data and target tables.

Input data is the data that has been loaded into the staging table.

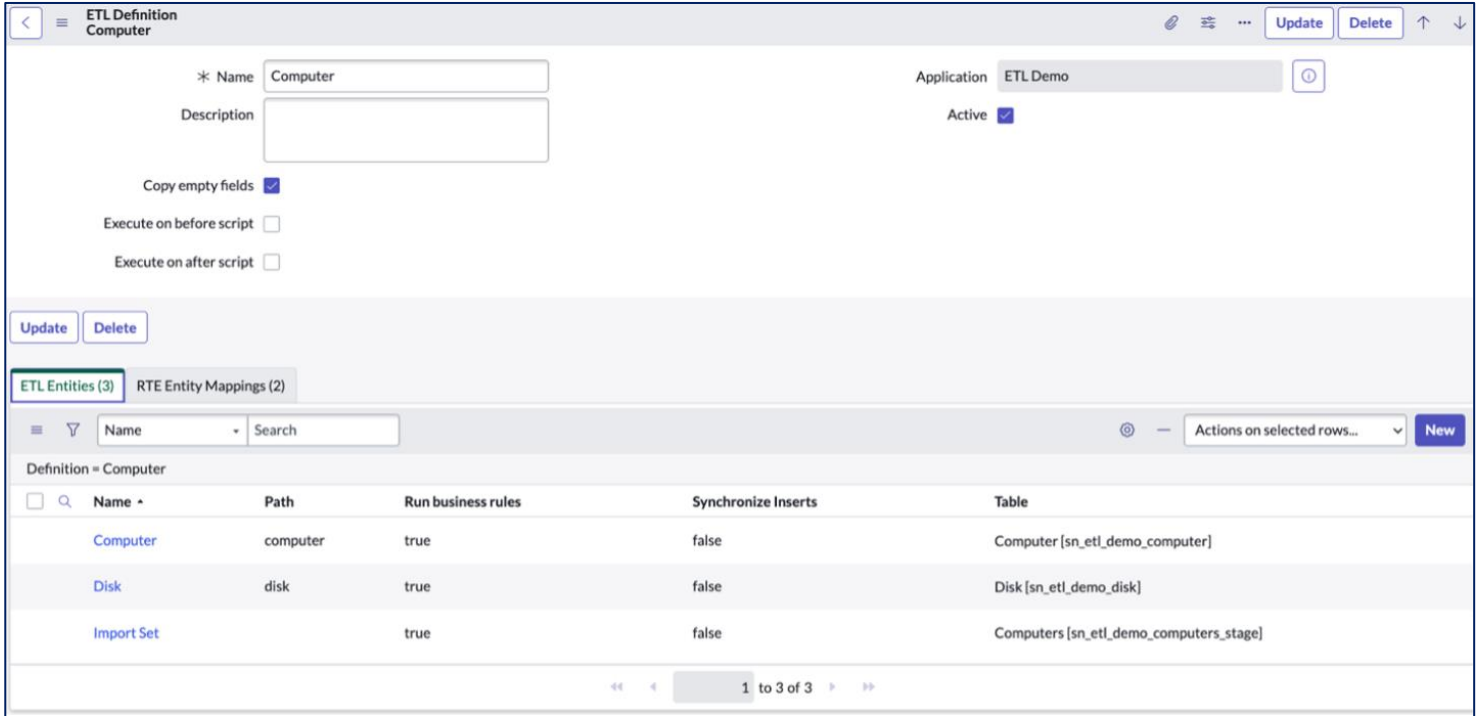
Target tables are the ServiceNow tables where you want your data to end up.

Mappings and operations are also based on entities, so it's helpful to create entities early, when you create the definition.

05.a Example

An example of an ETL definition for Computer

This definition has three entities associated with it. The Import Set entity represents the input data, data loaded from an Excel file into the Computers [sn_elt_demo_computers_stage] staging table. Computer and Disk are the target entities. They represent two ServiceNow tables named Computers [sn_etl_demo_computer] and Disk [sn_etl_demo_disk]. The data from the staging table will be loaded into the two target tables.



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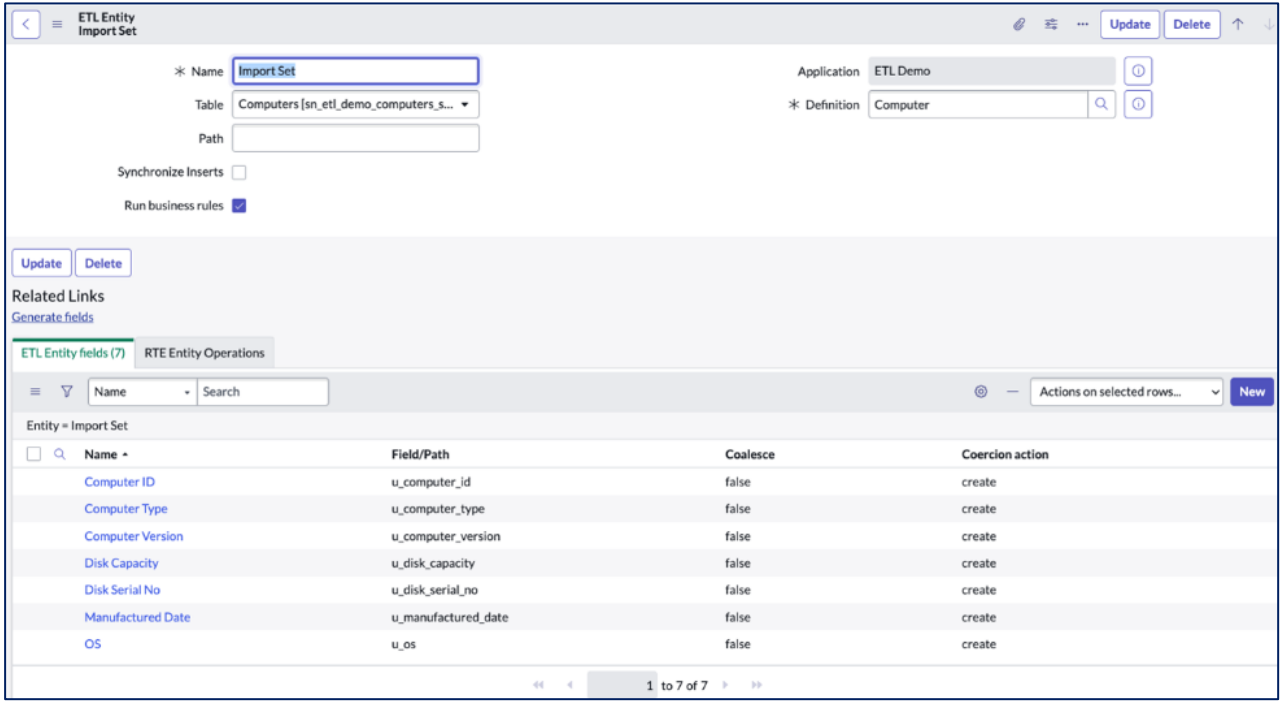
Input entities

Input entities represent the extracted data that was loaded into the staging table. Input entities have ETL entity fields to represent the import set table columns or, for a single column mode, JSON keys. You can create your own entity fields or use the Generate fields link to generate them automatically.

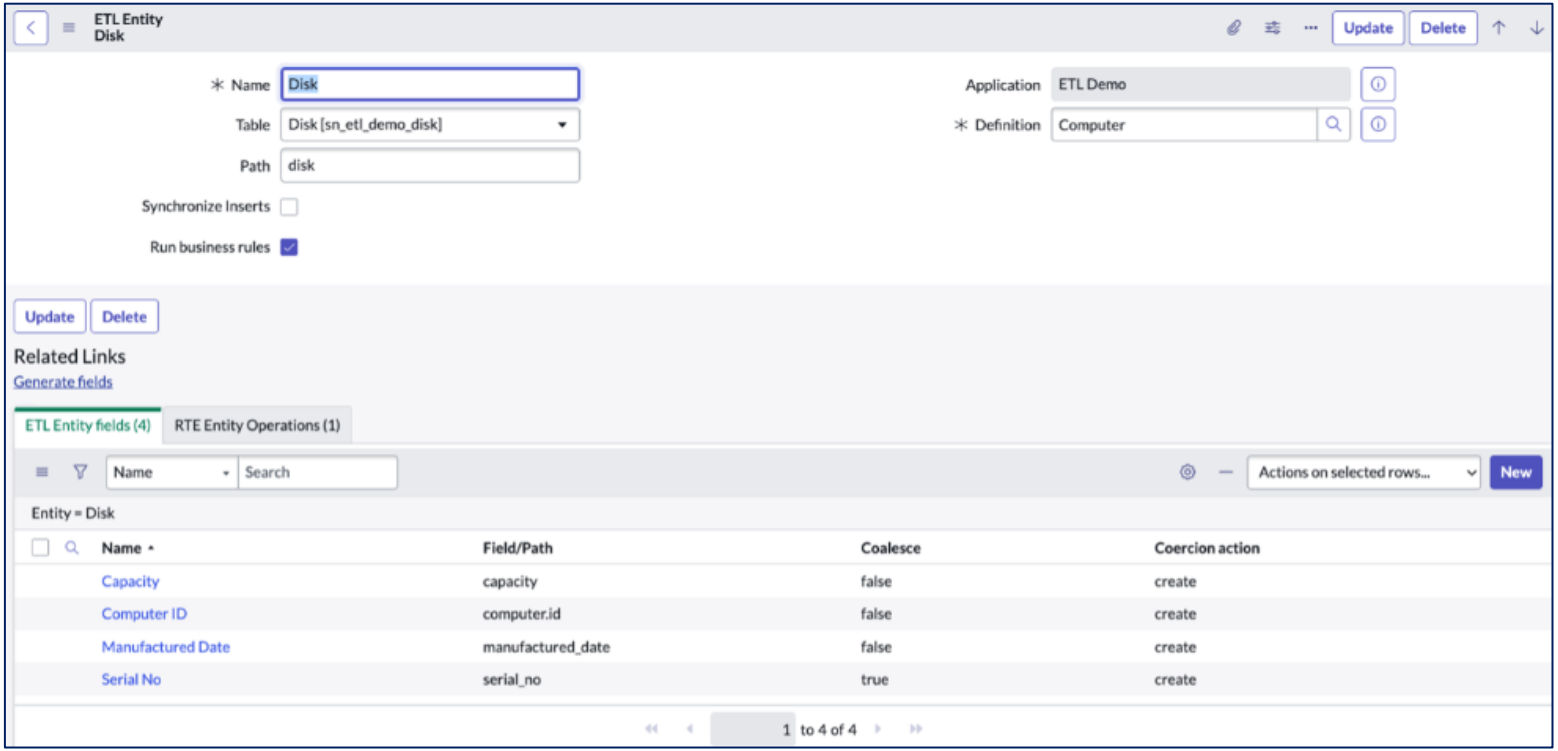
The following image shows the Import Set entity from the Computer ETL definition. The Import Set entity represents the input data loaded from an Excel file into the Computers [sn_elt_demo_computers_stage] staging table. The Import Set entity has an entity field for each column in the staging table.



Target entities

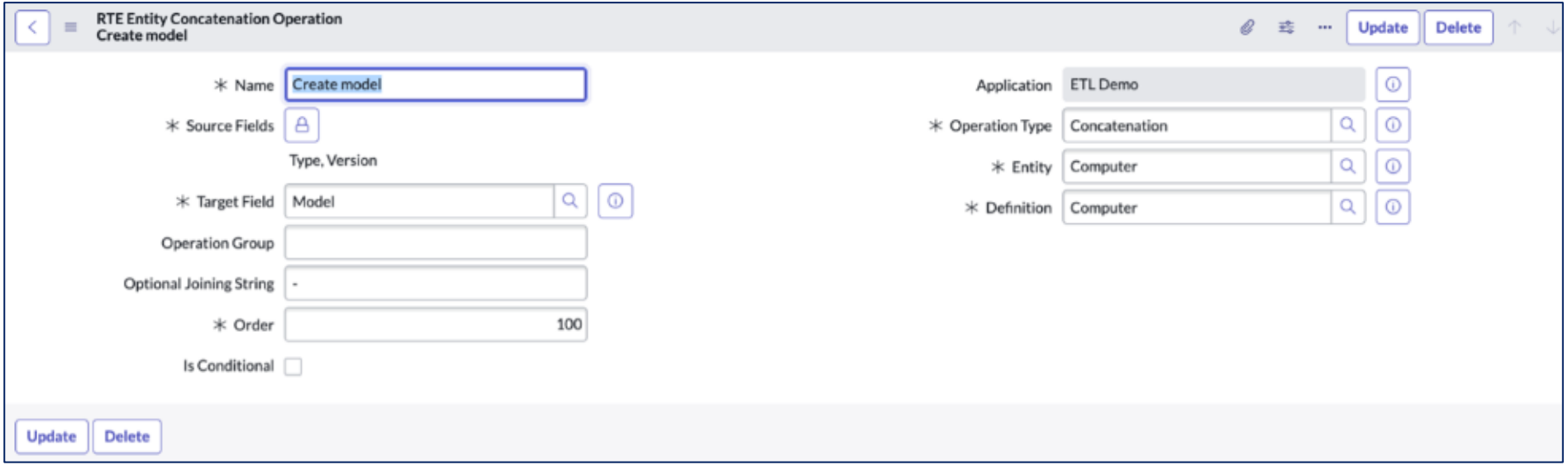
Target Entities represent the target tables in ServiceNow. The following image shows the Disk target entity from the Computer ETL definition. Disk represents the sn_etl_demo_disk target table. It has entity fields to represent table columns and temporary values to apply operations.

Each entity field has a name, a reference or path field, a coalesce field, and a coercion action.



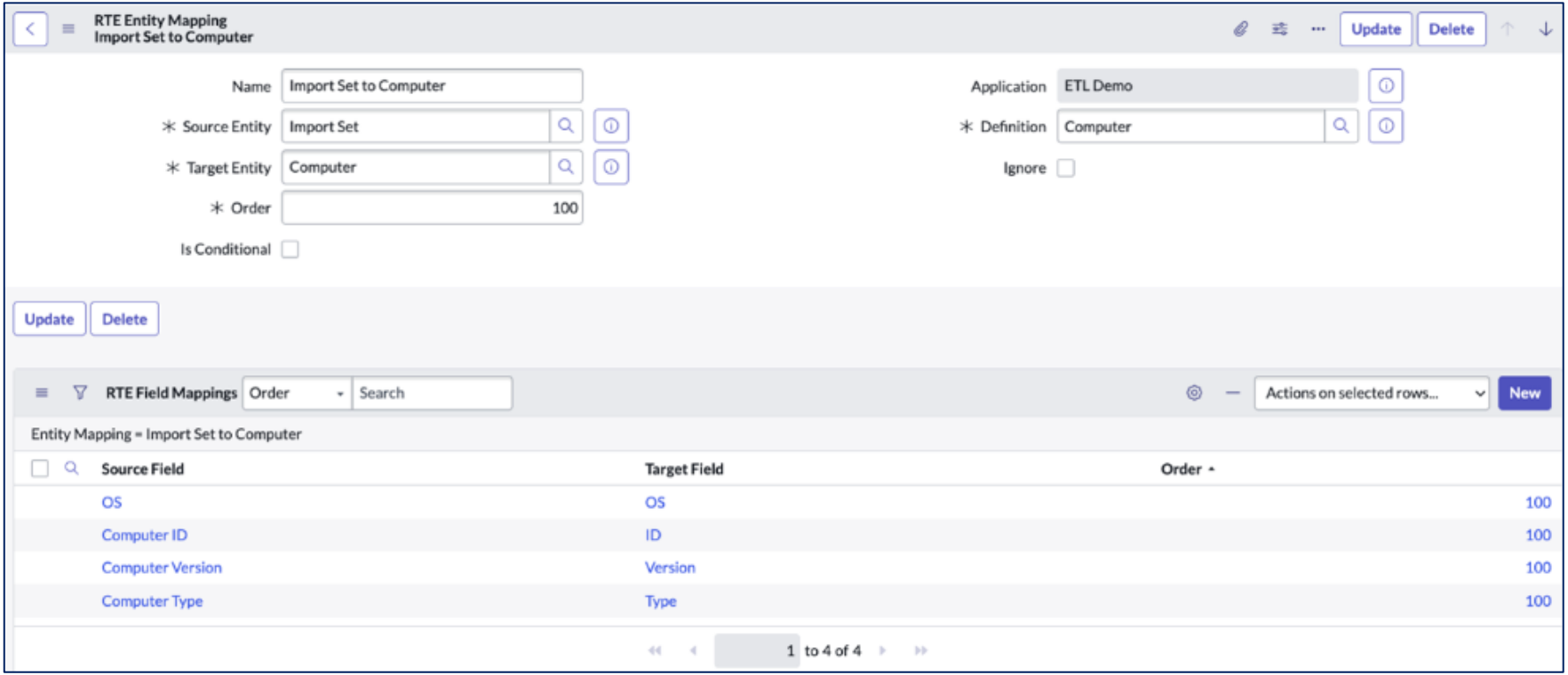
Robust Transform Engine (RTE) entity operations modify data

Entity operations modify input data before storing it in a target table. The following image shows an example of a concatenation operation. In the ETL definition for Computer, the imported data contains both a type and a version. However, the target table requires a value that is a combination of the type and version. So the Computer entity uses a concatenation operation to concatenate type and version. Entity operations can only be performed on entity fields, so in this example, two temp fields are created to copy the import set values.



RTE entity mappings specify field mappings

After creating the input and target entities with their entity fields and operations, create an RTE entity mapping for each target entity. RTE entity mappings specify how fields in the input entity are mapped to fields in the target entities. In the ETL definition for Computer, there are two RTE entity mappings. One, shown in the following image, maps input data to the Computer entity fields. The other maps input data to the Disk entity fields.



THANK YOU

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