

Managing the Masking Inventory

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Delphix stores the masking rules for each sensitive column in the Delphix repository database in the environment's inventory.

The Inventory Screen

From anywhere within an environment, click the **Inventory** tab to display the inventory for the rule sets for the environment and the Inventory Screen appears (Figure 3.7).

Inventory Settings

To specify your inventory settings:

1. On the left-hand side of the screen, select a **Rule Set** from the drop-down menu.
2. Below this, **Contents** lists all the tables or files defined for the rule set.

Figure 14 Inventory Screen

The screenshot shows the Delphix web interface. At the top, there are navigation tabs: Environments, Monitor, Scheduler, Settings, Admin, and Audit. Below these, there are sub-tabs: Overview, Connector, Rule Set, and Inventory. The main content area is titled 'CPY_RULE_SUBSETTI...' and includes buttons for Import, Export, and Row Types. A 'Filter By:' section has buttons for All Fields, Masked Fields, Auto, and User. On the left, there is a 'Select Rule Set' dropdown menu and a 'Filter Contents' section with search options. The main table displays the following data:

Select Rule Set	Type	Column	Data Type	Mask	Domain	Edit
CPY_RULE_SUBSETTI...		ALPHA_NUM_MAX	VARCHAR2 (50)	Mask	ACCOUNT_NO	✔
		ALPHA_NUM_MIN	VARCHAR2 (25)	Mask	ACCOUNT_NO	✔
		AT_SL_NUMERIC	NUMBER (18)	Mask	ACCOUNT_NO	✔
		AT_SL_STRINGS_1	NVARCHAR2 (25)			✔
		AT_SL_STRINGS_2	NVARCHAR2 (25)			✔
		AT_SL_STRINGS_3	NVARCHAR2 (25)			✔
		BIT_TYPE	NUMBER (0)			✔

3. Select a **table** or **file** for which you would like to create or edit the inventory of sensitive data. The **Columns** or **Fields** for that specific table or file appear.
4. If a column is a primary key (PK), Foreign Key (FK) or an index (IDX), an icon indicating this will appear to the left of the column name. If there is a Note for the column, a Note icon will appear. To read the note, click the icon.
5. If a table, metadata for the column appears: **Data Type** and **Length** (in parentheses). This information is read-only.
6. Choose how you would like to view the inventory:
 - a. **All Fields**—Displays all columns in the table or all fields in the file (allowing you to mark new columns or fields to be masked).
 - b. **Masked Fields**—Filters the list to just those columns or fields that are already marked for masking.
7. Choose how to determine whether to mask/unmask a column:
 - a. **Auto**—The default value. The profiling job can determine or update the algorithm assigned to a column and whether to mask the column.

- b. **User**—The user's choice overrides the profiling job. The user manually updates the algorithm assignment, mask/unmask option of the column. The Profiler will ignore the column, so it will not be updated as part of the Profiling job. In order to use the Secure Shuffle algorithm the user would select it as a User defined algorithm and assign it to the specific column. Secure shuffle automates the creation of a secure lookup algorithm by building a list of replacement values based on the existing unique values in the target column and creating a secure lookup using those values. In that respect it is simply shuffling the values.

Managing a Database Inventory

The following sections apply to databases:

- Setting Column Criteria for a Table
- Row Types and Creating New Row Types for Tables

Setting Column Criteria for a Table

Note: a database must be selected from the **Select Rule Set** dropdown menu on the left, not a file system.

To set criteria for sensitive columns:

1. Click the green **edit** icon to the right of a name of a column.
2. To mask the selected column, check the **Mask** check box.
3. Clear this check box if you do not want to mask this column.
4. Choose the appropriate sensitive data element type for the column from the **Domain** dropdown.
5. Delphix defaults to a **Masking Algorithm** as specified in the Settings screen. If necessary, you can override the default algorithm for a column.
6. To select a different masking algorithm, choose one from the **Algorithm** dropdown.

For detailed descriptions of these algorithms, see [Algorithms](#). For information about how to create your own algorithms and how to add them to domains, see Delphix Administrator's Guide.

If you select a DATESHIFT algorithm and you are not masking a datetime or timestamp column, you must specify a **Date Format**. (This field only appears if you select a DATESHIFT algorithm from the Masking Algorithm dropdown.) For a list of acceptable formats, click the **Help** link for Date Format. The default format is yyyy-MM-dd.

1. Select the **Row Type** according to its purpose, using "All Row" as a convention for all rows.
If you need to create a row type (for example, if filter conditions are required), see [Row Types and Creating New Row Types for a Table](#) next.
2. Select an **ID Method**:
 - a. **Auto**—The default value. The profiling job can determine or update whether to mask a column.
 - b. **User**—The user decides whether to mask/unmask a column. The user's choice overrides the profiling job. (The user masking is done after the profiling job is finished.)
3. You can add/remove notes in the **Notes** text field.
4. Click **Save** when you are finished.
You must click **Save** for any edits to take effect.

Row Types and Creating New Row Types for Tables

Delphix provides a feature called **Row Types** that limits masking of a given column to a specific subset of rows.

Note: a database must be selected from the Select Rule Set dropdown menu on the left, not a file system.

To create a new row type:

1. From an Environment's Inventory tab, click **+Row Types** in the upper right.
The **Row Type** window appears, listing existing row types.
2. Click **+ Add a Row Type**.
The **Add Row Type** window appears.
3. Name the **Row Type** according to its purpose. For example, if you want to subset the rows to only take rows with addresses, you can name this row type "Address Rows".
4. To limit the masking to a subset of rows, specify an appropriate **Where Clause**.
5. Click **Save**.

Managing a File Inventory

The following sections apply to files:

- [Setting Field Criteria for a File](#)
- [Defining Fields](#)
- [Adding Record Types for Files](#)

File inventory is based on file format, not on file content. Therefore, if you make a change to a file inventory, that change applies to all files that use that format.

Setting Field Criteria for a File

Note: a file system must be selected from the Select Rule Set dropdown menu on the left, not a database.

To set criteria for sensitive fields:

1. From an Environment's Inventory tab, click the green edit icon to the right of the field you want.
2. To mask this field, check the **Mask** check box (in the View Inventory pane).
3. Clear this check box if you do not want to mask this field.
4. Choose the appropriate sensitive data element type for the field from the **Domain** dropdown.
5. Delphix defaults to a masking **Algorithm** as specified in the Settings screen. If necessary, you may override the default algorithm for a field.
6. To select a different masking algorithm, choose one from the **Algorithm** dropdown. For descriptions of these algorithms, see [Algorithms](#).

If you select a DATESHIFT algorithm, you must specify a **Date Format**. (This field only appears if you select a DATESHIFT algorithm from the Masking Algorithm dropdown.) For a list of acceptable formats, click the **Help** link for Date Format. The default format is yyyy-MM-dd.

7. Choose a **Record Type** from the dropdown.
8. If you are masking a delimited or fixed file, specify a **Position**: the field number (for delimited files) or the character position (for fixed files) of the beginning of the field within the data record.
9. If you are masking a fixed file, specify a **Length** (the length of this field within the data record).
10. Notes can be added/removed in the **Notes** text field. (Fields with notes display a Note icon in the Notes column.)
11. Click **Save** when you are finished.



You must click **Save** for any edits to take effect.

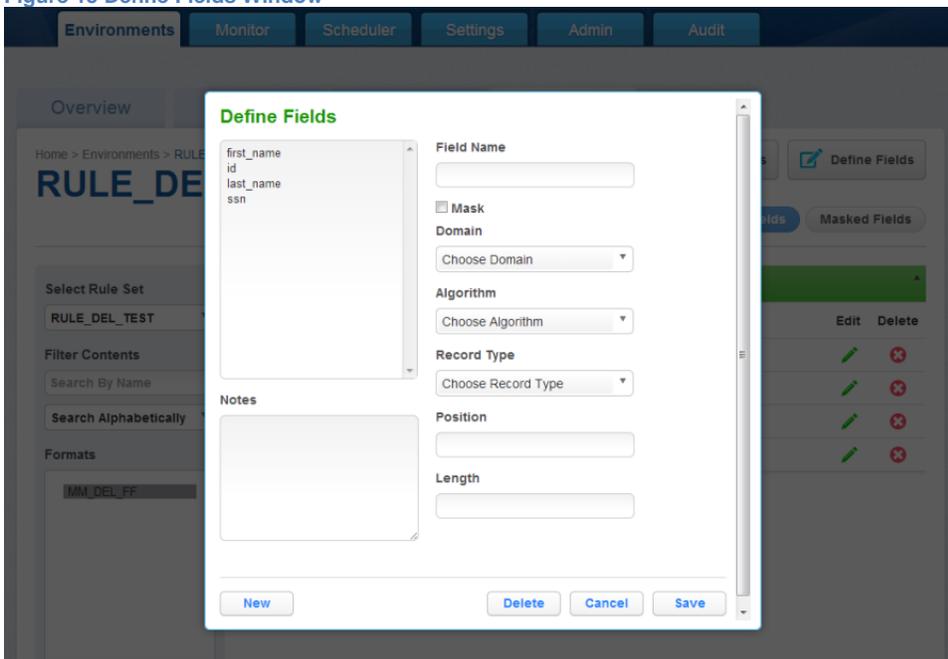
Defining Fields

Note: A file system must be selected from the Select Rule Set dropdown menu on the left, not a database.

To create new fields:

1. From an Environment's Inventory tab, click **Define fields** to the far right. The Edit Fields window appears.

Figure 15 Define Fields Window



2. Edit the fields as described in **Setting Field Criteria for a File**.
3. When you are finished, click **New** to create a new field, or click **Save** to update an existing field.

Adding Record Types for Files

Note: You must select a file system from the **Select Rule Set** dropdown menu on the left, not a database.

To add a new Record Format:

1. In the upper right-hand corner of an environment's **Inventory** tab, click **Record Types**. The **Record Type** window appears.
2. Click **+Add a Record Type** towards the bottom of the window. The **Add Record Type** window appears.
3. Enter values for the following fields:
 - a. **Record Type Name** — A free-form name for this record format.
 - b. **Header/Body/Trailer** — If the file has header or trailer records, you will need to create file formats for them. Select the appropriate type. Delphix allows for masking of multiple headers, multiple trailers, and multiple types of body records.
 - c. **Record Type ID** — (optional) For body records, specify the value of the record type code or other identifier that allows Delphix to identify records that qualify as this record type.
 - d. **Position #** — (optional) Specify the field number (for delimited files) or the character position number (for fixed files) of the beginning of the Record Type Identifier within the data record.
 - e. **Length #** — (optional) For fixed files, specify the length of the Record Type Identifier within the data record.
4. Click **Save** when you are finished.

Masking XML Documents

In order to mask an XML file there are a few steps you must do.

1. First you have to import the XML file format under **Settings > File Format**. You can simply use the XML file itself to import the format. If you have multiple xml files using this format you can use this format for all those files. If there are different xml formats you will have to import a file format for each type of xml document.
2. Then you can go to the appropriate environment and create a connector for XML files. Once you create the connector you can create a ruleset with the XML file(s) you need.

3. After you create the ruleset, you must go back and edit the ruleset and edit the file(s) in the ruleset. There you assign the file format that you created and what the end_of_record terminator is for that file.
4. Then save this information.

Once this is done you will see the XML fields show up on the inventory page so you can set up your masking. This is not a database.

To add a new Record Format:

1. From an Environment's Inventory tab, click **Record Types** towards the upper right.
The Record Type window appears.
2. Click **+Add a Record Type** towards the bottom of the window.
The Add Record Type window appears.

Importing and Exporting an Inventory

- The format of an imported.csv file must exactly match the format of the exported inventory. If you plan to import an inventory, before importing the inventory, you should export it and then update the exported file as needed before you import it.

To export an inventory:

1. Click the **Export** icon at the upper right.
The Export Inventory popup appears with the name of the currently selected Rule Set as the **Inventory Name** and a corresponding .csv **File Name**.
2. Click **Save**.

A status popup appears. When the export operation is complete, you can click on the **Download file** name to access the inventory file.

To import an inventory:

1. Click the **Import** icon at the upper right.
The Import Inventory popup appears.
2. Click **Select** to browse for the name of a comma-separated (.csv) file.
3. Click **Save**.
The inventory you imported appears in the Rule Set list for this environment.