Informatica® MDM - Customer 360
10.3

User Guide

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Preface

This guide is intended for business users who are responsible for onboarding customers and maintaining customer data.

Informatica Resources

Informatica provides you with a range of product resources through the Informatica Network and other online portals. Use the resources to get the most from your Informatica products and solutions and to learn from other Informatica users and subject matter experts.

Informatica Network

The Informatica Network is the gateway to many resources, including the Informatica Knowledge Base and Informatica Global Customer Support. To enter the Informatica Network, visit https://network.informatica.com.

As an Informatica Network member, you have the following options:

- Search the Knowledge Base for product resources.
- View product availability information.
- Create and review your support cases.
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Use the Informatica Knowledge Base to find product resources such as how-to articles, best practices, video tutorials, and answers to frequently asked questions.

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Informatica Global Customer Support

You can contact a Global Support Center by telephone or through the Informatica Network.

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https://www.informatica.com/services-and-training/customer-success-services/contact-us.html.

To find online support resources on the Informatica Network, visit https://network.informatica.com and select the eSupport option.

CHAPTER 1

Introduction to Informatica MDM - Customer 360

This chapter includes the following topics:

Overview of Informatica MDM - Customer 360

Informatica MDM - Customer 360 provides clean, consistent, and connected information about customers. Business managers use the master customer data to make better business decisions about customers and manage customer relationships. You can get a single trusted view of a customer.

With Customer 360, business users can achieve the following goals:

- Streamline the customer onboarding and qualification process.
- Centralize the data about customers in a master database.
- View the relationships between customers, parent companies, subsidiaries, and related organizations.
- Design campaigns based on customer preferences and behavior.
- Improve customer service.
- Connect customer data to the product catalogs and view the buying patterns.
- View customer-to-product relationships.

Customer 360 is based on Multidomain MDM. Business users connect to master customer data through a business-friendly user interface. The user interface displays an enterprise-level dashboard as well as 360 degree customer views that are customized for different business users.

The Customer 360 environment integrates with Informatica Product 360, which is a product information management system.

Use Customer 360 to access the master data that is stored in the Hub Store. Master data is organized by business entities. Business entities are the type of top-level data that has significance for an organization. Business entities include persons and organizations.

Business users use Customer 360 to perform the following activities:

- Add records.
- Search for and edit records.
- Manage relationships between records.
- Participate in review processes for new and changed records.
- Import records in bulk to create new customers.

Key Concepts

To work effectively in Customer 360, you need a basic understanding of Informatica Master Data Management concepts.

Business Entities

Business entities are an implementation of master data domains in your application. For example, the Customer master data domain can be implemented in the following types of business entities: Person, Patient, or Policy Holder.

The business entity data structure maps to the base object tables in the Operational Reference Store database. The base object tables contain all the master records. For example, the root node of a business entity corresponds to the root base object table. A child node in the business entity corresponds to a child base object table. Business entities can have an unlimited depth, though the views that display the child records might not be able to show all levels in a meaningful way beyond a certain depth.

Related Topics:

- "Adding Records Overview" on page 23
- "Adding a Person Scenario" on page 24
- "Finding Records Overview" on page 31

Search and Compare

A best practice in data governance is to check for existing records before adding new records. When you begin adding a record, Customer 360 searches for duplicate records.

You can preview the potential duplicate records as they appear and take one of the following actions:

- If more than one record is a potential match for the record you are adding, you can compare the records side by side. If you find that the records are duplicates, you can initiate a merge.
- If one record matches the record you are adding, you can open the record and begin working with it. In this case, the record that you started adding is discarded.
- If none of the records is a match, you can continue adding the new record.

The MDM administrator configures the fields to use in the search for potential duplicates.

Merge

After you compare records, you can merge records that appear to be duplicated.

When you merge a record, the root records of the merged record are consolidated into a single root record. The child records from each of the root records become child records of the merged root record.

Review Processes and Tasks

A review process is an automated business process. When a user adds, edits, merges, or unmerges records, the action can initiate a review process. A review process ensures that business managers or data stewards review and ultimately approve the data before it becomes master data.

Your user role determines whether a change to the master data triggers a review. For example, if your user role permits you to add or edit data but not approve changes, then when you save an edit or merge records, the action triggers a review process.

A review process contains people activities. A people activity is a point in the review process when the process requires human participation. When an instance of a review process reaches a people activity, the review process sends a task notification. Business managers and data stewards receive task notifications in their task inboxes.

Hierarchies and Relationships

A business entity can have relationships to other business entities. You can view a graph that shows how a business entity is related to other business entities. Use the Hierarchy view to examine the relationships between the open business entity and other business entities.

You can see the business entity relationships in the entity view. The relationship panels on the right display the relationship for the business entity. Use the panels to add relationships.

DaaS Validation

Validation and verification of postal addresses, email addresses, and phone numbers improves the ability to contact your customers. Use the integration of Customer 360 with Informatica DaaS for data verification and correction. You can verify customer contact information and store accurate data in the database.

You can analyze, verify, correct, and format addresses according to the local postal standards. Ensure that the email addresses are valid and formatted correctly. Find email domains involved with spam networks, traps, and other malicious threats and verify that the email address is valid, not valid, or malicious. Verify the phone numbers of your customers and ensure your ability to connect.

Logging In

To log in, you need the URL for Customer 360 and your user credentials.

1. Open a supported browser, such as Chrome.
2. Enter the URL for Customer 360. The URL has the following format:

   ```
   http://<MDM Server host name>:<MDM Server port number>/c360/
   com.informatica.tools.mdm.web.auth/login
   ```

   The **Log In** page opens.

3. Enter your user name and password.

4. Click **Log In**.

5. If prompted, select the Customer 360 application.

   The application opens and displays the **Home** page. Your username appears in the application header.

User Interface

The Customer 360 user interface contains a navigation pane on the left and a details pane on the right. Click a link in the Left pane to open the corresponding pages, such as New menu, File Import, and Task Manager. The details pane displays details about the link you select in the left navigation pane.

The following image shows the user interface with the **Home** page displayed:
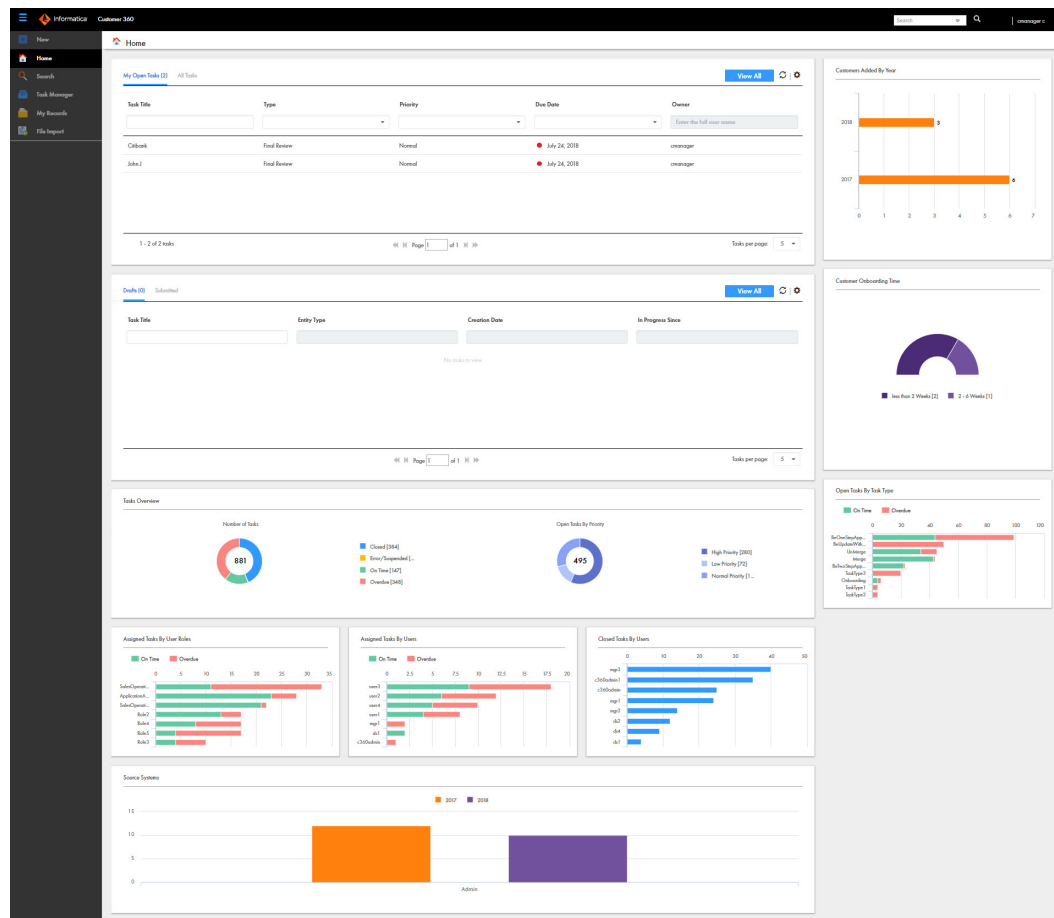
Customer 360 has the following tabs:

Home

The Home page is your dashboard and monitoring page. The page contains the tasks panel, records panel, and a collection of charts. The charts give a visual summary of the customers and task details. Managers and administrators can view a list of review tasks in the tasks panel. The records panel lists the records that you have submitted or saved as drafts.

New

> The New page lists the type of master data that you can add. Your user role must permit you to add the master data. Use the New tab to add records.

Search

> The Search page contains the search results. Use the Search page to find records. You can open a record from the search results.

Task Manager

> The Task Manager page displays the tasks that are assigned to you and all unclaimed tasks. Use the Task Manager to organize, claim, and resolve tasks that the review processes generate.

My Records

> The My Records page contains the list of drafts, submitted records, and the details pane. When you create a record, you can save the data as a draft. Use the My Records page to find, edit, and delete drafts. When a draft is complete, you can submit the draft for approval.

File Import

> The File Import page contains the options to import data into Customer 360. Follow the steps to select and import data.

Charts and Graphs

Charts and graphs on the **Home** page contain enterprise-level information about all customers and tasks. You can view a visual representation of the customers and related information. You can view the breakdown of tasks, grouped by their state and priority.

The charts and graphs can be static or dynamic. Before you analyze the data, ensure that the data reflects the current master data. Your administrator can add or remove charts from the **Home** page. All managers share the same **Home** page, so you might want to coordinate with other managers before requesting changes.

Chart	Description
Customers Added By Year	Displays the number of customers added in each year.
Customer By Onboarding Time	Displays how long it took to qualify customers.
Source Systems	Displays the percentage of customer data that comes from each source system in each year.
Tasks Overview	Displays the total number of tasks and breaks down the tasks by status and priority.
Assigned Tasks By Users	Displays the total number of tasks assigned to each user.
Closed Tasks By Users	Displays the total number of tasks closed by each user.
Open Tasks By Task Type	Displays the total number of tasks that are open for each task type.
Assigned Tasks By User Roles	Displays the total number of tasks assigned to each user role.

Task Inbox

A task is a request to participate in a review process. For example, you might need to approve a new record or review changes to a record. You receive task notifications in the task inbox. By default, the task inbox displays the tasks based on the first quick filter. For example, if the first quick filter is My Open Tasks, the task inbox lists all your open tasks.

The following image shows the task inbox with the My Closed Tasks filter selected:

1. Quick filters
2. Column filter
3. Refresh icon
4. Table Settings icon

The following table describes the elements in the task inbox:

Inbox Element	Description
Filters	Filters the tasks based on the filter criteria. You can use the following types of filters alone or in combination: - Quick filters. Filters the tasks based on the predefined filter that you select. - Column filters. Filters the tasks based on the task properties that are visible in the list.
View All	Displays the details of all the listed tasks in the Task Manager.
Refresh icon	Updates the contents of the task inbox.
Table Settings icon	Opens a dialog box where you can configure the columns for each quick filter listed in the task inbox.
Task Title	A link that displays a short description of the review task. To review the record and take action on the task, click the task title. The task opens in the Task Manager and displays the associated record in the review panel. If your role permits it, you can edit the record from this view before taking action on the task.
ID	Instance ID of the review process that generated the task.
Type	Name of a people activity within the process.
Priority	Priority of the task. The task priority can be Low, Normal, or High. When generating tasks, the review process assigns the same priority to all tasks of the same type.

Inbox Element	Description
Due Date	Date the task is due. The review process calculates a default due date based on the task creation date plus a predefined time period. The due date of each task is prefixed with one of the following colored dots: - Green. Indicates that the task is not overdue. - Red. Indicates that the task is overdue. - Amber. Indicates that the task will be overdue in the next 24 hours.
Status	Status of the task can be Open or Closed. When the task status is Open, you can view the record associated with the task.
Owner	Name of the signed-in user.
Creator	Name of the user who created the task.
Creation Date	Date on which the user created the task.

My Records Page

Use the **My Records** page to organize your work and get an insight into your drafts and records submitted for approval. You can work on the drafts and submit them for approval.

To go My Records, click **My Records** in the left navigation pane.

The following image shows the **My Records** page:

CHAPTER 2

Getting Started

This chapter includes the following topics:

Getting Started Overview

After you log in to Informatica MDM - Customer 360, you see the **Home** page. The **Home** page is unique to your user role.

Based on the **Home** page layout, you might be able to monitor data in reports, run a search in an embedded search engine, and organize your tasks.

Home Page

The **Home** page is your dashboard and monitoring page that displays a list of tasks and a collection of charts and graphs.

The **Home** page contains the following components:

Task Inbox

After a business user creates or edits record data, the action initiates a business process. The business process generates tasks to managers to participate in the review process. The task inbox displays tasks that you claim and all unclaimed tasks.

Drafts and Submissions

After you create or edit record data, you can save the form as draft to submit later. Users can view only their drafts and submitted forms.

Charts and Graphs

Charts and graphs include tasks overview, customer onboarding time, customers added by year, and source systems.

Sorting and Filtering Tasks

You can sort and filter the list of tasks in the task inbox. For example, you might want to review edited records before you review merge proposals.

The task inbox contains quick filters and column filters. You can use these filters in combination to get specific results. For example, to see high priority tasks assigned to you, select the **My Open Tasks** quick filter and set the Priority column filter to `High`. In logical terms, filters are joined by the AND operator.

Note: You can set one column filter at a time. For example, you can narrow your list to Organizations and then further restrict the results to show only the Merge tasks for organizations.

1. In the navigation bar, click **Home**.

   The task inbox appears.

2. To sort the list of tasks by a field, click the column heading with that field name.
   For example, to sort tasks by task type, click the **Task Type** column heading.

   Sorts the tasks based on the values in the selected column. An up arrow beside the column heading indicates that the values are sorted in ascending order. A down arrow indicates descending order.

   Note: By default, the task inbox sorts tasks case insensitively. If the number of tasks to sort is more than the value of the `CompositePagerTotalRecords` property, case-sensitive sorting is database dependent. For more information about the `CompositePagerTotalRecords` property, see the *Multidomain MDM Data Director Implementation Guide*.

3. To filter the list of tasks, set filter criteria in any order.

   - To filter tasks by the most commonly used criteria, select one of the following quick filters:

Filter	Description
My Open Tasks	Shows your open tasks.
My Closed Tasks	Shows the tasks that you closed.
All Tasks	Shows all the closed, claimed, and unclaimed tasks that are assigned to your user group.
All Unclaimed Tasks	Shows all the unclaimed tasks that are assigned to your user group.
All Closed Tasks	Shows all the tasks that the users in your user group closed.
All Claimed Tasks	Shows all the tasks that the users in your user group claimed.

   - To filter tasks based on the values of column headings, enter appropriate values for the following column headings:

Option	Description
Task Title	Shows tasks that contain the specified text. Enter the text that you want to search for in the task titles.
Type	Shows tasks with the selected task type. Select a task type from the list, such as **Final Review** or **Merge**.

Option	Description
Priority	Shows tasks with the selected priority, such as **High**. Select a priority from the list.
Due Date	Shows tasks that are overdue or due in a specific period. Select a due date option from the list.
Status	Shows tasks with the selected status, such as **Open** or **Closed**. Select a status from the list.
Owner	Shows tasks that are assigned to the user. Enter a user name.
Creator	Shows tasks that the specified user created.
Creation Date	Shows tasks that are created during a specific period of time. Select a creation date option from the list, such as **Last 7 days** or **Custom range**.

4. To remove filters, click the **Clear Filter** icon.

Configuring the Columns for the Task Inbox

By default, the task inbox displays the columns that the administrator configured for all the quick filters. For each quick filter, you can add or remove the available columns.

1. In the navigation bar, click **Home**.

   The task inbox appears.
2. Select a quick filter for which you want to configure the columns.
3. Click **Table Settings**.

   The **Table Settings** dialog box appears.
4. To add a column heading, in the **Available Fields** section, select a field and click **Add**.
5. To remove a column heading, in the **Selected Fields** section, select a field, and click **Remove**.
6. Click **OK**.

Viewing Customer Data

You can view the summary of customer details from a customer dashboard. Search for a customer that you want to view. If multiple business customers appear in the search results, you can use filters to refine the search. After you find the customer, click the customer record to view the details.

Customer Dashboard

A customer dashboard displays all relevant information of the customer. The dashboard displays customer details, such as contact information, financial data, preferences, previous purchases, hierarchies, tweets, and attached documents.

Note: You cannot edit the data in a dashboard view.

The following image shows the customer dashboard for a person type customer:

The Product Details panel displays the product purchase history of the customer. Each product in the panel is a link that you open and view the product details.

The following image shows the details of a product:

Samsung 673 HG28NC673AF 23" LED-LCD TV - 16:9 - HDTV - ATSC - 1366 x 768 - Dolby Digital Plus, Dolby Pulse, DTS Studio Sound, DTS Premium Sound 5.1 - 10 W RMS - Direct LED - 3 x HDMI - USB - Wireless LAN - Media Player HEALTHCARE TV NO REMOTE

Product Details

Product Category
undefined > Electronics > Desktops

Product Name
Samsung 673 HG28NC673AF 23" LED-LCD TV - 16:9 - HDTV - ATSC - 1366 x 768 - Dolby Digital Plus, Dolby Pulse, DTS Studio Sound, DTS Premium Sound 5.1 - 10 W RMS - Direct LED - 3 x HDMI - USB - Wireless LAN - Media Player HEALTHCARE TV NO REMOTE

GTIN
11343534543444

Long Description
Discover advanced TV solutions designed specifically for today's healthcare industry. Samsung's Healthcare TVs have been manufactured with hospital-specific features, such as an interchangeable pillow speaker interface and compatibility with many interactive patient education systems. Facility managers can benefit from up to 50% less energy use with slim direct-lit LED and an on-site warranty program.

Item Number	Alternate Item Number	Manufacturer Item Number
121667	-	4456677

Manufacturer	Main Supplier	Gross Weight
Samsung Commercial Hospitality Lcd	Electronic Equipment Supply	-

Country of Origin	Minimum Order Quantity
-	1

The following image shows the customer dashboard for an organization type customer:

The Hierarchies panel displays how a record is related to other records in a hierarchical format. A record can belong to multiple hierarchies. If an MDM Hub administrator defines a default hierarchy, the Hierarchies panel displays the default hierarchy for the record. Otherwise, the Hierarchies panel displays a list of hierarchies to which the record belongs. You can then select a hierarchy that you want to view. After you select a hierarchy, you can click a record to view the record details.

The Documents panel displays the list of documents that belong to a customer. You can filter, sort, and download the documents.

CHAPTER 3

Adding Records

This chapter includes the following topics:

Adding Records Overview

You can add records to the master data. The application developer defines the business entities, including the data and structure. The developer also designs the layout of the **Business Entity** views that open when you create a record.

Data entry form panel

The main panel in the view is the data entry form. Required fields have a red line.

Similar Records panel

If the view contains the **Similar Records** panel, as you enter data in required fields, Informatica MDM - Customer 360 generates a list of similar records for your review. Review the similar records before finishing the form. If you find the record already exists, you can edit the existing record instead of adding a new record. If you are uncertain whether a similar record is the same record that you want to add, continue adding the new record. If you add a duplicate record, Customer 360 can find and consolidate matching records for you.

Data Validation

When a user adds or changes data, Customer 360 checks the data against metadata and, optionally, validation rules. The metadata defines the expected format for the data, such as the data type or the number of characters permitted. Customer 360 has additional validation rules such as validation of government identifiers, addresses, phones numbers, and emails addresses.

Validation processes run at the field level, section level, and record level:

- Field level. When you add or edit data in a field in the **Business Entity** view, a client-side validation process verifies that the data satisfies the metadata. For example, when you enter a date in a Date field and then navigate away from the field, the process verifies that you entered the date in the expected date format.

- Section level. When you apply all changes in a section in the **Business Entity** view, a client-side validation process verifies that all data satisfies the metadata and that the required fields contain data.

- Record level. When you save a record in the **Business Entity** view, a server-side validation process verifies that data satisfies the metadata and the validation rules.

If user input does not satisfy the metadata or the validation rules, you see messages about the problems with the data.

Adding a Person Scenario

You are an insurance agent for a large insurance company. You have a new customer, Anthony Lomax, on the phone. You want to add Mr. Lomax as a record.

To add Anthony Lomax, you perform the following steps:

1. Click **New**, and then you select **Person** as the business entity.

2. In the **Last Name** field, you type Lomax. In the **First Name** field, you type Anthony.

3. In the Similar Records panel, you see a potential duplicate, so you open the similar record.

4. You confirm with Mr. Lomax that he is not the same person as the existing Anthony Lomax, and then close the similar record.

5. You finish adding Mr. Lomax's information in the form.

Adding an Organization Scenario

You are with the marketing department of a company. You have a new customer, CITIGROUP which is an organization. You want to add CITIGROUP as an Organization record.

To add CITIGROUP, you perform the following steps:

1. Click **New**, and then select **Organization** as the business entity.

2. In the **Legal Business Field**, type CITIGROUP.

3. Fill in all the other required fields.

4. If you see a potential duplicate record in the **Similar Records** panel, open the similar record.

5. Review and confirm that the similar record is not a duplicate record, and then close the similar record.

6. Finish adding data in the data entry form, and then click **Save**.

Adding a Person Record

To add a Person type record, start from the **New** menu.

1. Click **New**, and then click **Person**.

   The data entry form for **New Person** opens. A red line on a field indicates a required field.

2. For each required field in the form, click the field, and type a value.

3. If the **Similar Records** panel contains a list of similar records, review them.

   a. In the **Similar Records** panel, click the information icon beside the name of a record.

   b. Check the other data values to see if the record is the same as the one you are adding.

      - If it is the same record, click **View**. The selected record opens in an entity tab. You can edit data as required. You can view the child records for the record. You can discard the work-in-progress record.

      - If it is not the same record, click **Close**.

   c. Review other similar records in the same way.

   d. If a record does not exist, return to the tab containing the work-in-progress customer record.

4. In the customer creation form, add data in the optional fields.

   a. Fill in the fields.

   b. Optionally, add an image. Type a valid URL in the image field.

      Note: For best results, use an image that is a maximum of 200 x 200 pixels. For images, the MDM Hub stores the URL, not the file. If the location of the file changes, you must update the URL.

   c. Click **Apply**.

5. To add a child record to the record, perform the following steps:

   a. In the navigation menu, click a section name. For example, **Documents**.

   b. Click **Create Child Record**.

      The data entry form for the child record appears.
      The following image shows the data entry form of the **Documents** section:

      1. **Table** view
      2. **Form** view
      3. **Create Child Record**
      4. **Discard**
      5. **Apply**

   c. To switch from the form view to the table view of the fields, click **Table**.

   d. Fill in the fields.

      For a file attachment field, browse and select the file you want to attach, and then click **Open**.

      Note: By default, you can attach .pdf and .jpg files.

   e. Click **Apply**.

6. After you finish adding data, click **Save**.

    By default, the **Draft** check box is selected. When you click **Save**, the in-progress customer record is saved as a draft. Later you can submit the record for approval. If you do not want to save the record as draft, clear the check box before you save the record.

    Note: If you are a user with an approver role, ensure that you clear the draft check box.

    If your user role permits you to save data without a review, Customer 360 saves the record as an active record. Otherwise, Customer 360 saves the record as a pending record and initiates the review process associated with your role.

Adding an Organization Record

To add an organization record, select the business entity as Organization.

1. Click **New**, and then select **Organization**.

    The data entry form for **New Organization** opens. A red line on a field indicates a required field.
2. Fill in the required fields and other fields as required.
3. If you want to add a related person record, perform the following tasks:
    a. In the **Contacts** section, click the **Create Child Record** icon.
    b. Type the first name and last name of the person.
    c. In the **Relationship Type** box, type one of the following values:
        -   ContactContact. Specifies the person as a contact for the organization.
        -   ContactEmployee. Specifies the person as an employee of the organization.
    d. Enter values in other fields as required.
    e. Click the **Apply** icon.
4. Click **Save**.

    By default, the record is saved as a draft, and you can later submit the record for approval. If you do not want to save the record as a draft, clear the **Draft** check box before you save the record.

    Note: If you are a user with an approver role, ensure that you clear the draft check box.

    If your user role permits you to save data without a review, Customer 360 saves the record as an active record. Otherwise, Customer 360 saves the record as a pending record and initiates the review process associated with your role.

DaaS Validation Overview

Validation and verification of addresses, email addresses, and phone numbers improves the ability to contact your customers. Use the integration of Customer 360 with Informatica DaaS for data verification and correction. You can verify customer contact information and store accurate data in the organization.

You can analyze, verify, correct, and format addresses according to the local postal standards. Ensure that the email addresses are valid and formatted correctly. Find email domains involved with spam networks, traps, and other malicious threats and verify that the email address is valid, not valid, or malicious. Verify the phone numbers of your customers and ensure your ability to connect.

Address Verification and Standardization

You can improve the quality of your address data. You can correct, standardize, and verify international postal addresses in the address fields of your customer records. You can format the postal address according to the requirements of the local postal authorities.

Verify the postal addresses when you create customer records. You can also verify existing addresses and any changes you make to the address data.

You can verify an address when you select the verification check box and save the record.

Email Address Validation

Verify the email address in the email address fields of the customer records. You can verify whether an email address exists and is formatted correctly. You can identify known or potentially dangerous email addresses or domains.

Validate and verify the email addresses in real time at the point of entry when you create a customer record. You can verify existing email addresses and any changes you make to the email address data.

You can verify an email address when you select the verification check box and save the record.

Phone Validation

You can validate customer phone numbers in the phone fields of your customer records.

Validate phone numbers in real time when you create a customer record. You can validate existing phone numbers and any changes you make to the phone data.

You can validate a phone number when you select the verification check box and save the record.

Note: Phone number validation is accurate when you specify country code.

Validating a Postal Address, an Email Address, or a Phone Number

You can validate the postal address, email address, and phone number of your customer records. You can perform the validation when you create a customer record or when you update a customer record. You can validate the data in the parent and the child fields.

1. Open the record creation form to add a new customer or search and select a customer record to edit.
2. Select the check box for the field you want to verify.

   To validate address, select **Validate Address**. To validate email address, select **Validate Email**. To validate phone number, select **Validate Phone**.
3. Enter data in the fields for address, email address, and phone number.

   Note: For phone number validation, ensure that you provide the country dialing code.

4.   Click **Save**.

For the postal address, email, and phone number fields in the parent record, validation happens when you move the cursor out of the data field. For the child records, validation happens when you save the record.

If the check box for a field is selected, Customer 360 validates the data in the field and updates the validation status in the validation status field.

Adding a Household

A household is a party group. Create a household and add members of the household.

1.   Click **New** in the left navigation pane.

The **Create** page opens.

2.   Click **Household**.

The **New Household** page opens.

3.   In the **Party Group Name**, enter a name for the household.

4.   In the **Household Members** section, to add a household member, perform the following steps:

a.   Click the **Create Child Record** icon.

Fields appear where you can enter data.

b.   Fill in the fields.

c.   Click the **Apply** icon.

d.   Repeat step a to step c for additional members.

5.   After you finish adding data, click **Save**.

Adding an Address

Add an address from the **New** menu.

1.   Click **New** in the left navigation pane.

The **Create** page opens.

2.   Click **Address**.

The **New Address** page opens.

3.   In the **Address Line 1** field, enter the primary address information.

All other fields are optional.

4.   Click **Save**.

Adding a Time Period

Add a time period from the **New** menu.

1. Click **New** in the left navigation pane.

   The **Create** page opens.
2. Click **Time Period**.

   The **New Time Period** page opens.
3. From the **Time Period Type** list, select the type.
4. In the **Time Period Name** field, enter a name for the time period.

   All other fields are optional.
5. Click **Save**.

Adding a Time Period Group

Enter a short description of the task here (optional).

1. Click **New** in the left navigation pane.

   The **Create** page opens.
2. Click **Time Period Group**.

   The **New Time Period Group** page opens.
3. In the **Group Name** field, enter a name of the group.
4. Optionally, enter a description for the group, and then click **Save**.

Adding a Classification Value

Add a classification value from the **New** menu.

1. Click **New** in the left navigation pane.

   The **Create** page opens.
2. Click **Classification**.

   The **New Classification** page opens.
3. From the **Classification Type** list, select the classification type, such as NAICS or SIC.
4. In the **Classification Value** field, enter the value, and then click **Save**.

Adding a Campaign

Add a campaign from the **New** menu.

1. Click **New** in the left navigation pane.

   The **Create** page opens.

2. Click **Campaign**.

   The **New Campaign** page opens.

3. In the **Campaign Number** field, enter the campaign number.

4. Optionally, enter a description of the campaign.

5. From the **Campaign Type** list, select the campaign type.

6. From the **Campaign Channel Type** list, select the campaign channel type.

7. Specify the reference year.

8. Click **Save**.

CHAPTER 4

Finding Records

This chapter includes the following topics:

Finding Records Overview

To find a record, you can either enter a search text in a search box or use a query form. The search results show the most important details of the records. You can see more details by opening the records.

You can use the search box to search and filter records. However, to repeatedly perform the same search and filter operation, it is efficient to create and save a query.

When you use queries, you can search within a specific business entity for which the query is created. Whereas, when you use the search box, depending on your environment, in addition to searching within a business entity, you might be able to search across all business entities.

Note: The search options that you see depend on what was configured by the MDM administrator. You must have the required privileges for the business entities within which you want to search for records.

Search Page

The **Search** page is a temporary page that appears when you perform a search from the Search box in the application header. A search returns a list of records that satisfy the search criteria.

Use the **Search** page to review the search results. You can expand a record in a search result to view the summary of record details. To refine the search results, you can use filters.

You can group the records that appear in search results based on the business entities. If you group records, you can look for records in the relevant business entity groups.

The following image shows a sample **Search** page:
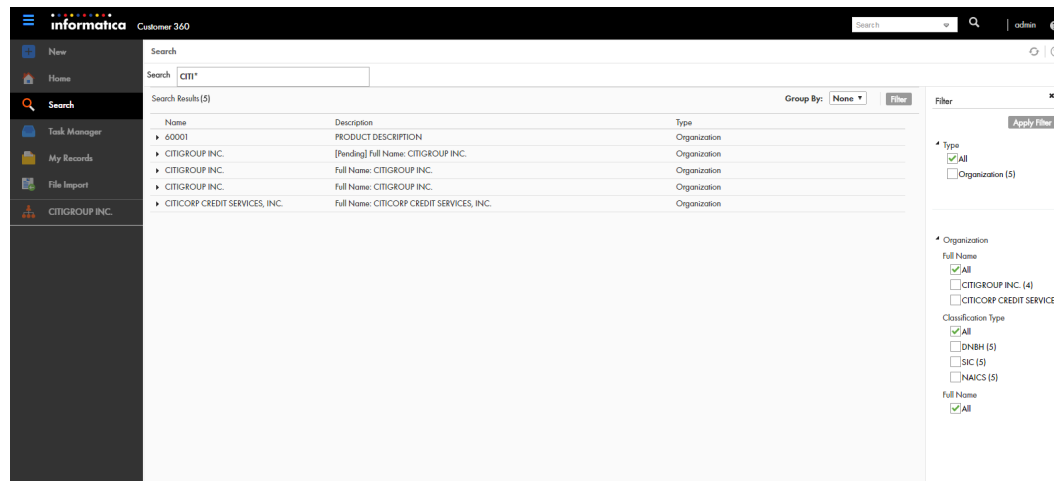
The **Search** page includes the following sections:

Search Results panel

Displays the total number of results found and lists the records that are part of the search results. You can group the records listed in the search results by business entity.

Filter panel

Displays the filter criteria to filter the search results. Use filters to refine the search results based on the filter criteria that you select or enter a value for. You can hide the **Filter** panel if you do not need to filter the search results.

Results total

Displays the total number of results found based on the search string that you enter in the **Search** box.

Filter criteria

Filter properties that you can select or enter a value for to refine search results.

Queries Page

You can click the **Queries** tab on the navigation bar to access the **Queries** page. Use the queries page to create and run queries. A query returns a list of records that satisfy the criteria that you specify.

When you click the **Queries** tab, the default query opens. If you do not have a default query, the **Saved Queries** panel appears. To find records, you can create a new query or run a saved query.

After you run a query, the **Search Results** panel lists the query results. You can customize the query results to include only the fields that you want.

The following table describes the user interface elements of the **Queries** page:

User interface element	Description
Query panel	Lists the saved queries or the query that is open. The query that you create appears in the query panel.
Run	Runs the query that is open.
Save	Saves a query that you create.

User interface element	Description
Back to Saved Queries	Displays the saved queries in the query panel.
Query Results panel	Lists the matching records that are the result of a query.

Using the Search Box to Find Records

You can search for records that you want to view, edit, or delete.

1. Optionally, in the **Search** box in the header, select a type of business entity from the list.

    By default, **All** is selected, and Customer 360 searches within all the business entity types.

    Note: The Search list contains the types of business entities that you have permission to view. If the list is empty, contact your MDM administrator to request permission.

2. In the **Search** box, perform one of the following tasks:

    *   Type the complete search string or the search string with the asterisk wildcard character (*) for the record that you want to find. You can use the wildcard character at the end of the search string or in between the search string. For example, if you want to search for John, you can specify `Jo*` or `J*n`.

    *   If the search is configured to suggest search strings, type a few characters of the search string, and select one of the suggested values as the search string.

        Note: The values are suggested when you search within a single business entity.

    If the search results must contain the words in the search string, add the `+` operator before each search word.

    If the search string includes any of the following special characters, add a backslash as a prefix to the special character: `+ , - , & , || , ! , ( ) , { } , [ ] , ^ , " , ~ , ? , : , \`. If you do not add a backslash as a prefix to each special character, the search might return no results or incorrect results. For example, if you want to search for `AT&T`, the search string must be `AT\&T`.

    If you want to search for a negative value, type the value in the search string without the minus character. For example, if you want to search for `-5000`, the search string must be `5000`.

    If you want to search a date, use a simple date format, such as `<Month> <DD> <YYYY>`, in any order and do not use a date format, such as `<YYYY>-<MM>-<DD>` or `YYYY-MM-DDThh:mmTZD`. For example, use November 20 2014 or 2014 Nov 20 as the search string.

    The following image shows the **Search** box with the search string, John*:

3. Click the **Search** icon.

4. Optionally, group the records that appear in search results based on the business entities.

    The search results are sorted and moved to the relevant business entity groups.

The following image shows search results in the Person business entity groups, and search results in the Secure Person business entity group:

5. To find the record that you are searching for, expand the business entity under which you expect to find the record.

The business entity expands to show all the records that appear in the search result and belong to the business entity.
The following image shows the expanded results for the Person business entity:

Filtering Records

After you perform a search, you can refine the search results by using filters. For example, you can refine the search results for John Smith by filtering the results by the city name, Toronto.

1. Perform a search.

    The search results appear in the **Search** page.

2. In the **Filter** panel, select or enter a value for the filter criteria that you require.

    Note: For a date and time field, you can specify the date in the filter, but not the time. The filter uses the default time as 00:00:00 UTC. Some numeric filters might appear in the scientific notation, even though the search results display the values in the decimal notation. For example, the filter might display 10544444.6 as 1.05444446E7.

3. Click **Apply Filter**.

    The search results contain only the records that match the filters that you applied. A list of the applied filters appears below the Search box. You can remove a filter by clicking the X icon for the filter.

The following image shows that the search results contain only the records that matched the applied filters:
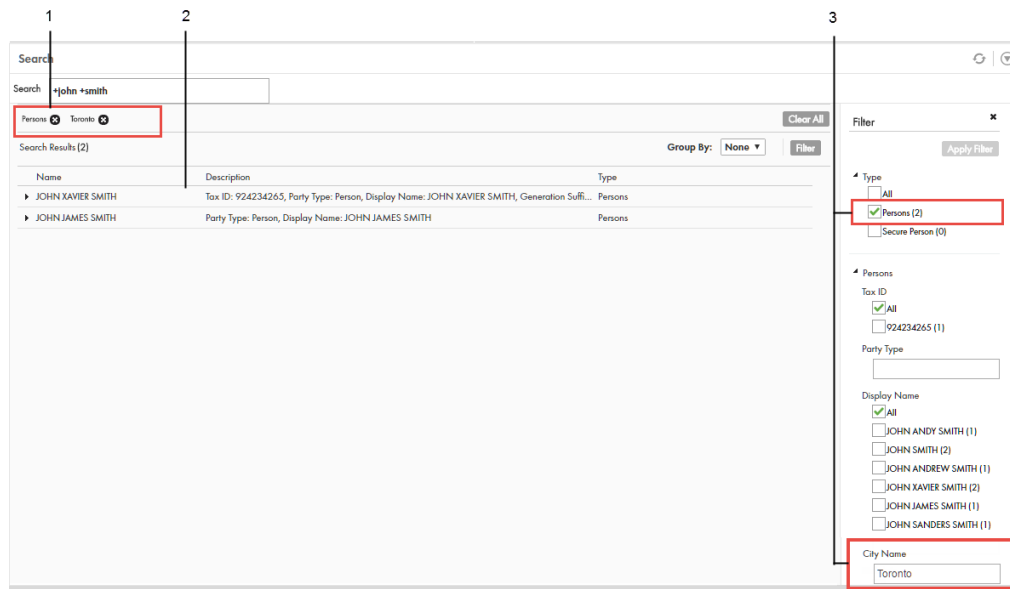
1. Applied filters
2. Filtered search results
3. Selected filters

4. To clear all the filter criteria, click **Clear All**.

Viewing and Opening a Record

You can view the summary of record details in the **Search Results** panel of the **Search** page. To ensure that you open the record that you want, review the details for the record before you open it. You can open a record in the **Business Entity** view, the **Data** view, or the **Hierarchy** view.

1. From the **Search Results** panel, select the record that you want to open.

   Note: A description with the prefix [Pending] means that the record has pending changes that are not yet approved. You can open the record, but you cannot make further changes until the review and approval process ends.

2. To verify that you have the correct record, expand the entry to display a few details about the record.

3. Click the record.

   The Dashboard view of the record opens.

4. In the **View** list, select **Business Entity**.

5. View the record details in the details pane.

Using Queries to Find Records

Use a search query, when you want to repeatedly perform the same search and filter operation. When you use search queries, you specify a criteria for your search. You might want to use queries to find records that you want to view, edit, or delete.

To create and manage queries, use the **Queries** page. You can create a query to search for records based on a specific business entity. To reuse the query that you create, save the query. If you use a query frequently, you can set it as the default query.

When you create a query with a lookup field that is dependent on other lookup fields, these other lookup fields are automatically included in the query. For example, the City lookup field is dependent on the State and Country lookup fields. When you create a query to include only the City lookup field, the State and Country lookup fields are automatically included in the query.

Types of Queries

You can use a basic or an extended query.

If a basic query does not return the results you are looking for, use an extended query. An extended query can find records that are missed by the basic query.

Basic Queries

Basic queries use simple text comparisons to find records that contain the query values. You can use text and the wildcard character (*) to query values.

The wildcard characters are special search symbols that you can use in basic queries to specify a text pattern instead of specific characters. You can use the asterisk (*) wildcard character to increase your chances of finding the records that you want. The wildcard characters are useful when you do not know the exact text or want to search for similar text.

The following table lists example search strings and explains how they function:

Example Query String	Query Behavior
John Smith	Queries for records that contain `John`, `Smith`, or any variations of `John` or `Smith` as a field value.
"John Smith"	Queries for records that contain `John Smith` or any variations of `John Smith` as a field value.
John*	Queries for records that contain a value that starts with `John`. For example, `Johnson` or `Johnny`.
Jo*n	Queries for records that start with `Jo` and end with `n`. For example, `Johansson` or `Jordan`.
*	Returns all the records.

Note: Basic query is not case sensitive in Microsoft SQL Server environments.

Extended Queries

Extended queries use matching logic and match-enabled attributes to find records that contain the query values. You must enable a match rule set to use with extended queries.

Extended query results include fuzzy matches, which are more reliable. Fuzzy matches take into account spelling variations, and other differences to ensure that matching data that are not identical are not missed. For example, an extended query can match variations of the word "Street", such as "St." and "St".

Note: The extended queries use match rule sets. If an MDM administrator edits or deletes a match rule set from the Hub Console, the related queries are deleted from the Data Director application.

When you use extended queries, ensure that the following conditions are met:

- The business entity has match-enabled attributes.
- The match rule set used by the query is configured by the MDM administrator to use the **Enable Search by Rules** option in the Hub Console.

Creating a Query

You can create a query to search for records within a specific business entity. You are the owner of the queries that you create.

1. In the navigation bar, click **Queries**.
2. In the **Saved Queries** panel, click the **Add** icon.

   The **New Query** dialog box appears.
3. From the **Business Entity** list, select the business entity within which you want to perform the search.
4. Select a query type.

Query Type	Description
Basic	Uses simple text comparisons to find records that contain the query values.
Extended	Uses matching logic and match-enabled attributes to find records that contain the query values.

5. If you selected the extended query type, from the **Match Rule Set** list, select a match rule set.

   Select the **Default** match rule set only when a suitable match rule set does not appear in the list. A match rule is generated based on the values that you specify.

   The fields available for the selected match rule set appear.
6. Select the fields that you want to include as the search criteria for the query.

   The fields that you selected appear in the **Selected Fields** section.
7. In the **Selected Fields** section, drag to rearrange the sequence of the fields.

   The fields appear in the query form in the sequence that you set.
8. Specify the search results options.

   a. If you want the query to be case sensitive, enable the **Case sensitive** option.

   b. If you want the search results sorted, from the **Sort By** list, select a field name by which you want the search results sorted.

   c. Select the sort order of the query to be ascending or descending.
9. Click **OK**.

   The query is created and opens on the Queries page.

10. To save the query for reuse, click **Save**.

   The **Save Query** dialog box appears.

11. Enter a query name and description.

12. If you want to use the query as a default query, enable **Set as my default**.

   The default query is the query that appears when you open the **Queries** tab.

13. If you want to share the query with other users, enable **Share with all**.

   By default, you own the query that you create. Other users cannot edit the queries that you own.

14. Click **Save**.

   The query is saved and appears on the **Saved Queries** panel.

You can run the query that you created, or save the query and run it when needed.

Running a Query

You can run a query to find records. To run a query that is not saved, enter the search criteria, and then run the query. To run a saved query, first, open the query.

1. In the **Saved Queries** panel, open the query that you want to run.

   a. If a default query is open, but you want to run a saved query, click the **Back** icon to navigate to the **Saved Queries** page.

   b. Expand the business entity to which the query belongs.

   c. Click the query name.

      The query form appears.

2. Enter the search criteria for the record that you want to find.

3. Click **Run**.

   The query results appear in the **Search Results** panel.

Viewing Query Results

After you run a query, the query results appear in the **Search Results** panel. You can open a record from the **Search Results** panel. Also, you can export the results to a CSV file.

To view the query results, you can perform the following tasks:

Open a record

   You can open the records from the **Search Results** panel.

Customize the results

   You can customize the results to view only the fields that are significant to your purpose.

Export the results

   You can export the results to a CSV file.

Opening Records from Query Results

After you run a query to find records, you can open the records from the **Search Results** panel.

1. From the **Search Results** panel, select a record, and click the **Open in a new window** icon.

   The record opens in the **Business Entity** view. You can view and edit the record.

2. Select a saved query or use the default query. If a default query is open, click the **Back** icon to navigate to the **Saved Queries** page.

3. If you want to open the record in any other view, from the **View** list, select a record view.

   Note: The record views that appear in the **View** list depend on the Customer 360 configuration and your user role privileges.

   The following views are available in the Customer 360 application:

View	Description
Cross-reference Records	View the records that contribute to the best version of the truth of a record. You can unmerge a record that was merged with another record.
Matching Records	View the records that match the record that you opened. You can identify and resolve duplicate records.
Hierarchy	View a diagram that shows how a record is related to other records. You can add, edit, and delete related records and relationships for the selected records.
History	View data changes over the lifespan of the record. You can identify the data events that changed the data.

   The record opens in the view that you select.

Customizing Query Results

You can customize the query results that appear in the **Search Results** panel to include only the fields that you want to view.

1. From the **Search Results** panel, click the **Settings** icon.

   The **Customize Query Columns** dialog box appears.

2. Select the fields that you want to display in the **Search Results** panel.

3. Optionally, change the order in which you want the fields to appear in the search results.

4. Click **OK**.

   The **Customize Query Columns** dialog box closes. The query results include only the fields that you selected.

Exporting Query Results

If you want to view the query results in a CSV file, export the query results to a CSV file.

▶ Export the query results to a CSV file.

   - To export all the fields, including the fields that do not appear on the **Search Results** panel, click **Actions** > **Export All Fields**.

   - To export only the fields that appear on the **Search Results** panel, click **Actions** > **Export Current Fields**.

     Note: Before you export the query results, you can customize the results that appear on the **Search Results** panel to include only the fields that you want to export.

Managing Queries

After you create and save queries, you might want to modify a query, or delete a query that you do not need.

To manage queries, you can perform the following tasks:

- Edit a saved query.
- Delete a saved query.
- Save an existing query as a new query.

Note: The extended queries use match rule sets. If an MDM administrator edits or deletes a match rule set from the Hub Console, the related queries are deleted from the Data Director application.

Editing a Saved Query

After you create and save queries, you might want to edit the queries. You can edit queries that you create or own.

1. In the **Saved Queries** panel, open the query that you want to edit.
   a. Expand the business entity to which the query belongs.
   b. Click the query that you want to edit.
      The query opens.
2. Click **Actions** > **Edit**.
   The **Edit Query** dialog box appears.
3. Edit the query properties as required.
4. Click **OK**.
   The query is updated. You can save or run the query.

Deleting a Saved Query

You can delete queries that you create or own.

1. In the **Saved Queries** panel, expand the business entity to which the query that you want to delete belongs.
2. Select the query that you want to delete, and then click **Actions** > **Delete**.
   The delete confirmation dialog box appears.
3. To delete the query, click **Yes**.
   The query is deleted.

Saving an Existing Query as a New Query

Instead of starting from scratch, you can use an existing query to create more queries. You can either select or open an existing query, and then save the it as a new query.

1. In the **Saved Queries** panel, select the query that you want to save as a new query.
2. Click **Actions** > **Save As**.
   The **Save As** dialog box appears.
3. Enter a unique name and description for the query.

4. Optionally, enable any of the following query options:

    - Set as my default. The query becomes the default query.

    - Share with all. The query is shared with other users.

5. Click **Save**.

    A copy of the query is saved with the new name, and the query opens.

6. Optionally, modify the new query.

    a. Click **Actions** > **Edit**.

    b. Edit the query as required.

        You can make the following changes to the query:

        - Add fields.

        - Remove fields.

        - Enable the query to be case-sensitive.

        - Select a field name by which the query result must be sorted.

        - Set the sort order to ascending or descending.

    c. Click **OK**.

        The query is saved with the changes.

Migrating and Sharing Saved Queries

When an MDM administrator migrates a Customer 360 configuration from one environment to another, the saved queries are not migrated. You need to manually export the queries from the source environment and then import the queries into the target environment.

Migrating and Sharing All the Saved Queries

When an MDM administrator migrates a Customer 360 configuration from one environment to another, the saved queries are not migrated. To migrate all the saved queries, export the queries from the source Data Director application and then import the queries into the target Data Director application. Also, you can share all the saved queries with other users, who can import the queries into their environment.

1. In the source environment, from the **Saved Queries** panel header, click the **Export** icon.

    A queries JSON file, which contains all the saved queries, is downloaded to the default download location. You can send the queries JSON file to other Customer 360 users who can import the file into their environment.

2. Import the JSON file into the target application.

    a. Copy the downloaded JSON file to an accessible location in the target application environment.

    b. From the **Saved Queries** panel header, click the **Import** icon.

    c. Locate and import the queries JSON file.

    All the saved queries are migrated to the target environment.

Migrating and Sharing a Single Saved Query

You can migrate a single saved query from one Customer 360 environment to another.

1. From the source environment, export the query that you want to migrate.

   a. In the **Saved Queries** panel, expand the business entity to which the the query to export belongs.

   b. Select the query and click **Actions** > **Export**.

   A query JSON file, which contains the saved query, is downloaded to the default download location. You can send the query JSON file to other Customer 360 users who can import the file into their environment.

2. Import the JSON file into the target application.

   a. Copy the JSON file to an accessible location in the target application environment.

   b. In the target application, from the **Saved Queries** panel header, click the **Import** icon.

   c. Locate and import the JSON file.

   The saved query is migrated to the target environment.

CHAPTER 5

Editing Records

This chapter includes the following topics:

Editing Records Overview

You might want to add or make changes to the information in a record. To make changes to a record, search for the record, and open the record in the **Business Entity** view.

If your user role permits it, you can edit the data or delete the record. When you save changes, based on your user role, a review process might be initiated. In this case, Customer 360 saves the requested changes in a pending record until the review process ends. If the review ends in an approval, Customer 360 applies the change from the pending record to the active records.

Scenario for Editing a Record

A customer named John Smith reports that he did not receive the product that you mailed to him. You want to check his address, correct errors, and redirect the product to the correct address.

You find the record for John Smith, which you select and open to view the address. You find that the address has an incorrect postal code. After you correct the address, you close and save the record. You ensure that you resend the product to the correct address.

Editing a Record

If your user role includes the edit permission, you can edit a record in the active state.

Note: You cannot edit a record that is in the pending state because the record has changes that are pending approval. You must wait until the review and approval process ends.

1. From the **Search Results** panel of the **Search** page, click the record that you want to edit.

    The Dashboard view of the record opens.

2. From the **View** list, select **Business Entity**.

    The record opens.

3. Click **Edit**.

    Tip: If the button is disabled, either you do not have permission to edit the record or the record has changes that are pending approval.

4. Edit the data in the parent record as required.

    a. Click anywhere in the top section.

        The section becomes editable.

    b. Edit the data.

    c. Click the **Apply** icon.

5. Edit the data in child records as required.

    a. Expand the child section.

    b. Click the **Edit** icon.

        The section becomes editable.

    c. Edit the data.

    d. Click the **Apply** icon.

6. Click the **Save** button.

    If your user role permits you to save data without a review, the application saves the record to the MDM Hub Store as active records. Otherwise, the application saves the record as pending record and initiates the review process associated with your role.

Deleting a Record

If your user role includes the delete permission, you can delete records in the active state. You cannot delete a record that is in the pending state because the record is part of a workflow and is pending approval.

1. From the **Search Results** panel of the **Search** page, select the record that you want to delete.

2. Open the record.

3. Click **Actions** > **Delete**.

    A confirmation box appears.

4. Click **Yes**.

    Customer 360 marks the record as deleted and no longer displays the record, but does not remove the record from the database.

Adding a Tag

Tags are a way to associate a label or information to your customers. You can add tags to a customer in the dashboard view.

1. Search for a customer.

2. Select the customer to which you want to add the tags.

3. In the **Tags** panel, click **Add a Tag**.

4. Enter the tag that you want to add to the customer, and click **Add**.

5. Repeat step 4 until you add all the tags to the customer.

6. Click **Done**.

   All the tags are added to the customer.

CHAPTER 6

Working with Drafts

This chapter includes the following topics:

Working with Drafts Overview

When you create or edit record data, you can save the in-progress data entry form as a draft. You can partially fill in the record details and save for later. At any time, you can edit and complete the data entry, and then submit the data for approval.

My Records Page

Use the **My Records** page to organize your work and get an insight into your drafts and records submitted for approval. You can work on the drafts and submit them for approval.

To go My Records, click **My Records** in the left navigation pane.

The following image shows the **My Records** page:

Timeline

The details panel of tasks and drafts contains record details and the timeline for the record. The timeline shows in chronological order, the comments, history of changes, and actions taken on the record.

The following image shows the timeline for a record:

Editing a Draft

Before you submit a draft for approval, you can make changes to the draft record.

1. In the navigation pane, click **My Records**.
2. Click **Drafts** and select the draft that you want to edit.
3. click **Edit**.

    The entity view opens.
4. Edit the data as required and save the changes.

    The draft of the record is updated.

Submitting a Draft

You can submit a draft for approval.

1. In the navigation pane, click **My Records**.
2. Click **Drafts**, and then select the draft that you want to submit.
3. Click **Submit**.

Deleting a Draft

If you never want to submit your changes for approval, delete the draft to avoid confusion.

1. In the left navigation pane, click **My Records**.
2. Click **Drafts**.
3. Select the record that you want to discard, and then click **Discard**.
4. In the confirmation box, click **Discard**.

CHAPTER 7

Participating in Review Processes

This chapter includes the following topics:

Participating in Review Processes Overview

When a business user adds or changes data in Customer 360, the change triggers a review process. A review process is an automated business process that notifies business managers when changes are ready for their review.

The type of review process depends on the configuration whether the default review processes are in use. There might be different review processes for creation, edits, merges, and unmerges.

Example of a Review Process for Edits

The staff in the Despatch department use Customer 360 to keep customer address information up to date.

In the Despatch department, each user credential includes one of the following user roles:

- Sales Operation Analyst. The user have permission to add and change records, but the changes must go through a review process before the master data is updated.
- Sales Operation Manager. A Sales Operation Manager is a type of manager with additional permissions. A Sales Operation Manager reviews changes and has the authority to approve them.

A Sales Operation Analyst edits the customer data as requested by the customer representative. The following steps describe what happens during the review process.

1. A Sales Operation Analyst changes the address information of the customer and saves the change. In the MDM Hub Store, the state of the customer records changes from active to pending. The proposed edit is saved in a cross-reference record. The save action initiates the review process.
2. An instance of a review process starts and begins executing activities.

3. When the review process reaches the first people activity, it generates a task for managers. All users with the role of Sales Operation Manager receive a task notification in the task inbox with the task type of Approve.

4. A Sales Operation Manager claims the task. The task is assigned to the manager.

5. The Sales Operation Manager opens the customer record, reviews the edit, and agrees with the edit. The manager resolves the task by clicking Approve.

6. The review process marks the task as complete, and follows the Approve flow. The review process notifies the MDM Hub that the change is approved, and then the review process ends. The MDM Hub changes the address information in the customer record. The customer records change to the active state. The creator of the record receives a notification, when a record is approved or rejected.

Task Manager

Use the Task Manager to organize, claim, and resolve tasks that are generated by review processes.

To go to the Task Manager, in the navigation bar, click **Task Manager**. Alternatively, you can click the title of a task from the task inbox in the **Home** page. In this case, the Task Manager displays the selected task and its associated record.

The following image shows the Task Manager with a task selected:
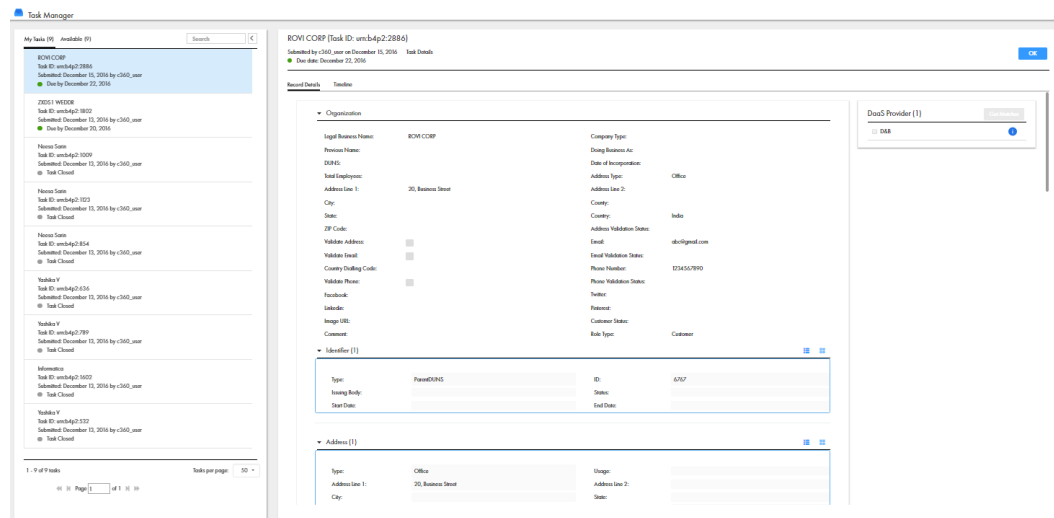
1. Task panel
2. Review panel

Task Panel

The task panel lists the details of the tasks. You can use the predefined filters to select the type of tasks that you want to view in the task panel.

When you open the Task Manager from the navigation bar, the task panel displays all the tasks. When you open a task from the task inbox of the **Home** page, the task panel displays only the details of the selected task.

The following image shows the task panel of the Task Manager:
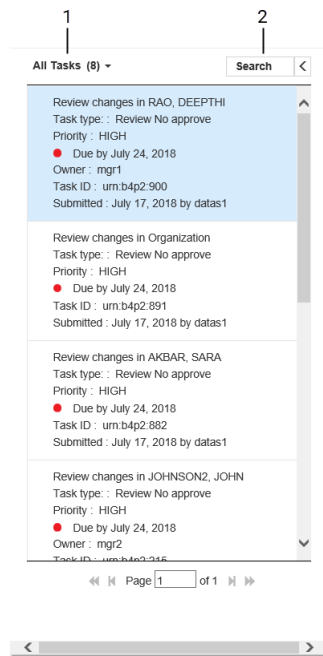
1. Quick filters
2. Search

The following table lists the user interface elements of the task panel :

User Interface Element	Description
Quick filters	Filters the tasks based on the predefined filter that you select. Use one of the following filters: - My Open Tasks. Shows your open tasks. - My Closed Tasks. Shows the tasks that you closed. - All Tasks. Shows all the closed, claimed, and unclaimed tasks that are assigned to your user group. - All Unclaimed Tasks. Shows all the unclaimed tasks that are assigned to your user group. - All Closed Tasks. Shows all the tasks that the users in your user group closed. - All Claimed Tasks . Shows all the tasks that the users in your user group claimed.
Search	Searches the displayed tasks for the specified text.

The following table lists the details that the task panel can display :

Task Detail	Description
Task Title	A link that displays a short description of the review task. To review the record and take action on the task, click the task title. The task opens in the Task Manager and displays the associated record in the review panel. If your role permits it, you can edit the record from this view before taking action on the task.
Type	Name of a people activity within the process.

Task Detail	Description
Priority	Priority of the task. The task priority can be Low, Normal, or High. When generating tasks, the review process assigns the same priority to all tasks of the same type.
Task Status and Due Date	Status of the task and the date the task is due. Status of the task can be Open or Closed. When the task status is Open, you can view the record associated with the task. The review process calculates a default due date based on the task creation date plus a predefined time period. The due date of each task is prefixed with one of the following colored dots: - Green. Indicates that the task is not overdue. - Red. Indicates that the task is overdue. - Amber. Indicates that the task will be overdue in the next 24 hours.
Owner	Name of the signed-in user.
ID	Instance ID of the review process that generated the task.
Submitted Date and Creator	Name of the user who created the task, and the date on which the user created the task.

Note: If you and your colleagues require different task details, contact your MDM administrator. The MDM administrator can update the application to display the desired details.

Review Panel

Use the review panel to review the changed record, the comments added to the task, and the workflow diagram. The content of the review panel differs based on the type of change that was made to the record.

The following image shows an edited record in the review panel:

The following image shows an edited record in the review panel:

Element	Description
Record Details	Displays the details of the record associated with the task.
Timeline	Displays the history of changes, the comments, and the actions taken on the record in the chronological order.
Workflow Diagram	Displays a graphical representation of the process flow associated with the task. You can view the workflow diagram only if you have the ActiveVOS abAdmin role assigned.
Task Details	Displays the task details in edit mode.
Actions	Actions that you can perform on the task. The possible actions depend on the task definitions in the review process. Sample actions can be Approve, Reject, and Disclaim.
More Actions	Additional actions that you can perform on the task.
Edit	Opens the record in edit mode.
Open	Opens the record in a separate tab.

Task Types

By default, workflows are triggered when a user with the Sales Operation Analyst creates or updates a record. When a user with the Sales Operation Manager role creates or updates a record, no workflows are triggered.

The Customer 360 default configuration includes the following tasks:

Task Type	Description
DraftState	Created when a creator creates or updates a record and chooses to keep the change in draft state.
Notification	Created when an approver approves or rejects a record.
Update	Created when an approver sends back a record for resubmission.
FinalReview	Created when a creator sends a new record or an updated record for approval.

The following steps summarize what happens when a user with the Sales Operation Analyst role creates or updates a record and a user with the Sales Operation Manager role approves the record:

Task	Task Owner	Possible Actions	Result
DraftState	Creator	Submit	Record is submitted for approval. Record is assigned to users with Sales Operation Manager role.
		Discard	Record is deleted.
FinalReview	Approver	Claim	User claims the tasks. Record appears in the task inbox of the user.
		Disclaim	Record is assigned back to users with the Sales Operation Manager role.
		Approve	Record is promoted. Notification sent to the creator.
		Reject	Record is deleted. Notification sent to the creator.
		Send Back	Record is sent back to the creator with comments.
Update	Creator	Submit for Approval	Record is resubmitted for approval. Moves to the FinalReview workflow.
		Cancel	Record is deleted.
Notification	Creator	OK	Close the workflow.

Claiming Tasks

Multiple users can share the same reviewer role. To work on a task, you must claim the task. This ensures that other users cannot work on the task while you work on it. Before you can claim a task, check for comments or attachments.

1. Click **Task Manager**.

    The task panel contains a list of tasks.

2. In the task panel, select **All Unclaimed Tasks**.

    The task panel lists all the unclaimed tasks of your user group.

3. Select a task that you want to claim.

    The record appears in the review panel.

4. Optionally, review the comments and attachments.

    a. On the **Timeline** tab, read all the comments.

    b. Click **Task Details**.

    c. Download attachments in the **File Attachments** section.

    d. Click **Cancel**.

5. To claim the task, click **Claim**.

   The task panel is updated, and your user name appears in the **Owner** field of the task.

Resolving Tasks

You resolve a task by reviewing the new or changed record and then taking an action. The possible actions depend on the task definitions in the review process.

Reviewing Edited Records

When you open a task to review an edited record, the fields that contain edited values are marked.

In the MDM Hub Store, the proposed edits are contained in a cross-reference record that is set to the pending state.

1. In the task inbox of the **Home** page, click a task that is a request to review an edited record.

   The record opens in the review panel of the Task Manager.

   Note: If you open an unassigned task, be sure to claim it before you start work.

2. Look for highlighted fields and decide if the edits are valid.

3. If you see a typographical error or an incorrect value for which you know the correct value, perform the following steps to edit the field:

   a. Click **Edit**.

   b. Make the changes as required, and then click **Save**.

4. To resolve the task, click an appropriate action button, or click **More Actions** and select one of the following actions:

Action	Description
Approve	If you agree with the edits and the task type permits you to approve changes, click **Approve**. The ActiveVOS® Server marks the related Final Review people activity as completed and performs the next activity in the process.
Send Back	If you require more information to review the edits, click **Send Back**. Type an explanation in the Comment box.
Reject	If you disagree with the one or more edits, click **Reject** and type an explanation in the Comment box. The ActiveVOS Server notifies the person who edited the record.
<Other>	If you see other options in the menu, then your organization uses a custom business process. If the purpose of the option is not clear and your role permits access to the ActiveVOS console, you can open the process to understand the workflow. Otherwise, contact the person who created the business process.

5. Confirm your action in the confirmation dialog box.

6. To change the ownership of the task without resolving the task, click an appropriate action button, or click **More Actions** and select one of the following actions:

Action	Description
Reassign	To ask another person to review the proposed changes, click **Reassign**, select the user, and type an explanation in the Comment box. The task is reassigned to the selected person. **Note:** If this option is not available, click **Task Details** and select the user from the **Assignee** list.
Disclaim	To return the task to the pool of unassigned tasks, click **Disclaim** and type an explanation in the Comment box. Someone with the same role needs to take action on the task.

The task remains open, but is no longer assigned to you.

Reviewing New Records

When you open a task to review a new record, review all field values in the record that need to be validated.

In the MDM Hub Store, the parent record and child records are in the pending state until the new record is approved.

1. In the task inbox of the **Home** page, click a task that is a request to review a new record.

   The record opens in the review panel of the Task Manager.

   Note: If you open an unassigned task, be sure to claim it before you start work.

2. Determine if the values in the record meet your business requirements.

3. To make changes to the record data, perform the following steps:

   a. Click **Edit**.

   b. Make the changes as required, and then click **Save**.

4. To resolve the task, click an appropriate action button, or click **More Actions** and select one of the following actions:

Action	Description
Approve	If you agree with the edits and the task type permits you to approve changes, click **Approve**. The ActiveVOS® Server marks the related Final Review people activity as completed and performs the next activity in the process.
Send Back	If you require more information to review the edits, click **Send Back**. Type an explanation in the Comment box.
Reject	If you disagree with the one or more edits, click **Reject** and type an explanation in the Comment box. The ActiveVOS Server notifies the person who edited the record.
<Other>	If you see other options in the menu, then your organization uses a custom business process. If the purpose of the option is not clear and your role permits access to the ActiveVOS console, you can open the process to understand the workflow. Otherwise, contact the person who created the business process.

5. Confirm your action in the confirmation dialog box.

6. To change the ownership of the task without resolving the task, click an appropriate action button, or click **More Actions** and select one of the following actions:

Action	Description
Reassign	To ask another person to review the proposed changes, click **Reassign**, select the user, and type an explanation in the Comment box. The task is reassigned to the selected person. **Note:** If this option is not available, click **Task Details** and select the user from the **Assignee** list.
Disclaim	To return the task to the pool of unassigned tasks, click **Disclaim** and type an explanation in the Comment box. Someone with the same role needs to take action on the task.

The task remains open, but is no longer assigned to you.

Resolving Records Sent Back for Updates

If an approver sends back a record, the creator receives the task in the task inbox of the **Home** page. As a creator, you can open the task, check the comments, work on the record, and send the record for reapproval.

1. In the task inbox of the **Home** page, select the task.

   The record opens in the review panel of the **Task Manager**.

2. Click **Task Details**, and read the comments.

3. Click **Edit**, make changes as required, and then click **Save**.

4. To resolve the task, select one of the following actions:

Action	Description
Submit for Approval	Submits the updated record for approval.
Cancel	Deletes the record.

5. Confirm your action.

   The task is closed.

Closing Notification Tasks

When an approver approves or rejects a record, the process triggers a notification task workflow for the creator of the task. If you created or updated a record and sent it for approval, you get the notification in your task inbox.

1. In the task inbox of the **Home** page, click the notification task.

2. Click **OK**.

   The task is closed.

Reviewing Merge Proposals

When you open a task to review a merge proposal, the primary record appears beside the records that are selected for the merge.

1. In the task inbox of the **Home** page, click a task that is a request to review a merge proposal.

    The record opens in the review panel of the Task Manager.

    Note: If you open an unassigned task, be sure to claim it before you start work.

2. Review the merge preview and determine if the merge is valid. The fields that appear in the merge preview are highlighted.

3. To resolve the task, select one of the following actions:

Action	Description
Merge	If you agree with the merge proposal and the task type permits you to approve changes, click **Merge**. The ActiveVOS Server marks the related Merge people activity as completed and performs the next activity in the process.
Cancel	If you disagree with the merge proposal, click **Cancel** and type an explanation in the Comment box. The ActiveVOS Server notifies the person who proposed the merge.
<Other>	If you see other options in the menu, then your organization uses a custom business process. If the purpose of the option is not clear and your role permits access to the ActiveVOS console, you can open the process to understand the workflow. Otherwise, contact the person who created the business process.

   The task is closed.

4. To change the ownership of the task without resolving the task, click an appropriate action button, or click **More Actions** and select one of the following actions:

Action	Description
Reassign	To ask another person to review the proposed changes, click **Reassign**, select the user, and type an explanation in the Comment box. The task is reassigned to the selected person. **Note:** If this option is not available, click **Task Details** and select the user from the **Assignee** list.
Disclaim	To return the task to the pool of unassigned tasks, click **Disclaim** and type an explanation in the Comment box. Someone with the same role needs to take action on the task.

   The task remains open, but is no longer assigned to you.

Reviewing Unmerge Proposals

When you open a task to review an unmerge proposal, a preview shows the result of the unmerge.

1. In the task inbox of the **Home** page, click a task that is a request to review an unmerge proposal.

    The unmerge preview for the record appears in the review panel of the Task Manager.

    Note: If you open an unassigned task, be sure to claim it before you start work.

2. Review the unmerge preview and determine if the unmerge is warranted. The fields that appear in the preview are highlighted.

3. To resolve the task, click an appropriate action button, or click **More Actions** and select one of the following actions:

Action	Description
Unmerge	If you agree with the unmerge proposal and the task type permits you to approve changes, click **Unmerge**. The ActiveVOS Server marks the related Unmerge people activity as completed and performs the next activity in the process.
Cancel	If you disagree with the unmerge proposal, click **Cancel** and type an explanation in the Comment box. The ActiveVOS Server notifies the person who proposed the unmerge.
<Other>	If you see other options in the menu, then your organization uses a custom business process. If the purpose of the option is not clear and your role permits access to the ActiveVOS console, you can open the process to understand the workflow. Otherwise, contact the person who created the business process.

The task is closed.

4. To change the ownership of the task without resolving the task, click an appropriate action button, or click **More Actions** and select one of the following actions:

Action	Description
Reassign	To ask another person to review the proposed changes, click **Reassign**, select the user, and type an explanation in the Comment box. The task is reassigned to the selected person. **Note:** If this option is not available, click **Task Details** and select the user from the **Assignee** list.
Disclaim	To return the task to the pool of unassigned tasks, click **Disclaim** and type an explanation in the Comment box. Someone with the same role needs to take action on the task.

The task remains open, but is no longer assigned to you.

Organizing Work on Tasks

When you have a long list of tasks, you can organize tasks by sorting and filtering the list, changing task properties, and assigning tasks to others.

For example, you might want to work on the tasks that have the highest priority or on the tasks that are due soonest. After you filter the list of tasks, you might find tasks that need a higher priority or tasks that you can work on at a later date. You can edit the task properties to better reflect the urgency within the business to resolve tasks.

Editing Due Date, Priority, and Other Task Properties

As you work with tasks, you might decide that some task properties need to be changed. For example, if changes are made to the record of an important client, you might want to increase the priority of the review task. Or, if you plan to be away and want to finish a set of tasks before you leave, you can change the due dates for the tasks to represent a date before your planned absence.

1. In the navigation bar, click **Task Manager**.
2. In the task panel, select the task you want to edit.

3. In the review panel, click **Task Details**.

4. Edit one or more of the following fields to change the task properties:

Field	Description
Task Title	Enter a title that is more meaningful to you. A good title includes at least the name of the record and the change that initiated the review.
Priority	Select a priority that reflects the urgency within the business to resolve this change.
Due Date	Select a due date that reflects the urgency within the business to resolve the change.
Assignee	Reassign this task to someone else.
File Attachment	Attach files to provide additional information about the task. Attachments appear in the **Task Details** dialog box. **Note:** The **File Attachment** field is available only if the task supports attachments.
Add Comment	Add comments to explain edits to the task properties and to track questions and answers about the task. Comments appear in the **Comments** tab.
Assign Back to Pool	Return the task to the pool of unassigned tasks so that other users can claim the task. **Note:** The **Assign Back to Pool** button is available only if the task belongs to another user.

5. Click **Save**.

Assigning Tasks

If the business process management supports reassignment, you can assign tasks to other users. To find out if task assignments can be done, open the **Task Details** dialog box and see if the **Assignee** list is enabled.

1. In the navigation bar, click **Task Manager**.

   The task panel contains a list of your assigned tasks and all unassigned tasks.

2. In the task panel, select **My Open Tasks**.

   The task panel displays all your open tasks.

3. Select the task that you want to assign to another user.

   The record appears in the review panel.

4. To provide additional information about the task, click **Task Details**, and then add a comment or a file attachment.

   Note: If you do not have the options for comments or attachments, contact your MDM administrator to request that they enable comments and attachments.

5. To assign the task, select the user from the **Assignee** list.

6. Click **Save**.

Assigning Tasks Back to the Pool

When a user in your user group is not available, you can send the user's tasks to the pool of unassigned tasks so that other users can claim them. The option to assign the tasks back to the pool is available only if the task belongs to another user.

1. Click **Task Manager**.
2. In the task panel, select the task that you want to send to the pool.
3. In the review panel, click **Task Details**.
4. Click **Assign Back to Pool**.

Disclaiming Tasks

If you claim or are assigned a task that you feel would be better handled by someone else, you can disclaim the task. Disclaimed tasks return to the pool of unassigned tasks.

1. Click **Task Manager**.
2. In the task panel, select an assigned task.

   The record appears in the review panel
3. In the review panel, click **More Actions** > **Disclaim**.

CHAPTER 8

Importing Data

This chapter includes the following topics:

Importing Data Overview

You can import data in bulk from a CSV source file into the Customer 360 database. To import data, populate the data in one of the predefined templates. A predefined template contains a list of fields associated with a business entity view. The import process helps you to create or update multiple primary records in a single operation. You can import up to 10000 records at a time.

Before you import, you can perform an ad hoc match to compare the import data with the existing records. The match process identifies duplicate and unmatched records. You can then select to import the unmatched records or all the records.

You can stop the import at any point while it is in progress. However, you cannot roll back the imported records. After the import operation is complete, it generates an import summary that shows the number of imported and rejected records. If your user role permits, Customer 360 saves the imported records as active records. Otherwise, Customer 360 saves the imported records as pending records and initiates the review process associated with your role.

Import Summary Report

When you import data into Customer 360 database, the import operation generates a summary report.

The report lists the following information:

- Number of records created

- Number of records updated
- Number of records processed with exceptions
- Number of records not imported because the import was stopped before completion

The following image shows a sample import summary report:
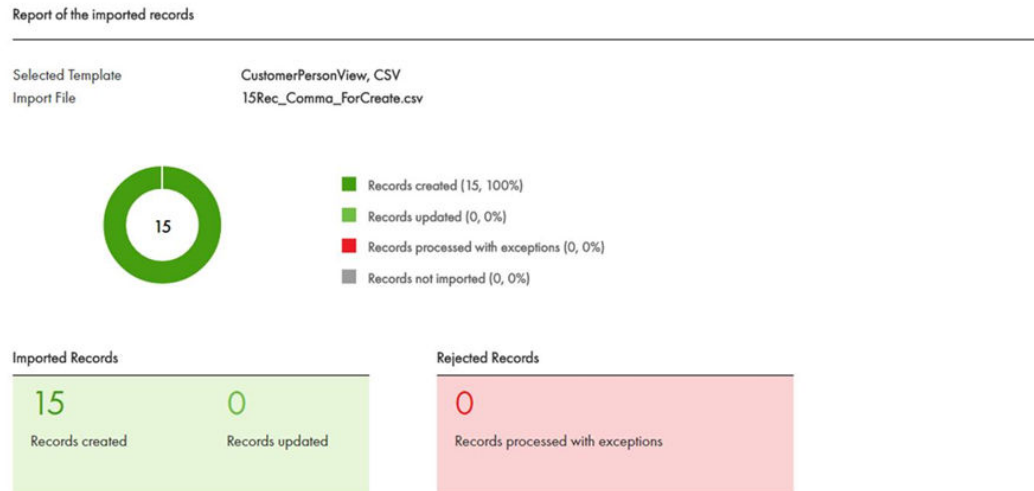
In addition, the report shows the selected template, the name of the import file, and the match rule set used in the ad hoc match.

The import operation writes the rejected records to a CSV file. You can download the rejected records, analyze, identify the issues with the records, and update the records. You can reimport the corrected records.

Import Template

An import template contains the list of columns associated with a business entity view. The columns map to the columns in the base object tables in the Operational Reference Store. The columns in the import file must map to the columns in the template. The import file can have a subset of the columns in the template.

If the file you want to import does not match an existing template, ask the Administrator to add the required template.

Import File

You import data from an import file. You must use a CSV file, which is a flat file with the data separated by a delimiter, such as a comma. Ensure that the columns in the import file match the columns in the import

template. Ensure that the required columns are present in the file. The import file can have a subset of the columns in the template.

Match Rule Sets

A match rule set contains a logical set of match rules. Match rules define the criteria for the match process to determine whether two records are duplicates. Based on the requirements and the purpose of the match, the MDM Hub administrators configure match rule sets in the MDM Hub Console. The ad hoc match process uses a match rule set to identify the duplicate records.

Match Results

When you perform the ad hoc match, Customer 360 generates the match results that contain the details of the matched and unmatched records. You can review the match results to determine whether to import all the records or the unmatched records.

The match results show the following information:

- Number of input records
- Number of matched records
- Number of unmatched records

The following image shows sample match results and a list of matched records:
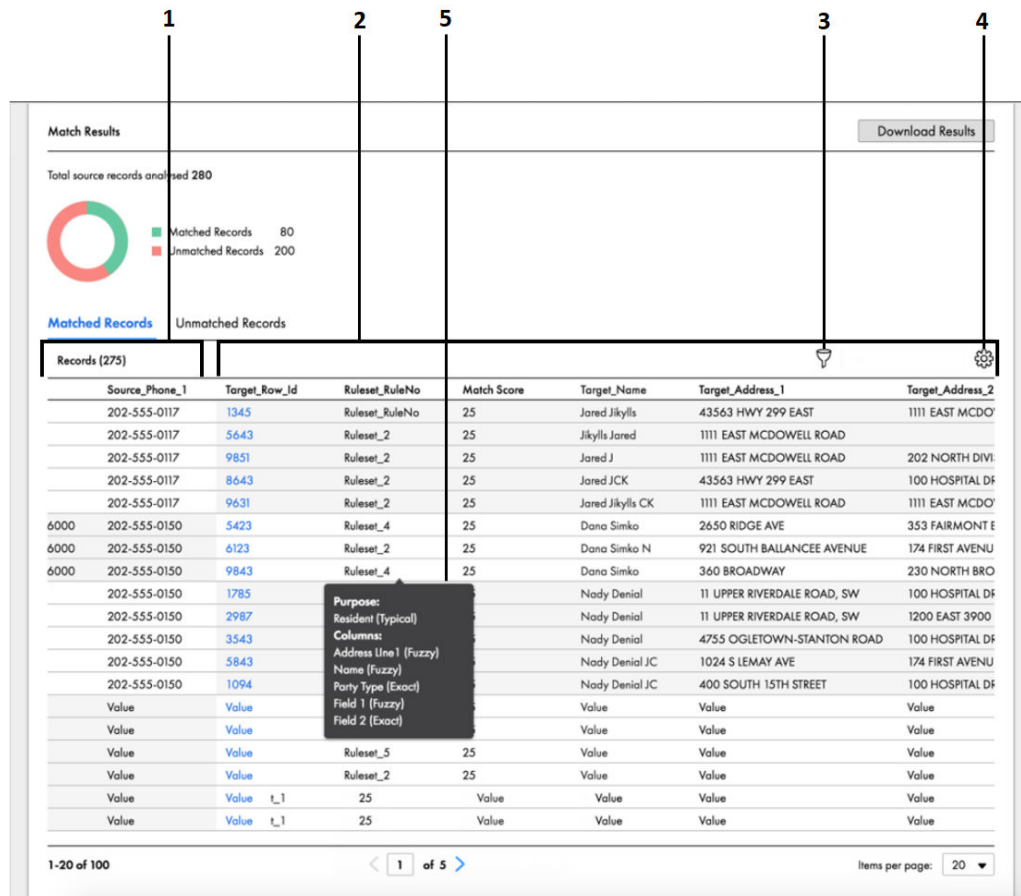
1. Input records
2. Matched records
3. Filter
4. Table settings
5. Match rule description

The **Unmatched Records** tab lists the unmatched input records. The **Matched Records** tab lists the input records and their matched records as matched pairs. The `Source_<Column Name>` columns refer to the columns in the input file, and `Target_<Field Name>` columns refer to the business entity fields. The `Ruleset_RuleNo` column displays the rule set name and the rule number that matches an import record with an existing record. On hovering over a `Ruleset_RuleNo` column value, you can see the match purpose and the match columns that the rule uses. You can filter the records and use the table settings to select the columns you want in the match result tables.

You can download the match reports as a .zip file. The .zip file contains the CSV files that list the matched and unmatched records.

Importing Data

You can import data in bulk into Customer 360.

1. In the navigation pane, click **File Import**.

    The **Choose a Template** page opens.

2. To choose the data you want to import, select the import template and the format of the file you want to import.

3. Optionally, to download the template, perform the followings steps:

    a. Click **View Template Details**.

        The **Choose a Template** page lists the columns available in the template and their data types.

    b. Click **Download Template**.

        Based on your browser settings, the **Save As** dialogue box might appear where you can choose the directory to save the template. The template is downloaded as a CSV file. Use the template to create the input file.

4. Click **Next**.

    The **Specify Import Properties** page opens.

5. Browse to the file that contains the data that you want to import, and then click **Open**.

6. In the **Import Properties** panel, specify the following import file properties:

Property	Description
Delimiter	Character that represents the break between data values in the import file. Select a predefined delimiter or select **Other** to define a custom delimiter.
Character Encoding	Character encoding used in the file. Character encoding is the mapping of the characters from a language or group of languages to hexadecimal code. Select UTF-8 or UTF-16 encoding.
Text Qualifier	Symbols used in the file to enclose a string.
Header	Enter the number of the row that serves as the header row in the file.
Date format	Date format for the date fields in the import file.
Source System	Required. Source system that supplied the records to import.
Primary Key Column	Column in the import file to consider as the primary key column. The primary key column must exist in the import file. If the value in the column does not exist in the base object, the import operation inserts a record. If the value in the column exists in the base object, the import operation updates the record. The column can have null values.

7.   To control what data to import from the file, set one of the following properties:

Records	Property
All records	Select **All Records**.
Range of records	Specify the **From Row** and the **Number of Records to Import**.

8.   Click **Validate and Preview**.

Note: To continue, you must validate and preview the import file.

9.   Click **Next**.

The **Import File** page opens.

10.   To match the input records with the existing records, perform the following steps:

a.   In the **Ad Hoc Match** section, select **Yes**.

b.   Select one of the match rule sets available in the list.

Note: An MDM administrator configures the match rule sets in the MDM Hub Console.

c.   Click **Match Records**.

After the match process is complete, the match results are displayed.

d.   If you want to filter the match results, click **Filter**, and then click **Add Field**.

The following table lists the different user interface elements that you can find in the **Match Results** section:

User Interface Elements	Description
	Displays the **Add Field** list.
Add Field	Displays a list of fields that you can use to define filters. Based on the data type of the field, select the condition or a range to filter the results. For example, to filter data based on a date range, select the date field and set the date range.
	Clears all the applied filters. After you clear the filters, the icon changes to .

e.   To configure the columns that you want to view in the **Match Results** section, click **Table Settings**, select and order the columns, and click **OK**.

f.   To download match reports, click **Download Reports**.

The match report is downloaded as a .zip file. The .zip file contains CSV files that list the matched and unmatched records.

g.   In the **Import** section, select the type of records you want to import.

11.   Click **Import Records**.

After the import process is complete, the import result displays the number of imported records and the number of rejected records.

12. To stop the import while it is in progress, click **Stop Import**.

 The import result displays the number of imported records, rejected records, and unprocessed records.

13. To download the list of rejected records as a CSV file, click **Download**.

CHAPTER 9

Resolving Duplicates

This chapter includes the following topics:

Resolving Duplicates Overview

The match process identifies matching records based on match rules. When you open the **Matching Records** view for a record, Customer 360 retrieves data about the matching records from the matches table. You can also search for other similar records and add them to the view.

In the **Matching Records** view, you can review the records in the similar records. You start with the parent records. If you identify duplicate records based on the data in the parent records, select the records. The merge preview for the parent record shows you the results of the proposed merge. Next, you can compare all the child and descendant records of the selected records. If some of the records contain different values for the same field, the merge preview process refers to the trust score for the data. The most trustworthy data is used in the merged record. At any time, you can open a preview of the merged record.

When you are sure that the merge preview reflects the best version of the truth, start the merge process. If your user role requires that someone else review the proposed merge record, Customer 360 saves the record and starts a merge review workflow. When an authorized person approves the proposed merge, the MDM Hub updates the master data to reflect the merged record.

Match Process

The match process uses match rules to identify the records that are similar to the record that you opened in the **Business Entity** view. The degree of similarity among the records depends on how the match rules are defined.

The MDM Hub Administrator or a Data Steward defines the match rules in the Hub Console. Match rules identify the record columns to search and the type of match to use, that is, fuzzy or exact. For more information about match rules, see the *Multidomain MDM Configuration Guide*.

This list of similar records is only a starting point. Records can be similar, without being duplicate records. You must review the similar records and identify the duplicates.

Merge Process

To resolve duplicate records, you merge a target record with the duplicate records. The merge process creates a record that contains the most trustworthy data from all the participating records.

At the parent level, the merge process merges the data of the parent record.

At the child level, when the parent-to-child relationship is a one-to-one relationship, the merge process merges the child records. When the relationship is a one-to-many relationship, you can select the child records to merge from the **Matching Records** view. All records that are not selected for a merge are added to the merged record.

Note: Developers define the parent-to-child relationships when they define the structure of the business entity.

After the merge process handles a child record, it tries to merge each level of descendant records using the same merge strategies. The merge process must run successfully on a level before the process can try to merge the next level.

The following image shows how the merge process works on three records, where each record has a parent record and two child-level relationships:
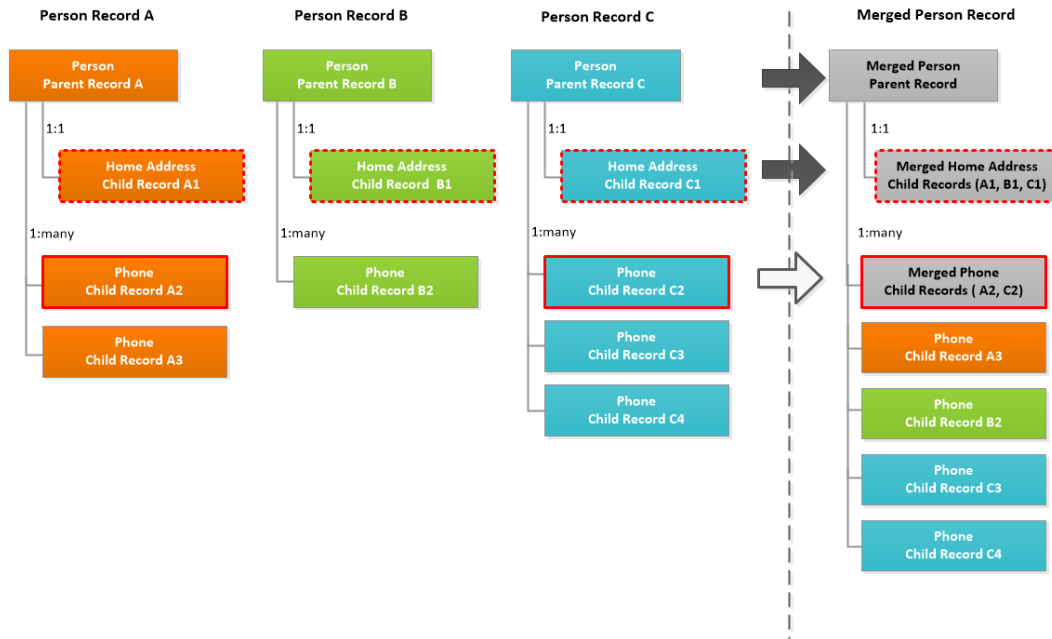
The merged record contains the merged parent record, the merged child records, and all the records that were not merged.

Scenario for Duplicate Records

You work for an insurance organization. A customer, Paula Laine, calls to review her home insurance policy. You ask Ms. Laine for her policy number, and enter the policy number in the **Search** bar.

In the search results, you select the record that contains the policy number, and open the record in the **Business Entity** view. You confirm a few personal details and then answer Ms. Laine's questions about her policy.

After you answer her questions, you ask Ms. Laine if she has any other policies. Ms. Laine tells you that she has an automobile policy registered with a subsidiary of your organization. You enter the automobile policy number in the **Search** bar, and the search returns the record that contains the automobile policy. You verify that the personal data matches the data in the other record.

After you end the conversation, you open the record that contains the home policy in the **Matching Records** view. From the similar records, you select the record that contains the automobile policy. You click **Preview** and verify that both policies appear in the Policies section. In addition, you can see that the merged record is more complete overall, with data such as Ms. Laine's middle name and her mobile phone number coming from different source records. When you are satisfied that the merge preview represents the best version of the truth, you start the merge process.

Resolving Duplicate Records

Use the **Matching Records** view to compare similar records. When you identify records that are duplicates, you can resolve the duplicates by merging the records.

To identify and resolve duplicate records, perform the following tasks:

1.

   Review the suggested similar records and, optionally, find other records that you think might be matches. Select duplicates.

2.

   After you select duplicate records, the **Navigate** menu updates to include the child records and descendant records from the duplicate records. Review the child records. Select duplicates.

3.

   Start the merge process.

Identifying Duplicate Records

Compare the data in a target record with similar records in the **Matching Records** view. Start with the parent record, then use the Navigate menu to open the child records and their descendant records.

Initially, the Navigate menu reflects the structure of the target record. After you select duplicate records, the merge preview shows the result of merging the parent records of the target and duplicate records. The merge preview process applies the merge cascade rules to the child records and descendant records. The structure in the Navigate menu changes to reflect the structure of the proposed merged record.

1. With a record open, select **Matching Records**.

   The **Matching Records** view opens with the target record in the second column. The first column contains the **Merge preview**. The remaining columns contain the records that satisfy a match rule that is associated with the records of the target record. The row labels in the grid correspond to the column names in the parent record.

2. Optionally, show only the records that satisfied a specific match rule.

   a. Click the **Filter** tab.

   b. Select **Specify a match rule**.

   c. Click in the field and select the match rule from the list.

      Tip: If the list is empty, the records of the target record have no match rules.

3. If you think that the match process missed a similar record, you can add it.

  a. Click **Add**.

    The **Find and select entities** page opens.

  b. Type the text or value that you want to find, and click **Search**.

    The search returns all records that contain the search term.

  c. Optionally, select filters to restrict the search results and click **Apply Filter**.

  d. Expand the details for a record by clicking the plus icon beside the name.

  e. Select the records that you want to add.

  f. Click **Select**.

    The records appear in the **Matching Records** view. If a record is already displayed in the view, it is not added again.

4. Compare the data in the parent records across all the similar records.

5. Optionally, to change the fields displayed for each record, click the **View** button.
   For example, you can show or hide the system columns.

6. When you determine that a record is a duplicate of the target record, select the check box in the column header for that record. You can select more than one record.

   The **Merge preview** shows the result of merging the parent records.

7. Click **Preview**.

   The **Business Enitity Preview** opens. The preview shows the result of merging the records that belong to the target and duplicate records.

8. To close the preview, click **Back**.

   You return to the **Matching Records** view.

Identifying Duplicate Child Records

After you preview the merge of duplicate records, review the child records and their descendant records in the **Matching Records** view. Select a record from the target record. You can select one or more duplicate records to merge with the target record.

Note: As you work with the child records, you might find data that makes you decide that a record is not a duplicate after all. You can return to the Overview screen and clear the check box for that record. The merge preview process regenerates the Merge Preview. The merge preview process keeps any manual merges that you created among the records in the remaining records. If a manual merge contained records from the removed record, those records are removed from the manual merge.

1. In the **Navigate** tab, expand a node and select a child record from the target record.

   The grid changes. The second column contains the selected child record, which is the target record. The remaining columns display the sibling records.

   Tip: If a pending icon appears in the column header for the target record, the record is in the pending state and cannot participate in a merge process. Select a different record as the target record.

   For example, you might see multiple telephone numbers for the target record plus all the telephone numbers that belong to the duplicate records.

2. If you see a sibling record that is a duplicate of the target record, select the check box in the column header. You can select more than one record.

   Tip: If a pending icon is shown instead of the check box, the record is in the pending state and cannot be selected for a merge.

The **Merge Preview** column shows the result of merging the target record with the duplicate records.

3. Repeat the process on the remaining child records. Optionally, you can perform the same process on descendant records.

4. Click **Merge**.

5. In the **Merge Duplicates** dialog box, confirm the merge.

    A manual merge request is saved in an internal change list.

Merging Duplicate Records

After you select duplicate child records and descendant records for manual merges in the **Matching Records** view, start the merge process.

1. In the **Navigate** tab, click **Overview**.

    You can see the parent records in the view.

2. Optionally, preview the proposed merged record.

    a. Click **Preview**.

    b. Review the proposed merged record. The **Preview** is similar to the **Business Entity** view.

    c. Click **Back**.

3. Click **Merge**.

    Based on your user role, one of the following actions occurs:

    • If your user role permits you to merge records without a review, the merge process merges the records in the selected records. The merged records are in the active state.

    • If your user role requires a review process, the merge process starts the merge review workflow. The records that will participate in the merge remain in the active state, but the merge occurs only after the merge proposal is approved.

RELATED TOPICS:

• "Merge Process" on page 70
• "Identifying Duplicate Records" on page 71

Resolving Duplicate Child Records within a Record

To look for duplicate child records within a single record, open the record in the **Matching Records** view. Do not select any other records.

1. With the record open, select **Matching Records** from the View list.

    In the grid, the second column contains the selected record. In this scenario, ignore any similar records.

2. In the **Navigate** tab, expand a node and select a child record from the record.

    The grid changes. The second column contains the selected child record, which is the target child record. The remaining columns contain the sibling child records, if any.

3. If you see a sibling record that is a duplicate of the target child record, select the check box in the column header. You can select more than one child record.

The **Merge Preview** column shows the result of merging the target child record with the duplicate child records. The merge request is saved in an internal change list.

4. Repeat the process on the remaining child records. Optionally, you can perform the same process on descendant records.

5. In the **Navigate** tab, click **Overview** to return to the parent record.

6. Click **Merge**, and then confirm the merge.

   The merge process implements the manual merge requests on the sibling child records. Based on your user role, one of the following actions occurs:

   • If your user role permits you to merge records without a review, the merge process merges the child records. The merged child records are in the active state.

   • If your user role requires a review process, the merge process initiates the merge review workflow. The child records that participate in the merge remain in the active state, but the merge occurs only after the merge proposal is approved.

CHAPTER 10

Investigating Data Changes

This chapter includes the following topics:

Overview

You can compare the best version of the truth at different moments in time for a particular record. If you suspect that the data in the record has changed inappropriately, you can use the **History** view to identify the data event that caused the data change.

The **History** view displays a chronology of data changes over the lifespan of the record. You can view the data that existed in the record at any point in time in the chronology. View the data before a data event and after a data event to determine if the event caused the inappropriate data change. A data event is any action that changes the data in a record, such as an edit or a merge operation.

Scenario for Data Changes in History View

A customer reports that he recently changed his email address and he wants to confirm that you have his current contact details. You look in the **History** view for the record that represents this customer.

The customer stated that he changed his address in October of the current year, so you look for data events in the **History** view chronology that occurred around that time. You see that multiple data events occurred in October for the record. You navigate to the Email child record and compare the data before and after the data events. You see that the new email address for the customer was added. After further investigation, you see that the middle name of the customer was added.

Comparing Data Changes in the History View

Use the History view to compare changes to master data.

1. With the record open, select **History**.

    The **History** view opens. Changes to the record appear on the timeline.

2. Optionally, select filters to show or hide different types of events.

3. Optionally, select a time unit to group data events. To do this, click **Options** and choose a different timescale. For example, select **M** to select a monthly timescale.

    The following image shows data events grouped under the month of October:

4. Click the event labeled **Email**.

    The event details panel shows the record details before and after the event and the time when the record was updated. In this example, the email address has changed from jsmith@example.com to jxsmith88@example.com.

5. Click the event labeled **SMITH, JOHN**.

    The following image shows that the display name of the record changed from John Smith to John Xavier

    Smith.

CHAPTER 11

Investigating Hierarchies and Relationships

This chapter includes the following topics:

Investigating Hierarchies and Relationships Overview

A record can have relationships with other records. You can view a graph that shows how a record is related to other records. Use the **Hierarchy** view to investigate relationships and the related records.

Relationships describe the affiliation between two records. The MDM Hub supports one-to-many and many-to-many relationships between records, in addition to hierarchical relationships between records in the same record. You can view, add, edit, and manage relationships between a record and other related records. In the Related Records panel, you can view the records that directly relate to the record that is open in the Entity view.

Scenario for Adding Related Records

A relationship is configured between the Organization and the Person business entities, such that an organization employs persons. You have an organization, Informatica, to which you want to add the employees. John Smith is an employee of Informatica.

You search for Informatica. You open the record. You search for the Person business entity that represents John Smith. You add John Smith as a related record to Informatica. After an appraisal, John Smith has a different job title and salary. You must update the relationship details to reflect the change. You open Informatica and select the relationship between Informatica and John Smith. You update the relationship details.

Relationships for a Person

Default relationships are configured for the Person customer. You can add the relationships from the relationship panels of the business entity view. If you do not see the relationship type that you want to add, request the administrator to configure the relationship.

By default, the Person customer has the following two relationship panels configured:

- **Relationship**. The relationships that you can add from the panel include relationships such as guardian, spouse, child, or sibling.
- **Household**. The relationship that you can add from the panel is member of a household.

Relationships for an Organization

Default relationships are configured for the Organization customer type. You can add the relationships from the relationship panels of the business entity view. If you do not see the relationship type that you want to add, request the administrator to configure the relationship.

By default, the Organization customer type has the following three relationship panels configured:

- **Relationship**. The relationships that you can add from the panel include the linkage relationships between different companies within a corporate family.
- **Contact**. The relationship that you can add from the panel includes the relationship of a person entity to the organization, such as employee or contact.
- **Classification**. The relationships that you can add from the panel include classification type for the organization.

Adding a Related Record

When a record has relationships configured, you can add related records to the record. Search for and open the record in a Business Entity view. Search for the record that you want to add as a related record and add the record in the Related Records panel.

Note: The Related Records panel must be present in the Business Entity view.

1. From the **Search Results** panel of the **Search** workspace, select the record to which you want to add the related records.
2. Open the record.

   The **Related Records** panel displays the records that are directly related to the record you open. There might be more than one Related Records panel.
3. In the **Related Records** panel, click **New**.

   The **Add a Related Record** page opens.
4. Select the relationship type.
5. In the **Search** box, type the complete search string or the search string with the asterisk wildcard character (*) for the record that you want to find.
6. Click **Search**.
7. In the **Filters** panel, select a value for the filter criteria that you require.
8. Click **Apply Filter**.

   The revised search results appear in the **Search Results** panel based on the filters you set.
9. Select the record that you want to add as related record and click **Proceed**.

10. If the relationship has additional attributes, specify the additional attributes.

    For example, for a PersonOwnsAutomobile relationship, you might have to specify the mileage and price.

11. Click **Save**.

    The record is added as related record and appear in the **Related Records** panel.

Viewing Related Records

To view the records related to a record, search for and open the record. You can view the related records in the Related Records panel. Each related record in the component is a link that you can open in an Entity View.

1. From the **Search Results** panel of the **Search** workspace, select the record.

2. Click **Entity View**.

    The related records are listed in the Related Records panel.

Editing Related Records

You can edit the details of the relationship between a record and the related record. You can edit the additional attributes associated with the relationship. Search for the record and edit the relationship from the Related Records panel.

1. From the **Search Results** panel of the **Search** workspace, select the record that you want to edit.

2. Open the record.

    The **Related Records** panel displays the records that are directly related to the record you open. There might be more than one Related Records panel.

3. In the **Related Records** panel, select the related record that you want to edit, and then click the **Edit** icon.

4. Edit the additional relationship attributes, and then click **Save**.

    For example, assume that job title and salary are two attributes associated with the OrganizationEmploysPerson relationship. After an appraisal, you might edit the job title and salary for that Person record to reflect the changes.

Deleting a Related Record

You can delete the relationship between a record and a related record. Search for the record and then delete the related record in the Related Records panel.

1. From the **Search Results** panel of the **Search** workspace, select the record that you want to edit.

2. Open the record.

    The **Related Records** panel displays the records that are directly related to the record you open. There might be more than one Related Records panel.

3. Select the related record that you want to delete, and then click the **Delete** icon.

    A confirmation box appears.

4. To delete the relationship, click **Delete**.

    Customer 360 deletes the relationship between the record and the related record and no longer displays the related record in the **Related Records** panel.

Opening a Record in the Hierarchy View

Use the **Hierarchy** view to examine the relationships between the open record and other records.

1. To open a record in the **Hierarchy** view, select a record.

    The record opens.
2. From the **View** list, select **Hierarchy**.

    The **Hierarchy** view opens. The selected record and the related records appear on the canvas.
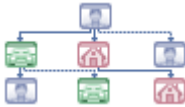
Displaying Relationships on the Canvas
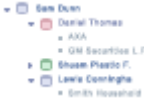
You can change the way that records and relationships appear on the Hierarchy canvas. You can change the layout, create and apply filters, hide or show related records, or change other canvas display options.

Selecting a Layout

Different layouts can reveal different insights into record relationships. You can customize the size and spacing in some of the layouts.

1. In the canvas, click the **Layouts** tab.

    The **Layout** panel opens.
2. Click a layout icon.

Layout	Layout Name
	Hierarchy.
	Tree.
	Circular.
	Taxonomy.

Layout	Layout Name
	Network.
	Explorer View.

3. Click **Apply**.

   The canvas displays the relationships between the records in the selected layout. If you can customize the layout, one or more options appear in the **Layouts** panel.

4. To customize the layout, set the layout options.

   - To increase a value, move the slider to the right, and then click **Apply**.

   - To decrease a value, move the slider to the left, and then click **Apply**.

   - In the Network layout, you can choose whether to show spheres of influence. When selected, the **Sphere of influence** option encloses each record in a circle. The size of the circle reflects the number of direct relationships held by each records. The more direct relationships, the larger the circle.

Filtering Related Records

Use filters to show or hide a set of records and relationships. For example, you might want to simplify the view so that you can focus on a particular relationship.

Defining a Filter

Use the **Filters** panel below the canvas to select filter options to apply to the canvas.

To enable a filter option, select the option check box. To disable a filter option, clear the check box. Filter options are cumulative. You can select as many or as few as you need to clarify the relationships on the canvas. In logical terms, filters are joined by the AND operator.

1. In the **Hierarchy** view, click the **Filters** tab that is located below the canvas.

   The **Filters** panel opens.

2. In the **Hierarchies** section, select the check boxes for one or more types of business entities.

   The filter affects all selected types of business entities.

3. Click the name of a business entity.

   The relationship filter options for the selected business entity appear to the right.

4. Optionally, change the relationship filter options for the record.

5. Optionally, click **General** and change the general filter options:

Option	Description
Hide unconnected entities	Hides records with no relationship to the selected record.

Option	Description
Show pending relationships	Shows relationships that are currently under review.

6. Optionally, click **Relationship Directions** and change the directional filter options:

Option	Description
Show Parents	Shows the parents of the selected record.
Show Children	Shows the child records of the selected record.
Show Unknown	Shows records where the relationship between the records is unknown.
Show Undirected	Shows related records where the type of relationship is not specified.
Show Bidirectional	Shows related records where the direction of the relationship goes both ways.

7. Click **Apply**.

    The application applies the selected filter options to the canvas.

Saving a Filter

If you expect to reuse the filter options that you applied to the canvas, save the options as a filter. After you save a filter, you can choose to make the filter the default filter whenever the selected record is displayed in the canvas.

1. In the **Filters** panel, click **Saved Filters**.
2. Type a name in the **Filter Name** field.
3. To share the filter with colleagues, select **Public**.
4. Click **Save**.

    The filter options that are currently applied to the view are saved.
5. To always apply this filter with the selected record, click the **Default for <Business Entity>** button.

Applying a Saved Filter

When you apply a saved filter, the filter applies to the types of business entities selected in the filter.

1. In the **Filters** panel, click **Saved Filters**.
2. Select the filter from the **Filter Name** list.

    The filter options reflect the settings in the selected filter.
3. Click **Apply**.

    The canvas reflects the settings in the applied filter.

Applying a Default Hierarchy Filter

When you apply a default hierarchy filter, the filter applies to the selected business entity.

1. In the **Filters** panel, click **Defaults**.

2. Select the filter from the **Default hierarchy** list.

   The filter options reflect the settings in the selected filter.

3. Click **Apply**.

   The canvas reflects the settings in the applied filter.

Deleting a Saved Filter

You can delete saved filters that you no longer use. If the filter is public, check with colleagues before you delete it.

1. In the **Filters** panel, click **Saved Filters**.

2. Select the filter from the **Filter Name** list.

   The filter options reflect the settings in the selected filter.

3. Click **Delete**.

Hiding and Showing Records on the Canvas

You can hide or show selected records and relationships on the canvas. When you hide a record on the canvas, the relationship of the record to the primary record remains intact, but the relationship is not shown on the canvas.

After you hide a record, the **Hierarchy** view updates the remaining records that are related to the hidden record. In the canvas, the related records show the number of visible relationships out of the total number of relationships, and display a plus sign icon to show that some relationships are hidden. In the relationship table, the row that represents the hidden record does not have a canvas icon.

Showing Direct and Indirect Relationships

In the **Hierarchy** view, direct and indirect relationships between records are expressed in hops. A hop is a relationship between records. A direct relationship is one hop, while an indirect relationship is more than one hop. For example, given records A, B, C, and D, the relationship A--D is one hop, A--B--D is two hops, and A--B--C--D is three hops. You can change the number of hops that appears for a selected record.

1. In the canvas, click a record.

   The Actions button appears.

2. Perform one of the following actions:

   - To view direct relationships, click the **Actions** button and click **Fetch** > **One Hop**.

   - To view direct and indirect relationships, click the **Actions** button and click **Fetch** > **Many Hops (#)**.

3. Optionally, change the number of hops that are shown by the **Many Hops (#)** option.

   a. Click the **Actions** button and click **Fetch** > **Preferences**.

   b. In the **Show Many Hops** dialog box, set a value between 2 and 20.

   c. Click **Execute**.

   d. Click the **Actions** button.

      The **Many Hops (#)** menu item reflects the value that you set.

   e. To apply the new number of hops to the canvas, click **Fetch** > **Many Hops (#)**.

Hiding a Record

If the graph is complex, you can simplify the graph by hiding records that are not meaningful to your investigation. When you hide a record, the record and the relationships of the record are hidden. You cannot hide the primary record or a record that functions as the anchor of the graph in the canvas.

1. On the canvas, click the record.

   The **Actions** button appears.
2. Click **Actions**.
3. Click **Hide** > **Hide Entity**.

   On the canvas, the record and the relationships of the record are hidden.

Hiding Selected Records

Select one or more records to hide. You cannot hide the primary record or a a record that functions as the anchor of the graph in the canvas.

1. In the canvas, select records by pressing the **Ctrl** key and clicking the records.

   Selected records are highlighted.
2. On the toolbar, click the **Actions** icon, and then click **Hide Selected Entities**.

   In the canvas, the selected records and the record relationships are hidden.

Hiding a Record's Children

You can hide the children of a selected record. To qualify as a child record, the Direction type of the child record must be Child.

1. In the canvas, click the record.

   The record Actions button appears.
2. Click **Actions**.
3. Click **Hide** > **Hide Children**.

   In the canvas, the children of the selected record are hidden.

Showing a Hidden Record

You can show a hidden record and the relationships of the record in the canvas.

1. In the canvas, click a record.
2. If the relationship table is closed, click the arrow button to open the relationship table.

   The relationship table displays all records that are directly related to the selected record.
3. In the relationship table, select the hidden record that you want to show in the canvas.
4. Right-click and click **Add to Canvas**.

   In the canvas, the record and the relationships of the record are displayed.

Showing All Hidden Relationships

When a record box includes a plus sign icon in the lower left corner, the record has relationships to hidden records. You can show all the hidden records.

▶   To show all hidden records, click the **Show** icon in the record box.

The hidden records and the relationships of the record are shown on the canvas.

Navigating the Canvas

In the canvas, you can zoom in or out on the graph, move around the graph, or move quickly to another part of the graph.

- To zoom in or out on the graph, move the slider up or down.
- To view hidden adjacent parts of the graph, use the direction arrows to move the hidden records into view.
- To navigate quickly through a large hierarchy graph, click the **Navigation** tab and click a different area of the graph. The area appears in the canvas.

Setting Canvas Display Options

You can set options that control the canvas.

- To increase the height of the canvas, click the **Full Screen Mode** icon. The application header and workspace bar are hidden.
- To show the canvas legend, click the **Other** tab. The legend appears on the left.
- To use simple graphics in the canvas when the number of records exceeds a threshold, click the **Other** tab, set a threshold value, and click **Apply**.

Investigating Related Records

As you investigate the relationships for the selected record, you might need to review the details for a related record or for a relationship.

You can view the following kinds of details:

- Record data
- Source systems and pending records
- System columns
- Relationship details
- Hierarchy
- History of changes

Viewing Record Data

If you need more information about a record, you can view the record data. For example, when the hierarchy contains similar records, you might want to confirm that you have the correct record before taking an action.

1. In the canvas, click a record.

    The record Actions button appears.

2. Click **Actions**.

3. Click **View** > **Details**.

4. In the **Entity Details** window, review the summary details.

    - If the details are sufficient to allow you to continue your work, click **Close**.

    - If you need more information about the record, click **More Details**. The record opens in a new tab. You can review all the data about the record and, if necessary, edit the data.

Viewing Source Systems and Pending Changes

You can view information about contributing source systems and pending changes for a selected record.

In the MDM Hub Store, the information is stored as cross-reference (XREF) records.

1. In the canvas, click a record.

    The record Actions button appears.

2. Click **Actions**.

3. Click **View** > **Cross References**.

4. In the **Cross References** dialog box, review records.

    - If the details are sufficient to allow you to continue your work, click **Cancel**.

    - If you need to make changes, edit values, and then click **Save**.

Viewing System Columns

Data stewards might be interested in viewing the values in the system columns for a selected record. For example, you can view values for the Rowid Object column and Creator column.

1. In the canvas, click a record.

    The record Actions button appears.

2. Click **Actions**.

3. Click **View** > **System Columns**.

4. In the **System Columns** window, review the values.

5. When you are finished, click **Close**.

Viewing and Editing Relationship Details

If you need more information about a relationship, you can view details about the relationship, such as the relationship type.

1. In the canvas, click a relationship line.

    The relationship Actions button appears.

2. Click **Actions**.

3. Click **View Relationship Details**.

4. In the **Edit Relationship** dialog box, review the details about the relationship.

Option	Description
Diagram	Displays a diagram of the related records and the direction of the relationship.
Hierarchy	The type of the business entity, such as organization or household.
Relationship Type	The type of relationships that are possible between the records, such as employee or relative.
Rel Start Date	The start date of the relationship. If the date occurs in the past, the relationship is active. If the date occurs in the future, the relationship will start on the specified date. If the field is empty, a start date was not set.
Rel End Date	The end date of the relationship. If the date occurs in the past, the relationship has ended and is inactive. If the date occurs in the future, the relationship will end on the specified date. If the field is empty, the relationship is currently considered permanent.
Switch Entities	You can switch the order of the record to change the direction of the relationship. The **Switch Entities** button is enabled for some Relationship Types.
Other fields	Additional fields might appear for some Relationship Types.

5. Optionally, to change the relationship details, edit options and click **Save**.

Adding a Relationship

You can create a relationship between two unrelated records as long as a relationship type exists for the business entities.

1. Ensure that both records are visible on the canvas. You might need to use the slider to zoom out the canvas.

2. Drag and drop one record box on top of the other record box.

3. In the **Add Relationship** dialog box, configure the following options:

Option	Description
Diagram	Displays a diagram of the related records and the direction of the relationship.
Hierarchy	The type of the business entity, such as organization or household.
Relationship Type	The type of relationships that are possible between the records, such as employee or relative.
Rel Start Date	The start date of the relationship. If the date occurs in the past, the relationship is active. If the date occurs in the future, the relationship will start on the specified date. If the field is empty, a start date was not set.

Option	Description
Rel End Date	The end date of the relationship. If the date occurs in the past, the relationship has ended and is inactive. If the date occurs in the future, the relationship will end on the specified date. If the field is empty, the relationship is currently considered permanent.
Switch Entities	You can switch the order of the records to change the direction of the relationship. The Switch Entities button is enabled for some Relationship Types.
Other fields	Additional fields might appear for some Relationship Types.

4. Click **Save**.

    In the canvas, a relationship line appears between the two records. If the relationship is directional, the line includes an arrowhead to show the direction.

Changing Records and Relationships

In the **Hierarchy** view, you can add, edit, and delete related records and relationships for the selected record. If an effective date is set, the update is valid for the selected effective date.

Adding a Record to the Canvas

To create a relationship to a record that is not on the canvas, search for the record and add it to the canvas.

1. On the toolbar, click **Add to Canvas**.

    If you navigate to the Hierarchy view from a record tab, the Smart Search dialog box opens. If you navigate to the Hierarchy view from the legacy Data tab, the Search dialog box opens.

2. If the **Smart Search** dialog box opens, perform the following steps:

    a. Optionally, select the type of business entity.

    b. Type the search term.

    c. Click **Search**.

        If the search process finds matches, the matching records appear in the search results.

    d. Optionally, use the filters to narrow the search results.

    e. If the record appears in the search results, select the record and click **Select**.

        The record appears on the canvas.

3. If the legacy **Search** dialog box opens, perform the following steps:

    a. Enter the search criteria.

    b. Click **Run Search**.

    c. If the record appears in the search results, select the record and click **Add to Canvas**.

        The record appears on the canvas.

4. **Next steps.** Create a relationship between the added record and other records.

Adding a Relationship

You can create a relationship between two unrelated records as long as a relationship type exists for the business entities.

1. Ensure that both records are visible on the canvas. You might need to use the slider to zoom out the canvas.
2. Drag and drop one record box on top of the other record box.
3. In the **Add Relationship** dialog box, configure the following options:

Option	Description
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Switch Entities	You can switch the order of the records to change the direction of the relationship. The Switch Entities button is enabled for some Relationship Types.
Other fields	Additional fields might appear for some Relationship Types.

4. Click **Save**.

   In the canvas, a relationship line appears between the two records. If the relationship is directional, the line includes an arrowhead to show the direction.

Editing a Record from the Hierarchy View

As you work with related records in the **Hierarchy** view, you might find that you need to edit data.

1. In the canvas, click a record.

   The record Actions button appears.
2. Click **Actions**.
3. Click **Edit** > **Edit Entity**.

   A tab opens and displays the record in the **Data** view.
4. Edit data as required and save the changes.
5. To return to the **Hierarchy** view, click the tab that contains the **Hierarchy** view.

Deleting a Record from the Hierarchy View

As you work with related records in the **Hierarchy** view, you might find that you want to delete a record. When you delete a record, the record is removed from the view, and the records are marked for deletion in the MDM

Hub Store. All the relationships between the deleted record and the selected record are also deleted. You cannot delete the record whose hierarchy you are viewing.

1. In the canvas, click the record that you want to delete.

   The record Actions button appears.

2. Click **Actions**.

3. Click **Edit** > **Detete Entity**.

   The record and the relationships of the record are removed from the canvas and the relationship table. The record is marked for deletion in the MDM Hub Store.

Deleting a Relationship

You can delete relationships between records. You can delete the relationship immediately, or you can cause the relationship to expire with an end date.

The **End Date Relationship** option is available under the following circumstances:

- The end date is empty.

- The relationship belongs to the current source system specified for the application.

- One cross-reference record persists in the database for the current effective period where the record does not intersect with effective periods from other source systems.

You delete relationships from the canvas.

1. In the canvas, click the relationship line.

   The relationship Actions button appears.

2. Click **Actions**.

3. Choose how you want to delete the relationship.

   - To delete the relationship and mark it with an end date, click **End Date Relationship**. When prompted for confirmation, click **Yes**. The end date is set to the date before the selected effective date.

   - To delete the relationship from the selected effective period without adding an end date, click **Delete Relationship**.

   - To delete the relationship for all effective dates, click **Delete All Relationship Periods**.

   The relationship line disappears and the relationship is deleted from both affected records.

CHAPTER 12

Viewing the Relationship Graph

This chapter includes the following topics:

Relationship Graph Overview

A relationship graph connects a group of business entities through relationships. You can use Informatica MDM - Relate 360 to create a relationship graph. After you create a relationship graph in Relate 360, you can view the relationship graph in Customer 360.

The following image shows a representational relationship graph:
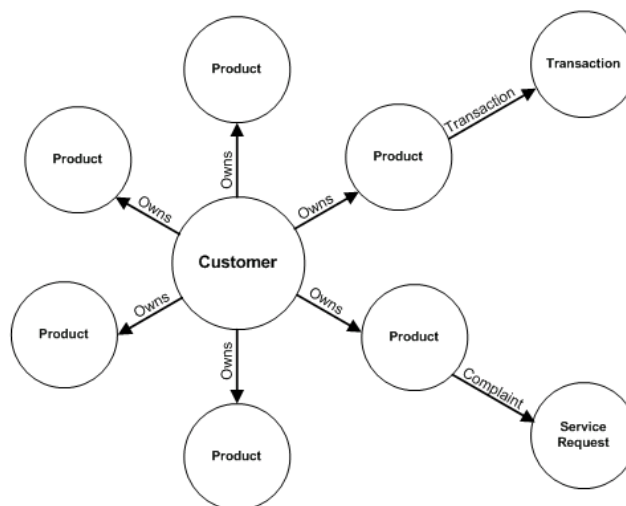
In the representational relationship graph, Customer, Product, Transaction, and Service Request are business entities, and owns, transaction, and complaint are relationships that connect the business entities. The

representational graph can display all the products a customer owns. The graph can also display the service requests and the transaction details of each product the customer owns.

Note: The Customer 360 environment must be integrated with Relate 360 to view the relationship graph.

Opening the Relationship Graph View

You can access the relationship graph through the custom view that is created for the relationship graph.

1. Open a record.
2. Select the custom view that is created for the relationship graph.

   The relationship graph appears.

Relationship Graph User Interface

The relationship graph displays a graph, filters, and column values for the selected record. The graph displays all the related records of the selected record. You can filter the records in the graph based on the filters that are available for the business entity.

The following image shows a sample relationship graph:
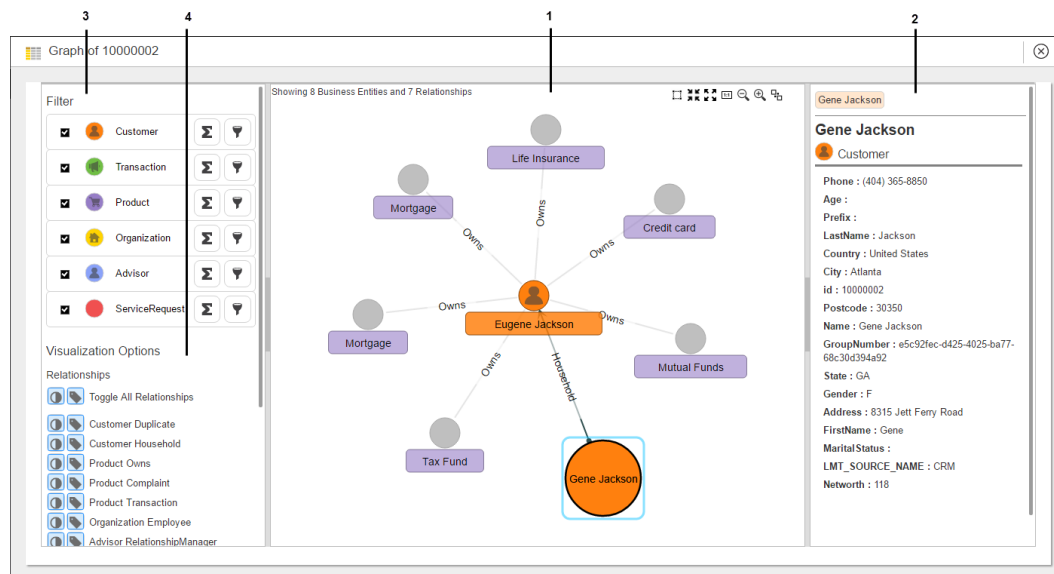
1. Graph panel
2. Fields panel
3. Filters panel
4. Visualization Options panel

A relationship graph includes the following panels:

Graph panel

Displays how the selected record is connected to other records. The graph changes based on the filters that you apply.

Fields panel

Displays the columns related to a record that you select in the graph. The columns that appear in the **Fields** panel depend on the parameters that you configure in the relationship configuration file.

Filters panel

Displays the filters that you can use to filter the records. You can filter the records based on the business entities and their column values. You can also aggregate the records based on the columns of the business entity.

Visualization Options panel

Allows you to highlight the relationships and records. You can also hide or show the labels of the relationships and nodes.

Filtering the Records

You can filter the records based on their column values. You can also filter all the records that are related to a business entity.

1. Open the relationship graph.

   By default, the graph displays the selected record and all its related records.

2. To remove all the records that belong to a business entity from the graph, under **Filter**, clear the business entity.

   The graph refreshes and removes all the records that belong to the business entity from the graph.

3. To include all the records that belong to a business entity in the graph, under **Filter**, select the business entity.

4. To filter the records based on the column values of a business entity, perform the following tasks:

   a. Under **Filter**, click the filter icon [filter icon] of a business entity whose columns you want to use to filter the records.

      A list of columns appear. The columns that are available in the list are based on the parameters that you configure in the relationship configuration file.

   b. Select a column.

      If you have configured the column as an exact filter, a text box appears. If you have configured the column as an enumeration filter, a list of enumeration values appear.

   c. For an exact filter, type the exact column value based on which you want to filter the records.

   d. For an enumeration filter, select the enumeration value based on which you want to filter the records.

      The following image shows the enumeration values configured for the `PaymentMode` column:
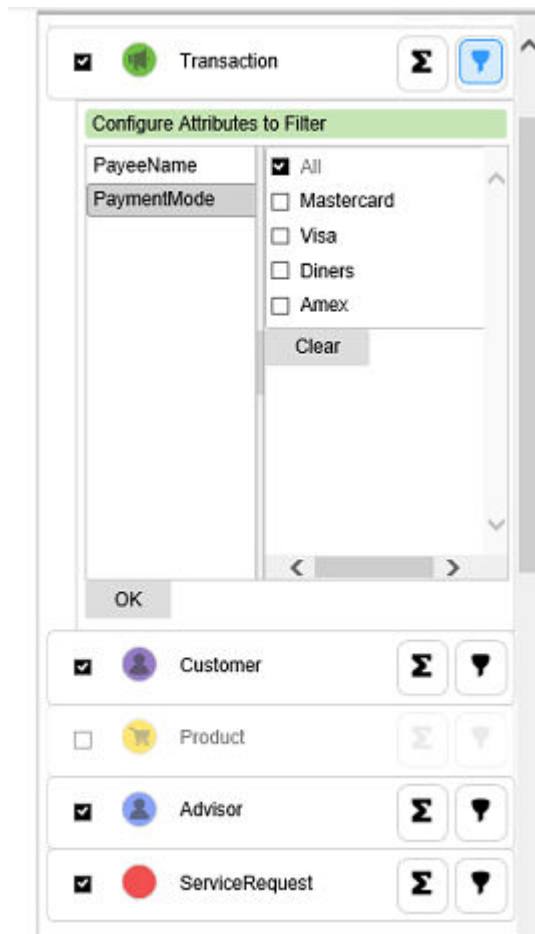
e.   Click **OK**.

The graph refreshes to reflect the filtered records.

Aggregating the Records

You can aggregate the records based on the selected columns of a business entity.

1.

Under **Filter**, click the aggregate icon [Σ icon] of a business entity whose columns you want to use to aggregate the records.

2. Select the columns based on which you want to aggregate the records, and click **OK**.

The graph refreshes to reflect the aggregated records.

The following image shows Gene Jackson's related records that are aggregated based on the `ProductName` column:
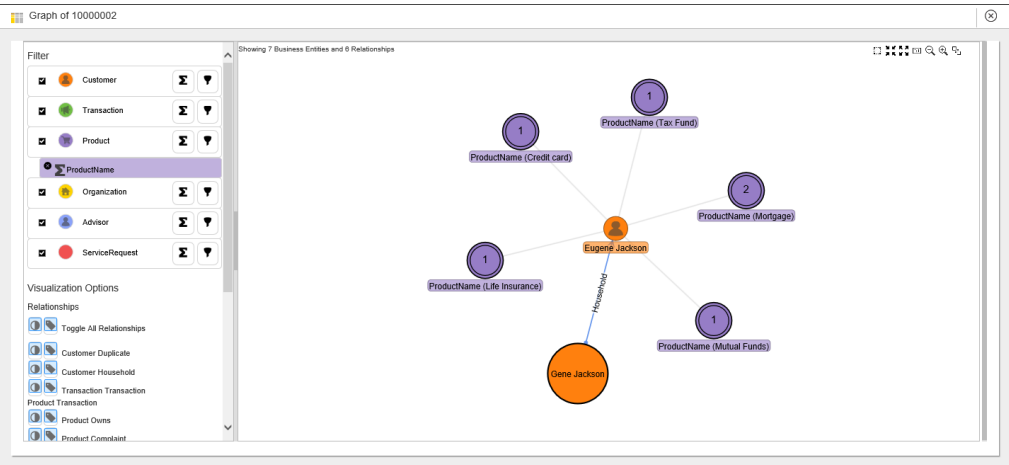
Setting the Visualization Options

You can select to show or hide the labels of the relationships and nodes in the relationship graph. You can also turn the highlight effect on or off for the relationships and nodes.

In the **Visualizations Options** panel, click the following icons that you can find against each relationship and business entity:

Icon	Description
	Turns the highlight effect on or off.
	Shows or hides the labels of the relationships or nodes.

Modifying the Graph View

You can zoom in, zoom out, and perform other actions in the graph to modify the view of the graph.

In the **Graph** panel, click the following icons that you can find in the upper right corner of the panel:

Icon	Description
	Adjusts the graph to highlight how the selected node is related to the main node.
	Aligns the graph to the center of the panel.
	Zooms in or zooms out the graph so that the entire graph fits the panel.
	Resets the graph to its original size.
	Zooms out to reduce the size of the nodes.
	Zooms in to increase the size of the nodes.
	Resets the graph to its default layout.

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