informer

Interacting with Query Results

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Accessing Query Results

Before you can interact with your data, you must have access to results produced by a query. The data can be shared via Query Results or Reports.

Query Results

There are two types of queries available in Informer, and either one of these can be shared with you.

- **Ad-hoc Queries** are real time queries that run against your database. You must run the query to populate the data to interact with the results, and they are found under the Reports listing page.
- **Datasets** are pre-populated queries that have been updated on demand or via a schedule and they are found under the Datasets listing page. The data is already populated, and you can interact with the results.

Reports

There are three types of reports that can be shared with you: Dashboards, Comparison Boards and Data View reports. These reports are built from Dataset results and are found under the Reports listing page.

Listing pages provides some basic summary information about the Reports and Datasets in the system, along with some helpful filtering options to find what you are looking for. With the search bar at the top, you can dynamically filter the list according to whatever string you type in.

The left panel lets you filter to the following categories:

- Personal - shows only the content the currently logged in user owns
- Teams - lets you filter shown content according to which Team owns it

Once you have data results, you can start interacting with it.

Interacting with Query Results

Actions

The Actions menu contains actions that allow you to view, modify, and distribute the data within your Dataset. The different options available to you are outlined below and will depend on your level of access:

Option	Description
Export	Creates a local file containing the results of your query. Data can be exported to any of the following file types: • CSV • HTML • Live Excel • JSON • Excel • XML • Tabbed • Custom • Fixed • PDF
Add to Bundle	Adds the selected query to an existing bundle or creates a new bundle
Assign Tags	Allows you to assign existing tags to your query
Benchmark	Allows you to run a benchmark on your query, flow steps, and indexing to identify potential bottlenecks in performance
Bundle and download	Creates a bundle with the selected query and downloads the file
Change Inputs	Allows you to set the values given as Inputs when the query is run (only available in Datasets)
Change Owner	Gives ownership of the query to another team or user
Clear User Settings	Clears user-specific settings set within the query to their default values
Clear data	Removes all the data in the query (only available in Datasets)
Copy	Creates a copy of the current query

Option	Description
Create Dataset	Creates a Dataset using current query (only available in Ad-hoc Query)
Create Data View Report	Generates a Data View Report using the current query (only available in Datasets)
Create a Data Access Token	Allows you to share data with authorized users outside of Informer (only available in Datasets)
Create a query token	Generates a token that can be used to access the query outside of Informer (only available in Ad-hoc Query)
Delete	Permanently deletes the query
Edit	Opens the query Edit page. This can also be accessed by clicking the 'Edit' button in the top-right corner
Move to Folder	Moves the query to a new or existing folder
Refresh	Runs the query to update the data in the Dataset (only available in Datasets)
Rename	Allows you to change the name and description of the query

Filters

Use Post Query Filters to limit the results to only show data that meets the Filter criteria. Filters are dynamically applied to the result set without having to refresh the Query for them to take effect.

Tips - If at some point the data disappears from your Dataset, you have applied a filter with no match. In that case remove the overly restrictive filter.

Types of Filters

Depending on how the end user wants to filter their result set, there are several different post-query filter options available:

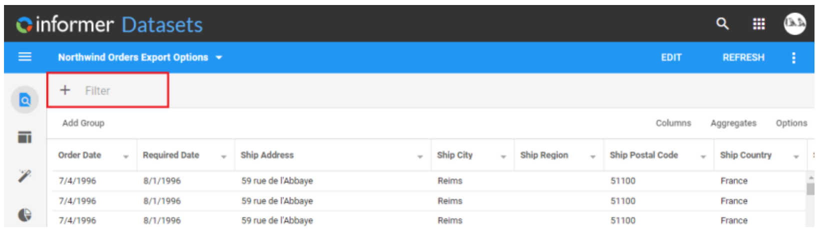
Filter Type	Description
Distinct Values	Provide a menu of check box options that lists the unique data values in the property. This filter can be applied to text, integer/decimal numbers, and date/timestamp data types.
Like	Allows a partial match of the property by leveraging wildcard characters. Normally filters must match entire words or character strings, but Like allows for partial matches. Wildcard characters are '*' for any string of characters and '?' for a single character. You can only enter one string to match with the like per property.
Enter Values	Allows the user type in a value to match. It must match exactly, or nothing will be found. Multiple values can be provided (use the gray + on the right of the panel). If ANY of these values match, the row meets the filter criteria.
Is Empty / Is Not Empty	Toggles to filter for properties that do or do not have a value. You do not have the option of adding other property filters from this panel. Once either is selected, a Filter Chip is created showing the property name and the state.
User Field	Allows the user to filter data based on User Fields that have been defined and assigned to Informer Users.

Filter Type	Description
Number Ranges	Facilitate creating a filter by selecting discrete ranges of numbers. One or more ranges can be selected. The number of entries that are in the category are listed to the right in gray. To change the ranges, choose Configure.
Number Range Slider	Facilitates creating a min/max filter using a visual slider or by entering values.
Number Value Slider	Is only available for Integer Numbers. It operates in a similar fashion to the Number Range Slider but filters to a single discrete value. If you click and drag the slider, you will see the values change in the dataset display dynamically.
Date Range	Creates a filter that will restrict data based on a range of dates. Enter the start and end date either by typing in the data or choosing it from a pop-up calendar.
Date Relative to Now	Creates a filter that defines dates in a past or future range. The first field can be 'Next' or 'Past'. The middle field is a positive integer number that can be typed in then adjusted with up/down arrows. The final field provides a selection of days, weeks, months, or years.
Date Keyword	Creates a filter that created relative dates based on keyword. The help icon, provides detailed information on the available options:
Booleans	Available only on fields with a type of Boolean. Configure to select True, False or Either.
Location Range	Filters query results based on how far away Location values are from a given point. Enter a distance and select the units you would like to use in the filter panel to the left, then click the '...' icon and select 'Configure'

Creating a Filter

Using post-query filters is a powerful function that lets you quickly view and filter that data you want to see, without having to re-run a Query.

To access the post-query filters, open the Query and click “+” on the Filter Bar:



A Query can have two main types of Filters: General Filters and Field-Specific Filters. The result of creating a Filter is a green capsule (Filter Chip) added to the Filter Bar.

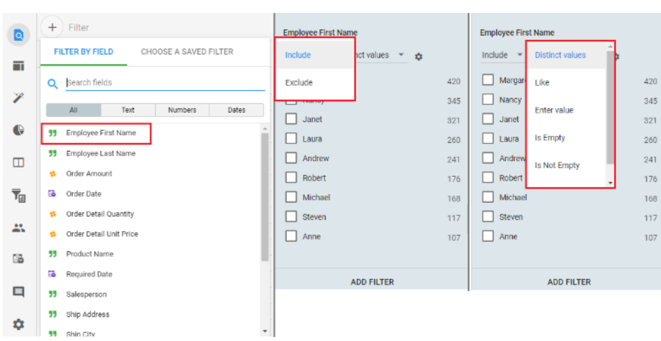
General Filters

To create a general filter, position the cursor in the new filter field next to the '+' icon and start typing. When you complete the search term (one or more words or groups of letters and numbers), press <enter>. The entire string you entered will become a Filter Chip. It will be displayed on the filter bar and the dataset display will only display rows that meet the filter criteria.

Field-Specific Filters

To restrict criteria values to a specific property, click the '+' sign at the far left of the filter bar and you'll be presented with a drop-down list of the properties in the report that can be filtered. If you already know the property name, you could also opt to type it into the filter bar.

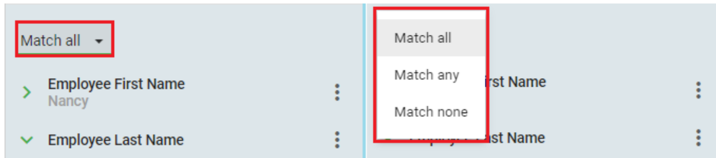
To begin filtering, select the Field to filter by in the dropdown menu, select “Include” or “Exclude” depending on desired results (Include is the default) then choose the type of filter in the resulting sub-menu.



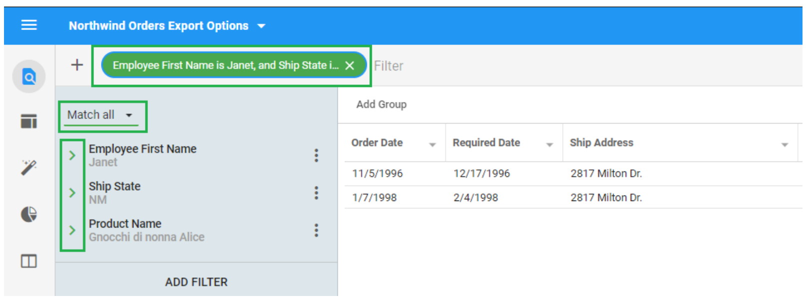
You can continue adding more Filter Chips to narrow down the results even further. By default, when you add multiple filters, only information that matches **all** the values will display. However, you can change how the filters are evaluated by using AND, OR and NOT.

Filtering Using AND, OR, and NOT

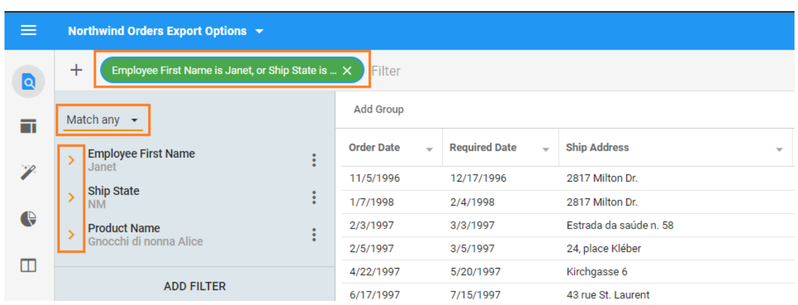
If you have at least two Filter Chips on the filter bar, you have the option to change how the filters are evaluated using All (logical AND), Any (logical OR), or None (logical NOT).



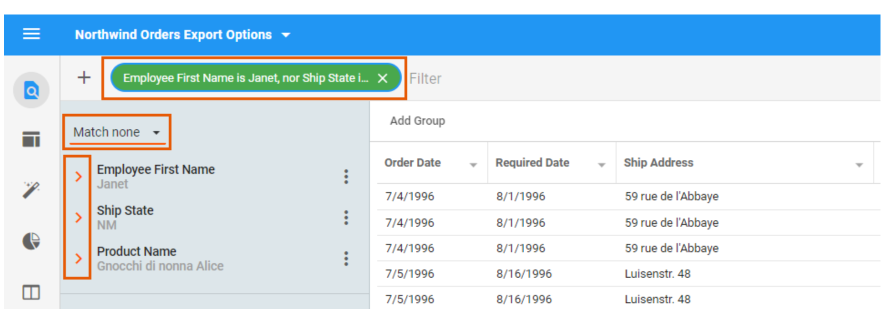
Match all: all the Filter Chips must be satisfied. The Filter Chips will be displayed in green to reflect the 'ALL' condition. In the example below, the rows that meet the filter criteria must contain Employee First name “Janet”, State “NM”, **and** Product name “Gnocchi”:



Match any: any of the Filter Chips can be satisfied. The Filter Chips will be displayed in orange to reflect the 'ANY' condition. In the example below, the rows that meet the filter criteria must contain Employee First name “Janet”, State “NM”, **or** Product name “Gnocchi”:

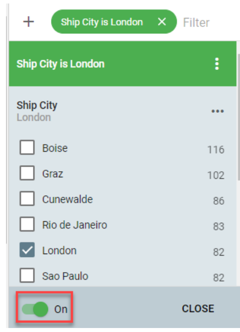


Match none: results will not contain any row that is satisfied by the Filter Chips. The Filter Chips will be displayed in dark orange to reflect the 'NONE' condition. In the example below, the rows that meet the filter criteria **cannot** contain Employee First Name “Janet”, Ship State “NM” **or** Product Name “Gnocchi”.



Removing a Filter

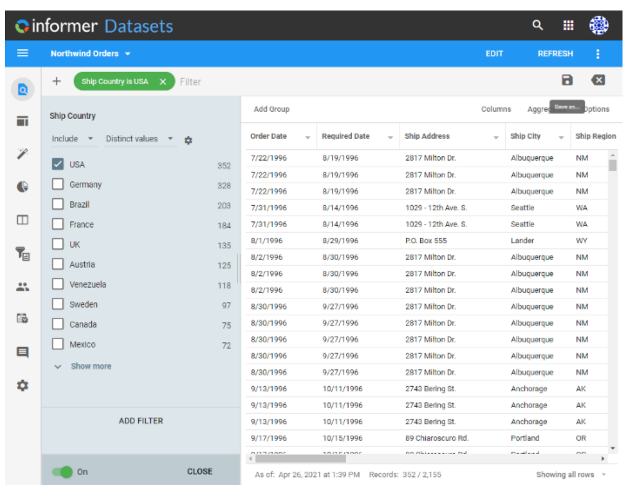
To remove a filter that is no longer needed, click the 'X' icon on the right side of the corresponding Filter Chip. If you only want to disable the filter without removing it from the filter bar, select the Filter Chip and click the switch in the bottom-left corner of the filter panel to turn off the filter.



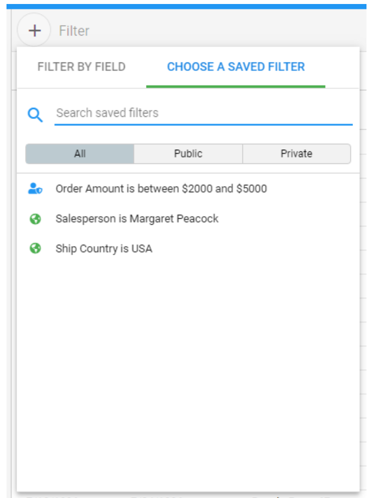
Saved Filters

Saved Filters on Queries allow you to create and re-use filters that either you or members of your team will find useful. Once you save a Filter, you can freely toggle it on or off depending on the results you're wanting to see. Filters can be saved as public or private. Public filters will be available to anyone who has access to the Query, and private filters will only be available to the user that saves it.

To save a filter, click the “Save as…” icon on the right side of the Filter Ribbon, enter a name for the filter, and click “Save”. Newly saved Filters are private by default.

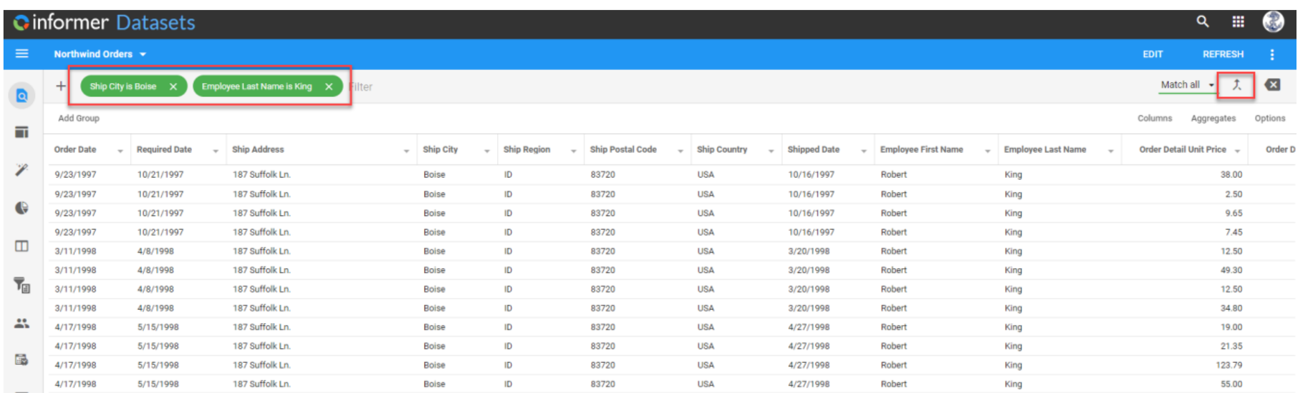


To apply a saved Filter to a Query, click the "Add a Filter" button in the Filter Ribbon, click onto the "Choose a saved Filter" tab, then click the desired Filter to add it to the Query*.* All the available saved Filters will show in this list or click the "Public" or "Private" tabs to see a list of only those Filters.

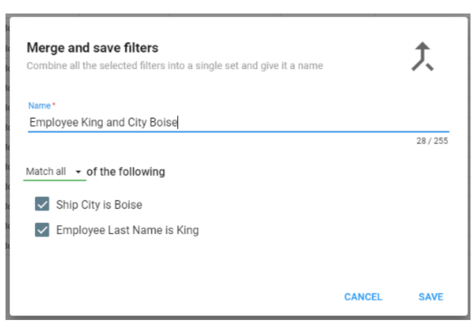


Merging Filters

If you have two filters that are commonly used together, you may wish to merge them into a single filter. To do this, add all the filters you want to merge to the Dataset and click the Merge icon on the right side of the filter bar:

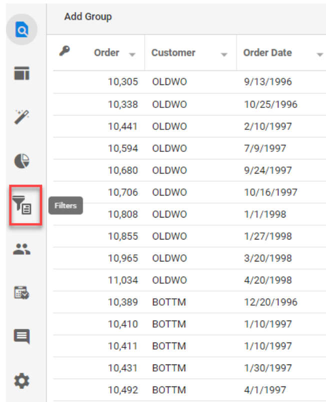


Enter a name to assign to the merged filter, then select 'Match all' (logical AND), 'Match any' (OR), or 'Match none' (NOT) in the dropdown menu. Uncheck the boxes next to any filters you do not want to be merged, then click 'Save' to merge the filters.

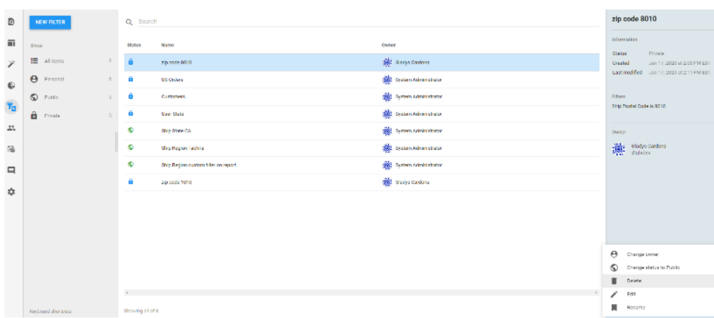


Filters Management Page

To access the Filters Management Page, click on the Filters icon on the left panel



The Filter Management page displays all the existing filters for the Dataset, and the status of either private or public. You can add new filters or edit existing ones. To edit an existing filter, highlight it and click **Actions** on the bottom right-hand corner



- **Change owner** - change the filter ownership to a team or user
- **Change status** - if the filter is private, you will have the option to change it to public, and vice versa
- **Delete** - delete the filter
- **Edit** - make changes to the filter
- **Rename** - change the displayed name of the filter

Column Options

Field options allow you to modify the appearance of the columns of your query, as well as its underlying structure. The various Field options are detailed below:

Note: Some of the options shown are dependent on the data type of the Field being modified. Additional options can also be found when editing the Dataset.

Field Options	Description
Filter	Filters the results of the query based on the selected field.
Pin Column	Pins the column to the left or right side of the table, keeping it there as you scroll left and right. To unpin a Field, select 'No pin' under the 'Pin' sub-menu of the Field options, or simply drag the column header away from the side of the table it is pinned to.
Sort	Sorts the selected Field in either ascending or descending order or removes sorting from the column entirely. You can also cycle through these options by clicking the header of a column.
Move	Moves a column to the beginning, to the end, or after some other specific column. Columns can also be moved by dragging the headers left and right.
Hide	Hides a column from view, which also excludes the column from any exported files. If there are already hidden fields, the 'Reveal hidden fields' option will make hidden fields visible again and any revealed columns will be grayed out and italicized to indicate that it is hidden. For hidden columns, the 'Unhide' option will make a column fully visible again and include them on any export files.
Remove	Removes the column from the grid, same as hiding a Field. To add a Field back to the grid, click the “Columns” button in the settings bar at the top of the grid, find the Field in the list, and check it back on. This column selector shows a list of all the columns in the Query, filterable by data type.
Group	Groups the data into separate tables based on distinct values of the selected Field. To add nested groupings, click the '+' icon at the top and select the next Field you wish to group by. When data is grouped, you have the option to see an overall summary without the details by clicking on Summary Only. This option is available in the query edit page, query results page, and in Jobs.
Aggregates	Displays aggregate values below the selected field. The options vary depending on the field’s data type.

Field Options	Description
Format	Allows you to set the alignment, style, and width of a column, as well as add CSS formatting
Number Options	Allows you to change the formatting of numbers based on what the values represent. These options are only available for Integer and Decimal Number Fields.
Date/Time Format	Allows you to choose how dates or times in a column are formatted. Examples of common formats are shown, as well as an option to create a custom format using moment.js formatting
Autosize all columns	Automatically adjusts the columns widths in the result set so that none of the headers or cell values are truncated.
Autosize this column	Adjusts the column width for the selected column.
Lock column width	Prevents the selected column's width from changing
Show field alias	Shows the alias of the Field under the label. If Field aliases are already shown, this option will change to 'Hide field alias'.

Pivot Table

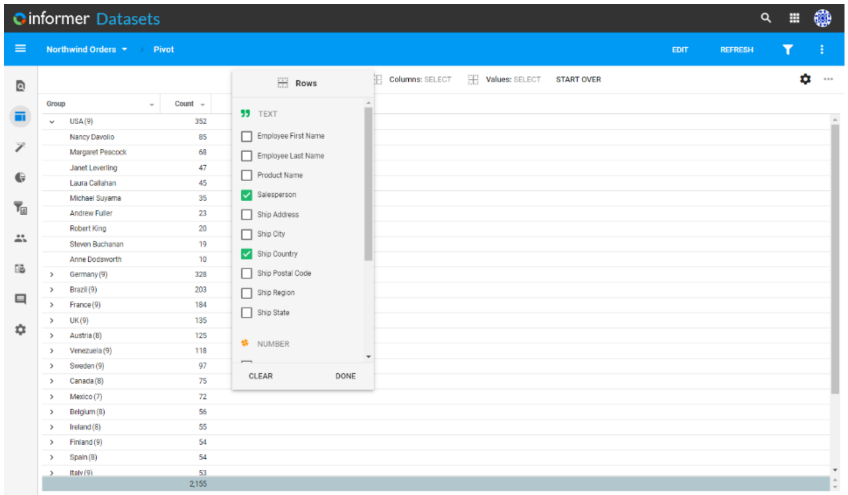
Pivot Tables are one of the Visual options for queries and transform data into a row and column table with values that can be customized. Pivot Tables can be saved on Datasets (depending on your level of access) but cannot be saved in Ad-hoc Queries.

Create a Pivot Table

When creating a Pivot Table, options available include setting Rows, Columns, and Values, as well as a 'Start Over' button that clears all selections

- **Rows** - Choose any fields to represent the rows of your table. If multiple rows are selected, they will be nested in the order they are selected.
- **Columns** - Choose any fields to represent the columns of your table.

- **Values** - Choose the values you want your table to represent.

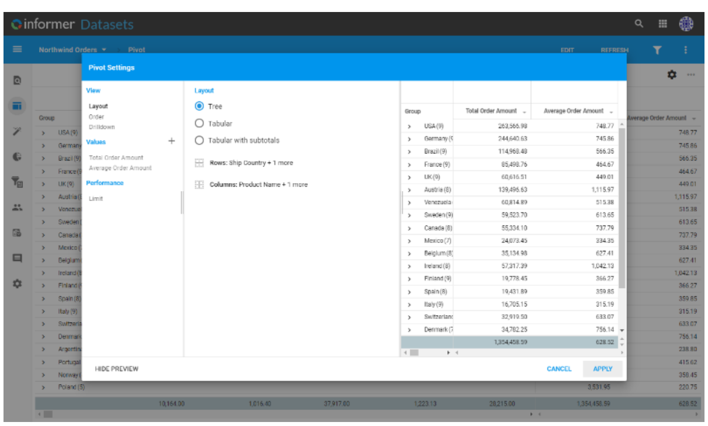


Settings

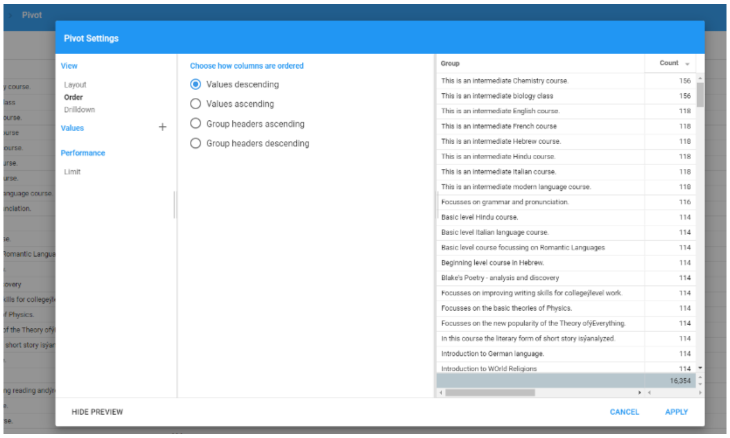
In addition to having full control over which rows, columns and values get displayed in your pivot table, there are also other display options that can be adjusted. Click on the 'configure' gear icon in the top-right of the pivot table window.

Layout – allows to change how many nested groupings for your rows are displayed

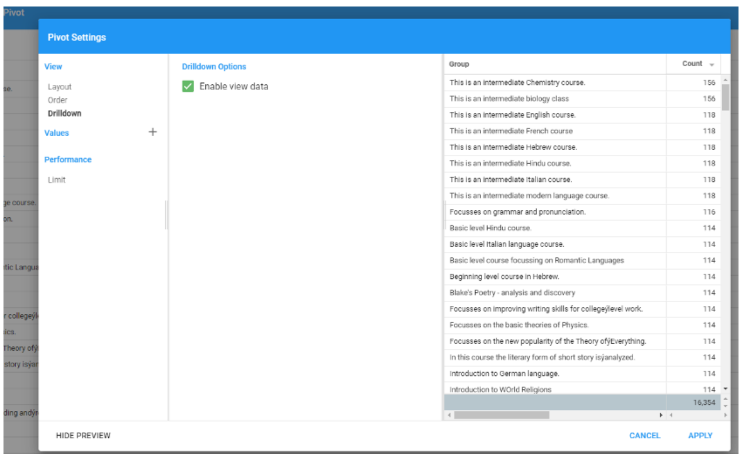
- Tree – it's the default type where you need to click on a top-level grouping to expand it and show lower-level groupings. Any sub-totals of a row's values are displayed on the right-side of the pivot table
- Tabular – this will normalize all row groupings so that users do not have to click on any top-level grouping to expand options. Sub-totals are displayed.
- Tabular with subtotals – same as tabular layout type, with additional top-level subtotal rows.



Order – allows to change the ordering of the columns based on their values. You can choose from values ascending or descending, or alphabetically by group header.

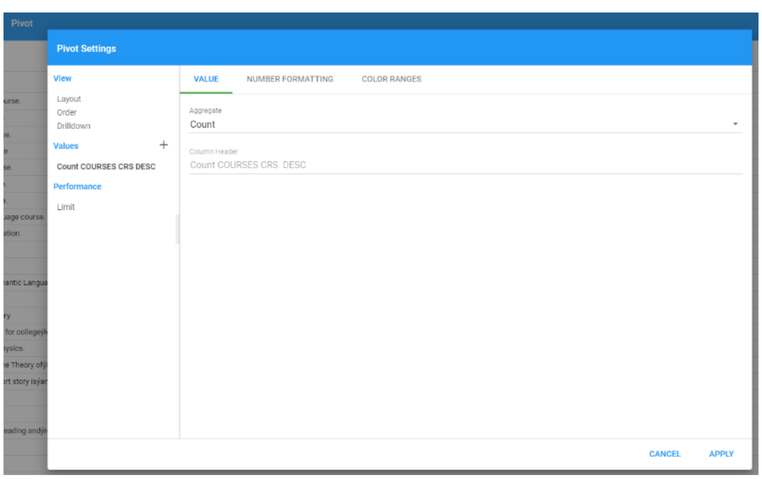


Drilldown – enable or disable the ability for end users to drill down into a specific cell's data

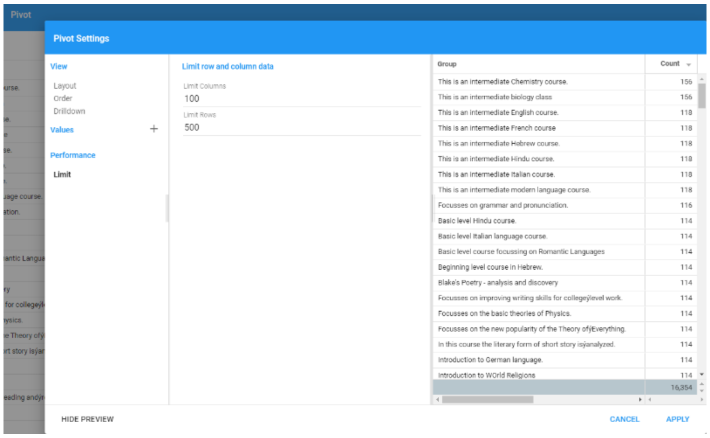


Values – options for each value or aggregate in your pivot:

- Change column header on values
- Number formatting
- Color ranges



Performance – limits how many groupings are included in the pivot (you might only want to see the top 100 groups)



Discover

Informer suggests interesting Visuals based on the Fields that you select. To begin making Visuals, select the Fields you want to represent in the right panel. The center panel will show several different types of Visuals based on the Fields you pick. Visuals with multiple groups, such as charts and tables, will create groupings based on the order in which the Fields were selected. To remove Fields, uncheck the checkboxes by the ones you wish to remove, or click 'Start Over' next to the list of Fields above the Visuals to remove all Fields.

Each Visual that is generated using Discover can be customized using the icons at the top and bottom

Options	Description
Expand	The first icon in the top-right corner of the Visual is 'Expand'. This shows a larger view of the Visual.
Options Menu	The '...' icon in the top-right corner opens a menu with additional Visual options:

Options	Description
	• *Download* - Saves a local copy of the Visual as an image or HTML file that can be used outside of Informer 5 • *Configure* - Allows you to change the configuration of the Visual. • *Pin copy to Homepage* - Pins a copy of the Visual to your Homepage with the current configuration. Any changes made to the Visual afterwards will not affect the pinned version. • *Rename* - Renames the Visual • *Revert* - Reverts any changes that you've made to the Visual's configuration since it was generated by Discover • *Information* - Tells you the last time the data being used in the Visual was updated

Common Configuration Options

Many Visuals have icons in the bottom-left corner that allow you to change common configuration options more quickly than through the configuration screen. These include:

- Change chart type
- Change groups
- Change series
- Filter
- Save Visual to Saved Visuals (only available for Datasets)

Visuals

Go to the 'Visuals' section on the Dataset to create a new visual from scratch. If there are Visuals already associate with the Dataset, you will see a list of them. Click on 'New Visual' to create a new one.

Types of Visuals

There are several different options for visuals depending on how you want to display your data:

- Line, Spline and Area Charts
- Bar and Column Charts
- Pie Charts
- Trend Charts
- Scatter Plots
- KPIs
- Maps

Filters can also be applied to Visuals, just like post-query filters on a Dataset or Ad-hoc Query.

Filters

To access the Filters Management Page, click on the 'Filters' icon. This page displays all existing filters for the Dataset and the status of either private or public. You can add new filters or edit existing ones. For existing filters, click on Actions on the bottom right-hand corner:

- **Change owner** – change the filter ownership to a team or user
- **Change status** – if the filter is private, you will have the option to change it to public, and vice versa
- **Delete** – delete the filter
- **Edit** – make changes to the filter
- **Rename** – change the displayed name of the filter

Access

Under the Access section, you can change the ownership of a Query as well as sharing to other Users and/or Teams. This will be covered in the Designing Queries class.

Jobs

A job is any task or collection of tasks to be executed using data in your system. These tasks can be executed as needed or using a schedule. This is a user-level permission, so not everyone will have access to create and schedule jobs. Jobs can be created from the Jobs page or from inside a query.

The three main components of a Job are the data, actions the job will execute, and the automated schedule used to run the Job.

Data

The first part of configuring a job is defining the data to use. You can choose one or more Datasets or Ad-hoc Queries. Once the Data has been added, additional options will display on the screen to interact with the query results.

Please note that if this is an Ad-hoc Query, you must first 'Run' the query.

Actions

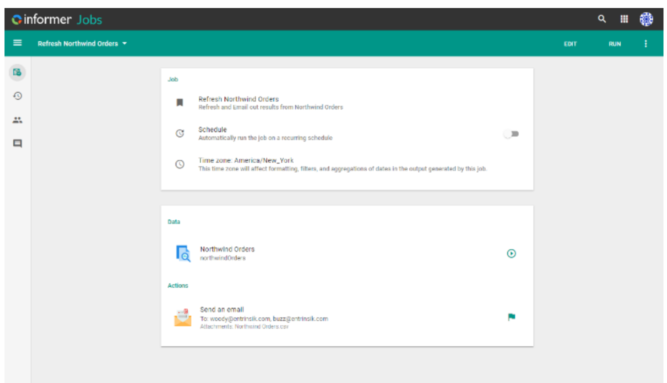
Once the data for the Job is established, you can setup Actions. Multiple actions can be defined, and these actions can include filtered data. These are the available options:

- **Send an email** – Use a rich email editor to send an email using content sourced from the data components of the Job. You can also add file attachments to the email – a new HTML file, a new text file, a new zip file, a file from the file system, or the data components of the Job in a certain file format.

- **Send an email burst** – Use a rich email editor to send emails to different individuals using only specific content per email sourced from the data components of the Job. You can also add file attachments to the email –a new HTML file, a new text file, a new zip file, a file from the file system, or the Data components of the Job in a certain file format.
- **Send to FTP** – Establish and send files via an FTP connection. Choose the files to send - add a new HTML file, a new text file, a new zip file, upload files, or send from the data components of the Job.
- **Send to file system** – Save files to the file system of your Informer instance. Choose the files to send - add a new HTML file, a new text file, a new zip file, upload files, or send from the data components of the Job

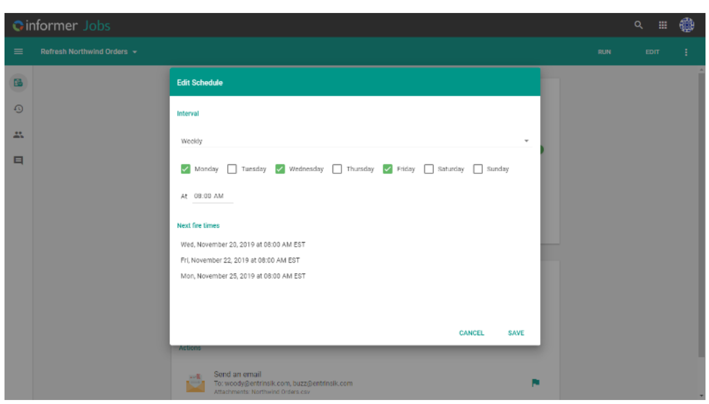
After adding Data components and configuring actions, the Job Details page will display. This page outlines everything that the job is doing.

- **Edit** – displays the Job's edit page where you can modify or add new Data components or Actions to the job
- **Run** – executes the Job as it is currently configured



Schedule

To setup a schedule on a job, toggle on the 'Schedule' option from the Job details page. The 'Edit Schedule' page opens where you can specify the schedule interval (minutes, hourly, daily, weekly, monthly, yearly, or some other custom interval as determined by a CRON syntax Job.



Interacting with Reports

Dashboards

- Filtering
  - Can apply Saved filters
  - Can create new filter
- Drill down
  - Can drill down on all fields (if access has been granted)
  - Can create Pivot table from the visual
  - View Data to display detail information
  - Export
- Actions on each visual will depend on level of access
  - Download
  - Pin to homepage will add visual to Pins area on home page

Comparison Boards

- Filtering
- Can apply Saved filters
- Can create new filter
- Drill down
- Can drill down on all fields (if access has been granted)
- Can create Pivot table from the visual
- View Data to display detail information
- Export
- Actions on each visual will depend on level of access
- Download
- Pin to homepage will add visual to Pins area on home page

Data View

- Data View are created from a dataset
  - Pick and choose the columns/fields to include in report
  - Can apply Saved filters
  - Can create new filters
- Same options as interacting with Dataset and Ad-hoc Queries
  - Add group
  - Summary only
  - Aggregates
  - Options