

IBM Cognos Analytics
Version 11.1

New Features Guide



©

Product Information

This document applies to IBM Cognos Analytics version 11.1.0 and may also apply to subsequent releases.

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Chapter 1. New and changed features

The following topics document new and changed features in Cognos® Analytics.

Release 11.1.7 - July 2020

This section describes new and changed features in IBM® Cognos Analytics 11.1.7.

Getting started

Learn about enhancements to the user interface, training materials, and features that affect multiple IBM Cognos Analytics components.

New APIs for developers

Next generation APIs are now available for developers to automate, scale, and accelerate their use of Cognos Analytics.

RESTful APIs have been introduced to allow you to create, read, update, and delete common operations, such as customizing themes and extensions; managing content and data sources; and working with tenants, users, and roles.

JavaScript APIs enable you to develop applications that leverage an assortment of JavaScript classes and methods. Use the provided dashboard sample to get started with creating your own dynamic dashboard.

For details on REST and JavaScript API reference documentation and samples, see [Cognos Analytics APIs](#).

Additional Carbon Design changes

Additional Carbon Design practices were implemented, such as new icons and updates to fonts and colors. Icons from previous releases may have changed as well.

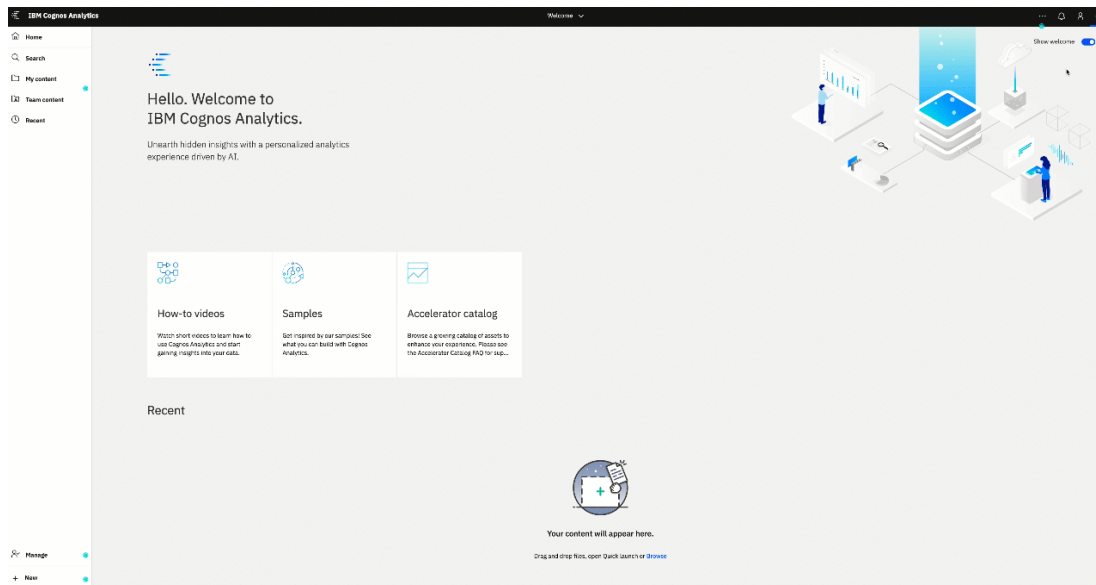
The adoption of Carbon Design provides a consistent user experience across IBM products. For more information, see <https://www.carbondesignsystem.com>.

Accelerator Catalog samples

Accelerator Catalog is a platform that showcases and shares both expertise and assets. Use the content to get acquainted with IBM Cognos Analytics.

Assets are available for various skill levels and are categorized across multiple industries and business function. For more information, please visit [IBM Data and AI Accelerators](#).

Finding Accelerator Catalog samples is also quick and easy. Accelerator Catalog samples can be searched for and opened from the Cognitive Learn Pane.



Support for each asset is provided by the author of the asset. Please refer to the Accelerator Catalog **FAQ** for further details.

Dashboards

Use IBM Cognos Analytics dashboards to discover key insights about your data and monitor events or activities at a glance.

Schematics

Schematics are visualizations that can map data directly onto an arbitrary graphic representation. Schematics can, for example be floor plans, seating arrangements, mechanical drawings, or schematic geographical representations.

A schematic is a library of similar images, like seating plans or stadium layouts, that use similar keys and that are conceptually bundled together to provide some organization.



Before you can import a schematic, you must author and distribute the schematic.

For more information, see the *Authoring schematics - tutorial* documentation in the *IBM Cognos Analytics Custom Visualizations Developer Guide*.

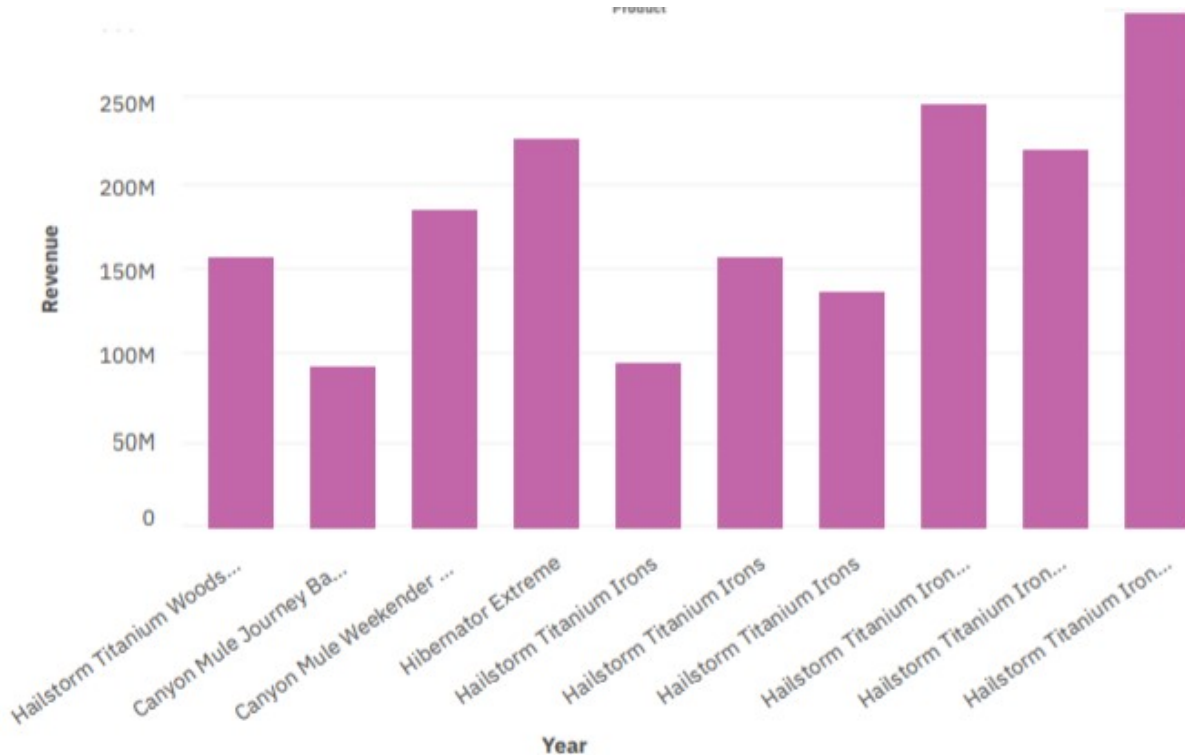
When the schematic is authored and distributed, you can add it in a dashboard.

For more information, see *Adding a schematic to a dashboard* in the *IBM Cognos Analytics Dashboard and Stories User Guide*.

Improved categorical axis labels in visualizations

As of IBM Cognos Analytics 11.1.7, the display of categorical axis labels is improved.

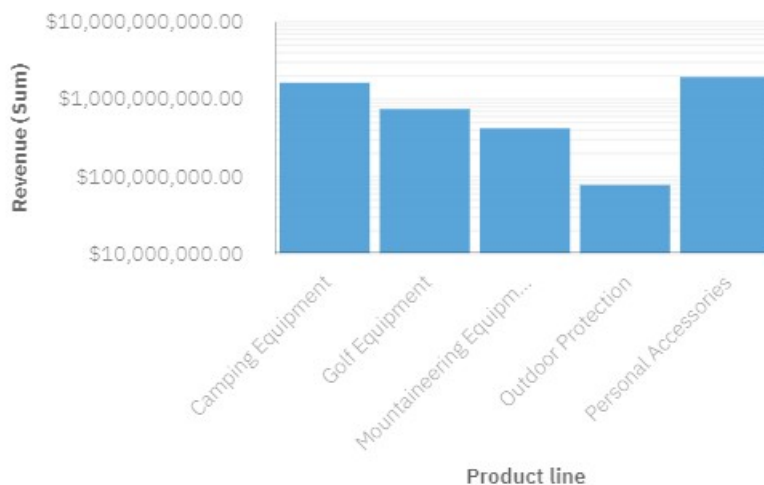
The padding and angle changed to improve the legibility.



Logarithmic scale in visualizations

Logarithmic scales are useful when the data you are displaying is much less or much more than the rest of the data or when the percentage differences between values are important.

Revenue by Product line



For more information, see the *Logarithmic scale* topic in the *IBM Cognos Analytics Dashboard and Stories User Guide*, and the *Properties for individual 11.1 visualizations in Reporting* topic in the *IBM Cognos Analytics Reporting User Guide*.

Responsive option

Hides certain aspects of the visualization if the size is limited, to maximize the space that is available to display data.

For more information, see the *Responsive option* topic in the *IBM Cognos Analytics Dashboard and Stories User Guide*.

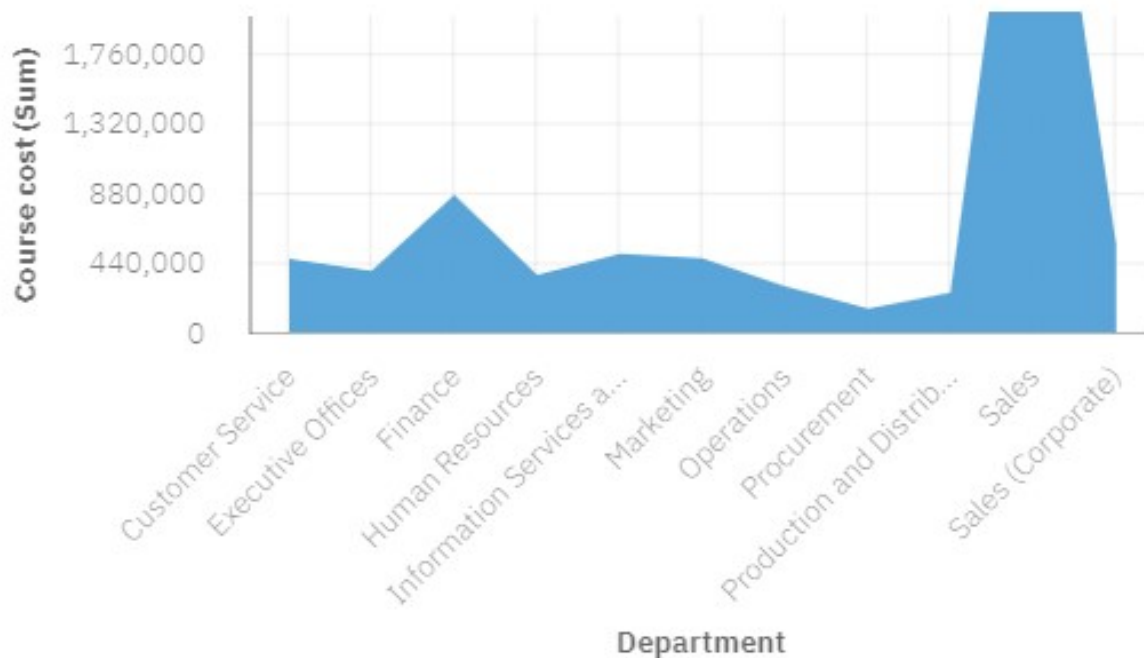
New axis options for visualization

You can change the value axis tick interval in some visualizations.

With the option, **Value axis minimum value** you can set the minimum value of the value axis.

With the option, **Value axis maximum value** you can set the maximum value of the value axis.

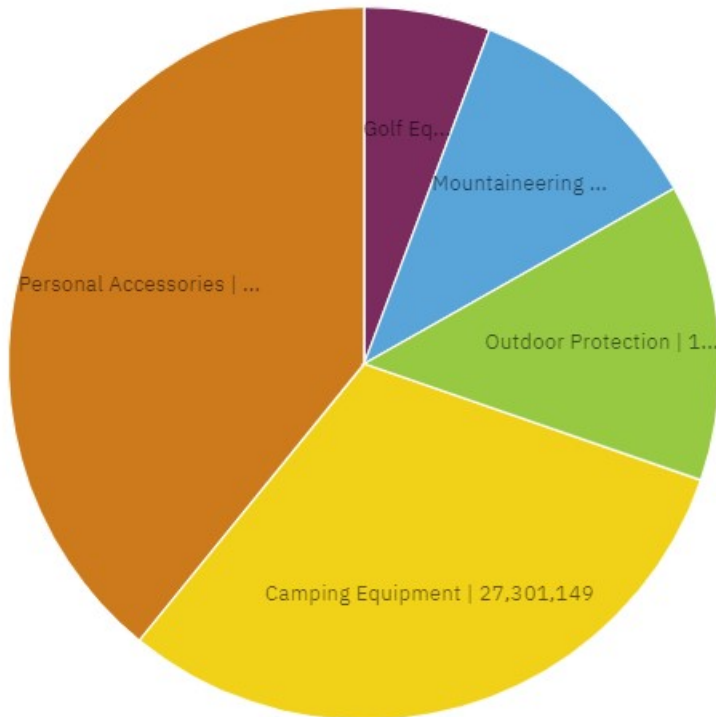
Course cost by Department



For more information, see the *Value axis options* topic in the *IBM Cognos Analytics Dashboard and Stories User Guide*, and the *Properties for individual 11.1 visualizations in Reporting* topic in the *IBM Cognos Analytics Reporting User Guide*.

Changing the label options in a pie visualization

You can change the format of the labels and use a callout for the label location in pie visualizations.



For more information, see the *Changing the label format* and *Changing the label value location* documentation in the *IBM Cognos Analytics Dashboard and Stories User Guide*.

Improvements to visualization legends

If there are too many items in the legend to be displayed an ellipsis is displayed.



For more information, see the *Working with the legend* topic in the *IBM Cognos Analytics Dashboard and Stories User Guide*, and the *Legends* topic in the *IBM Cognos Analytics Reporting User Guide*.

Sub-categories added to waterfall visualizations

You can use sub-categories in waterfall visualizations. Use sub-categories to display how categories are built up.

You can see how the revenue of each month contributes to the quarterly totals.



For more information, see the *Waterfall* documentation in the *IBM Cognos Analytics Dashboard and Stories User Guide*, and the *Waterfall* topic in the *IBM Cognos Analytics Reporting User Guide*.

Treemap visualization supports different display modes

In addition to the default squarified display mode, you can now select: slice, dice, and slice-dice as the display mode in treemap visualization.

Treemap visualizations support the following display modes:

- **Squarified:** The default display mode.
- **Slice:** Displays measures that belong to the same node in a vertically sliced way.
- **Dice:** Displays measures that belong to the same node in a horizontally sliced way.
- **Slice - Dice:** Displays stacked hierarchical measures that belong to the same node in a vertically sliced way.

The following screen capture displays a treemap with the Organization and Department measures on the **Area hierarchy** field, and Expense total on the **Size** field.

Expense total for Organization and Department hierarchy



For more information, see the *Treemap* topic in the *IBM Cognos Analytics Dashboard and Stories User Guide*, and the *Treemap* topic in the *IBM Cognos Analytics Reporting User Guide*.

Accessibility: skip to content

Using **Skip to content** you skip the application toolbar and the navigation pane and go straight to the content in IBM Cognos Analytics.

Using **Skip to content** helps in keyboard navigation because you don't need to tab through the application toolbar and the navigation pane to reach your content.

You can also use the keyboard shortcuts to achieve the same results:

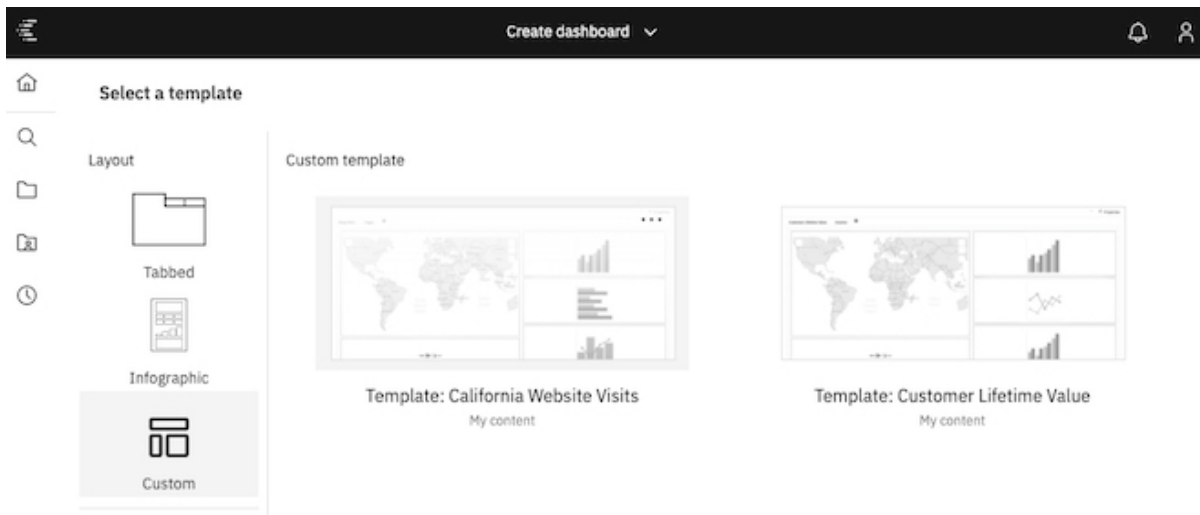
- Skip to navigation: Ctrl+Shift+1 (for Microsoft Windows), Cmd+Shift+1 (for macOS)
- Skip to main content: Ctrl+Shift+2 (for Microsoft Windows), Cmd+Shift+2 (for macOS)

For more information, see the *Skip to content* topic in the *IBM Cognos Analytics Accessibility Guide*.

Create custom templates

You can save an existing dashboard as a template to use to quickly create new dashboards.

A custom template that you save from a dashboard is an outline of a dashboard without the data. Your dashboards chart types, colors, placement, and other formatting remain intact on a custom template. If you have one or more custom templates saved, instead of choosing a blank layout you can select a custom template when you are creating a new dashboard.

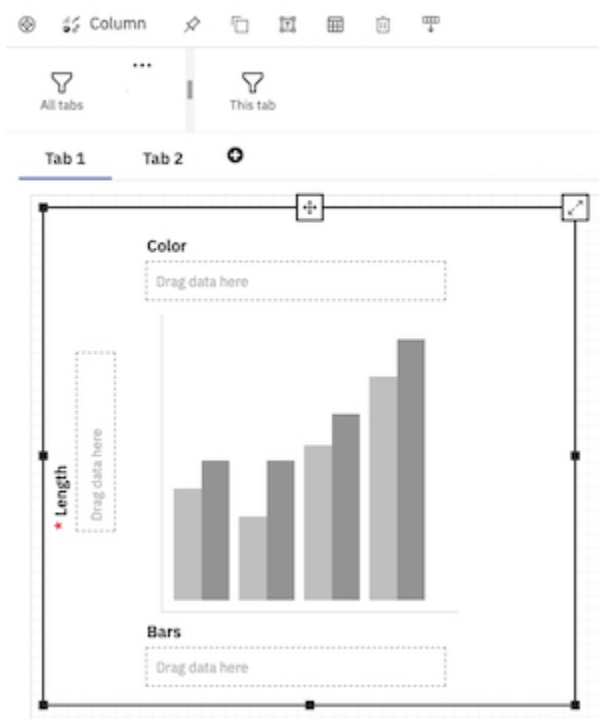


For more information, see the *Creating a custom template* documentation in the *IBM Cognos Analytics Dashboard and Stories User Guide*.

Drop zones on visualizations

Use drop zones on visualizations to add data directly to specific fields and quickly build a visualization.

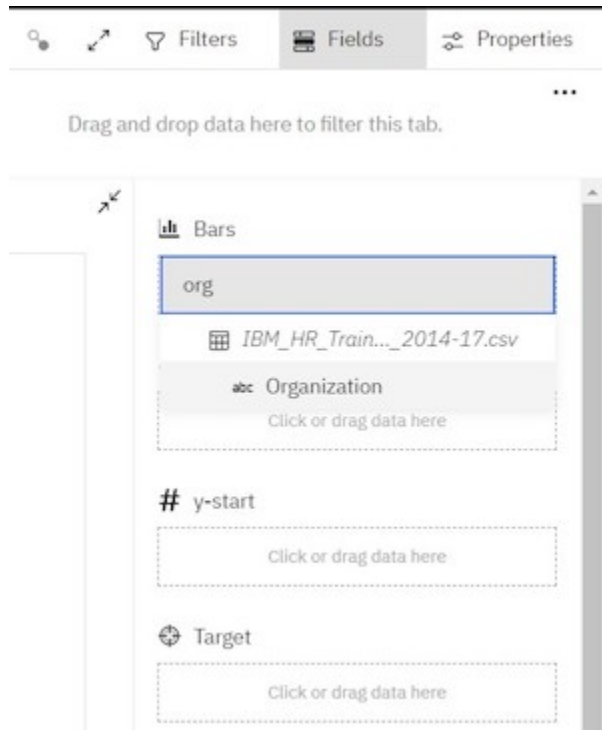
When you start with a blank visualization, drop zones guide you to where to drag your data directly on to the visualization.



For more information, see the *Creating a visualization using drop zones* documentation in the *IBM Cognos Analytics Dashboard and Stories User Guide*.

Creating a visualization using search in data fields

You can quickly build a visualization that uses search in data fields.



For more information, see the *Creating a visualization using search in data fields* documentation in the *IBM Cognos Analytics Dashboard and Stories User Guide*.

Export visualization data to a CSV file

You can export the aggregate and detail data from a visualization to a CSV file.

The **Export data** feature is available from the **Visualization data menu** in the data tray.

Visualization data	HollywoodMovies.csv	salesAndMarketing.csv
Product type	Planned revenue	Revenue
Cooking Gear	302058230.59	272835984.18
Lanterns	135242686.1	126925660.64
Camping Equipment	375110672.2	351880402.84
Camping Equipment	333438429.7	309172888.35

For more information, see the *Exporting visualization data to a CSV file* documentation in the *IBM Cognos Analytics Dashboard and Stories User Guide*.

Conditionally format crosstabs

You can define rules to color cells based on key business metrics.

On the toolbar, open the properties for a crosstab or table to highlight conditionally formatted data with color.

The screenshot displays the IBM Cognos Analytics interface. At the top, a toolbar includes icons for zooming, panning, and tabs for 'Filters', 'Fields', and 'Properties'. The 'Properties' tab is active, showing the 'Conditional color: Pages' settings. On the left, a crosstab titled 'Unique Visitors and Pages by Zip Code' is shown. The table has three columns: 'Zip Code', 'Pages', and 'Unique Visitors'. The 'Pages' column is highlighted with a green-to-red color gradient based on the number of pages. The 'Unique Visitors' column is greyed out. The right sidebar shows the 'Conditional color: Pages' configuration. It includes a 'Current conditional palette' section with a color bar and a 'Change palette' link. Below this, the 'Color By' dropdown is set to 'Pages' and the 'Scale' dropdown is set to 'Numeric'. The 'Rules' section contains two rules: 'Greater than 278,000' with a green color swatch and 'Less than 278,000' with a red color swatch. An 'Add rule' button is at the bottom of the rules section. The 'Background opacity (%)' is set to 50.

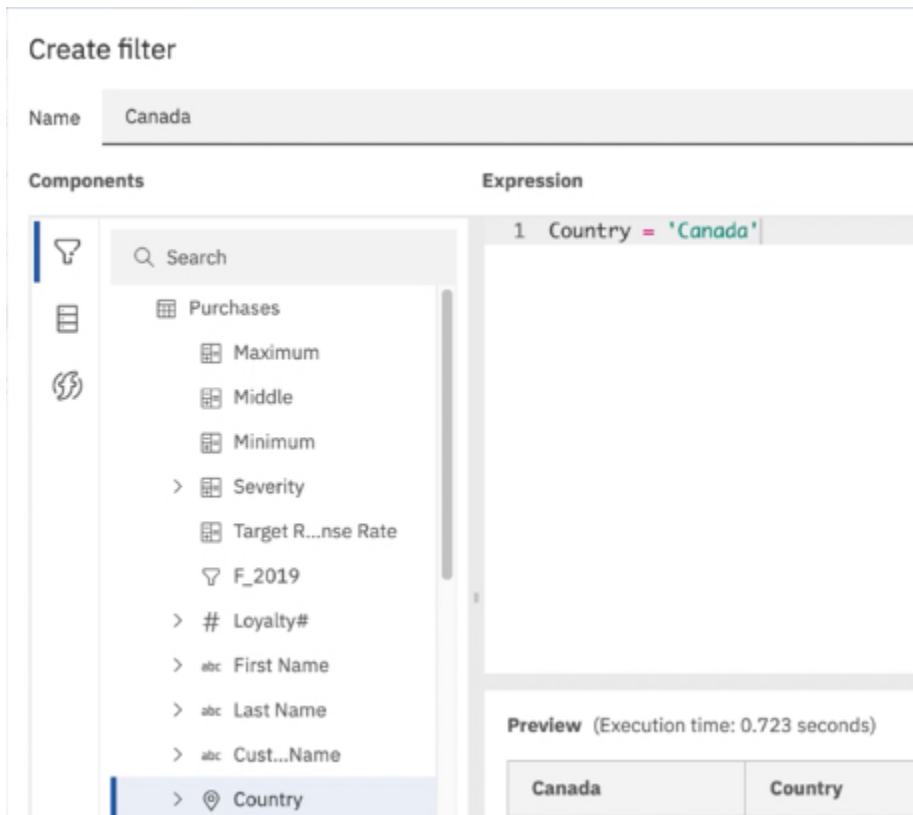
Zip Code	Pages	Unique Visitors
90037	284,242 ↑	15,712
90701	278,669 ↑	15,404
90017	273,277 ↓	15,106
93927	265,210 ↓	14,660
90703	262,710 ↓	14,522
90250	259,902 ↓	14,367
90245	251,947 ↓	13,927
90293	247,490 ↓	13,681

For more information, see the *Highlighting conditionally formatted data with color* documentation in the *IBM Cognos Analytics Dashboard and Stories User Guide*.

Create module filters

You can create module filters from the metadata tree.

The filters can be dragged to the local filter area on a visualization or on to the filter shelf.



For more information, see the *Creating selectable filters* documentation in the *IBM Cognos Analytics Data Modeling Guide*.

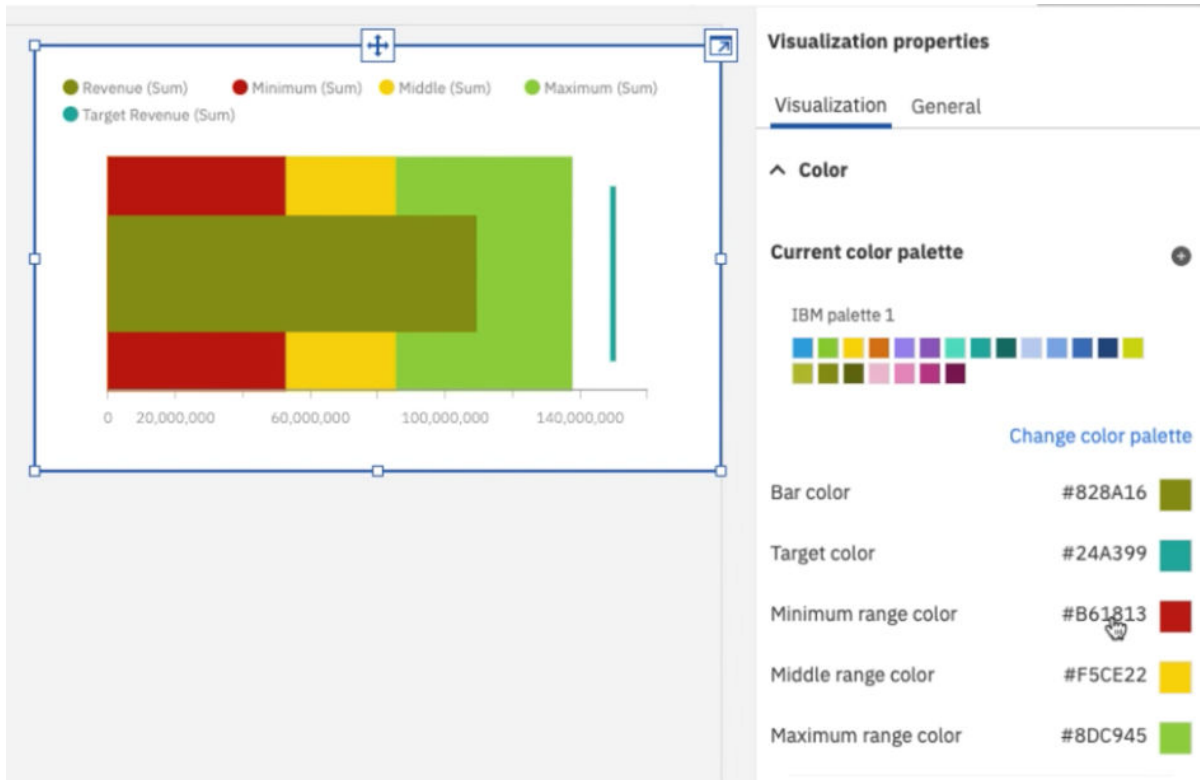
IBM Plex font

You can select the IBM Plex® font when you author a dashboard or a report.

Bullet visualization range coloring

You can now apply color to the min/mid/max ranges.

With the option, **Minimum range color**, **Middle range color**, and **Maximum range color** you can set the color of the ranges.



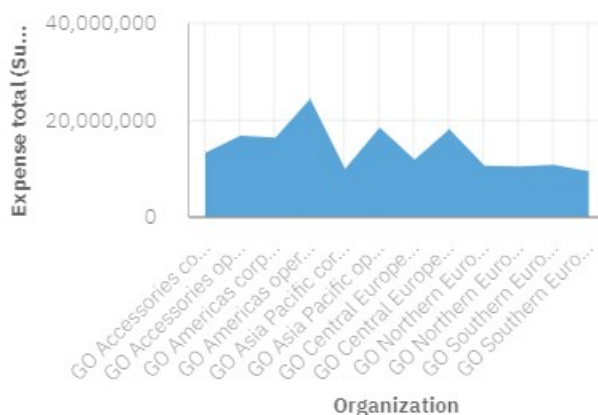
New title options for visualizations

Add clarity by adding a title to any visualization.

The following options are available for titles in a visualization:

- **Smart title** Data is used to display the title.
- **Custom title** You can specify the title.
- **No title**

Expense total by Organization



For more information, see the *Adding a title to a visualization* topic in the *IBM Cognos Analytics Dashboard and Stories User Guide*.

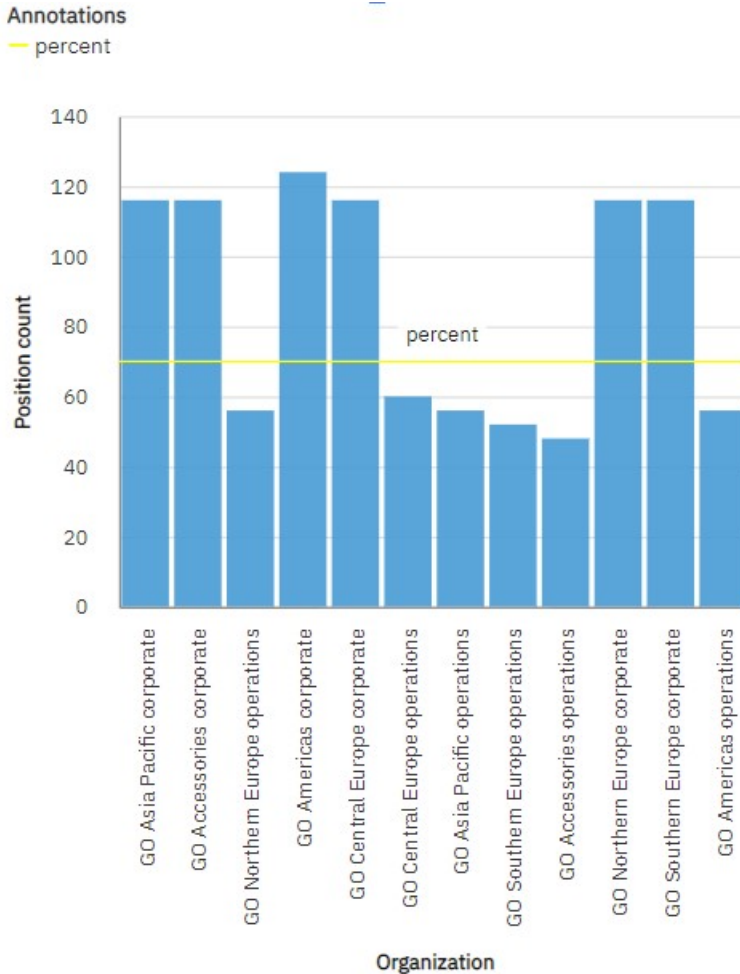
Reporting

IBM Cognos Analytics reporting is a web-based report authoring tool that professional report authors and developers use to build sophisticated, multiple-page, multiple-query reports against multiple databases.

Adding a baseline to a visualization

Baselines are horizontal or vertical lines that cut through the chart to indicate major divisions in the data.

A bar visualization with a baseline at 50%.



For more information, see the *Adding a baseline to a visualization* topic in the *IBM Cognos Analytics Reporting User Guide*.

Comparing measures in a visualization

The number of visualizations that you can use for comparing measures has increased.

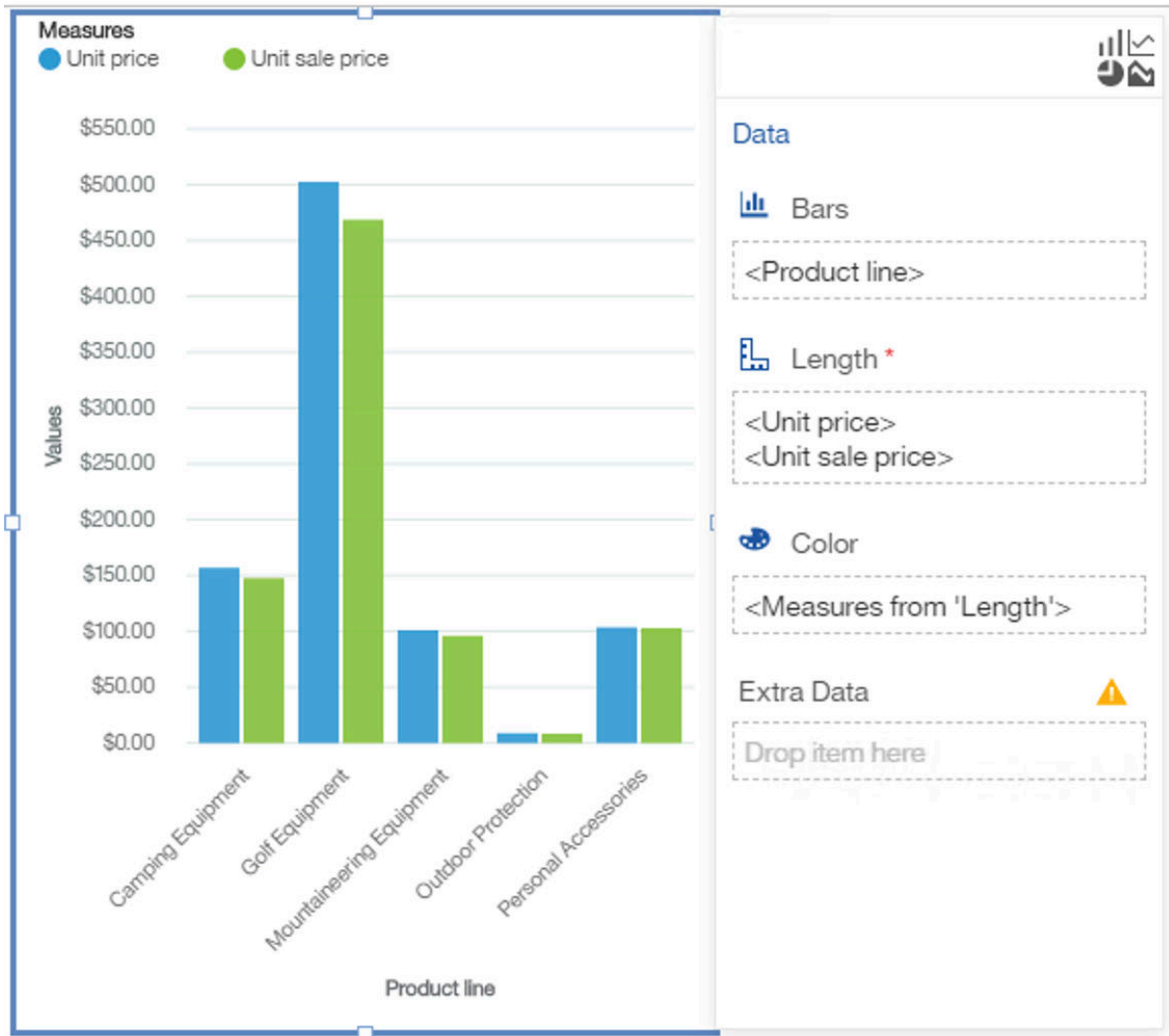
You can compare measures from the same category in a visualization by adding multiple measures on the measure slot.

Comparing measures is only available for the following visualizations:

- Area
- Bar
- Column
- Hierarchical packed bubble
- Packed bubble
- Point
- Clustered combination

- Stacked combination
- Line
- Tiled map
- Pie
- Radar
- Tree map
- Waterfall
- Word cloud

For example, you can compare the unit price with the unit sale price.



For more information, see the *Comparing measures in a visualization* documentation in the *IBM Cognos Analytics Reporting User Guide*.

Clustered combination and stacked combination visualizations

Use a clustered combination visualization to compare values by one or more columns, such as sales for products per country and use lines to highlight relationships between multiple data series.

Use a stacked combination visualization to compare the proportional contributions for each item to the total, such as sales for products and sales for products each month and use lines to highlight relationships between multiple data series.



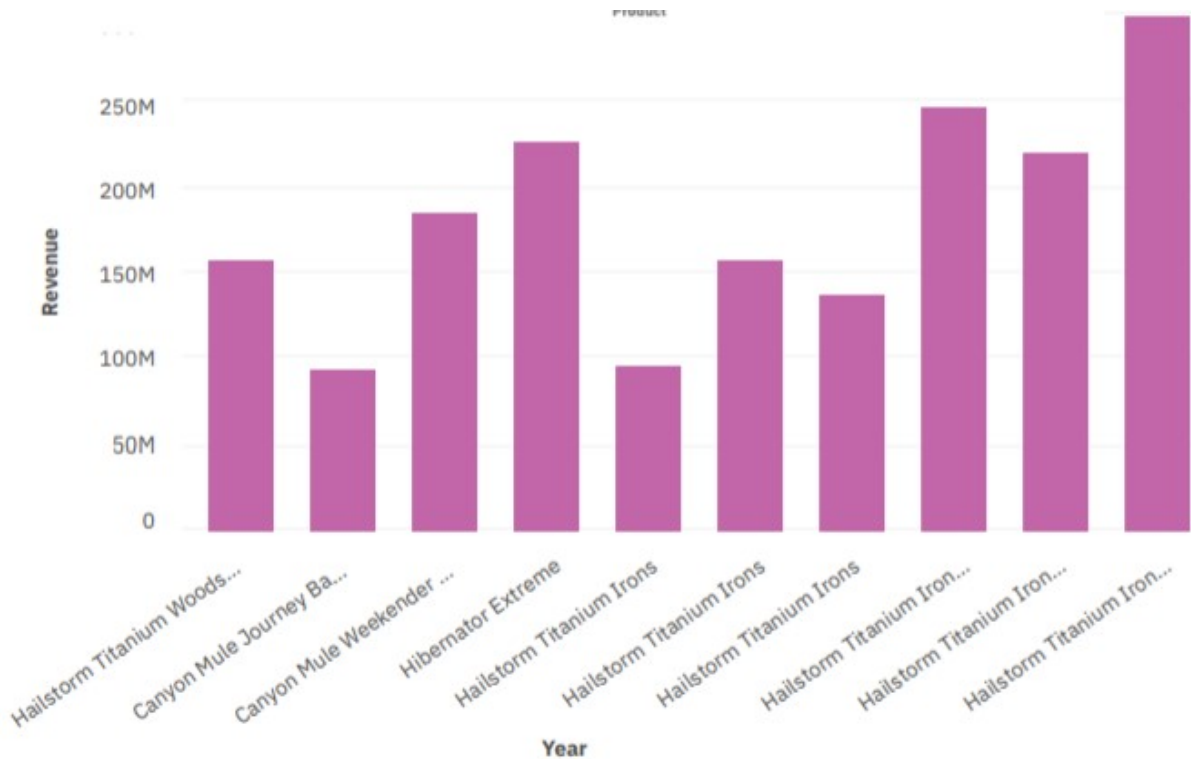


For more information, see the *Stacked combination* and *Cluster combination* topics in the *IBM Cognos Analytics Reporting User Guide*.

Improved categorical axis labels in visualizations

As of IBM Cognos Analytics 11.1.7, the display of categorical axis labels is improved.

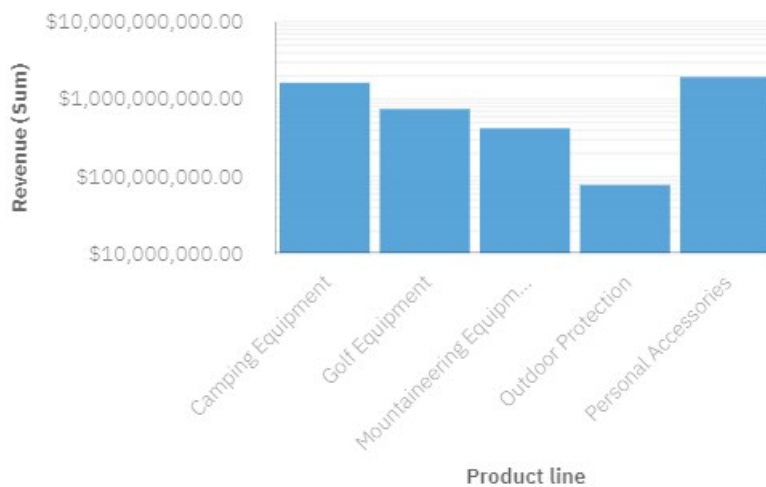
The padding and angle changed to improve the legibility.



Logarithmic scale in visualizations

Logarithmic scales are useful when the data you are displaying is much less or much more than the rest of the data or when the percentage differences between values are important.

Revenue by Product line



For more information, see the *Logarithmic scale* topic in the *IBM Cognos Analytics Dashboard and Stories User Guide*, and the *Properties for individual 11.1 visualizations in Reporting* topic in the *IBM Cognos Analytics Reporting User Guide*.

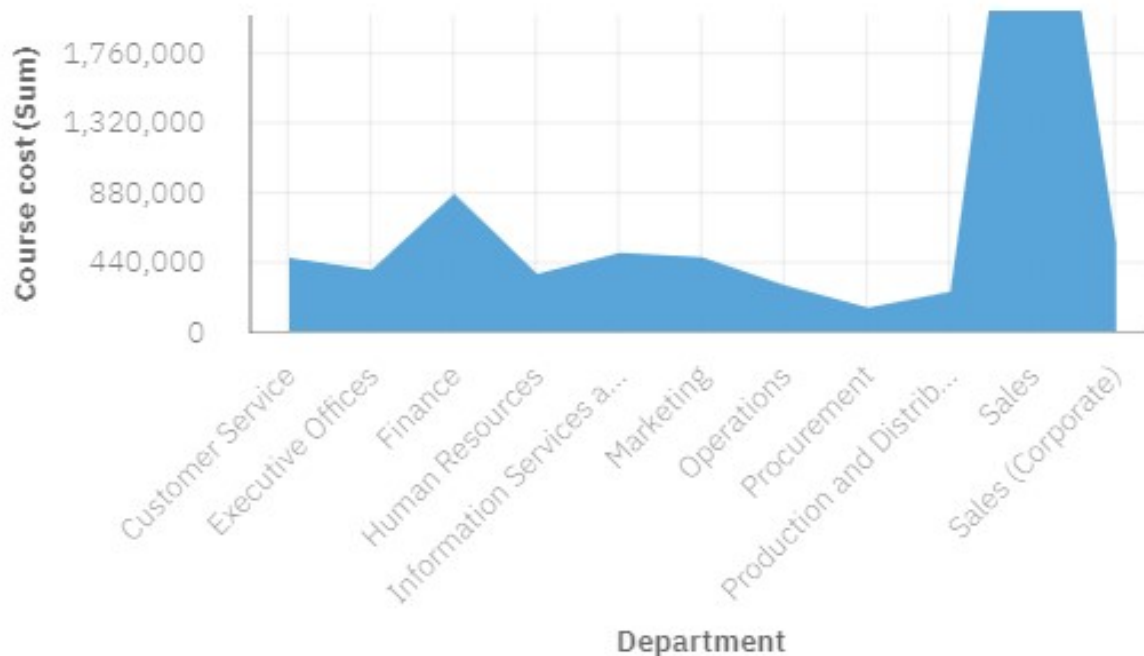
New axis options for visualization

You can change the value axis tick interval in some visualizations.

With the option, **Value axis minimum value** you can set the minimum value of the value axis.

With the option, **Value axis maximum value** you can set the maximum value of the value axis.

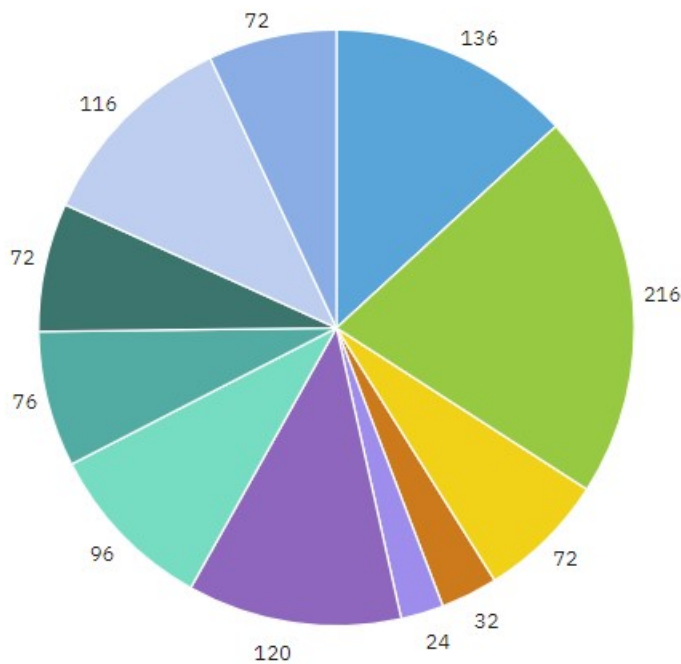
Course cost by Department



For more information, see the *Value axis options* topic in the *IBM Cognos Analytics Dashboard and Stories User Guide*, and the *Properties for individual 11.1 visualizations in Reporting* topic in the *IBM Cognos Analytics Reporting User Guide*.

Changing the label location in a pie visualization

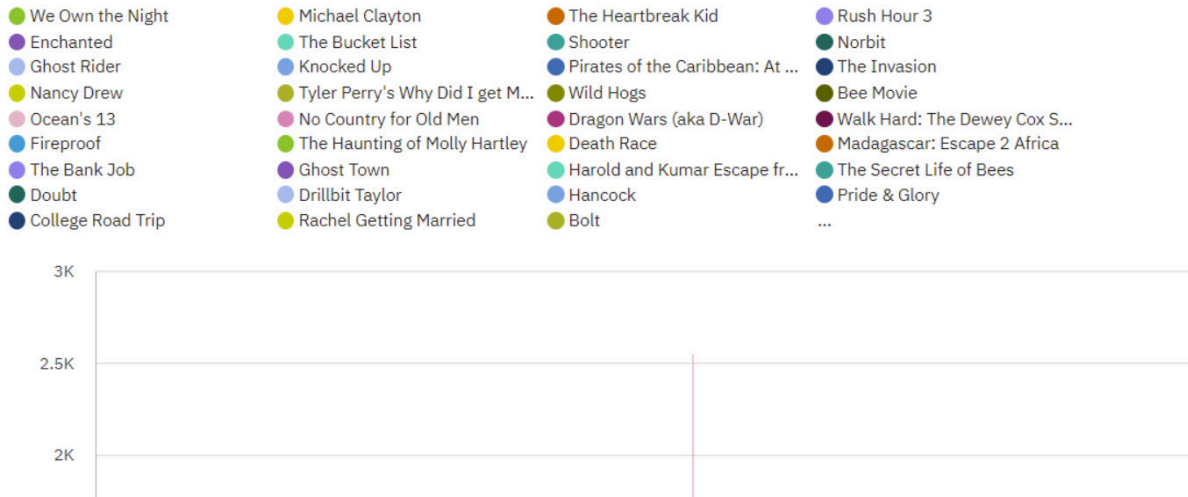
You can change the label location in pie visualizations.



For more information, see the *Properties for individual 11.1 visualizations in Reporting* topic in the *IBM Cognos Analytics Reporting User Guide*.

Improvements to visualization legends

If there are too many items in the legend to be displayed an ellipsis is displayed.



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Sub-categories added to waterfall visualizations

You can use sub-categories in waterfall visualizations. Use sub-categories to display how categories are built up.

You can see how the revenue of each month contributes to the quarterly totals.



For more information, see the *Waterfall* documentation in the *IBM Cognos Analytics Dashboard and Stories User Guide*, and the *Waterfall* topic in the *IBM Cognos Analytics Reporting User Guide*.

Treemap visualization supports different display modes

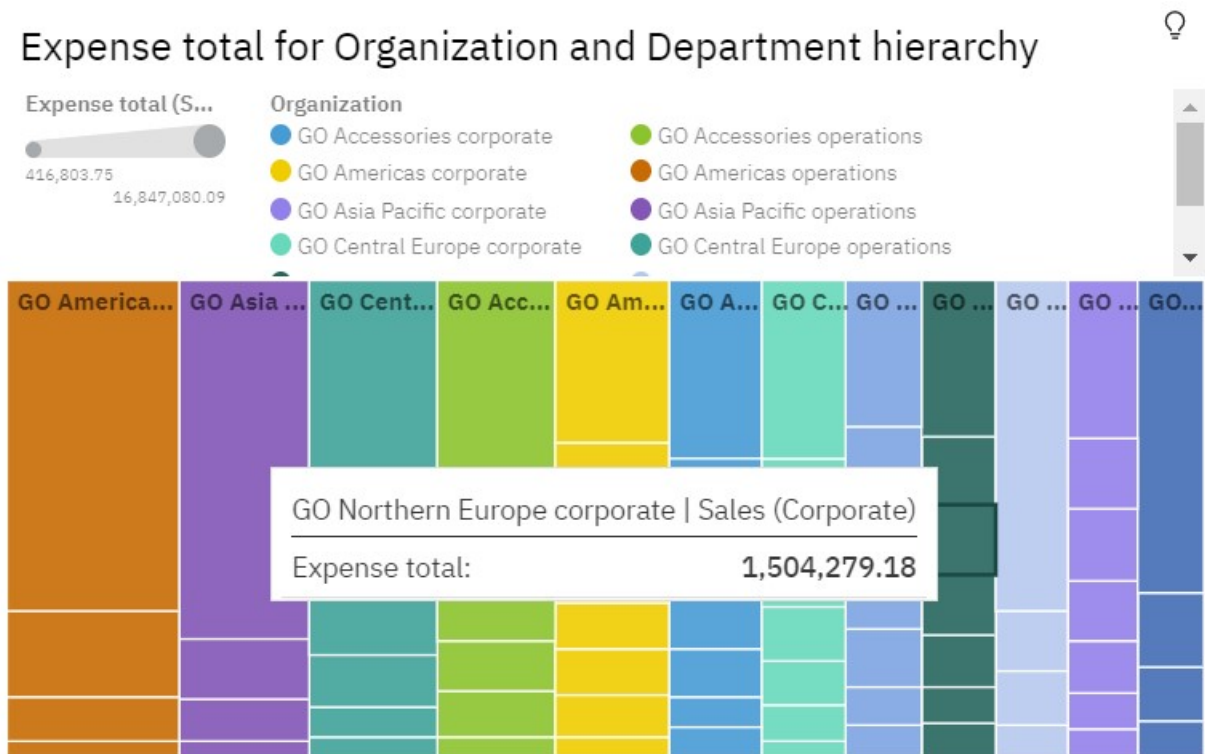
In addition to the default squarified display mode, you can now select: slice, dice, and slice-dice as the display mode in treemap visualization.

Treemap visualizations support the following display modes:

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- **Slice:** Displays measures that belong to the same node in a vertically sliced way.

- **Dice:** Displays measures that belong to the same node in a horizontally sliced way.
- **Slice - Dice:** Displays stacked hierarchical measures that belong to the same node in a vertically sliced way.

The following screen capture displays a treemap with the Organization and Department measures on the **Area hierarchy** field, and Expense total on the **Size** field.



For more information, see the *Treemap* topic in the *IBM Cognos Analytics Dashboard and Stories User Guide*, and the *Treemap* topic in the *IBM Cognos Analytics Reporting User Guide*.

Accessibility: skip to content

Using **Skip to content** you skip the application toolbar and the navigation pane and go straight to the content in IBM Cognos Analytics.

Using **Skip to content** helps in keyboard navigation because you don't need to tab through the application toolbar and the navigation pane to reach your content.

You can also use the keyboard shortcuts to achieve the same results:

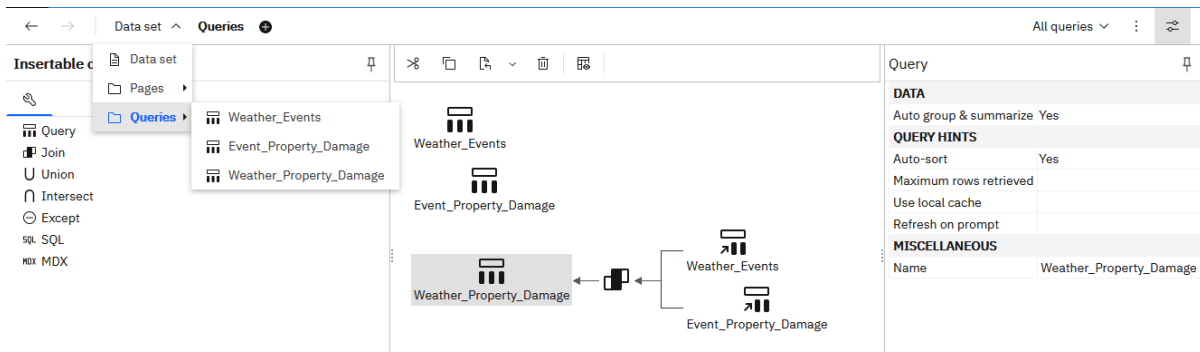
- Skip to navigation: Ctrl+Shift+1 (for Microsoft Windows), Cmd+Shift+1 (for macOS)
- Skip to main content: Ctrl+Shift+2 (for Microsoft Windows), Cmd+Shift+2 (for macOS)

For more information, see the *Skip to content* topic in the *IBM Cognos Analytics Accessibility Guide*.

Data set improvements

When you create data sets, you have access to the query explorer. Also, the generation of data in the data sets is much faster and more efficient.

By using the query explorer, you can reuse an existing report and its queries in the data set. You can also perform query operations with properties, manage advanced filters and parameters, review the generated SQL, and validate and rename queries.

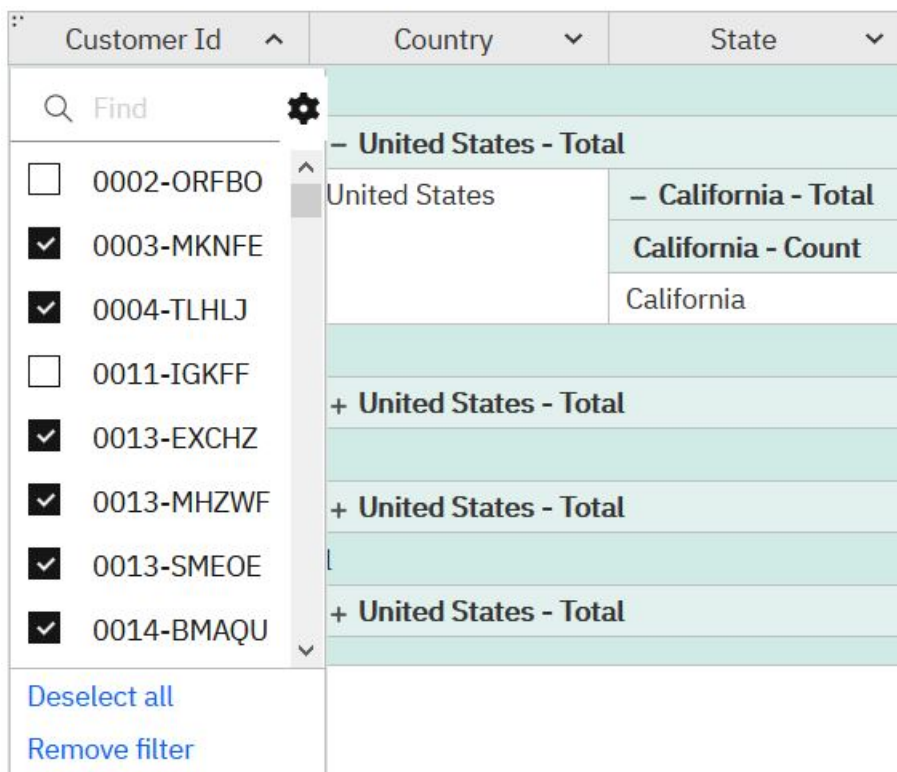


The data sets are created much faster than in previous releases because of fewer resources (CPU and memory) that need to be used. The faster data generation is more noticeable on larger data sets.

For more information, see "Data sets" in the *IBM Cognos Analytics Getting started* guide.

Data table enhancements

The column filter dialog box in a data table includes a new option that allows you to deselect all filters.



For more information, see the *Enabling filters on columns* in the *IBM Cognos Analytics Reporting User Guide*.

IBM Plex font

You can select the IBM Plex font when you author a dashboard or a report.

Disabling the on-demand toolbar

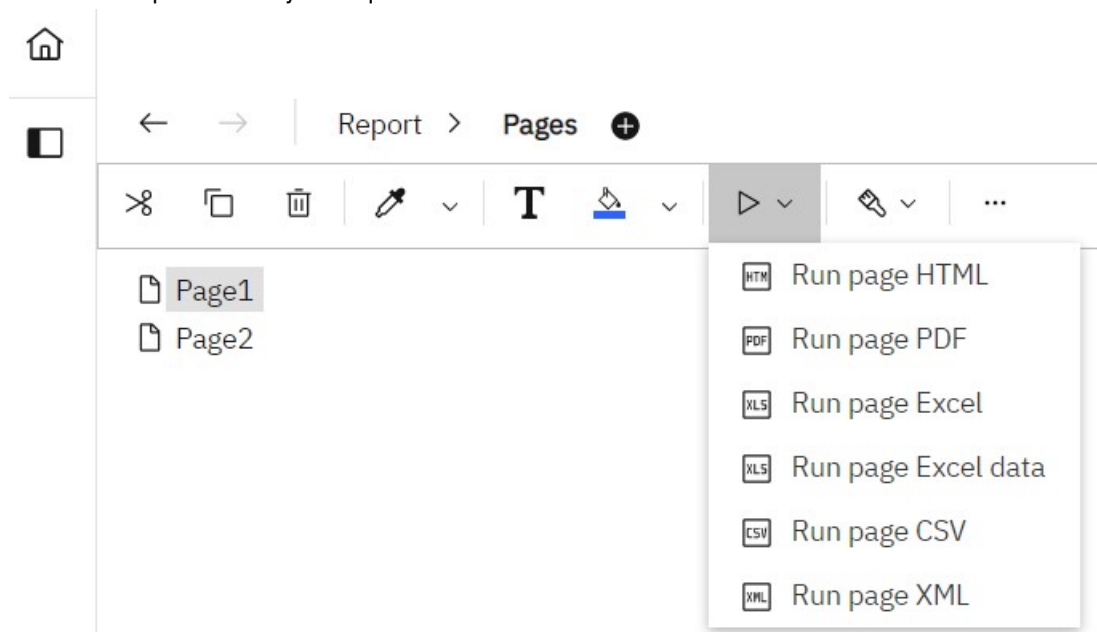
If you do not want to allow users to perform interactions on report output that uses the toolbar, you can disable the on-demand toolbar.

You can disable the toolbar based on role as well as per report.

For more information, see the *Disabling the on-demand toolbar* topic in the *IBM Cognos Analytics Reporting User Guide* and the *Restricting users from viewing the on-demand toolbar* topic in the *IBM Cognos Analytics Managing User Guide*.

Running a single page

The run option is now available when you are on the **Pages** tab in a report. You can run an individual page with the output format you require.



For more information, see the *The user interface* topic in the *IBM Cognos Analytics Reporting User Guide*.

Workaround for unexpected sorting results in some reports

On rare occasions, you might notice that data in some reports is not sorted.

At the same time, sorting is enabled in the report source data module, which is indicated by the **Members** property on columns set to **Automatic**.

For information about resolving this problem, see [this article](#).

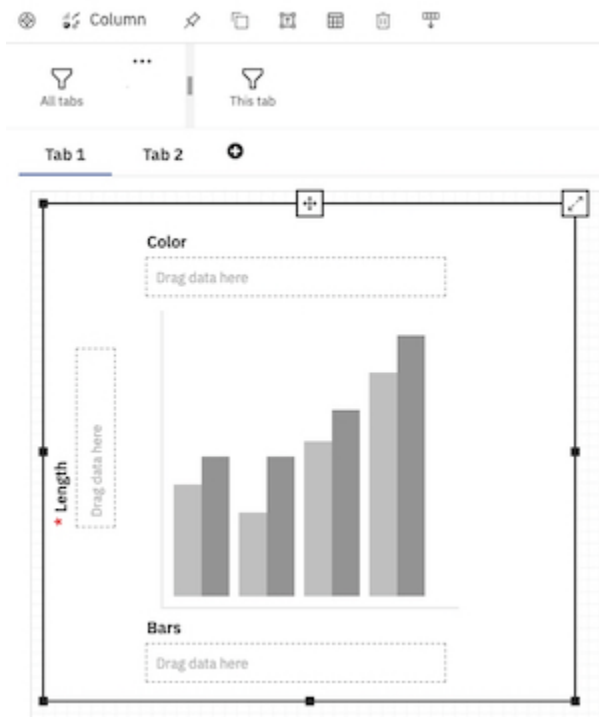
Explorations

Uncover hidden relationships and identify patterns that turn your data into insights with IBM Cognos Analytics explorations.

Drop zones on visualizations

Use drop zones on visualizations to add data directly to specific fields and quickly build a visualization.

When you start with a blank visualization, drop zones guide you to where to drag your data directly on to the visualization.



For more information, see the *Creating a visualization using drop zones* documentation in the *IBM Cognos Analytics Dashboard and Stories User Guide*.

Conditionally format crosstabs

You can define rules to color cells based on key business metrics.

On the toolbar, open the properties for a crosstab or table to highlight conditionally formatted data with color.

The screenshot displays the IBM Cognos Analytics interface. At the top, a toolbar includes icons for search, zoom, filters, fields, and properties. The main area shows a crosstab titled "Unique Visitors and Pages by Zip Code". The crosstab has two columns: "Pages" and "Unique Visitors". The "Pages" column is highlighted with a green background, and the "Unique Visitors" column is highlighted with a light gray background. The data rows show zip codes and their corresponding page and visitor counts. The "Pages" column values are color-coded: green for values greater than 278,000 and red for values less than 278,000. The "Unique Visitors" column values are in black text.

	Pages	Unique Visitors
90037	284,242 ↑	15,712
90701	278,669 ↑	15,404
90017	273,277 ↓	15,106
93927	265,210 ↓	14,660
90703	262,710 ↓	14,522
90250	259,902 ↓	14,367
90245	251,947 ↓	13,927
90293	247,490 ↓	13,681

On the right, the "Conditional color: Pages" properties panel is open. It shows the current conditional palette as "IBM conditional palette 1" with a color bar. The "Color By" dropdown is set to "Pages" and the "Scale" dropdown is set to "Numeric". The "Rules" section shows two rules: "Greater than 278,000" with a green background and "Less than 278,000" with a red background. The "Background opacity (%)" is set to 50.

For more information, see the *Highlighting conditionally formatted data with color* documentation in the *IBM Cognos Analytics Dashboard and Stories User Guide*.

Creating a visualization using search in data fields

You can quickly build a visualization that uses search in data fields.

Details

Fields

Properties

Bars

City

California Zip Website Visits Xlsx

City

Length*

Required field

Blog Visits

Unique Visitors

Click or drag data here

y-start

Click or drag data here

Target

Click or drag data here

Color

Measures group (2)

Click or drag data here

For more information, see the *Creating a visualization using search in data fields* documentation in the *IBM Cognos Analytics Explorations User Guide*.

Smart titles from dashboards

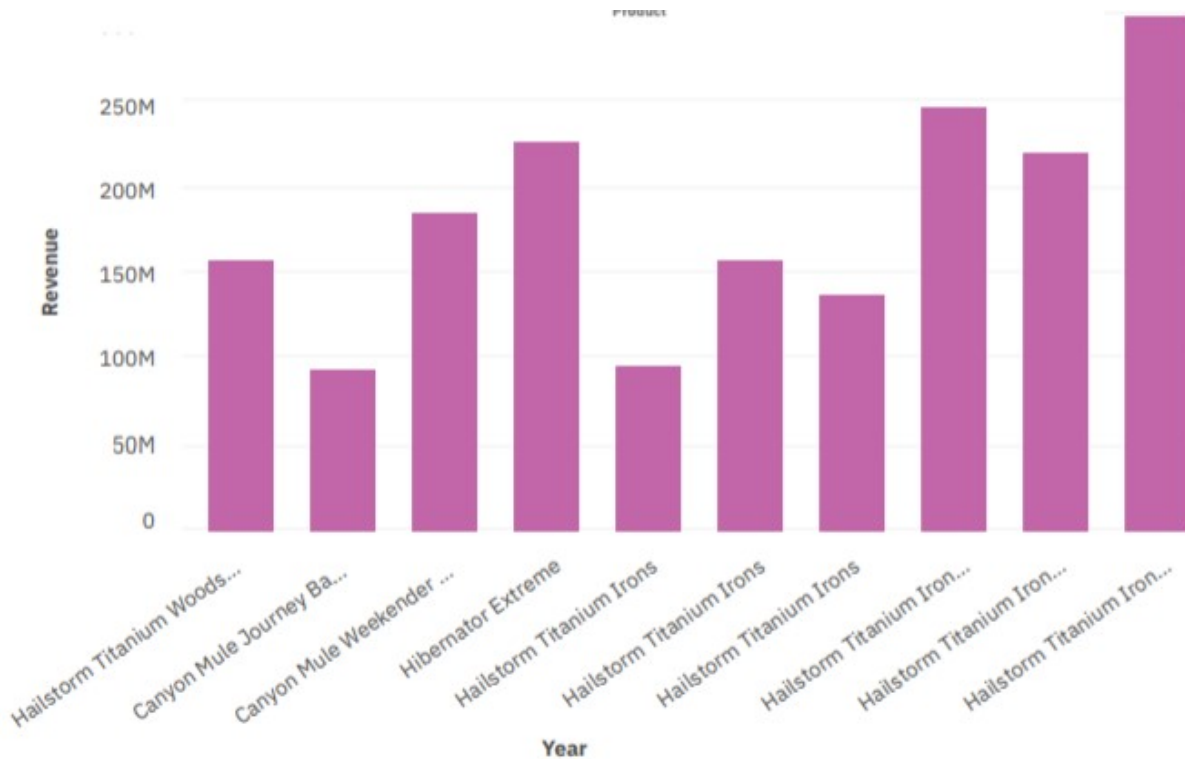
Smart titles from dashboards are supported in an exploration.

In dashboards, data is used to display a smart title for visualizations. When you open an exploration from a dashboard visualization that has a smart title, that title is carried over to your exploration.

Improved categorical axis labels in visualizations

As of IBM Cognos Analytics 11.1.7, the display of categorical axis labels is improved.

The padding and angle changed to improve the legibility.



Accessibility: skip to content

Using **Skip to content** you skip the application toolbar and the navigation pane and go straight to the content in IBM Cognos Analytics.

Using **Skip to content** helps in keyboard navigation because you don't need to tab through the application toolbar and the navigation pane to reach your content.

You can also use the keyboard shortcuts to achieve the same results:

- Skip to navigation: Ctrl+Shift+1 (for Microsoft Windows), Cmd+Shift+1 (for macOS)
- Skip to main content: Ctrl+Shift+2 (for Microsoft Windows), Cmd+Shift+2 (for macOS)

For more information, see the *Skip to content* topic in the *IBM Cognos Analytics Accessibility Guide*.

Notebooks

IBM Cognos Analytics for Jupyter Notebook integrates Jupyter notebooks into IBM Cognos Analytics. You can create and upload notebooks into Cognos Analytics, and work with Cognos Analytics data in a notebook using Python or R scripts. You can also embed notebook output in a dashboard, story, or report.

search_data method in Jupyter notebooks

A new method in notebooks, `search_data`, allows you to search for data objects in your Cognos Analytics content.

For more information, see "Searching for data objects" in the *IBM Cognos Analytics Getting Started* guide.

Modeling

Use the data modeling component in IBM Cognos Analytics to create a data module that can then be used in dashboards, stories, explorations, reports, and other content. Data modules are containers that describe data and the rules for combining and shaping data to make it ready for analysis and visualization.

Column dependency attributes for measures

When defining column dependencies, you can now assign attribute values to measures.

The values of **Minimum** (default), **Average**, and **Maximum** can be assigned.

For more information, see "Configuring column dependencies" in the *IBM Cognos Analytics Data Modeling* guide.

Sample retail calendar

When creating data modules for relative date analysis, you can now use the sample retail calendar.

The sample calendar is based on the National Retail Federation (NRF) [4-5-4 Calendar](#).

For more information, see "Sample calendars" in the *IBM Cognos Analytics Data Modeling* guide.

Additional out-of-the-box filters in sample calendars

Additional, predefined date filters were added to all sample calendar data modules.

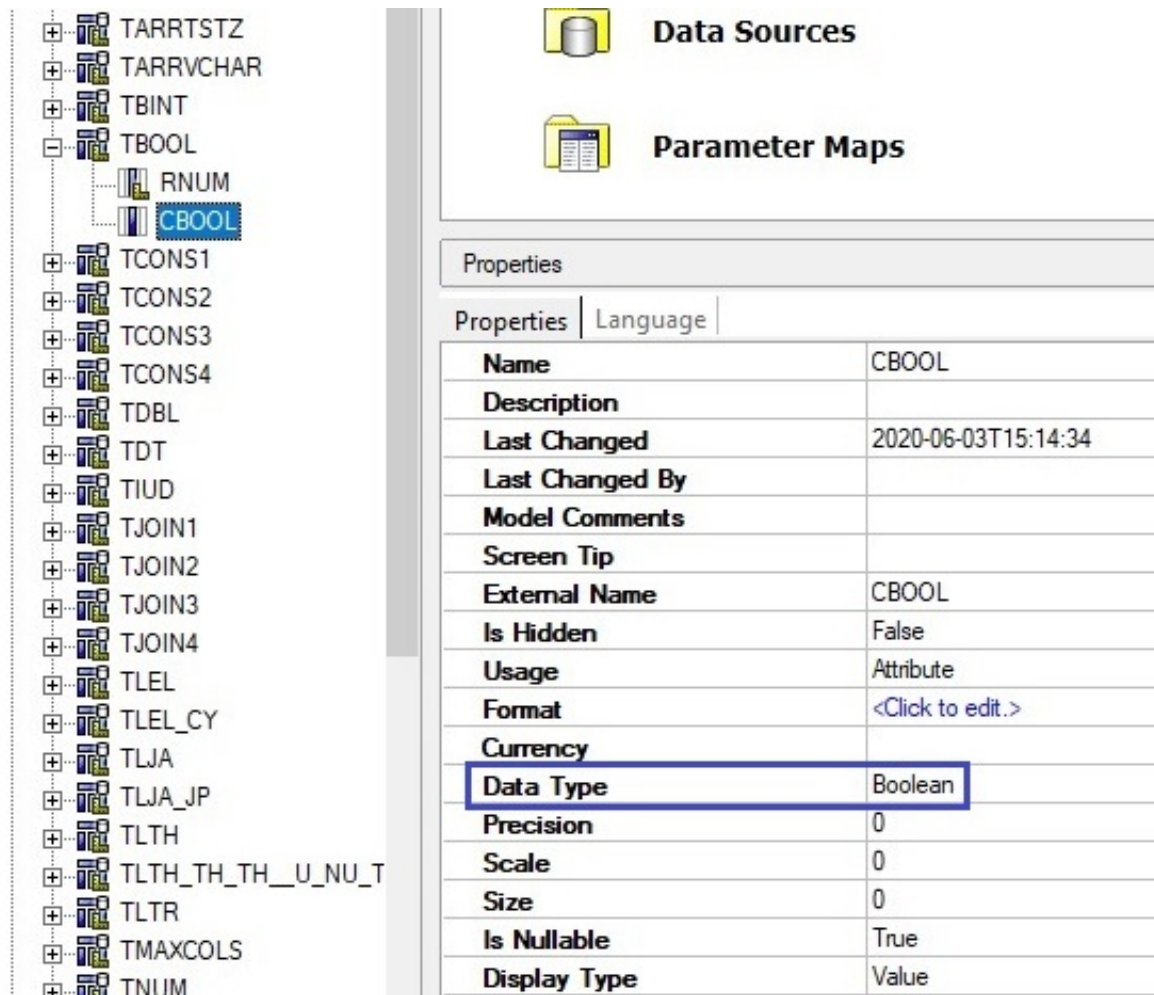
The following new filters are available for relative date analysis:

- Current week
- Prior week
- WTD (week to date)
- Prior WTD
- Same week last year

For more information, see "Sample calendars" in the *IBM Cognos Analytics Data Modeling* guide.

Boolean data type preserved on columns in Framework Manager models

When importing metadata from a data server, the Framework Manager model now shows the data type of Boolean columns as Boolean instead of Unknown.



The screenshot displays the IBM Cognos Framework Manager interface. On the left, a tree view shows a list of columns: TARRTSTZ, TARRVCHAR, TBINT, TBOOL, RNUM, CBOOL (highlighted), TCONS1, TCONS2, TCONS3, TCONS4, TDBL, TDT, TIUD, TJOIN1, TJOIN2, TJOIN3, TJOIN4, TLEL, TLEL_CY, TLJA, TLJA_JP, TLTH, TLTH_TH_TH_U_NU_T, TLTR, TMAXCOLS, and TNUM. On the right, the 'Properties' pane is open, showing the 'Data Sources' and 'Parameter Maps' tabs. The 'Properties' tab is selected, and the 'Language' dropdown is set to 'English'. The 'Data Type' property is highlighted, showing the value 'Boolean'.

Properties	
Language	
Name	CBOOL
Description	
Last Changed	2020-06-03T15:14:34
Last Changed By	
Model Comments	
Screen Tip	
External Name	CBOOL
Is Hidden	False
Usage	Attribute
Format	<Click to edit.>
Currency	
Data Type	Boolean
Precision	0
Scale	0
Size	0
Is Nullable	True
Display Type	Value

In previous releases, the data type on Boolean columns was shown as Unknown.

Existing models can be updated in Framework Manager to update the data type from Unknown to Boolean.

Note: Database vendors might describe and return a Boolean column with a different data type, such as a character or integer. In these cases, the column data type continues to be displayed in Framework Manager as intended by the vendor.

For more information, see "Importing metadata from relational databases" in the *IBM Cognos Framework Manager guide*.

Mobile

Use the IBM Cognos Analytics for Mobile app to quickly see how your business and organization is performing.

New in release 11.1.7, you can use Cognos Analytics for Mobile. Cognos Analytics for Mobile allows you to view dashboards, stories, and explorations on your iOS device. You can quickly see how your business or organization is performing at a bird's eye view, or dive into the details. Monitor important KPIs across the enterprise, share your findings with your colleagues, and set alerts to stay on top of changes.

Note: Cognos Analytics for Mobile is only available for Cognos Analytics on Cloud On-Demand and Cognos Analytics on Cloud Hosted in release version 11.1.7.

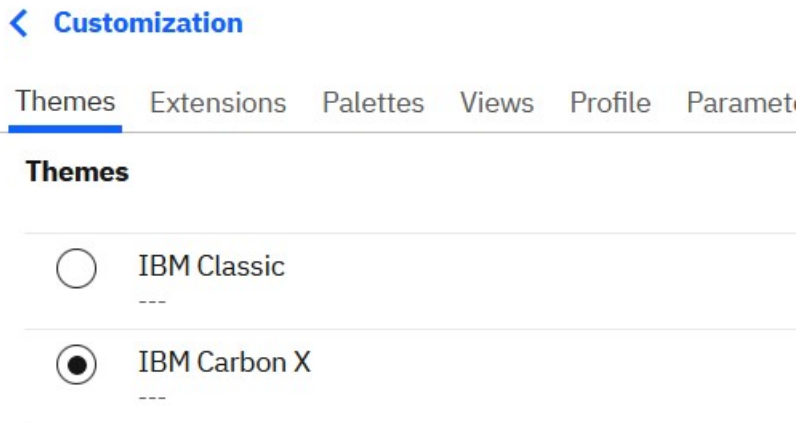
Administration

Manage the security, access, and functionality of IBM Cognos Analytics components.

IBM Carbon X theme

IBM Carbon X is the name of the default theme that is applied to new installations of IBM Cognos Analytics. The new theme adopts color standards from the [IBM Color Design System](https://www.carbondesignsystem.com/) (https://www.carbondesignsystem.com/).

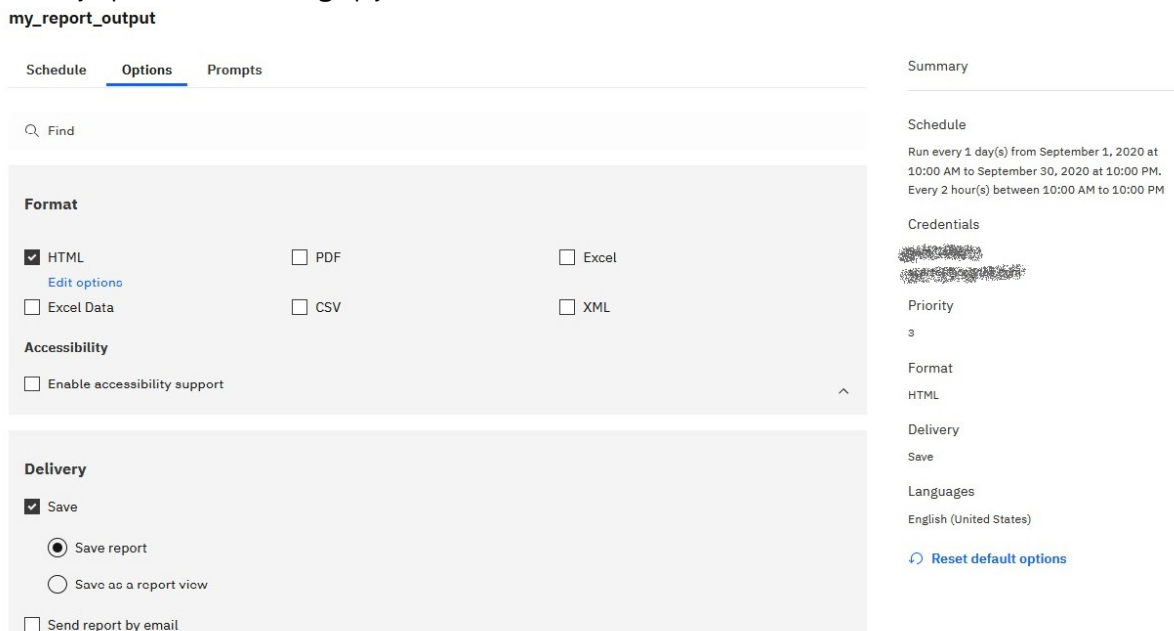
Highlights of the IBM Carbon X theme include bright blue elements and a black banner. Upgraded installations maintain their previous colors, now part of the IBM Classic theme. Administrators can switch themes at any time.



For more information, see "Creating themes" in the *IBM Cognos Analytics Managing User Guide*.

Redesigned scheduling interface

IBM Carbon X design standards have also shaped a sleek new interface for building schedules, choosing delivery options, and setting up jobs.



The new design lets you:

- Edit a schedule that is owned by someone else without changing its credentials
- Save as a report view from the Run as dialog

- Enjoy a less cluttered interface
- Search to help speed up the selection of delivery options, email recipients, and prompts
- Keep an eye on the Summary pane, which uses natural language to describe all of your selections in real time.
- Simplify scheduling thanks to a dynamic interface that changes based on the options you select

For more information, see "Scheduling a report" in the *IBM Cognos Analytics Managing User Guide*.

New capabilities in 11.1.7

In Cognos Analytics 11.1.7, five new capabilities are available and one existing capability was modified.

- The **Email** capability allows a user to send an email when scheduling or sharing content.
Additionally, four new secured functions are associated with the **Email** capability:
 - **Email Delivery Option**
 - **Include link in email**
 - **Share using email**
 - **Type in external email**
- The **Attach Outputs** capability allows a user to attach outputs in an email when setting a schedule, running a report in the background, or setting job steps.
- The following three capabilities are available only to users of Cognos Analytics on Cloud On-Demand and Cognos Analytics on Cloud Hosted:
 - The **Cognos Analytics for Mobile** capability allows users access to Cognos Analytics via the Cognos Analytics for Mobile app.
 - The **Share Pin Board** capability allows users to share a pin board that they created using Cognos Analytics for Mobile.
 - The **Visualization Alerts** capability allows users to create an alert for a pin board in Cognos Analytics for Mobile.
- The existing **Job** capability was modified so that Report Administrators can now create jobs. For details, see the "Job capability" section of "Initial access permissions for capabilities" in the *IBM Cognos Analytics Managing Guide*.

For more information on capabilities, see these topics:

- "Initial access permissions for capabilities" in the *Managing IBM Cognos Analytics Guide*
- "Default permissions based on licenses" in the *Managing IBM Cognos Analytics Guide*

Salesforce available as a Data server connection

As of release 11.1.7, you can connect to a Salesforce data server from **Manage > Data server connections**. Salesforce connections allow you to work with data modules in Cognos Analytics. In previous releases, you could define connections to Salesforce only from the Administration console and use them only in Framework Manager packages.

With the ability to create Salesforce data server connections, you also have access to a new connection editor. You can define a Salesforce connection string that includes a JDBC URL and optional connection properties.

For more information about the new connection editor and its connection properties, see "Salesforce connection editor" in the *Cognos Analytics Managing Guide*.

Salesforce URL connection change

Salesforce data server connections must use a new URL endpoint.

In the Cognos Analytics Administration console, if you have an existing Salesforce data server connection or want to create a new one, you must manually update the URL endpoint from `https://login.salesforce.com/services/Soap/u/20.0` to `https://login.salesforce.com/services/Soap/u/45.0`.

For more information, see this [Salesforce article](https://help.salesforce.com/articleView?id=000351312) (https://help.salesforce.com/articleView?id=000351312)

Note: While connections using this editor will continue to work, this connection editor will be deprecated in a future release of Cognos Analytics. We recommend that you migrate your applications to use the new connection editor. For more information, see "Salesforce connection editor" in the *Cognos Analytics Managing Guide*.

Support for Microsoft Analysis Services 2019 (ODBO and XMLA)

Cognos Analytics supports the Microsoft Analysis Services 2019 data server (ODBO and XMLA).

Existing connections that are moved to this server might lose signons.

Reports that were created against previous versions of the data server still work after they are switched to use the new client and server. The client and server versions must match.

Similar to other Microsoft Analysis Services MSOLAP versions, the Microsoft Analysis Services MSOLAP client must be installed to the same location as the report server. For this version of Microsoft Analysis Services, the MSOLAP version 15 client is required.

To create a connection to the new data server from the **Manage > Data server connections** administration interface, select the generic **Microsoft Analysis Services** data server type, and then select **2019**.

Note: The Microsoft Analysis Services 2019 (ODBO) data server type is not available in the Administration console.

For more information, see "Data servers" in *Managing IBM Cognos Analytics*.

Support for JWT authentication with Db2 data server connections

A connection to a Db2 data server using the IBM JCC JDBC driver can be configured to pass a JSON Web Token (JWT) when authenticating to the database.

To use this functionality with a Db2 data server connection, Cognos Analytics must be configured to use an OpenID Connect authentication provider. To provide the token, the connection settings must specify the OpenID Connect namespace that was configured as an identity provider. The identity provider namespace must be capable of returning claims in the JWT that Db2 requires.

When setting the Db2 data server connection, choose the **Use an external namespace** authentication method. For more information, see "Creating a data server connection" in *Managing IBM Cognos Analytics*.

For information about configuring an OpenID authentication provider, see "OpenID Connect authentication provider" in *IBM Cognos Analytics Installation and Configuration Guide*.

For information about which Db2 and IBM JCC versions support JWT authentication, refer to the Db2 and IBM JCC documentation.

Vendor-supported driver versions tested with 11.1.7

IBM Cognos Analytics 11.1.7 supports an updated list of client driver versions.

For more information, see [Cognos Analytics on Premises 11.1.7 - vendor-supported client driver versions that were tested with Cognos Analytics](#).

Support for REST API data server connections

Cognos Analytics now allows you to connect to a REST API data server by setting up a Progress DataDirect Autonomous REST connection.

For more information, see "Progress DataDirect Autonomous REST connections" in the *IBM Cognos Analytics Managing Guide*.

Deprecation of data source versions

Support for several versions of data servers will be removed in a future release of Cognos Analytics.

When a connection is tested, Cognos Analytics may indicate that the version detected is marked for deprecation in a future release of Cognos Analytics.

While the connection can still be used, it should be updated to reference a newer, in-service version of the vendor's product.

Note: For a list of data sources currently supported by Cognos Analytics, see [Supported software environments](https://www.ibm.com/support/pages/node/735235) (<https://www.ibm.com/support/pages/node/735235>).

Several versions of supported data sources have passed or are approaching the vendor's end of service date, including these versions:

- Denodo
 - Denodo Platform 5.5
 - Denodo Platform 6.0
- Exasol 6.1 and earlier
- IBM Db2 Z
 - DB2 for z/OS 10.1 and earlier
 - DB2 for z/OS 11.1.0 and earlier
- IBM Db2 LUW
 - DB2 LUW V9.7
 - DB2 LUW 10.1
 - DB2 LUW 10.5
- IBM DB2 i5/OS 7.2 and earlier
- IBM Informix 11.7 and earlier
- IBM Planning Analytics prior to 2.0.6.
- IBM TM1 all versions
- MariaDB 10.1 and earlier
- MemSQL 6.7.x and earlier
- Microsoft SQL Server 2016 SP2 and earlier
- Microsoft Analysis Services (OLEDB) prior to SQL Server 2016 Service Pack 2
- Mongo BI-Connector 2.11 and earlier
- MySQL 5.5 and earlier
- ORACLE
 - Oracle 11.2.0.4 and earlier
 - Oracle 12.1.0.2 and earlier
 - Oracle 12.2.0.1
- Oracle Essbase 11.1.2.4
- Pivotal Greenplum 5.20.x and earlier
- PostgreSQL 9.4 and earlier
- Teradata 16.10 and earlier
- Tibco Composite 7.0.8 and earlier
- SAP Sybase ASE 15.7
- SAP Sybase IQ 16.0
- SAP Hana
 - SAP Hana 1.0 SPS12 and earlier
 - SAP Hana 2.0 SP3 and earlier

- Vertica
 - Vertica 7.x
 - Vertica 8.x

Deprecation of Teradata Presto JDBC driver

Support for the Teradata Presto JDBC driver will be removed in a future release of Cognos Analytics. Existing connections should be changed to use the Presto JDBC driver class.

Installation and configuration

Learn about changes to the IBM Cognos Analytics installation and configuration.

Minimum password length now 15 characters

When you perform an **Easy install**, the password that you create must now be a minimum of 15 characters in length. This change reflects Microsoft Windows industry standards.

For more information, see "Easy installation" in the *IBM Cognos Analytics Installation and Configuration Guide*.


Release 11.1.6 - April 2020

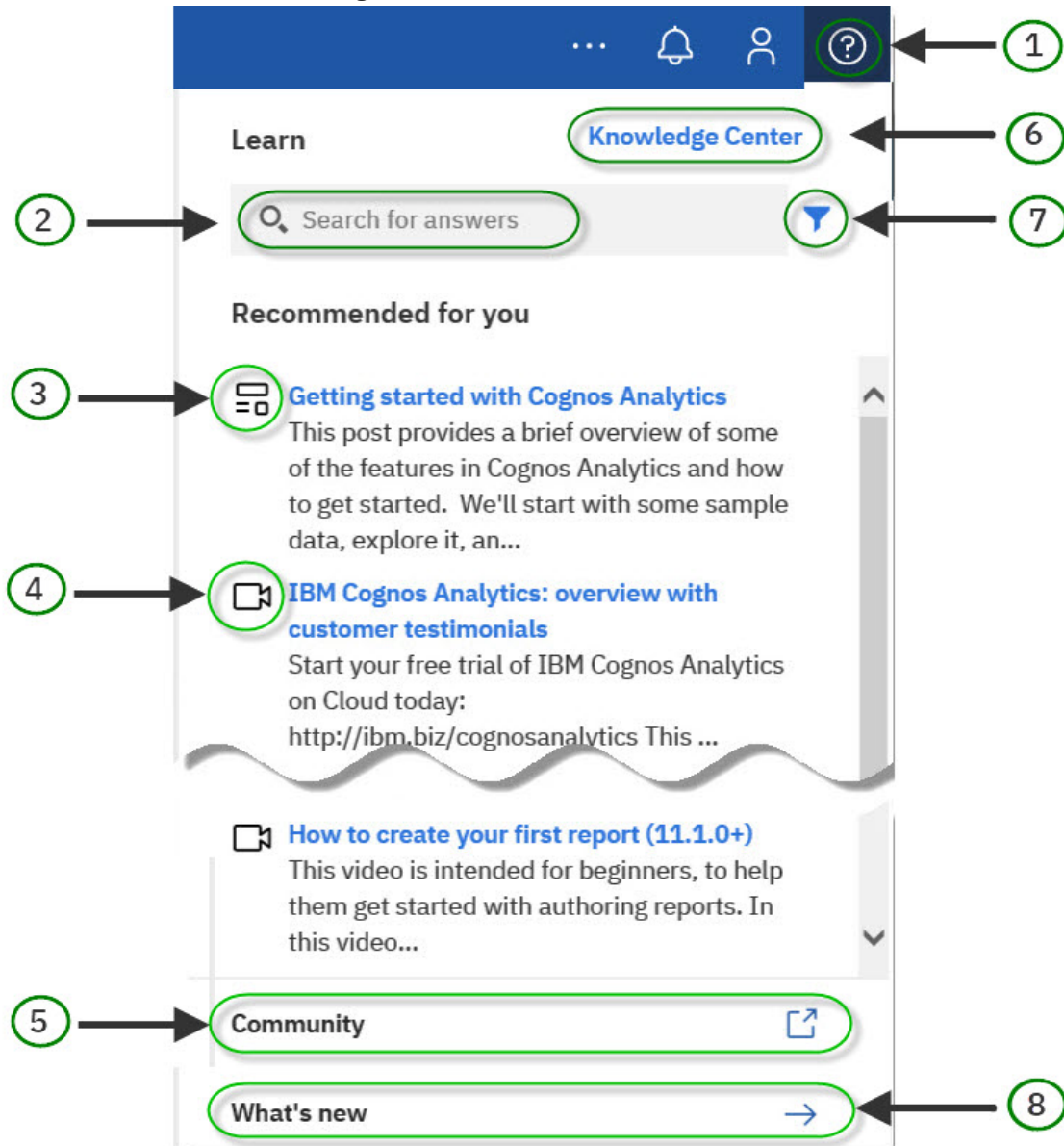
This section describes new and changed features in IBM Cognos Analytics 11.1.6.

Getting started


Learn about enhancements to the user interface, training materials, and features that affect multiple IBM Cognos Analytics components.

Ask for help in the cognitive Learn pane

If you want to learn more about how to use Cognos Analytics, click  and ask a question. The cognitive help tailors your question to where you are working and finds only the answers that are relevant to you. You can find the latest videos, blogs, and documentation.



1. Open and close the Learn pane

Click  to open the Learn pane (it remembers where you were the last time you opened it). Click anywhere to close it. The Learn pane recommends content that relates to your task and finds similar content that you might also like. And, it is always learning! When you search and find answers, you are training the Learn pane and those answers contribute to **You might also like** for everyone.

2. Search for answers by typing a question or by entering keywords

You can search in any supported language in the Learn pane and you see translated documentation in your search results. You also see blogs and videos that match your search, however, blogs and videos aren't translated. If you don't find the results that you are looking for, you can click the **Ask in the forum** link and submit a question to the Cognos Analytics forum.

3. Read a blog in the Cognos Analytics Community Blog

The community blogs are written by experts who use Cognos Analytics and share their tips and tricks.

4. Learn more from YouTube videos, tutorials, and examples

Sometimes the best way to learn is to see it in action. The videos in the Learn pane are created by the IBM Business Analytics Support team.

5. Go to the Cognos Analytics Community

In the community, you can find the latest posts, events, and discussions.

6. Visit the IBM Knowledge Center for all IBM Cognos Analytics documentation

In the IBM Knowledge Center, you can read all documentation, including related products.

7. Filter to see only videos, blogs, or documentation

You can filter your search results based on your preferred content type so that you can learn in the way that works best for you. You can read documentation topics that are written by subject matter experts. Or, you can read a blog that is written by the experts in the Cognos Analytics Community. Or if you are a visual learner, you can watch YouTube videos, tutorials, and examples created by the IBM Business Analytics Support team.

8. Read more about What's new in this release

When you click the new and changed feature alerts in the alerts banner, topics about new and changed features appear in the Learn pane.

If you dismiss the **What's new** alerts banner, you can always go back and see the new and changed topics for this release. If you are on the **Welcome** page and you click **What's new** in the Learn pane, you see everything new in this release. If you are working on a dashboard, you see only what's new in Dashboards. The Learn pane tailors the new and changed topics to what you are working on.

New Carbon Design icons

New icons adhering to the Carbon Design principles were introduced.

The adoption of Carbon Design icons provides a consistent user experience across IBM products. For more information, see <https://www.carbondesignsystem.com>.

Dashboards

Use IBM Cognos Analytics dashboards to discover key insights about your data and monitor events or activities at a glance.

Expand crosstab hierarchies

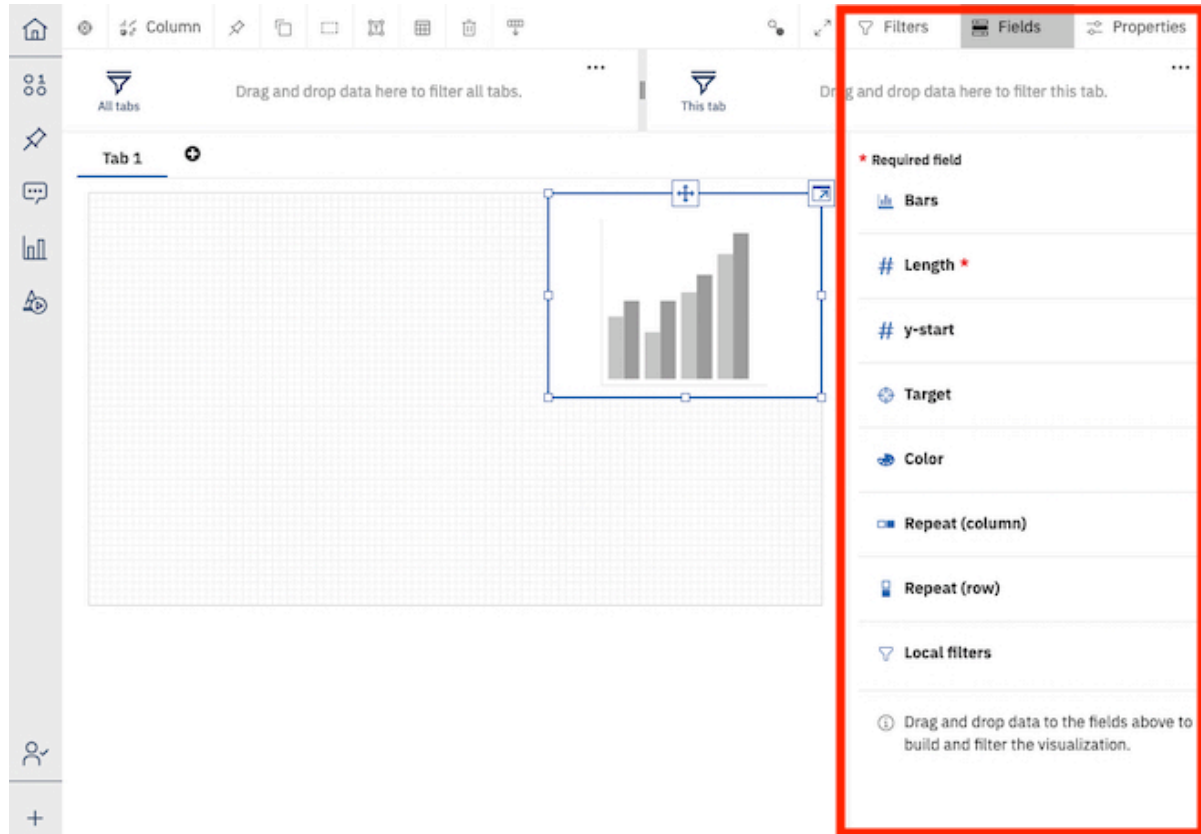
If you are using an OLAP data source, you can expand crosstab hierarchies to display the nested children.

Revenue	2017	Summary
Camping Equipment	352,910,329.97	352,910,329.97
Golf Equipment	174,740,819.29	174,740,819.29
Mountaineering Equipment	141,520,649.7	141,520,649.7
Outdoor Protection	4,471,025.26	4,471,025.26
Personal Accessories	443,693,449.85	443,693,449.85
Summary	1,117,336,274.07	#####

For more information, see the *Expanding and collapsing hierarchies in crosstabs* topic in the *IBM Cognos Analytics Dashboard and Stories User Guide*.

Fields pane

On the toolbar, open the **Fields** pane to add columns to build and modify visualizations.



Add a column to each mandatory field in the **Fields** pane. You no longer have to expand each individual visualization to make changes.

Visualization toolbar is docked at the top of a dashboard

The toolbar for visualizations is now at the top of your dashboard and is docked there by default.

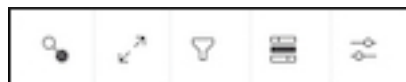
The toolbar icons that are displayed depend on what you select on the dashboard. For example, if you click a table visualization on the dashboard, the toolbar appears with the icons that you can use for tables.





You can undock the toolbar so that it is attached to a selected visualization.

For more information, see the *Unlocking the toolbar* topic in the *IBM Cognos Analytics Dashboard and Stories User Guide*.

Other icons were moved to a new toolbar location.



For example, the filter icon  on the toolbar is for collapsing and expanding the **All tabs** and the **This tabs** filters.

Another icon, the **View widget connections** icon , has moved from the app bar to the visualization toolbar. For more information about this icon, see "Disconnecting visualizations and filter widgets" in the *IBM Cognos Analytics Dashboard and Stories User Guide*.

Changed dashboard reset experience

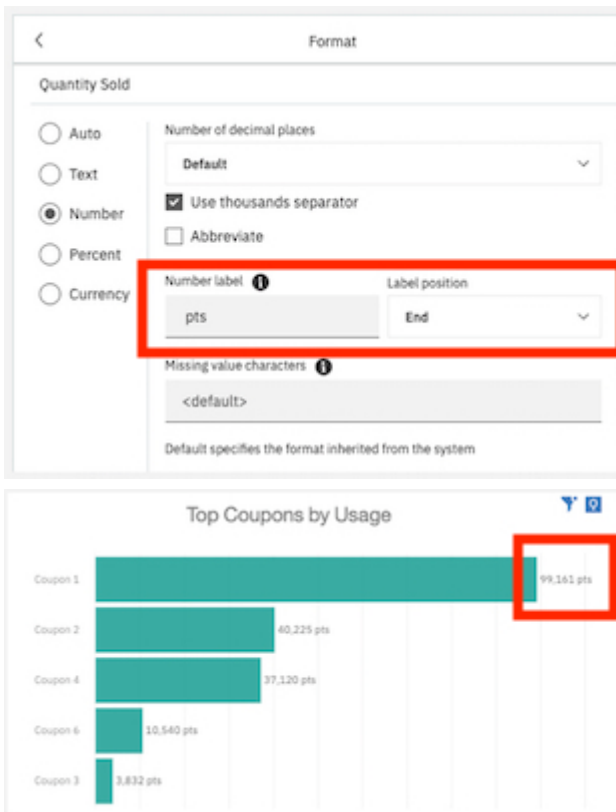
The way that you reset a dashboard to the last saved version has changed in 11.1.6.

For more information, see "Resetting a dashboard" in the *IBM Cognos Analytics Dashboard and Stories User Guide*.

Customize unit labels

You can define a custom label on a measure.

For example, if you have a bar chart that shows numbers, you can specify a label for the numbers, such as pts to indicate that the numbers represent points. You can also specify the position of the label, such as **End**.



For more information, see the *Customizing unit labels* topic in the *IBM Cognos Analytics Dashboard and Stories User Guide*.

Focus mode

Focus mode is now available for dashboard consumers. Use focus mode to maximize the size of a visualization to quickly review chart content.

For example, if you want to take a closer look at a chart on a dashboard, expand the visualization to make it larger.

For more information, see the *Expanding visualizations* topic in the *IBM Cognos Analytics Dashboard and Stories User Guide*.

Guided dashboard creation

From the embedded assistant, you can now generate a dashboard based on specified fields of interest.

This capability was introduced in version 11.1.4 as a two-step process. After generating a set of charts for selected fields/columns, a **Create dashboard from the charts** option was provided. Beginning in version 11.1.6, you can guide the dashboard creation by including context and field information. For example:

- create dashboard for profit in 2019
- generate dashboard for top 10 products by profit

- create dashboard for products by profit in Florida

Use AI to personalize recommended visualizations

IBM Cognos Analytics recommends particular visualization types based on your selected data. With AI learning, your usage and preferences are used in subsequent recommendations to provide a more personalized experience.

For example, Cognos Analytics may recommend a **Packed bubble** chart. By changing the recommended visualization to **Word cloud**, and saving your selection, AI learns from your usage and may choose the **Word cloud** chart next time.

Note: Selected visualization types are weighted based on recommendations and AI learning. You may need to save a preferred visualization type multiple times before Cognos Analytics selects it.

The AI learning feature is enabled by default, but can be changed from your advanced preferences settings under the **Personal menu**. You must have the AI > Learning capability to use this feature. You can optionally delete previously saved usage data from your personal preferences.

For more information, see "Recommended visualizations" in the *IBM Cognos Analytics Dashboards and Stories Guide*.

Use stand-alone calculations with AI and advanced analytics features

Stand-alone calculations are now fully supported with AI and advanced analytics features, including the AI assistant, relationship diagram in Explore, and the decision tree, spiral, and driver analysis visualizations.

For example, in **Explore**, the relationship diagram is now displayed when a stand-alone calculation is used as a field of interest.

Stand-alone calculations, sometimes also referred to as global calculations, reside outside of a table or query subject, and can refer to fields from any table in the data module or model. This type of calculations can be created in data modules and Framework Manager models, as well as directly in dashboards, stories, and explorations.

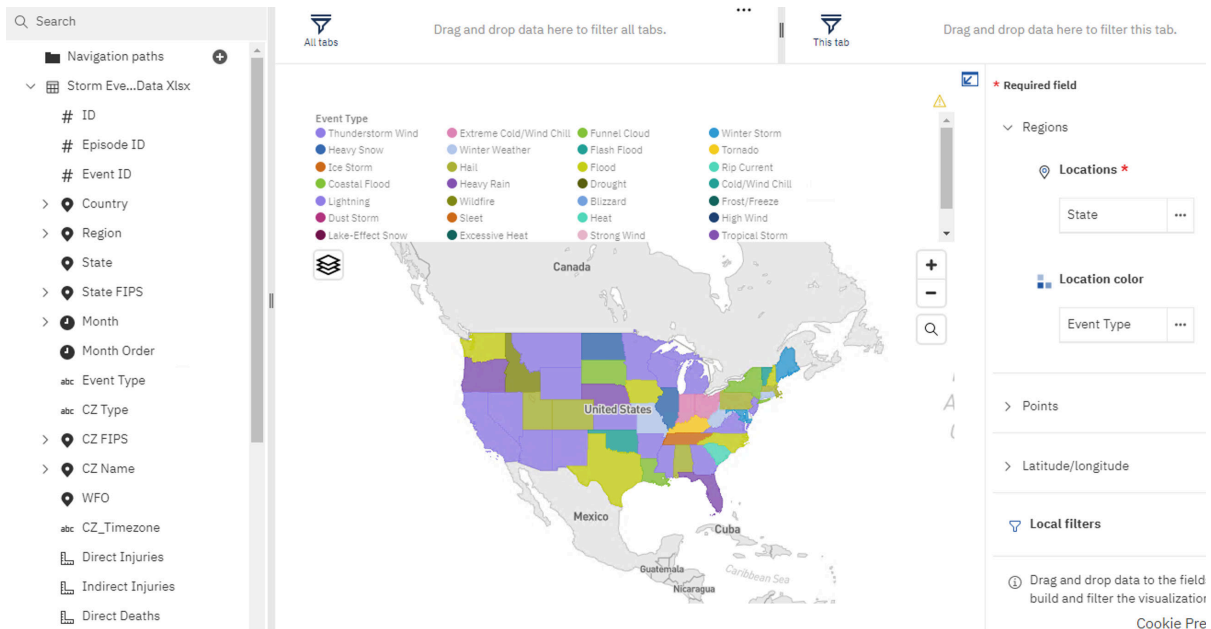
For more information, see the *IBM Cognos Analytics Explorations* guide.

For more information about calculations, see the *IBM Cognos Analytics Data Modeling* guide, and *Framework Manager* guide.

Support for categorical coloring in a map visualization

As of IBM Cognos Analytics 11.1.6, map visualizations support categorical coloring.

You can use categorical coloring in a map visualization by dragging categorical data to the **Location color** field. A warning is displayed when there are multiple color items for a single location.



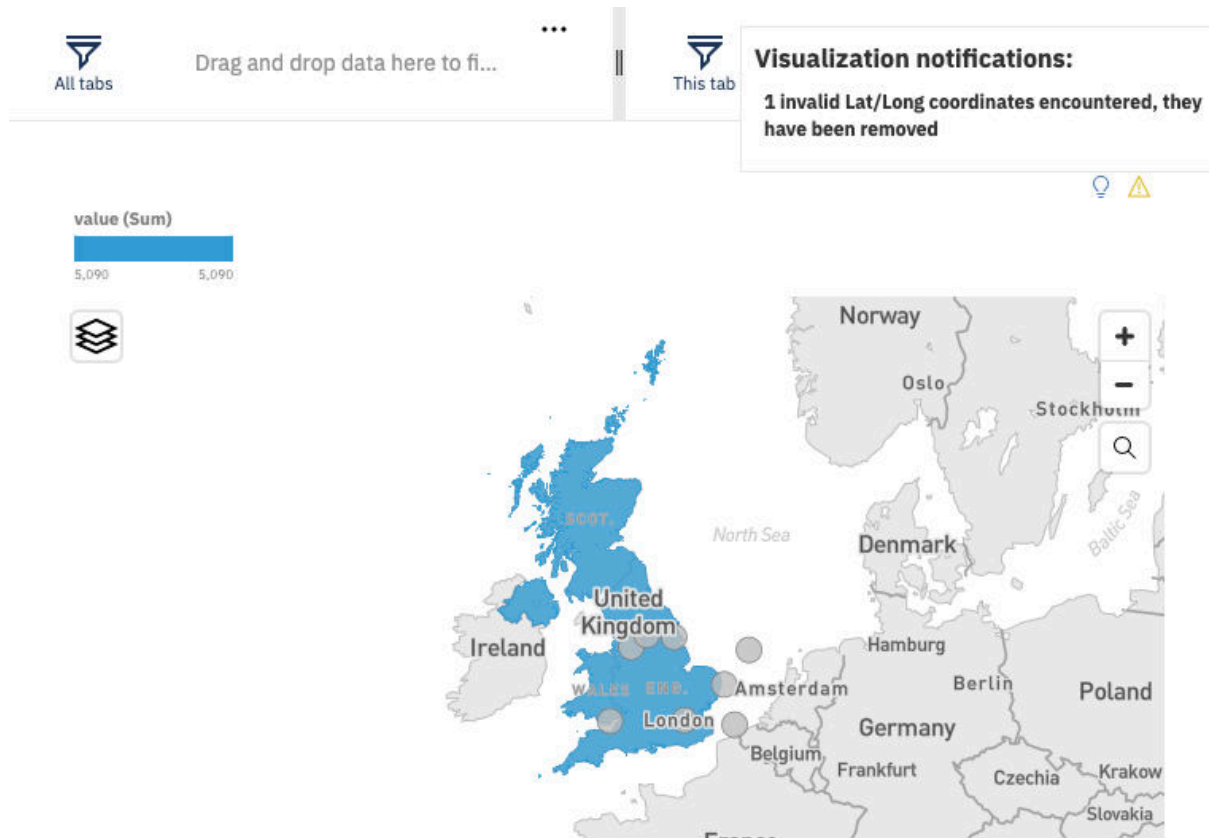
For more information on using the map visualization in a report, see the *Example: Adding regions and points to a map* documentation in the *IBM Cognos Analytics Reporting User Guide*..

For more information, see the *Adding a map to a dashboard* documentation in the *IBM Cognos Analytics Dashboard and Stories User Guide*..

Map rendering when data contains invalid latitude or longitude

The way invalid latitude and longitude data are handled in a map visualization changed.

When invalid or missing latitude and longitude data value were encountered, Cognos Analytics remapped the coordinate to [0,0]. As of version 11.1.6 Cognos Analytics does not display the data point on the map at all.



In previous versions, when a location string was not matched, then the datapoint was not displayed on the map, and a warning was shown. In IBM Cognos Analytics 11.1 R6, the legend is updated to reflect the removed data point and add a warning message if the domain in the legend changes. If the data points that are removed affect the data domain, IBM Cognos Analytics adjusts the legend that displays the domain to be accurate and displays a warning message.



For more information on using the map visualization in a report, see the *Example: Adding regions and points to a map* documentation in the *IBM Cognos Analytics Reporting User Guide*.

For more information, see the *Adding a map to a dashboard* documentation in the *IBM Cognos Analytics Dashboard and Stories User Guide*.

Stories

Stories can help you inform and engage your audience. You can use stories in IBM Cognos Analytics to create scenes that visualize your data and to tell a narrative.

Expand crosstab hierarchies

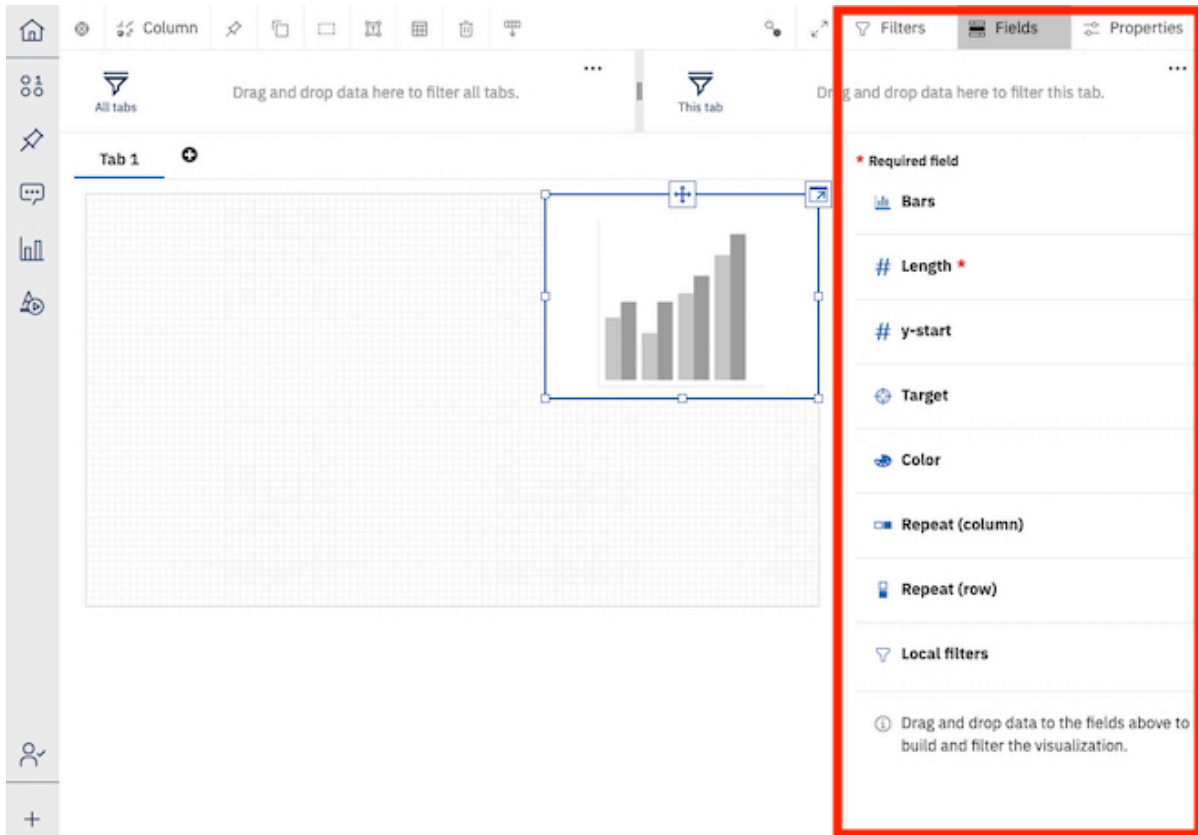
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Fields pane

On the toolbar, open the **Fields** pane to add columns to build and modify visualizations.

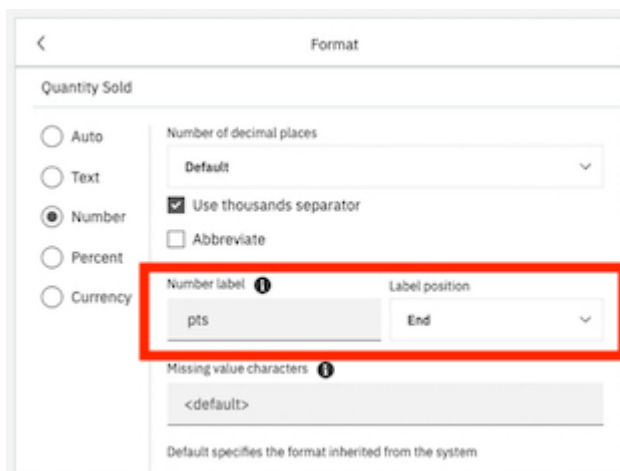


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For example, Cognos Analytics may recommend a **Packed bubble** chart. By changing the recommended visualization to **Word cloud**, and saving your selection, AI learns from your usage and may choose the **Word cloud** chart next time.

Note: Selected visualization types are weighted based on recommendations and AI learning. You may need to save a preferred visualization type multiple times before Cognos Analytics selects it.

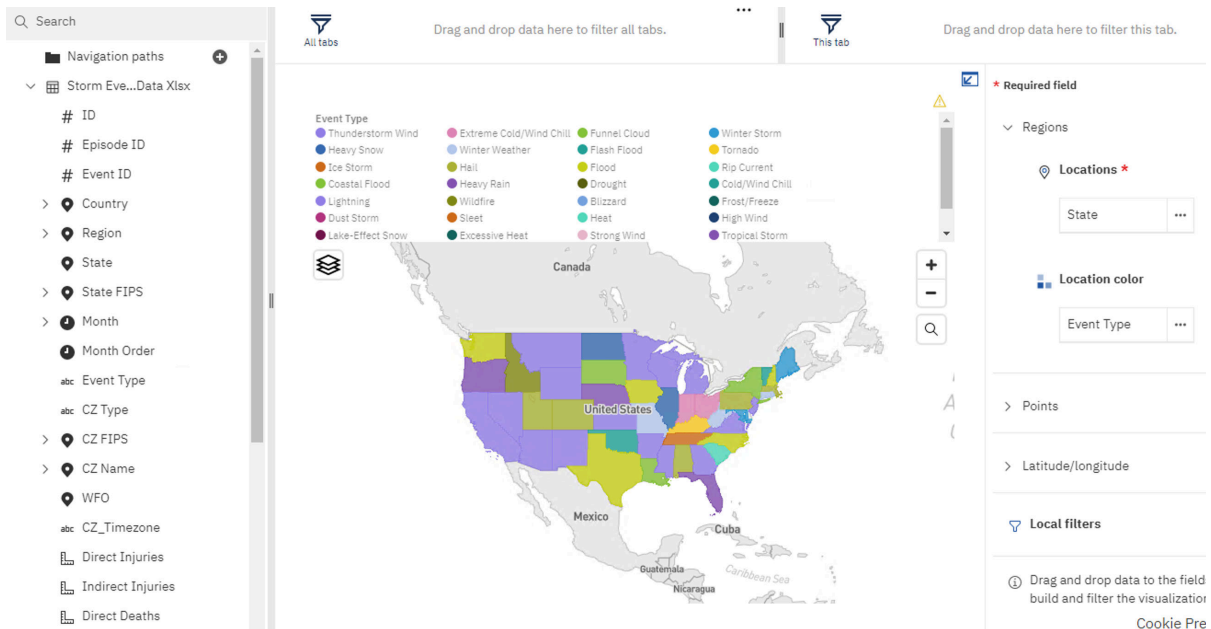
The AI learning feature is enabled by default, but can be changed from your advanced preferences settings under the **Personal menu**. You must have the AI > Learning capability to use this feature. You can optionally delete previously saved usage data from your personal preferences.

For more information, see "Recommended visualizations" in the *IBM Cognos Analytics Dashboards and Stories Guide*.

Support for categorical coloring in a map visualization

As of IBM Cognos Analytics 11.1.6, map visualizations support categorical coloring.

You can use categorical coloring in a map visualization by dragging categorical data to the **Location color** field. A warning is displayed when there are multiple color items for a single location.



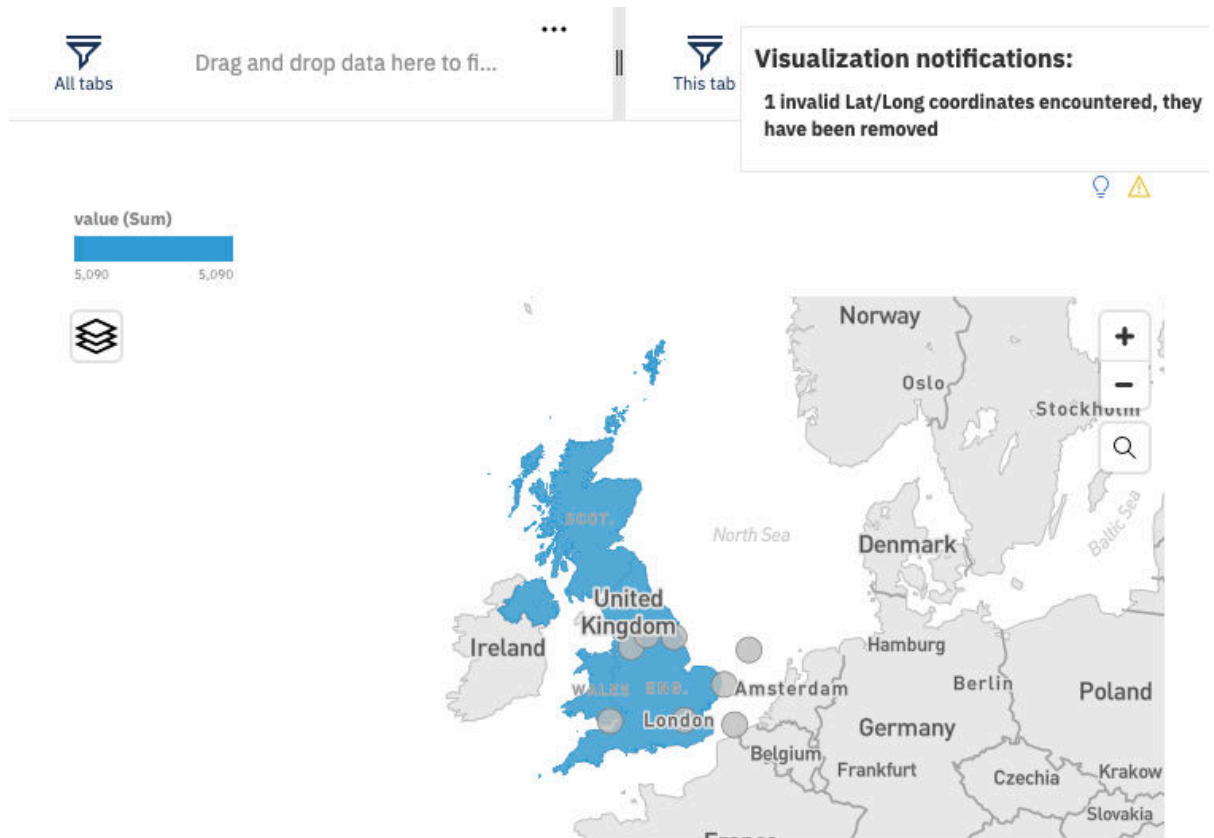
For more information on using the map visualization in a report, see the *Example: Adding regions and points to a map* documentation in the *IBM Cognos Analytics Reporting User Guide*.

For more information, see the *Adding a map to a dashboard* documentation in the *IBM Cognos Analytics Dashboard and Stories User Guide*.

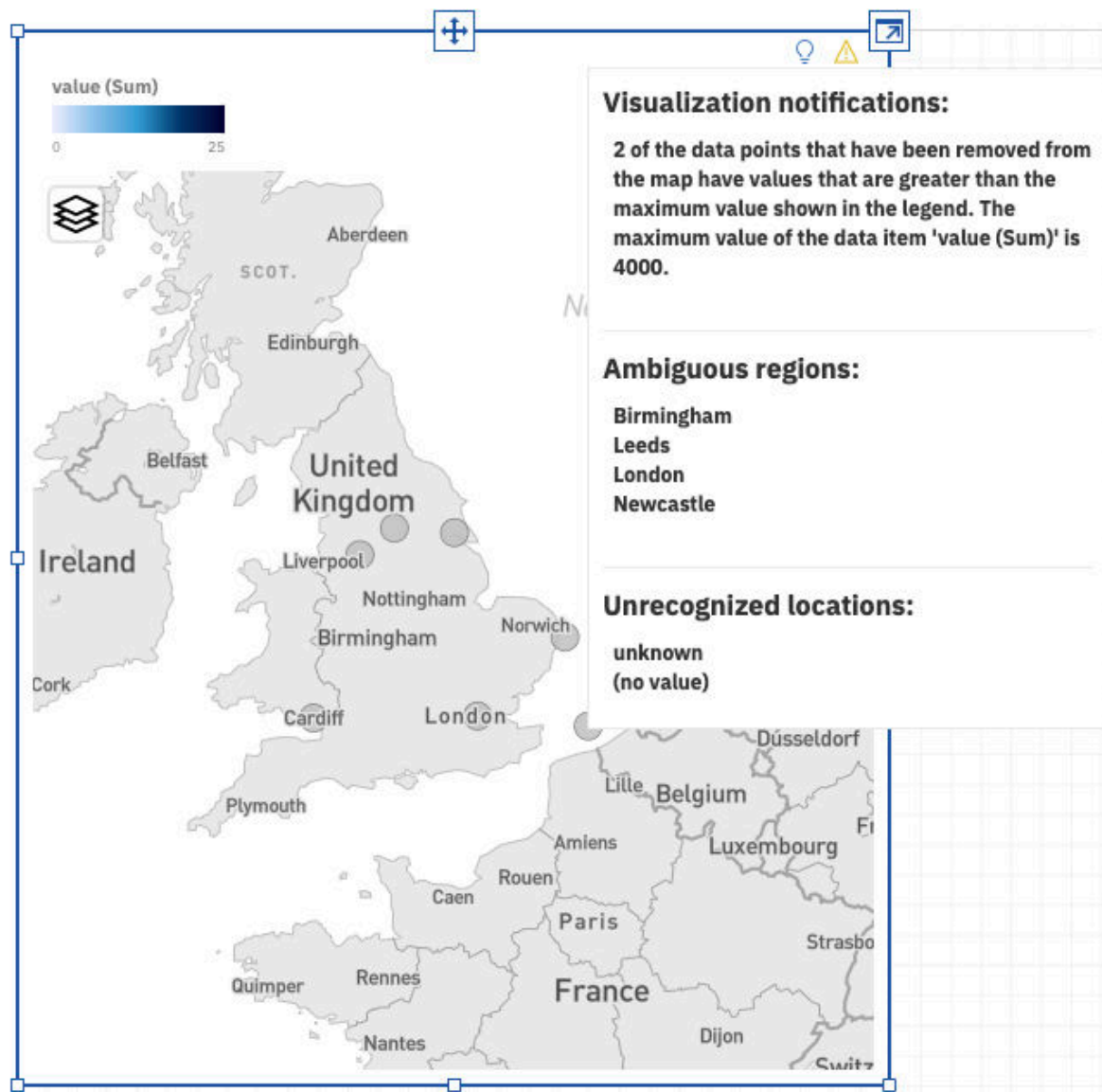
Map rendering when data contains invalid latitude or longitude

The way invalid latitude and longitude data are handled in a map visualization changed.

When invalid or missing latitude and longitude data value were encountered, Cognos Analytics remapped the coordinate to [0,0]. As of version 11.1.6 Cognos Analytics does not display the data point on the map at all.



In previous versions, when a location string was not matched, then the datapoint was not displayed on the map, and a warning was shown. In IBM Cognos Analytics 11.1 R6, the legend is updated to reflect the removed data point and add a warning message if the domain in the legend changes. If the data points that are removed affect the data domain, IBM Cognos Analytics adjusts the legend that displays the domain to be accurate and displays a warning message.



For more information on using the map visualization in a report, see the *Example: Adding regions and points to a map* documentation in the *IBM Cognos Analytics Reporting User Guide*.

For more information, see the *Adding a map to a dashboard* documentation in the *IBM Cognos Analytics Dashboard and Stories User Guide*.

Use stand-alone calculations with AI and advanced analytics features

Stand-alone calculations are now fully supported with AI and advanced analytics features, including the AI assistant, relationship diagram in Explore, and the decision tree, spiral, and driver analysis visualizations.

For example, in **Explore**, the relationship diagram is now displayed when a stand-alone calculation is used as a field of interest.

Stand-alone calculations, sometimes also referred to as global calculations, reside outside of a table or query subject, and can refer to fields from any table in the data module or model. This type of calculations can be created in data modules and Framework Manager models, as well as directly in dashboards, stories, and explorations.

For more information, see the *IBM Cognos Analytics Explorations* guide.

For more information about calculations, see the *IBM Cognos Analytics Data Modeling* guide, and *Framework Manager* guide.

Explorations

Uncover hidden relationships and identify patterns that turn your data into insights with IBM Cognos Analytics explorations.

Guided dashboard creation

From the embedded assistant, you can now generate a dashboard based on specified fields of interest.

This capability was introduced in version 11.1.4 as a two-step process. After generating a set of charts for selected fields/columns, a **Create dashboard from the charts** option was provided. Beginning in version 11.1.6, you can guide the dashboard creation by including context and field information. For example:

- create dashboard for profit in 2019
- generate dashboard for top 10 products by profit
- create dashboard for products by profit in Florida

Use AI to personalize recommended visualizations

IBM Cognos Analytics recommends particular visualization types based on your selected data. With AI learning, your usage and preferences are used in subsequent recommendations to provide a more personalized experience.

For example, Cognos Analytics may recommend a **Packed bubble** chart. By changing the recommended visualization to **Word cloud**, and saving your selection, AI learns from your usage and may choose the **Word cloud** chart next time.

Note: Selected visualization types are weighted based on recommendations and AI learning. You may need to save a preferred visualization type multiple times before Cognos Analytics selects it.

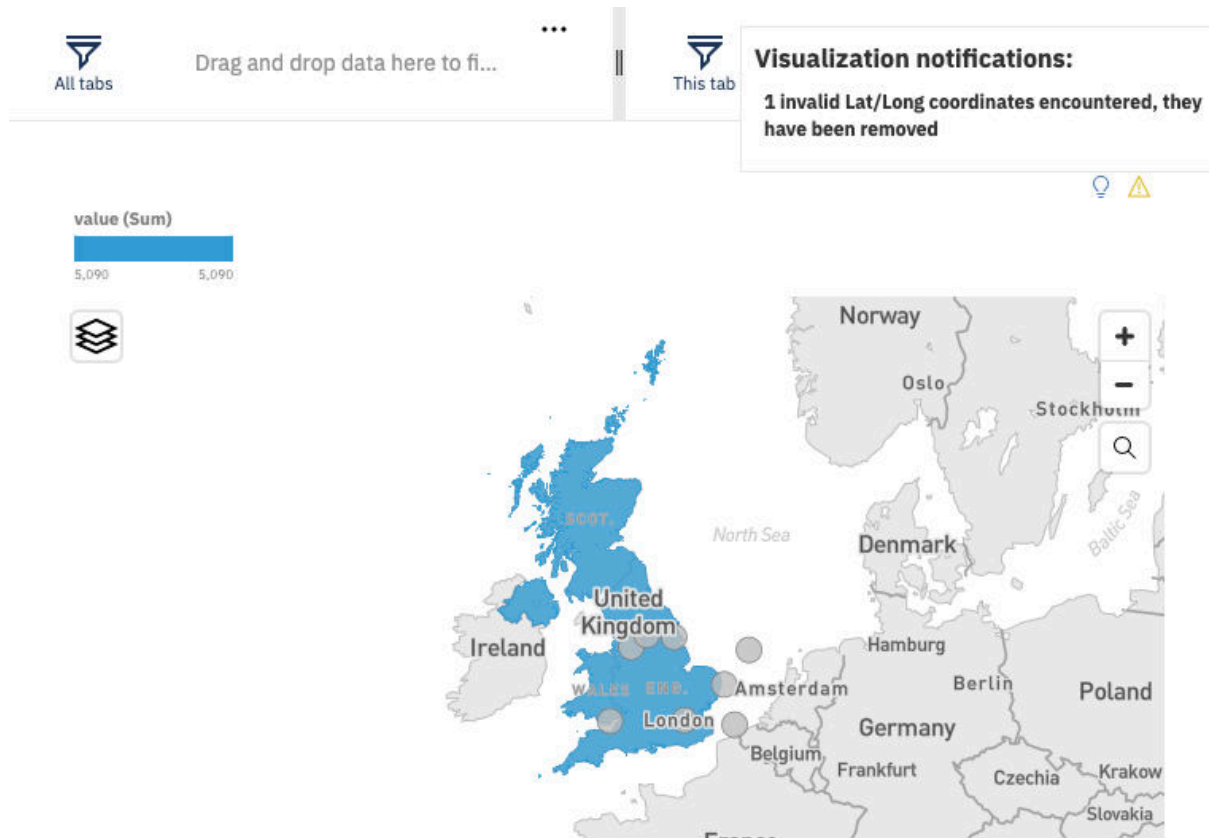
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For more information on using the map visualization in a report, see the *Example: Adding regions and points to a map* documentation in the *IBM Cognos Analytics Reporting User Guide*.

For more information, see the *Adding a map to a dashboard* documentation in the *IBM Cognos Analytics Dashboard and Stories User Guide*.

Use stand-alone calculations with AI and advanced analytics features

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For more information, see the *IBM Cognos Analytics Explorations* guide.

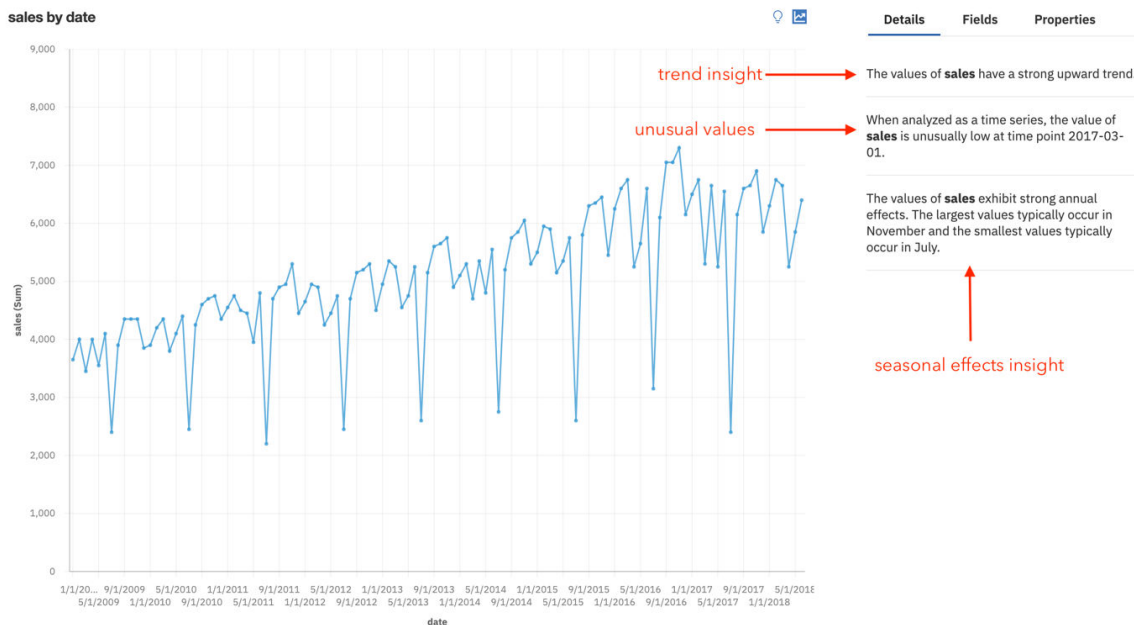
For more information about calculations, see the *IBM Cognos Analytics Data Modeling* guide, and *Framework Manager* guide.

Natural language details for time series

Natural language details for time series in IBM Cognos Analytics provides insights for time series data that is displayed in all applicable exploration visualizations.

When time fields and a measure field are specified in the visualization and a forecasting model is computed, detected time series insights become available under the **Details** tab.

Cognos Analytics supports three types of insights for time series data: *unusual values*, *seasonal effects*, and *trend*. Unusual values list observations that are statistically different from values that are predicted by the selected forecasting model. The seasonal effects insight provides a seasonal length, which is the duration of a seasonal pattern, for a time series. For example, average temperature variation across 12 months establishes an annual pattern. This insight also provides the strength of the seasonal effects and the time points with the largest and the smallest seasonal influence per seasonal pattern. The trend insight detects an overall direction of the time series together with its strength.



Insights for time series are based on the selected exponential smoothing model for time series data in the visualization. A forecasting model is computed regardless of the visualization type or activation of the forecasting feature in the visualization. Time series points are automatically sorted in chronological order for the insights detection. Unlike in the forecasting feature, the time points that are displayed in the visualization are not sorted.

Insights for time series expand on the existing insights under the **Details** tab. The latter treat a time field as a categorical field and provide basic summaries and insights that correspond to the visualization insights feature.

For more information, see the *Natural language details for time series* documentation in the *IBM Cognos Analytics Explore User Guide*.

Notebooks

IBM Cognos Analytics for Jupyter Notebook integrates Jupyter notebooks into IBM Cognos Analytics. You can create and upload notebooks into Cognos Analytics, and work with Cognos Analytics data in a notebook using Python scripts. You can also embed notebook output in a dashboard, story, or report.

Support for R programming language in Jupyter notebooks

In addition to Python, you can now code notebooks in the R programming language.

For more information, see "R notebook examples" in the *IBM Cognos Analytics Getting Started* guide.

Reporting

IBM Cognos Analytics reporting is a web-based report authoring tool that professional report authors and developers use to build sophisticated, multiple-page, multiple-query reports against multiple databases.








Data tables

Data table is a new type of data container in Cognos Analytics reports.

Data tables are similar to lists because they also show data in rows and columns. However, unlike in lists, the data is rendered on the browser side, and not on the Cognos Analytics server side. As a result, the data in data tables is displayed very quickly.

You can group and summarize data in data table columns, expand and collapse rows, apply filters to columns, and add custom indicators instead of numbers in measure columns.

The following animation shows interactions in a data table.

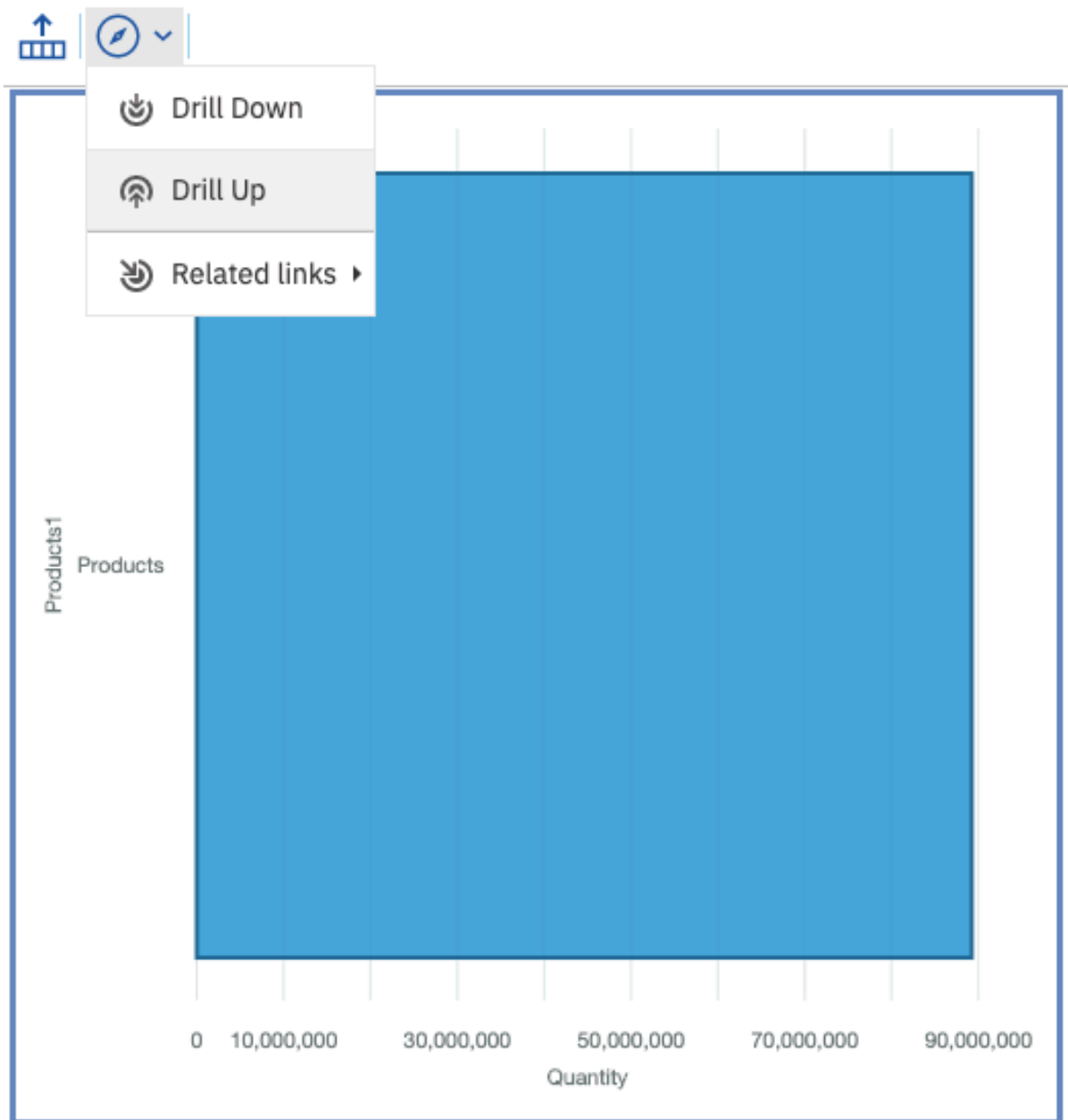
Year	Retailer country	City	Product line	Quantity	Revenue	
– 2014 - Total				6,063,095	\$240,435,999.08	^
2014	– Canada - Total			1,407,293	\$57,044,348.07	
	Canada	– Banff - Total		11,487	\$391,783.50	
		Banff	Personal Access...	11,487	\$391,783.50	
		– Calgary - Total		60,656	\$2,590,173.41	
		Calgary	Camping Equip...	33,678	\$2,201,806.88	
			Personal Access...	12,017	\$280,914.01	
			Outdoor Protection	14,961	\$107,452.52	
		– Charlottetown - Total		5,054	\$215,955.28	
		Charlottetown	Camping Equip...	4,897	\$215,013.28	
			Outdoor Protection	157	\$942.00	
		– Fredericton - Total		9,402	\$351,382.95	
		Fredericton	Personal Access...	9,402	\$351,382.95	
	– Halifax - Total			89,358	\$3,095,625.27	

For more information, see the *Data tables* in the *IBM Cognos Analytics Reporting User Guide*.

Drilling up and down in a visualization in a report

If you use a dimensionally modeled data source, you can create a visualization and drill down to lower-level data or drill up to higher-level data.

The following example shows how to drill up and drill down on products and their sold quantity.



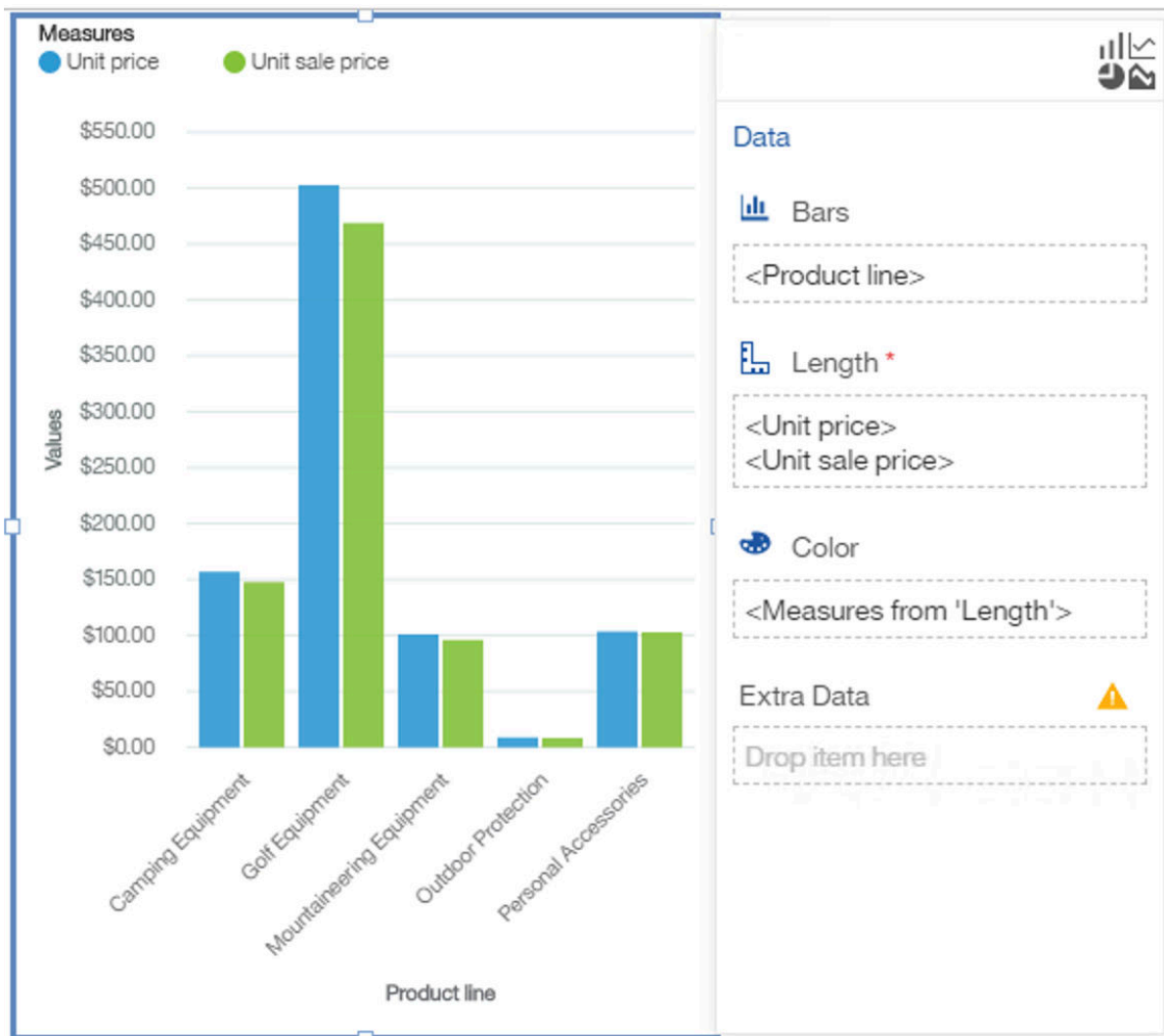
For more information, see the *Drilling up and down in a visualization in a report* documentation in the *IBM Cognos Analytics Reporting User Guide*.

Comparing measures in a visualization

You can compare measures from the same category in a visualization by adding multiple measures on the **Length** slot.

For example, you can compare the unit price with the unit sale price.

Note: Comparing measures is only available for bar and column visualizations.

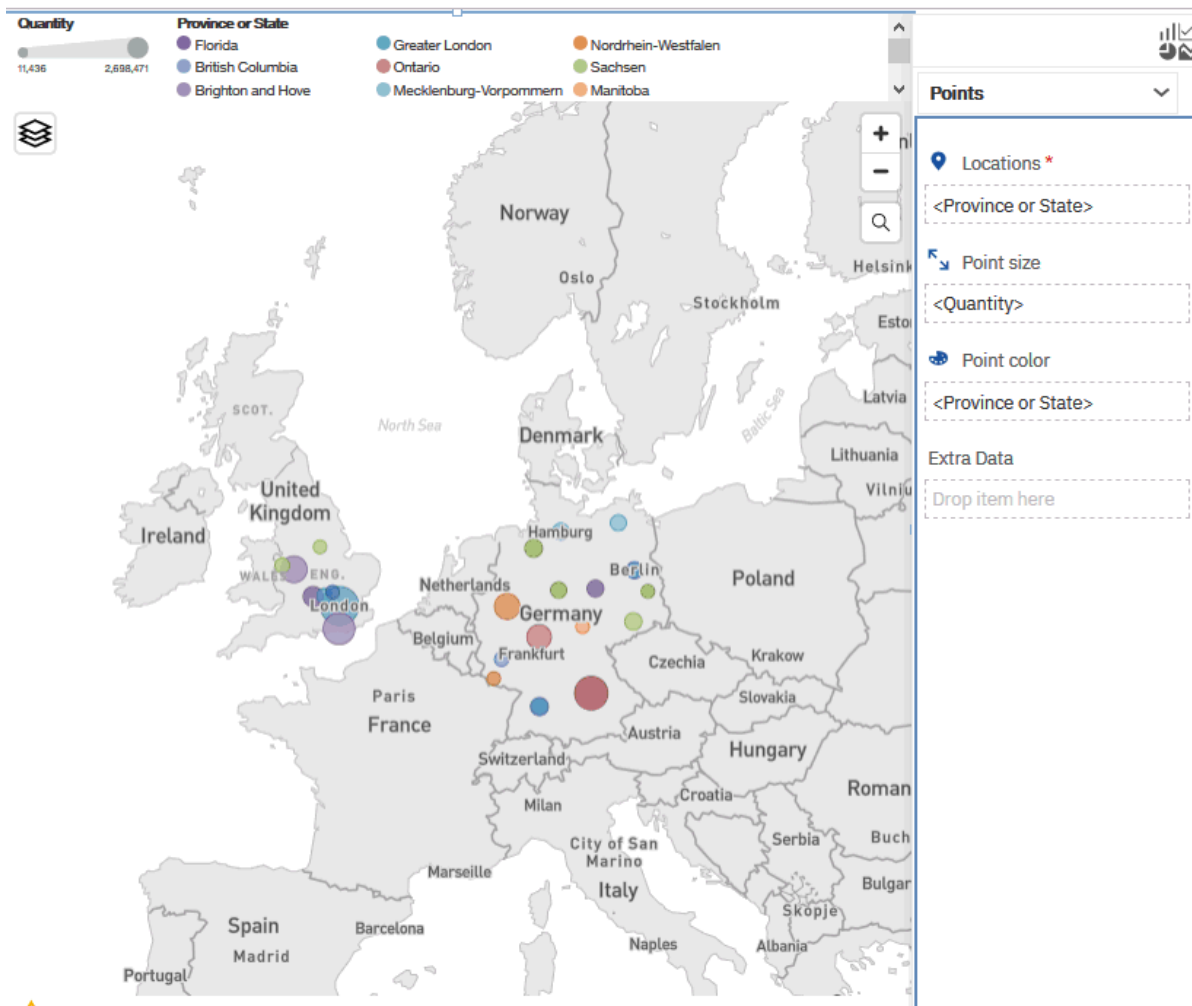


For more information, see the *Comparing measures in a visualization* documentation in the *IBM Cognos Analytics Reporting User Guide*.

Support for categorical coloring in a map visualization

As of IBM Cognos Analytics 11.1.6, map visualizations support categorical coloring.

You can use categorical coloring in a map visualization by dragging categorical data to the color fields in any map layer.



For more information on using the map visualization in a report, see the *Example: Adding regions and points to a map* documentation in the *IBM Cognos Analytics Reporting User Guide*.

Changed handling of invalid latitude and longitude coordinates in a map visualization in a report

The way invalid latitude and longitude data are handled in a map visualization changed.

When invalid or missing latitude and longitude data value were encountered, Cognos Analytics remapped the coordinate to [0,0]. As of version 11.1.6 Cognos Analytics does not display the data point on the map at all.

For more information on using the map visualization in a report, see the *Example: Adding regions and points to a map* documentation in the *IBM Cognos Analytics Reporting User Guide*.

Modeling

Use the data modeling component in IBM Cognos Analytics to create a data module that can then be used in dashboards, stories, explorations, reports, and other content. Data modules are containers that describe data and the rules for combining and shaping data to make it ready for analysis and visualization.

Add individual columns to a data module

After a table is updated in the source, you can update the table in the data module by adding or removing individual columns without updating the whole table.

Use the **Show unused items** checkbox in the **Sources** panel to highlight the columns that are not in the data module. Identify the columns that should be added to the data module, and drag these columns from the **Sources** panel to the **Data module** panel.

For data server sources, use the **Reload metadata** action on the source schema to identify potential discrepancies between the data in the source and the data module.

For more information, see "Updating columns in a data module" in the *IBM Cognos Analytics Data Modeling* guide.

Reload the schema metadata from a data module

You can reload the schema metadata directly from a data module.

Use the **Reload metadata** action on the source schema to identify potential discrepancies between the data in the source and the data module.

In previous releases, this task could only be performed from the administration interface.

For more information, see "Reloading the schema metadata" in the *IBM Cognos Analytics Data Modeling* guide.

Framework Manager model update utility

IBM Cognos Analytics includes the FMMD_ModelUpdate utility that changes the case of metadata object names in the *model.xml* files to lowercase or uppercase.

The names correspond to imported tables, views, stored procedures, and user-defined scalar functions.

The utility can be used with model files that were created or updated in IBM Cognos Framework Manager 11.x or earlier versions.

For more information, see "FMMD_ModelUpdate utility" in the *IBM Cognos Framework Manager* guide.

Samples

Get a deeper understanding of IBM Cognos Analytics capabilities with updated sample content.

New industry-specific base samples

Sixteen new base samples are available in IBM Cognos Analytics 11.1.6. These samples are designed for specific industries so that you can easily apply them to real-world scenarios.

For information about the new samples, go to the *IBM Cognos Analytics Samples* guide and see the topics titled with these sample names:

- "Manage incentive compensation and conduct risk"
- "Auto group executive dashboard"
- "2019 Q3 sales action plan"
- "Auto group revenue trends"
- "Auto group MTD dealer sales"
- "Nebraska school board enrollment"
- "Nebraska school board dashboard"
- "Nebraska school board final grade analysis"
- "Journey to improved educational outcomes"
- "Hospital admissions executive dashboard"
- "Admissions by hospital and department"
- "Increases in respiratory illnesses"
- "NLA 2018 v 2017 results"
- "NLA 2017 year end analysis"
- "NLA 2018 promotion"
- "NLA 2018 executive presentation"

Administration

Manage the security, access, and functionality of IBM Cognos Analytics components.

Enhanced Analytics User license

As of IBM Cognos Analytics release 11.1.6, anyone who is assigned the Analytics User license can create explorations.

For information about all the capabilities provided by the Analytics User license, see these topics:

- "License roles" in the *IBM Cognos Analytics Managing Guide*
- "Default permissions based on licenses" in the *IBM Cognos Analytics Managing Guide*

For information about creating explorations, see the *IBM Cognos Analytics Explorations User Guide*.

Watson Knowledge Catalog support

As of 11.1.6, data catalog connections are supported in Cognos Analytics. For example, you can now connect to an external Watson Knowledge Catalog database.

For more information, see "Data catalogs" in the *IBM Cognos Analytics Managing Guide*.

New AI Learning capability

When the new **AI > Learning** capability is assigned to a user, IBM Cognos Analytics learns from the user's product usage. This allows users, for example, to receive recommendations about particular visualization types that are based on their selected data.

For more information, see these topics:

- ["Use AI to personalize recommended visualizations" on page 38](#)
- "Initial access permissions for capabilities" in the *Managing IBM Cognos Analytics Guide*
- "Default permissions based on licenses" in the *Managing IBM Cognos Analytics Guide*

IBM App Id support

IBM Cognos Analytics supports IBM App Id as an OpenID Connect authentication provider.

For more information, see these topics:

- [IBM Cloud App ID \(https://www.ibm.com/cloud/app-id\)](https://www.ibm.com/cloud/app-id)
- "Managing OpenID Connect namespaces" in the *IBM Cognos Analytics Managing Guide*

Vendor-supported driver versions tested with 11.1.6

IBM Cognos Analytics 11.1.6 supports an updated list of client driver versions.

For more information, see [Cognos Analytics on Premises 11.1.6 - vendor-supported client driver versions that were tested with Cognos Analytics](#).

IBM Performance Server for PostgreSQL

IBM Cognos Analytics supports connections to IBM Performance Server (IPS) for PostgreSQL that either **1)** use Netezza client drivers that are supported by IPS for PostgreSQL or **2)** were created using the Netezza connection editor.

For more information, see these topics:

- [IBM Performance Server for PostgreSQL overview \(https://www.ibm.com/support/knowledgecenter/SS5FPD_1.0.0/com.ibm.ips.doc/postgresql/ips_overview.html\)](https://www.ibm.com/support/knowledgecenter/SS5FPD_1.0.0/com.ibm.ips.doc/postgresql/ips_overview.html)
- [Cognos Analytics on Premises 11.1.6 - vendor-supported client driver versions that were tested with Cognos Analytics \(https://www.ibm.com/support/pages/node/1106607\)](https://www.ibm.com/support/pages/node/1106607)

Installation and configuration

Learn about changes to the IBM Cognos Analytics installation and configuration.

Reordered cipher suite values in Cognos Configuration

In Cognos Configuration, the order of supported cipher suite values has changed. As of 11.1.6, if you configure Cognos Analytics to use TLS, the strongest supported cipher suite is used for encryption and decryption.

For more information about configuring cipher suites, see these topics:

- "Configuring the default cryptographic provider" in the *IBM Cognos Analytics Installation and Configuration Guide*
- "Select and rank cipher suites for Secure Socket Layer" in the *IBM Cognos Analytics Installation and Configuration Guide*

Release 11.1.5 - December 2019

This section describes new and changed features in IBM Cognos Analytics 11.1.5.

Getting started

Learn about enhancements to the user interface, training materials, and features that affect multiple IBM Cognos Analytics components.

Members in the metadata tree

The metadata tree in dashboards, stories, explorations, and data modules now includes members in both relational and dimensional sources.

For relational sources, each unique value in a column is shown as a member in the metadata tree. For dimensional sources, hierarchies and levels can be expanded to view members.

Users can drag members to the canvas to build visualizations just like they drag columns from relational sources. Only members that the user has permissions to view are available in the data tree.

For more information, see the Cognos Analytics dashboards, stories, explorations, and modeling documentation.

Shared location for uploaded files

Administrators can specify a default, shared location in **Team content** for uploaded files at the role, tenant, and global levels.

For more information, see these topics:

- "Customizing roles" in the *Managing IBM Cognos Analytics Guide*
- "Customizing tenants" in the *Managing IBM Cognos Analytics Guide*
- "Edit the default user profile" in the *Managing IBM Cognos Analytics Guide*

Saved report output as an email attachment

You can share saved report output as an email attachment.

For more information, see "Sharing assets from Team content via email" in the *IBM Cognos Analytics Getting Started Guide*.

Dashboards

Use IBM Cognos Analytics dashboards to discover key insights about your data and monitor events or activities at a glance.

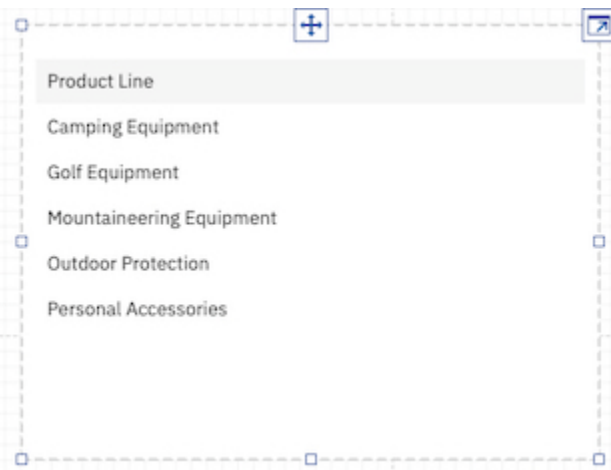
Improvements to crosstab and table formatting

The formatting for crosstabs and tables was enhanced to improve usability.

You can add a new column to a crosstab or table. As you drag data on to the visualization, a vertical guide line indicates where to drop the data.



To create a new visualization type, drag the new column inside the visualization where there is no guide line.





Display members in the data tree

You can expand hierarchies to display the members in the data tree. In the **Selected sources** panel, members are organized into a data tree structure, with parent and child members. Now you can show or hide all levels of the hierarchy, including the child members.

In the **Selected sources** panel, you can also search for members and configure properties for the members.

For more information, see the *Expanding hierarchies to display all members in the data tree* topic in the *IBM Cognos Analytics Dashboard and Stories User Guide*.

Drill through from a dashboard to another dashboard

You can define drill-through definitions from a dashboard to another dashboard. The values you select to drill through from are passed as global filters to the target dashboard.

For more information, see the *Adding a drill-through definition for one dashboard to another* topic in the *IBM Cognos Analytics Dashboard and Stories User Guide*.

Customize tabs

You can customize tab styling for individual tabs or for all the tabs in your dashboard. Move the tabs to the top, left, bottom, or right of your dashboard and add icons to your tabs.

For more information, see the *Customizing tabs* topic in the *IBM Cognos Analytics Dashboard and Stories User Guide*.

Show or hide rows and columns in a crosstab

You can show or hide individual rows and columns in a crosstab while the **Summary** rows maintain their value.

For more information, see the *Showing or hiding rows and columns in a crosstab* topic in the *IBM Cognos Analytics Dashboard and Stories User Guide*.

Customize missing values

You can customize how missing values are displayed in your visualizations.

For more information, see the *Customizing null values* topic in the *IBM Cognos Analytics Dashboard and Stories User Guide*.

Assistant-suggested questions based on context

You can now ask the Assistant to suggest a set of questions.

Suggestions are based on the context of your data source and particular industry. Before requesting suggestions, you must select a data source to set the context.

New URL for downloading the custom visualization command line tools

The location for downloading the custom visualizations command line tools changed.

For more information, see the *Setting up the development environment* documentation in the *IBM Cognos Analytics Custom Visualizations Developer Guide*.

Custom visualizations support nested and hierarchical categories

Custom visualizations now support hierarchical categories. You can use hierarchical categories by using the `Class Segment` in your custom visualization.

Enhancements for forecasting

Several enhancements are made to the forecasting algorithms in IBM Cognos Analytics.

For a comparison between the forecasting features in Cognos Analytics R4 and R5, see <https://community.ibm.com/community/user/businessanalytics/blogs/marco-maas1/2020/01/24/ibm-cognos-analytics-forecasting-comparison-r4-r5>.

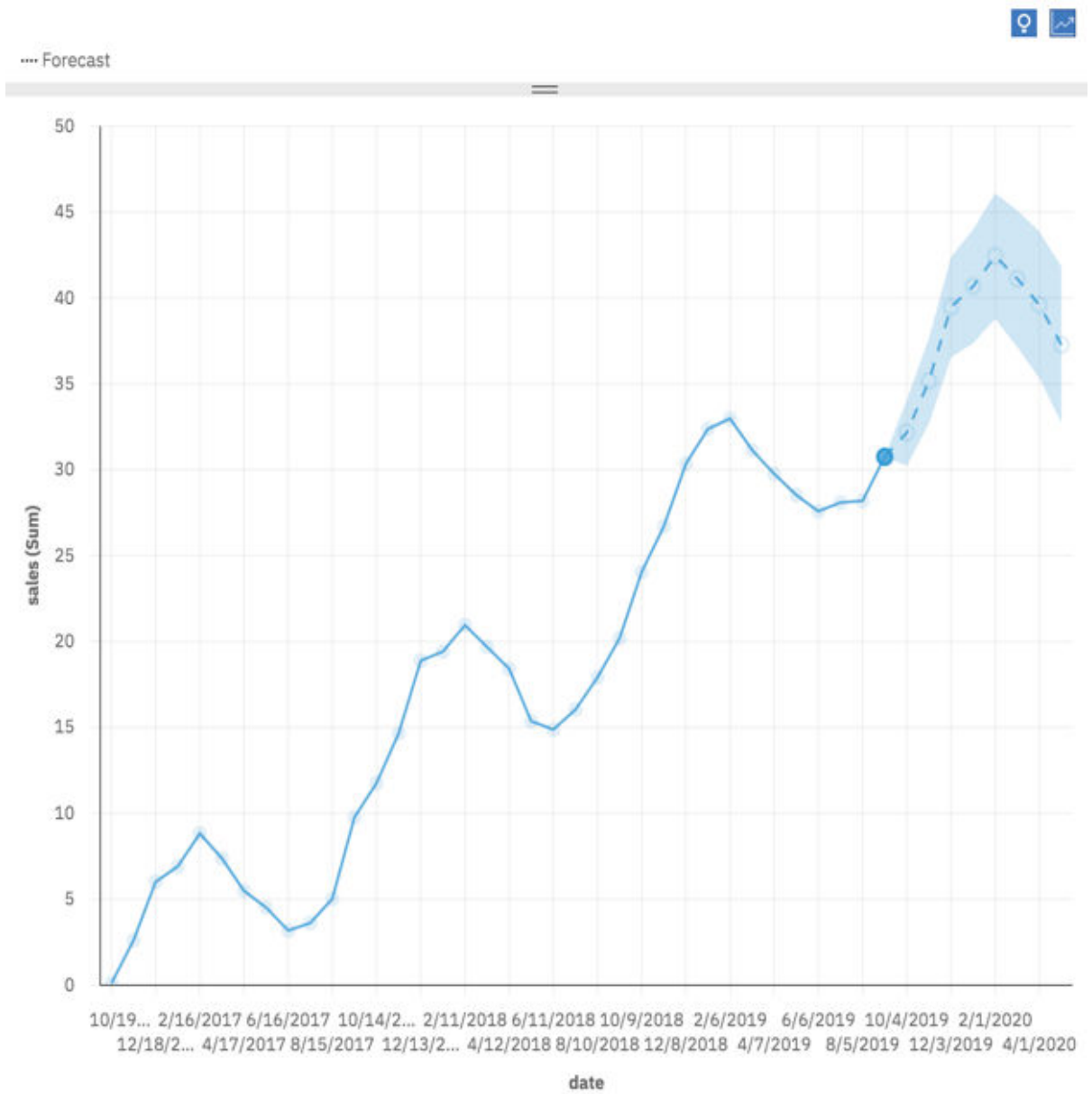
The forecasting models are fine-tuned since the previous release to provide more accurate forecasts. The enhanced forecasting algorithms were evaluated on over 2,000 data sets and there was a 20% increase in accuracy, compared to the previous algorithms. In addition to an increase in accuracy, the confidence intervals are now more reliable than in the previous release.

For more information, the *Forecasting* and *Forecasting in visualizations* documentation in the *IBM Cognos Analytics Dashboard and Stories User Guide*.

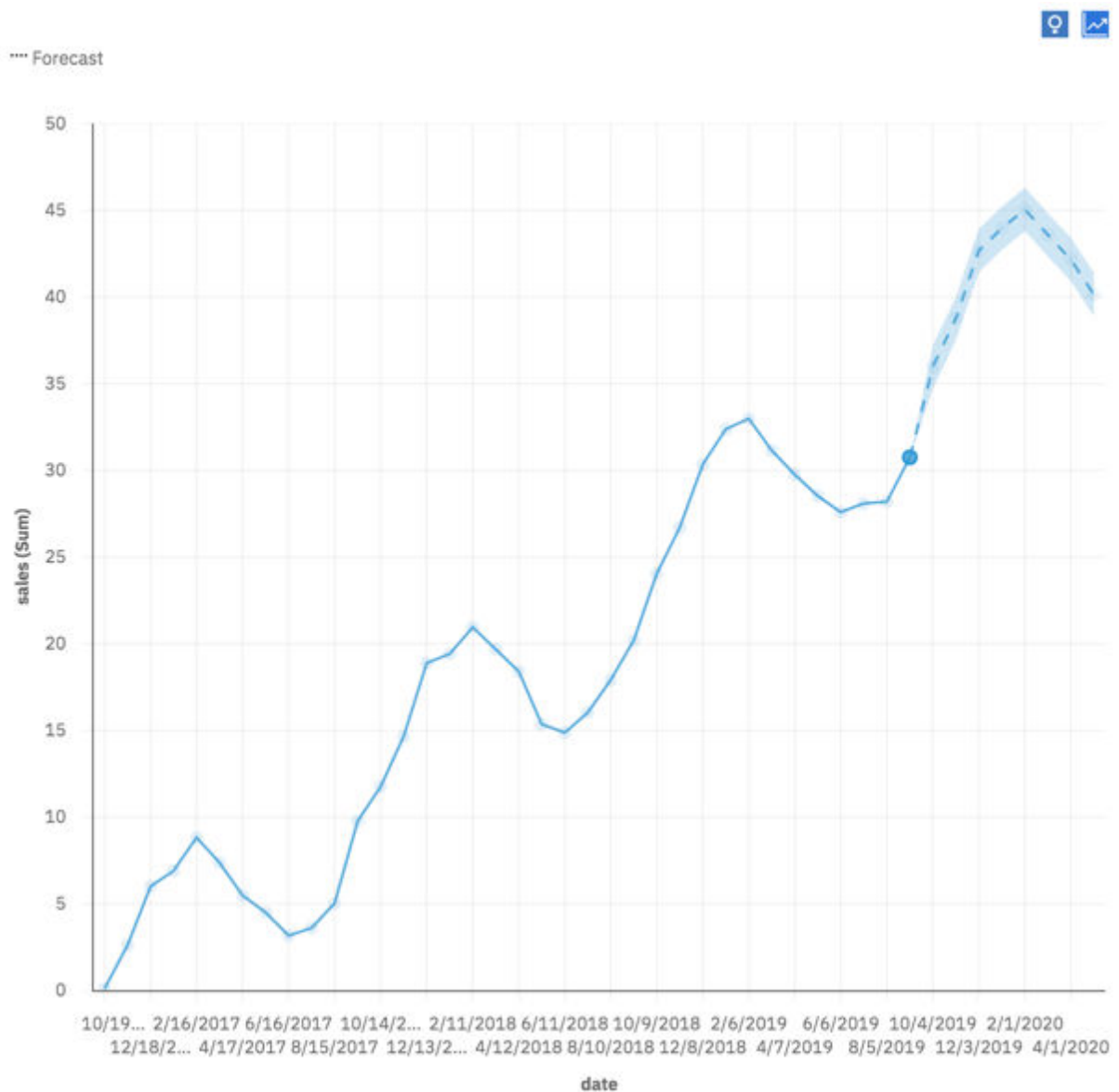
Better initial state estimates

Automated initial estimates of seasonal states provide more accurate forecasts and more reliable confidence bounds. The next visualizations show the effect of initial state estimates on model fit. The same model is fit in both cases. However, the new fit has tighter confidence bounds and higher accuracy. This is largely because the new initial state estimates use the seasonal period when the series is decomposed.

Before



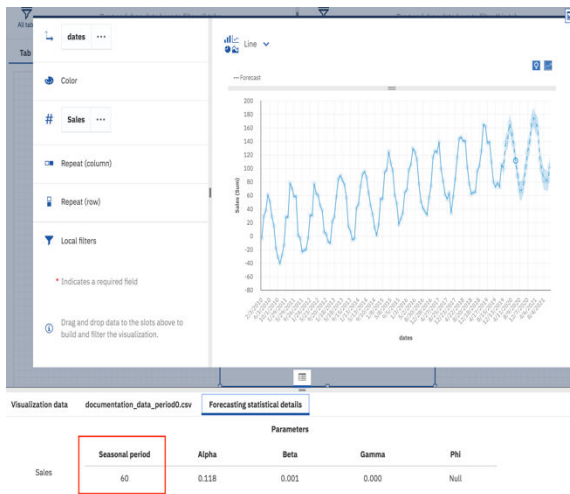
After



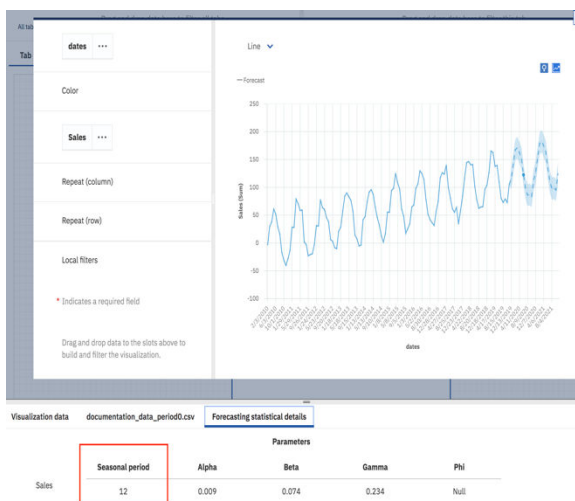
Period detection enhancements

Spurious large seasonal periods are less likely to be detected and preference is given to periods more in line with the time dimension of the data. For example, the next visualizations show monthly data over the course of 9 years. Period detection now immediately attempts to fit a seasonal period of 12 to capture yearly seasonal effects.

Before

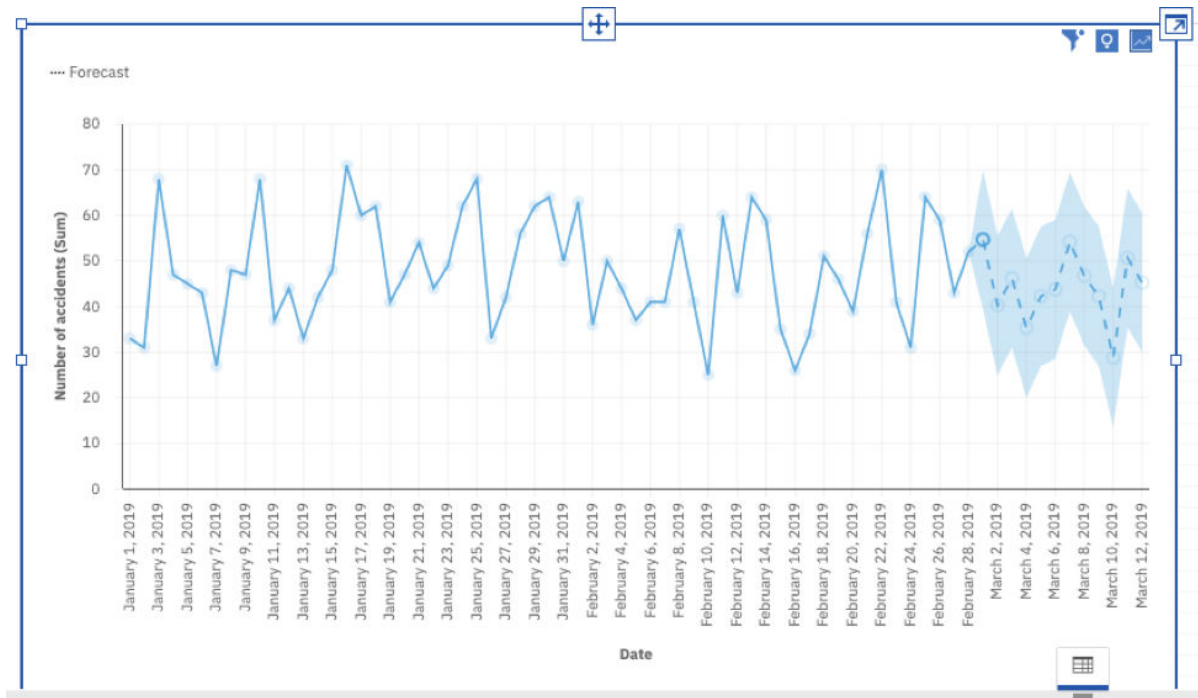


After



In many instances, a model with no seasonality is preferred to models with large spurious seasonality. The next visualizations show daily data over the course of 2 months. Model with relatively large seasonal period 28 provides strong fit to the historic data, but there is no clear seasonal patterns and a model with no seasonality is selected instead.

Before



Forecasting statistical details				
	Parameters			
	Seasonal period	Alpha	Beta	Gamma
Number of accidents	28	0.000	Null	0.000

After

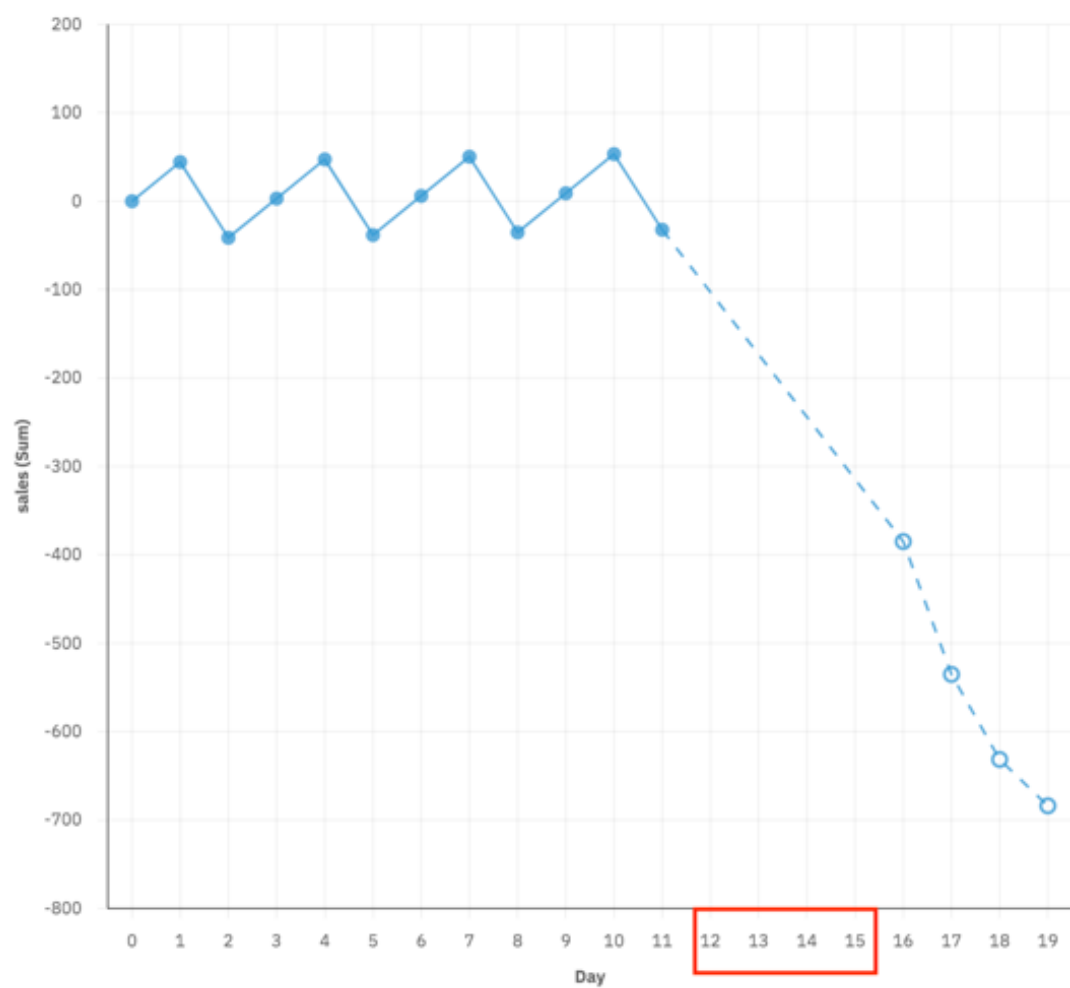


Missing value handling

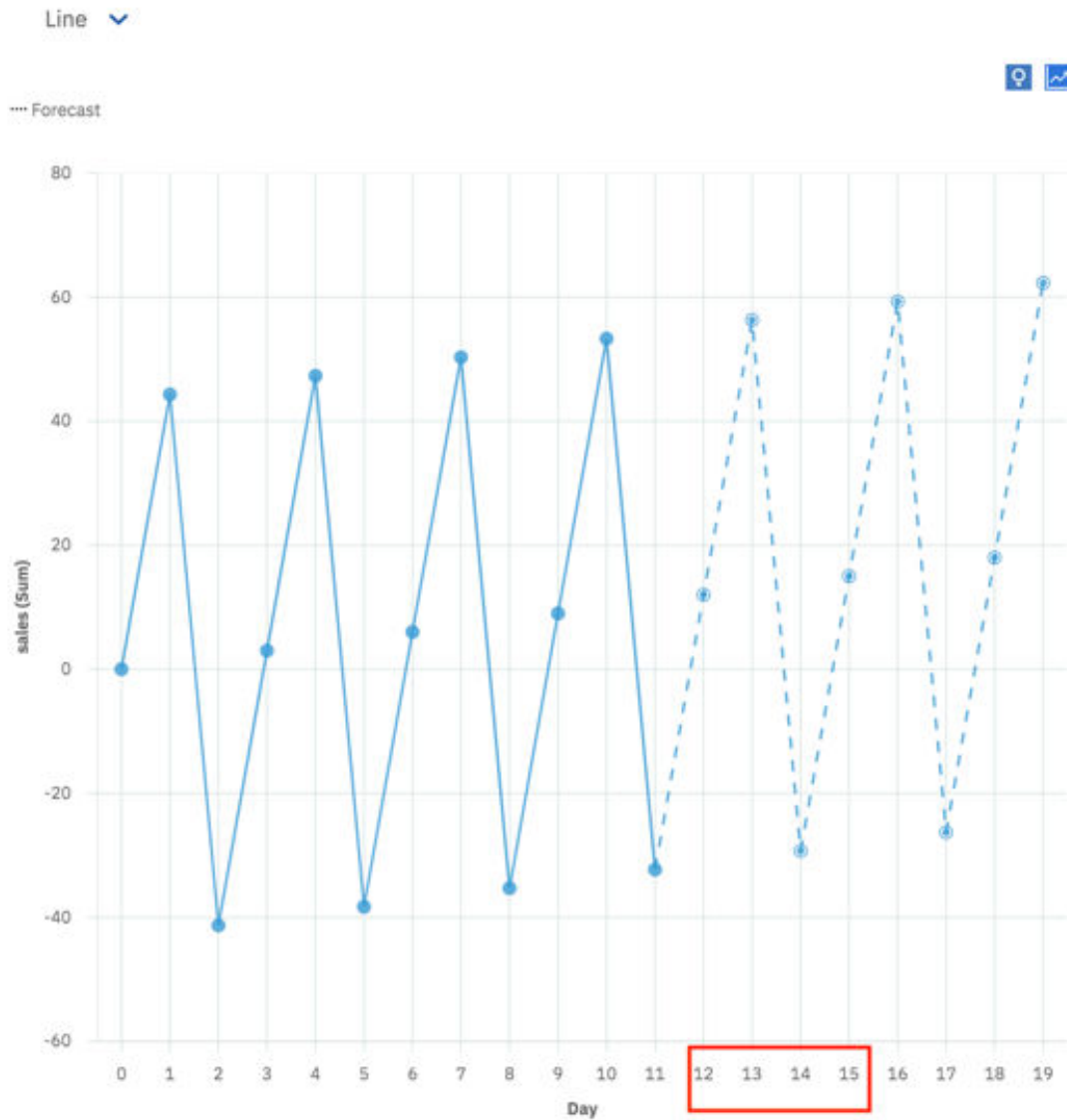
Missing values at the end of the series are forecasted in Cognos Analytics 11.1.5. In previous versions, missing data at the end of a series was imputed and used as input to the fitting procedure. Forecasting the values instead of imputing makes the fitting process less susceptible to poor fits.

Before

Forecast



After



Statistical details

The forecasting statistical details section within the data tray now provides more measures and diagnostic information:

1. **Status:** Report the status of the model fitting for a particular series with either **Success** or **Failure**.

Visualization data	test_004.csv	Forecasting statistical details	
		Forecast	Model
		Status	Trend Seasonality
Sales		Success	Additive None

2. **Accuracy:** Reported as Mean Absolute Scaled Error (**MASE**) subtracted from 1. This accuracy measure displays the improvement compared to the naive model.

Visualization data		test_004.csv					Forecasting statistical details	
		Accuracy Measures						
		Accuracy %	MASE	MAE	RMSE	MAPE	AIC	
Sales		38.9%	0.611	0.892	1.124	Null	33.945	

3. **Series length:** The total length of the series, including imputed values, that was used to fit the model. Missing values before the first valid value and after the last valid value are not included in series length since they are not used as input to the model fitting procedure.

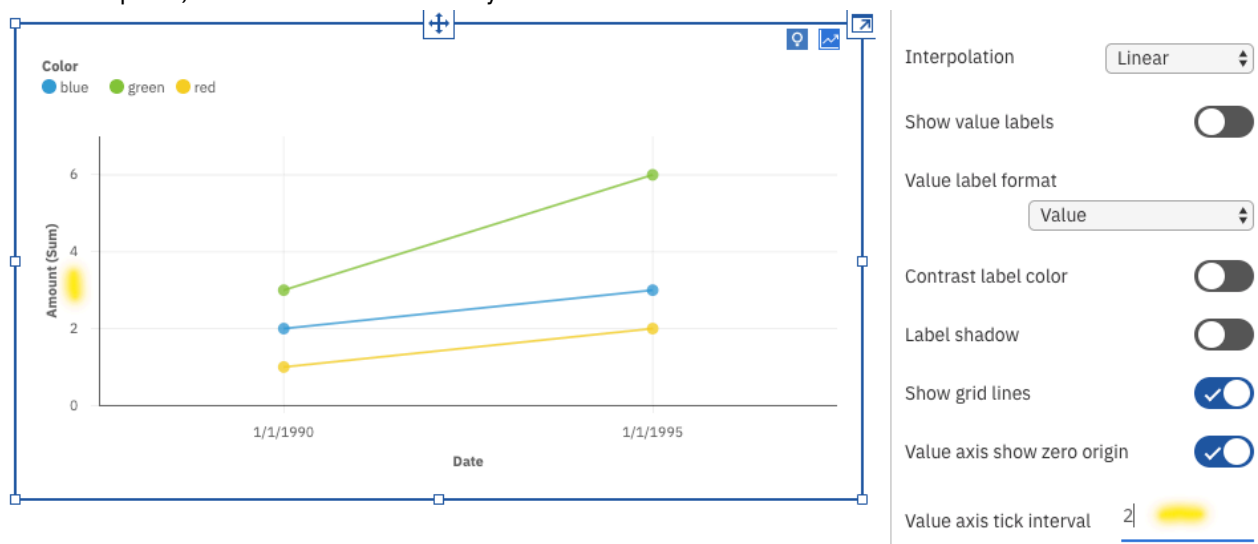
Visualization data		test_004.csv					Forecasting statistical details	
		Diagnostics						
		Missing count	Series length	Ignored periods	Trend strength	Seasonality strength	Date / time interval	
Sales		0	120	0	51.8%	Null	1 year	

4. **Notes:** A **Notes** section is now available to provide additional information regarding the status of a series, such as the cause of a failure.

Visualization data		test_004.csv					Forecasting statistical details	
		Seasonality strength	Date / time interval	Notes				
Sales		Null	1 year	One or more forecast models were excluded from evaluation because they did not fit the properties of the data.				

Value axis ticks interval

With the option, **Value axis tick interval** you can set the interval on the value axis.



For more information, see the *Value axis options* documentation in the *IBM Cognos Analytics Dashboard and Stories User Guide*.

Searching and zooming in a map

When you use a map in a dashboard, you can search and automatically zoom into items that are matched on your maps. For example, small regions that are spread over a large area.

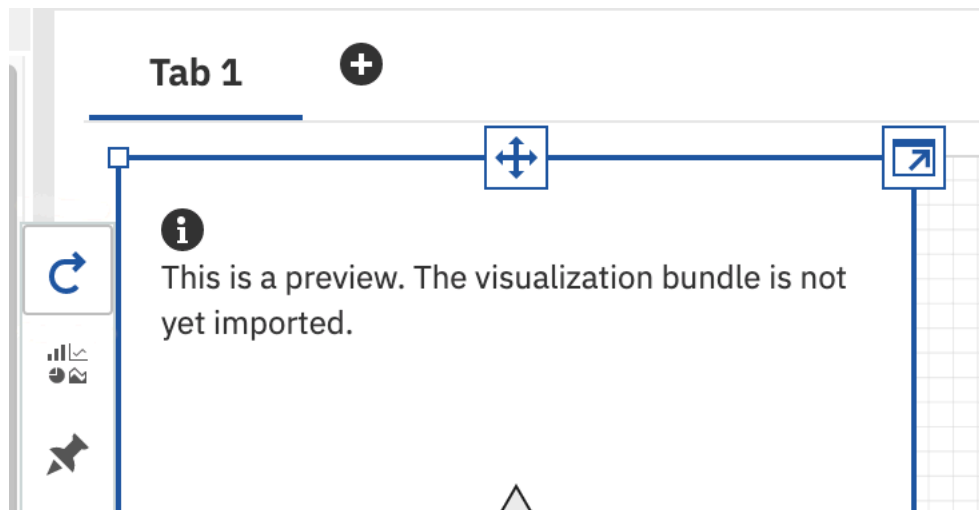


For more information, see the *Searching and zooming in a map* documentation in the *IBM Cognos Analytics Dashboard and Stories User Guide*.

Refreshing a custom visualization in preview mode in Dashboard

You can now refresh the custom visualization in a dashboard in preview mode.

To see these changes in the **Page preview** view, click **Refresh visualization**.



For more information, see the *Validating the visualization in a Cognos Analytics dashboard* documentation in the *IBM Cognos Analytics Custom Visualizations Developer Guide*.

Explorations

Uncover hidden relationships and identify patterns that turn your data into insights with IBM Cognos Analytics explorations.

Enhancements for forecasting

Several enhancements are made to the forecasting algorithms in IBM Cognos Analytics.

For a comparison between the forecasting features in Cognos Analytics R4 and R5, see <https://community.ibm.com/community/user/businessanalytics/blogs/marco-maas1/2020/01/24/ibm-cognos-analytics-forecasting-comparison-r4-r5>.

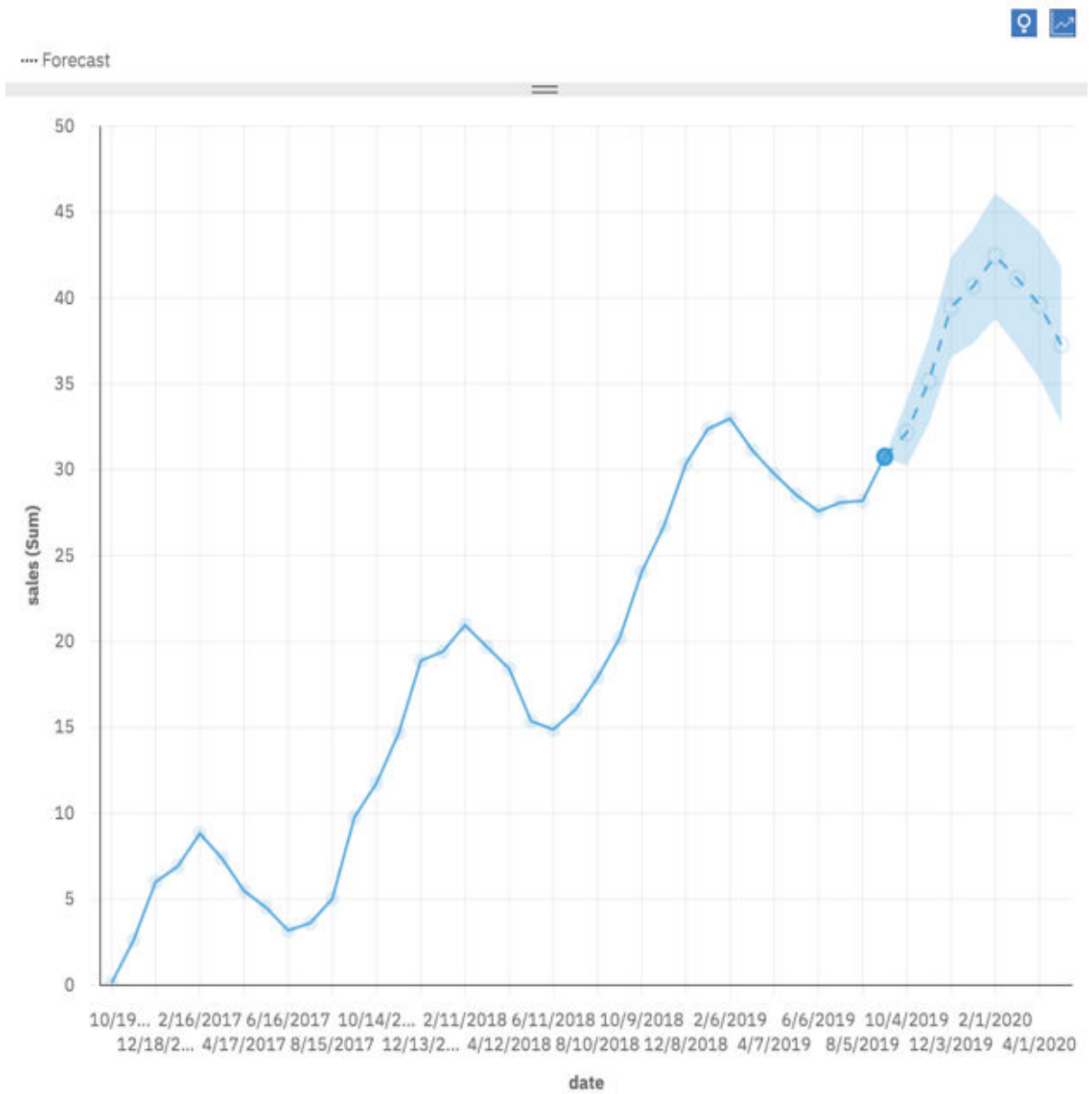
The forecasting models are fine-tuned since the previous release to provide more accurate forecasts. The enhanced forecasting algorithms were evaluated on over 2,000 data sets and there was a 20% increase in accuracy, compared to the previous algorithms. In addition to an increase in accuracy, the confidence intervals are now more reliable than in the previous release.

For more information, the *Forecasting* and *Forecasting in visualizations* documentation in the *IBM Cognos Analytics Dashboard and Stories User Guide*.

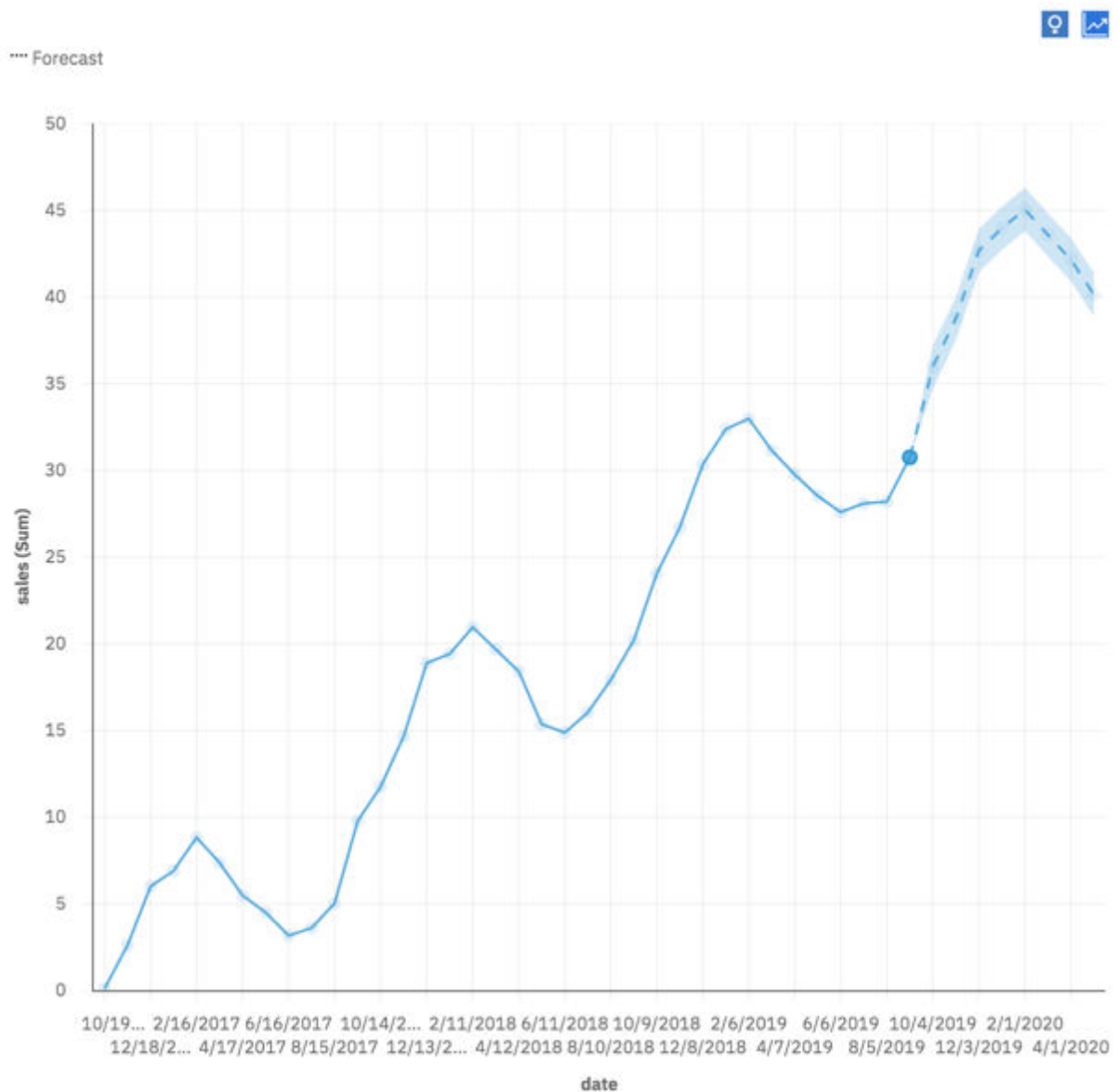
Better initial state estimates

Automated initial estimates of seasonal states provide more accurate forecasts and more reliable confidence bounds. The next visualizations show the effect of initial state estimates on model fit. The same model is fit in both cases. However, the new fit has tighter confidence bounds and higher accuracy. This is largely because the new initial state estimates use the seasonal period when the series is decomposed.

Before



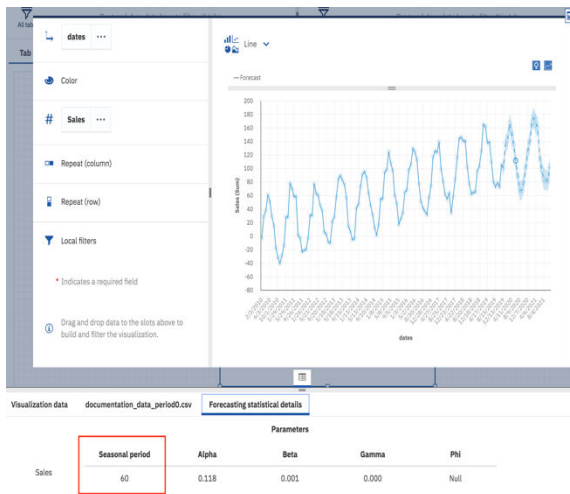
After



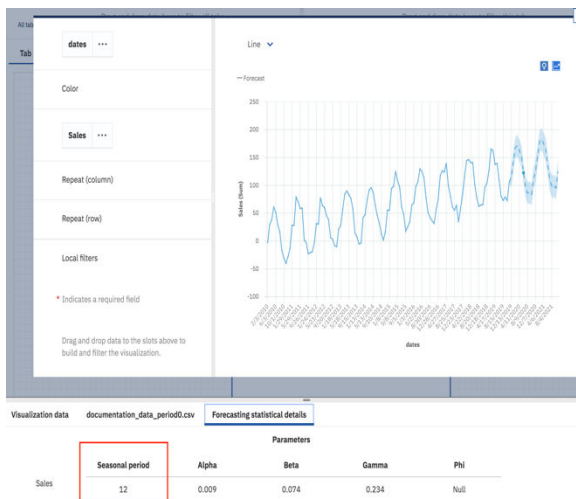
Period detection enhancements

Spurious large seasonal periods are less likely to be detected and preference is given to periods more in line with the time dimension of the data. For example, the next visualizations show monthly data over the course of 9 years. Period detection now immediately attempts to fit a seasonal period of 12 to capture yearly seasonal effects.

Before

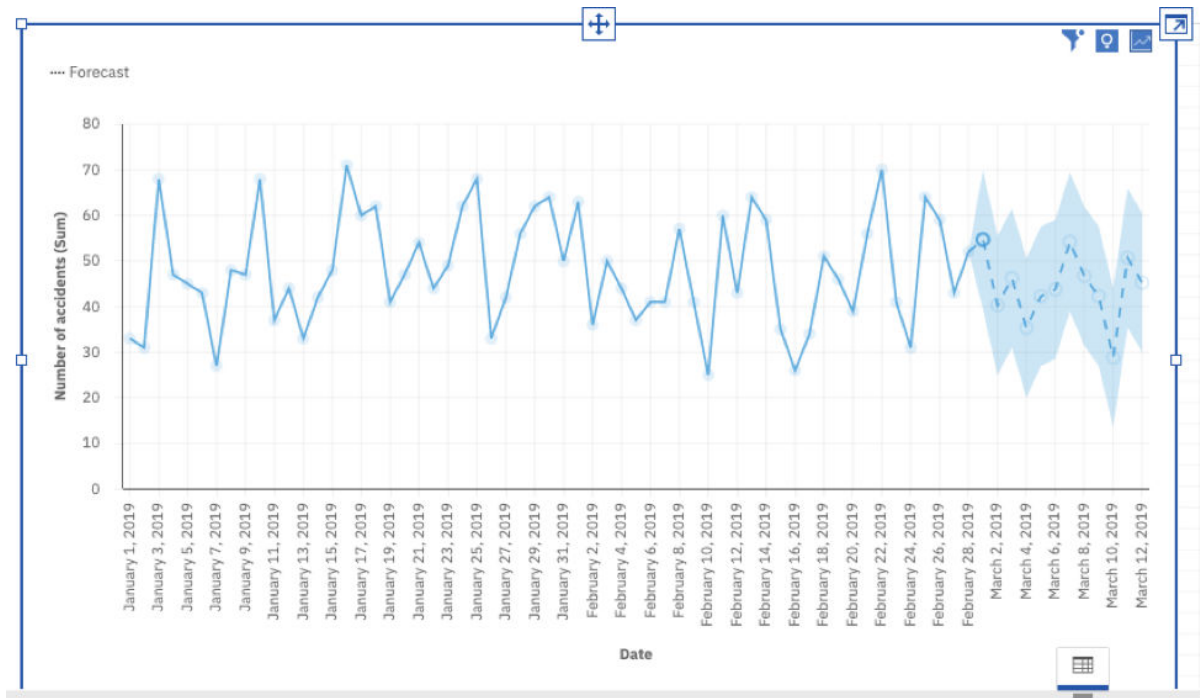


After



In many instances, a model with no seasonality is preferred to models with large spurious seasonality. The next visualizations show daily data over the course of 2 months. Model with relatively large seasonal period 28 provides strong fit to the historic data, but there is no clear seasonal patterns and a model with no seasonality is selected instead.

Before



Visualization data

Accidents data.xlsx

Forecasting statistical details

Parameters

	Seasonal period	Alpha	Beta	Gamma
Number of accidents	28	0.000	Null	0.000

After

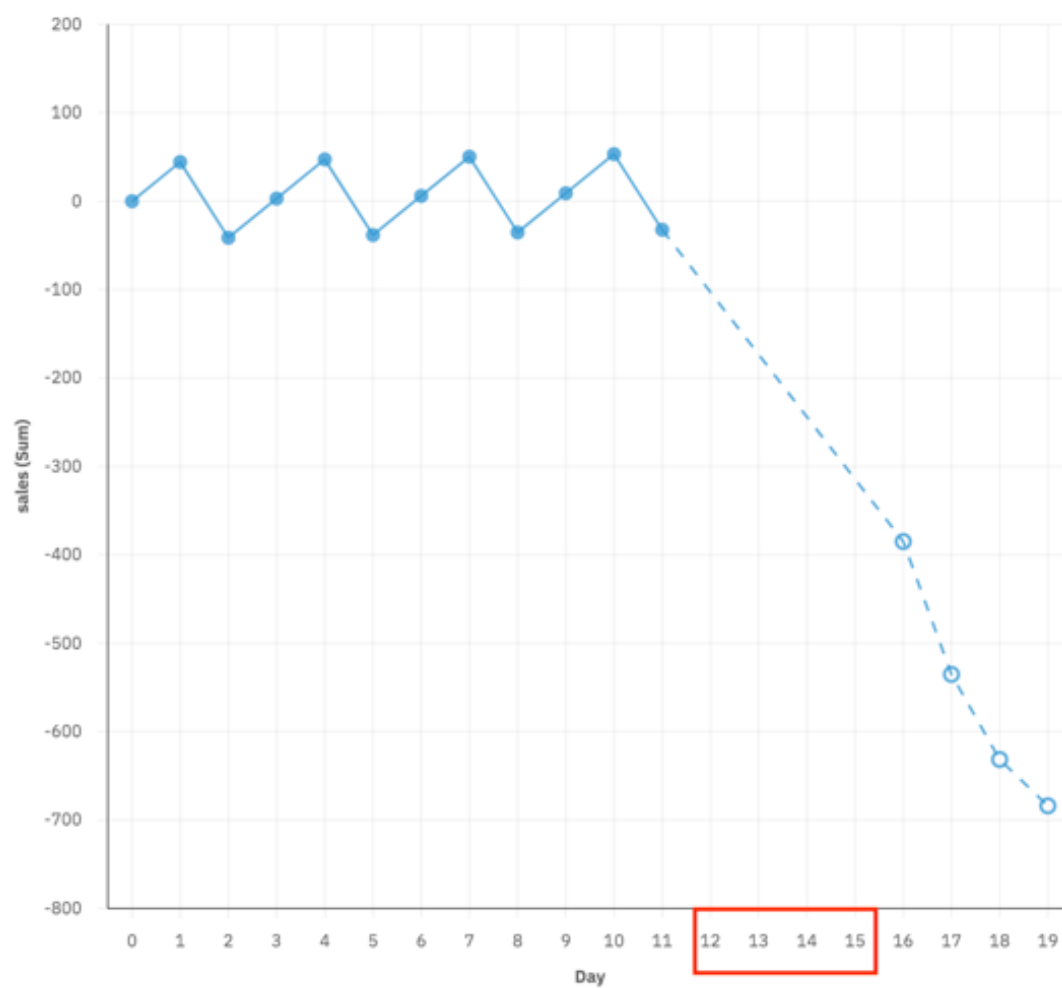


Missing value handling

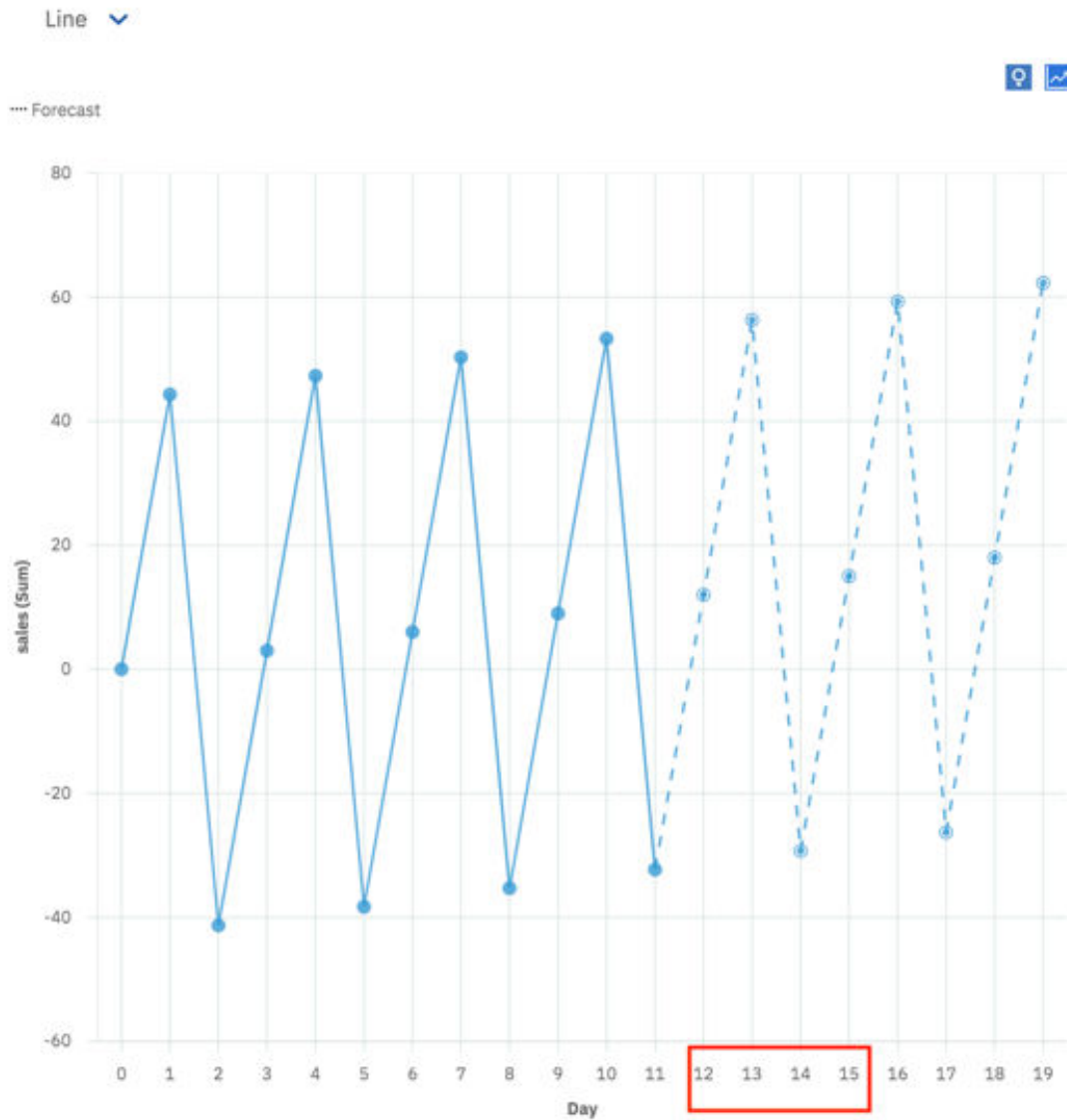
Missing values at the end of the series are forecasted in Cognos Analytics 11.1.5. In previous versions, missing data at the end of a series was imputed and used as input to the fitting procedure. Forecasting the values instead of imputing makes the fitting process less susceptible to poor fits.

Before

Forecast



After



Statistical details

The forecasting statistical details section within the data tray now provides more measures and diagnostic information:

1. **Status:** Report the status of the model fitting for a particular series with either **Success** or **Failure**.

Visualization data	test_004.csv	Forecasting statistical details	
		Forecast	Model
		Status	Trend Seasonality
Sales		Success	Additive None

2. **Accuracy:** Reported as Mean Absolute Scaled Error (**MASE**) subtracted from 1. This accuracy measure displays the improvement compared to the naive model.

Visualization data		test_004.csv	Forecasting statistical details				
		Accuracy Measures					
		Accuracy %	MASE	MAE	RMSE	MAPE	AIC
Sales		38.9%	0.611	0.892	1.124	Null	33.945

3. **Series length:** The total length of the series, including imputed values, that was used to fit the model. Missing values before the first valid value and after the last valid value are not included in series length since they are not used as input to the model fitting procedure.

Visualization data		test_004.csv	Forecasting statistical details					
			Diagnostics					
			Missing count	Series length	Ignored periods	Trend strength	Seasonality strength	Date / time interval
Sales			0	120	0	51.8%	Null	1 year

4. **Notes:** A **Notes** section is now available to provide additional information regarding the status of a series, such as the cause of a failure.

Visualization data	test_004.csv	Forecasting statistical details				
		Seasonality strength	Date / time interval	Notes		
Sales		Null	1 year	One or more forecast models were excluded from evaluation because they did not fit the properties of the data.		

Perform multiple requests concurrently

As you interact with the relationship diagram, you can perform multiple requests concurrently. Each request that you submit is now managed and cached independently.

While your requests are processed in the background, you can choose another field to focus on in the relationship diagram or create a new card.

For more information, see the *Explore relationships in your data* topic in the *IBM Cognos Analytics Explorations User Guide*.

Display members in the data tree

You can expand hierarchies to display the members in the data tree. In the **Selected sources** panel, members are organized into a data tree structure, with parent and child members. Now you can show or hide all levels of the hierarchy, including the child members.

In the **Selected sources** panel, you can also search for members and configure properties for the members.

For more information, see the *Expanding hierarchies to display all members in the data tree* topic in the *IBM Cognos Analytics Dashboard and Stories User Guide*.

Notebooks

IBM Cognos Analytics for Jupyter Notebook integrates Jupyter notebooks into IBM Cognos Analytics. You can create and upload notebooks into Cognos Analytics, and work with Cognos Analytics data in a notebook using Python scripts. You can also embed notebook output in a dashboard, story, or report.

Jupyter notebooks now available on Microsoft Windows 10

In addition to Linux distributions, the Jupyter notebook server can now be installed on Microsoft Windows 10 systems.

For more information, the *Installing Jupyter Notebook Server on Microsoft Windows 10* documentation in the *IBM Cognos Analytics Installing and configuring Cognos Analytics* guide.

Reporting

IBM Cognos Analytics reporting is a web-based report authoring tool that professional report authors and developers use to build sophisticated, multiple-page, multiple-query reports against multiple databases.

Schematics

Schematics are visualizations that can map data directly onto an arbitrary graphic representation. Schematics can, for example be floor plans, seating arrangements, mechanical drawings, or schematic geographical representations.

A schematic is a library of similar images, like seating plans or stadium layouts, that use similar keys and that are conceptually bundled together to provide some organization.



Before you can import a schematic, you must author and distribute the schematic.

For more information, see the *Authoring schematics - tutorial* documentation in the *IBM Cognos Analytics Custom Visualizations Developer Guide*.

When the schematic is authored and distributed, you can add it in a report.

For more information, see *Adding a schematic in a report* in the *IBM Cognos Analytics Reporting User Guide*.

New URL for downloading the custom visualization command line tools

The location for downloading the custom visualizations command line tools changed.

For more information, see the *Setting up the development environment* documentation in the *IBM Cognos Analytics Custom Visualizations Developer Guide*.

Custom visualizations support nested and hierarchical categories

Custom visualizations now support hierarchical categories. You can use hierarchical categories by using the **Class Segment** in your custom visualization.

Searching and zooming in a map

When you use a map in a report, you can search and automatically zoom into items that are matched on your maps. For example, small regions that are spread over a large area.



For more information, see the *Searching and zooming in a map* documentation in the *IBM Cognos Analytics Reporting User Guide*.

Legends are more compact in PDF and reports

If you use 11.1 visualizations in a report, then your PDF output and reports have a compact legend similar to the HTML output that was introduced in IBM Cognos Analytics 11.1.4.

For more information, see the *Improvements to visualization legends* documentation in the *IBM Cognos Analytics New Features Guide*.

Modeling

The data modeling component in IBM Cognos Analytics allows you to fuse together multiple sources of data, including relational databases, Hadoop-based technologies, Microsoft Excel spreadsheets, text files, and so on. Using these sources, a data module is created that can then be used in dashboards, stories, explorations, reports, and other content.

Members in the data tree

The data module tree shows the content of relational and dimensional sources. In both relational and dimensional sources, members are shown in the data tree.

To view the content of a dimensional source, expand the package that contains the source items. Dimensional members are the nodes of the **Members** folder. Relational members are the nodes of columns in relational sources.

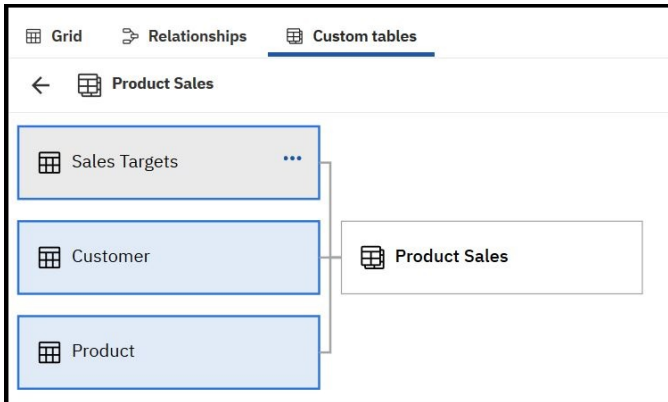
For more information, see "Members in the data tree" in the *IBM Cognos Analytics Data Modeling* guide.

Custom tables

Custom tables are created from tables that exist in the data module.

The term "custom table" is new in this release, but the functionality to create new tables in data modules existed in previous versions of Cognos Analytics.

In addition to the new name, this functionality was enhanced by the introduction of the **Custom tables** tab that provides a central view for creating, viewing, and managing custom tables in a data module. The tab includes the custom table diagram that shows the tables that were used to create the custom table. The following graphic is an example of a custom table diagram.



For more information, see "Custom tables" in the *IBM Cognos Analytics Data Modeling* guide.

Showing the query information

Modelers can view the query information (SQL) for tables and relationships.

The query information can be viewed as **Cognos SQL**, **Native SQL**, and **Query response**.

For more information, see "Showing the query information" in the *IBM Cognos Analytics Data Modeling* guide.

Generating the query SQL

You can specify how Cognos Analytics generates the SQL that retrieves data from tables.

Depending on the setting that you specify for the **Item list** property on tables, the generated SQL query includes all or only selected columns.

For more information, see "Generating the query SQL" in the *IBM Cognos Analytics Data Modeling* guide.

Redesigned user experience for intent modeling

When adding tables to a data module, you can engage the system to suggest the most appropriate tables for your module.

The selection of tables is based on keywords that you select. Starting with this release, the keywords are visualized using an interactive word cloud, as shown in the following example:

New location for Cognos Analytics base samples

The base samples are now organized into three categories.

- Team content > Samples > By business function
- Team content > Samples > By feature
- Team content > Samples > By industry

Administration

Manage the security, access, and functionality of IBM Cognos Analytics components.

Cloud storage for reports

You can configure Cognos Analytics to connect to an external cloud storage environment. This allows users to save their reports securely to the cloud.

For more information, see "Managing cloud storage" in the *IBM Cognos Analytics Managing Guide*.

New parameter for customizing alerts

System administrators can now create customized messages in the alerts banner by configuring a new parameter, `Glass.maintenanceMessage`. Previously, two parameters had to be configured for this task.

For more information, see "Customizing a message in the alerts banner" in the *IBM Cognos Analytics Managing Guide*.

New capabilities in 11.1.5

Two new capabilities are available in 11.1.5: **AI** and **Save to Cloud**.

- The **AI** capability allows designated users to access AI functionality. **Use Assistant**, an associated secured function, allows users to access the embedded Assistant. Users can then ask questions and gain insights about their data.
- The **Save to Cloud** capability allows users to save their report output to the cloud. A related secured function for Directory Administrators, **Manage Connections**, provides the ability to create and manage connections to external Cloud Object Storage services.

For more information on capabilities, see these topics:

- "Initial access permissions for capabilities" in the *Managing IBM Cognos Analytics Guide*
- "Default permissions based on licenses" in the *Managing IBM Cognos Analytics Guide*

Microsoft Azure Analysis Services data server

The Microsoft Azure Analysis Services data server is now supported for IBM Cognos Analytics on premises, on Microsoft Windows only.

For more information, see *Microsoft Azure Analysis Services data connection* in the *Managing User Guide*.

Changes to the Google BigQuery data server connections

New connections to the **Google BigQuery** data server in Cognos Analytics use the `com.simba.googlebigquery.jdbc42.Driver` driver class name by default.

Before the BigQuery JDBC driver version 1.2.2.1004 was introduced, Google provided two BigQuery JDBC drivers, each of them using a distinct driver class name. New **Google BigQuery** connections in Cognos Analytics used the `com.simba.googlebigquery.jdbc41.Driver` class name by default.

As of version 1.2.2.1004, Google provides a single BigQuery JDBC driver, which references the driver class name `com.simba.googlebigquery.jdbc42.Driver`. New connections to **Google BigQuery** in Cognos Analytics now use this driver class name by default.

If you have existing **Google BigQuery** connections that refer to the `com.simba.googlebigquery.jdbc41.Driver` driver class name, you must update them to `com.simba.googlebigquery.jdbc42.Driver` to use the BigQuery JDBC driver 1.2.2.1004 or later.

Support for MemSQL data server connections

You can now set up a MemSQL data server connection in Cognos Analytics.

For more information, see "Connector for memSQL connections" in the *IBM Cognos Analytics Managing Guide*.

Whitelist of email domains

Administrators can now create a whitelist of email domains. When the **Whitelist email domains** parameter is set, emails can be sent only to the specified email domains.

For more information, see "Configuring security" in the *IBM Cognos Analytics Managing Guide*.

Security token regeneration for a secure gateway

Administrators can now refresh a security token for a secure gateway instance whose token has expired.

For more information, see "Viewing the Secure Gateway list" in the *IBM Cognos Analytics Managing Guide*.

Installation and configuration

Learn about changes to the IBM Cognos Analytics installation and configuration.

Changed location of JRE files

The location of JRE files in the Cognos Analytics installation directory is changed.

The new location is *install_location/ibm-jre/jre*. The previous location was *install_location/jre*.

Release 11.1.4 - October 2019

This section describes new and changed features in IBM Cognos Analytics 11.1.4.

Getting started

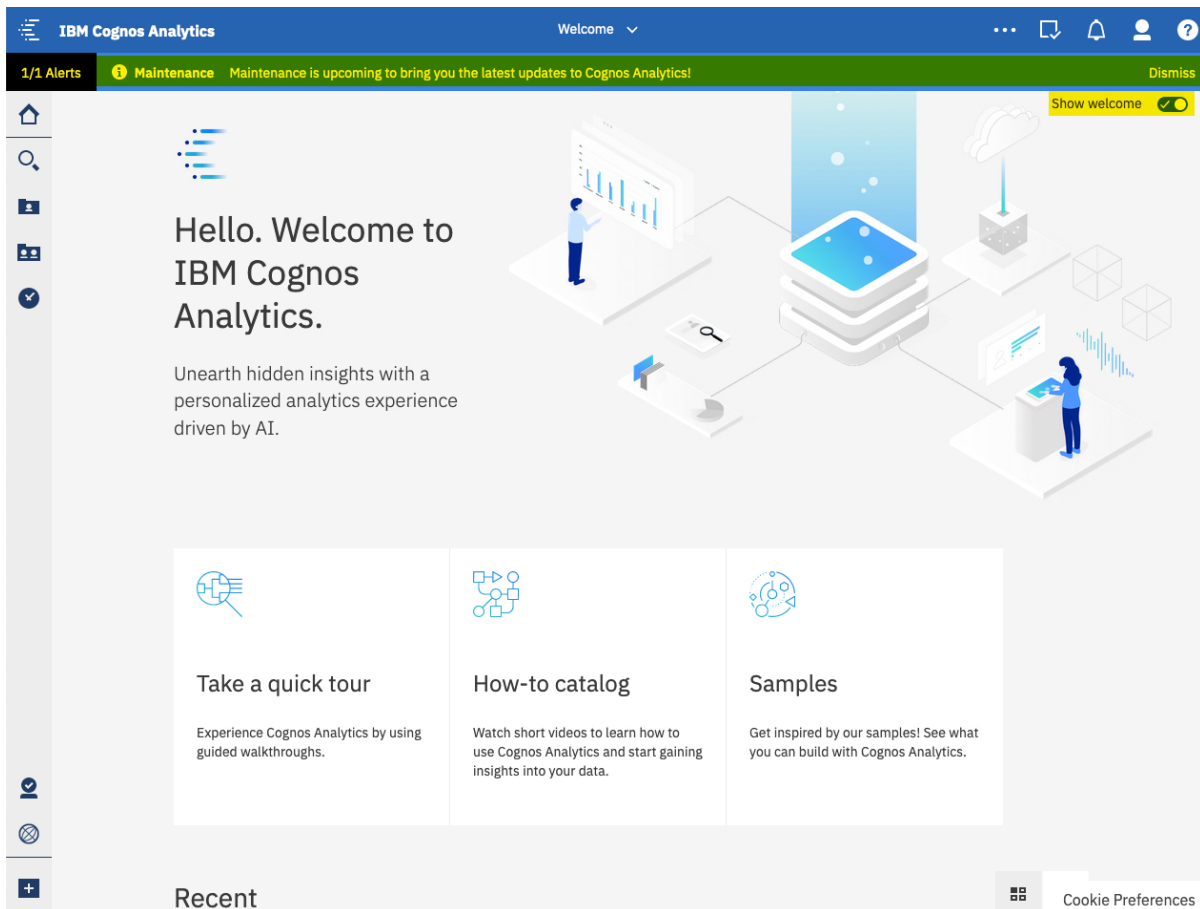
Learn about enhancements to the user interface, training materials, and features that affect multiple Cognos Analytics components.

Redesigned welcome page

A redesigned IBM Cognos Analytics user interface introduces an alerts banner and a new welcome page.

Alerts include important maintenance announcements and information on new and changed features. Administrators can write a maintenance message. For more information, see "Customizing a message in the alerts banner" in the *IBM Cognos Analytics Managing Guide*.

The welcome page provides new users with quick access to walk through tours, videos, and embedded samples; content varies by offering and configuration. A **Show welcome** switch allows the user to control whether the welcome page appears. The welcome switch can be disabled by the administrator. For more information, see "Hiding the Show welcome switch" in the *IBM Cognos Analytics Managing Guide*.



List view in the Recent folder

You can view the contents of the **Recent** folder in IBM Cognos Analytics in the list view or the tiles view.

Use the **List View**  and the **Tile View**  icons to switch between the views.

For more information, see "Search and find content" in the *IBM Cognos Analytics Getting Started* guide.

Support for The Weather Company data

You can incorporate historical and forecast on-demand data from The Weather Company, an IBM business, into IBM Cognos Analytics dashboards, stories, reports, explorations, and other content.

To make The Weather Company data available for use in Cognos Analytics, you must create a connection to the **IBM Weather Company** data server, and use this connection as a source for creating data modules or Framework Manager models where you merge your business data with The Weather Company data.

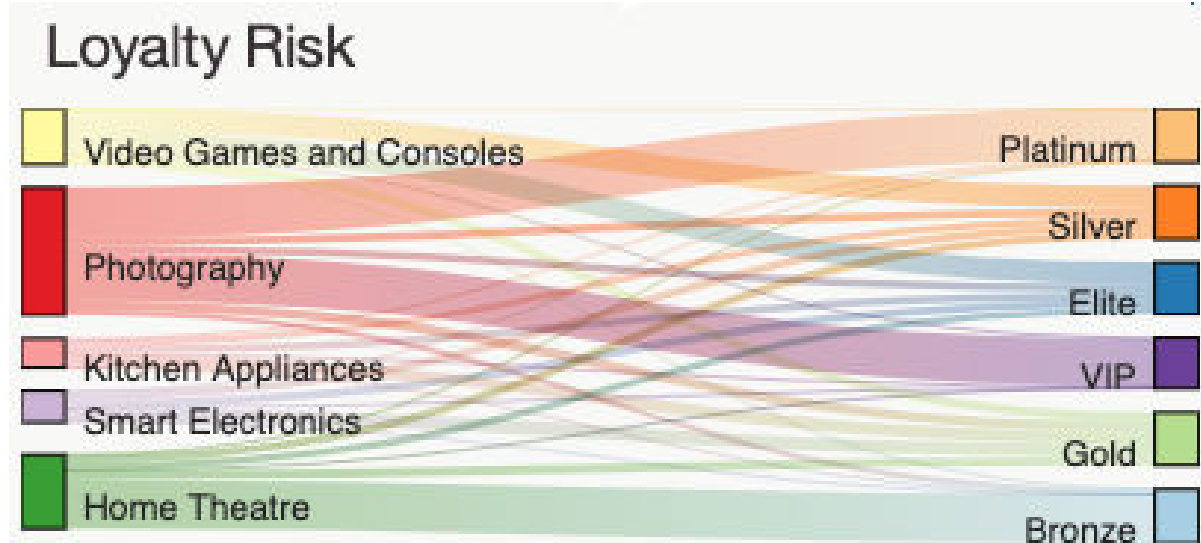
For more information, see ["The Weather Company data server connection" on page 101.](#)

Dashboards

Use Cognos Analytics dashboards to discover key insights about your data and monitor events or activities at a glance.

Custom visualizations

You can create custom visualizations to meet your specific business needs. IBM Cognos Analytics allows developers to create and test custom visualizations locally, before making them available to other users.



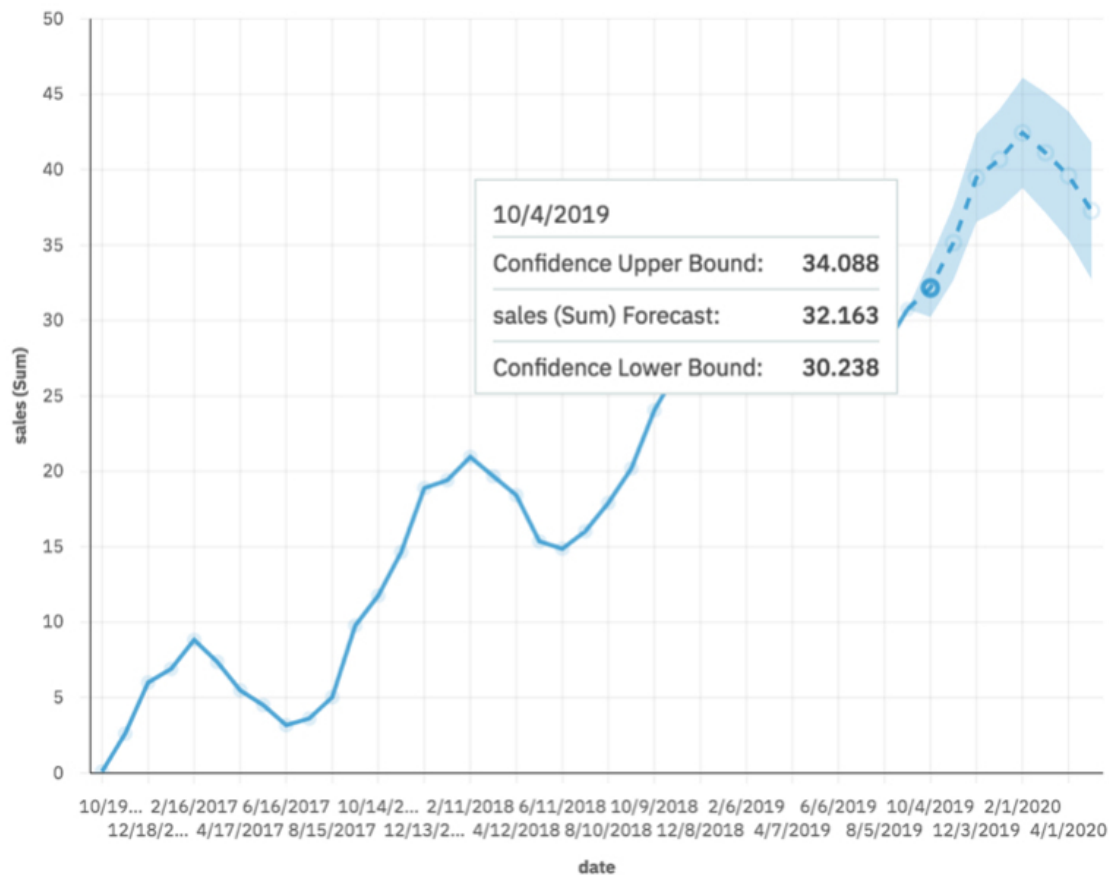
For more information on developing custom visualizations, see the *Developing custom visualizations* documentation in the *IBM Cognos Analytics Custom Visualizations Developer Guide*.

Note: Custom visualizations are supported in the interactive viewer only. You can only see them in HTML output.

Forecasting

Forecasting in IBM Cognos Analytics is an automated set of tools for modeling time dependent data. It leverages a popular class of exponential smoothing models to discover and model trend, seasonality and time dependence in the observed data. This makes it applicable to a broad range of time series encountered in business and industry. Automated model selection and tuning makes forecasting easy to use, even for the users not familiar with time series modeling. Forecasts and corresponding confidence bounds are very easy to understand when displayed in a visualization as a continuation of historic data. At the same time, core controls allow additional modeling and forecast flexibility. Statistical details for generated models provide technical background information.

Forecast

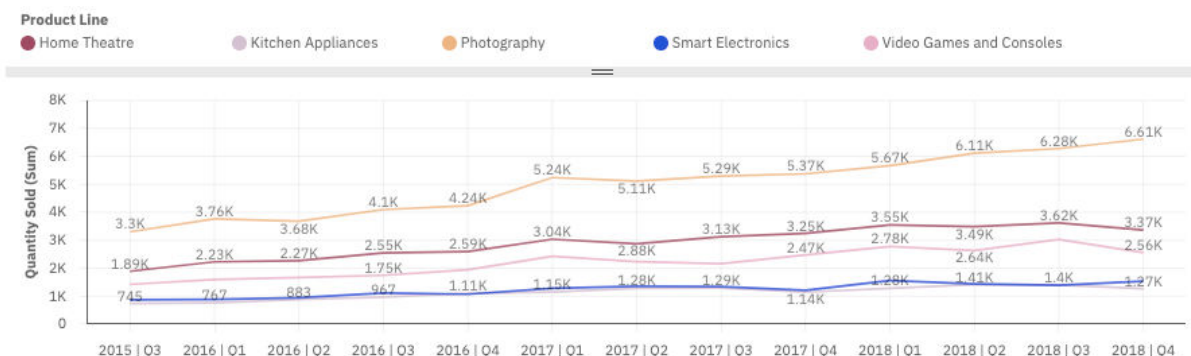


For more information, the *Forecasting* and *Forecasting in visualizations* documentation in the *IBM Cognos Analytics Dashboard and Stories User Guide*.

For a comparison between the forecasting features in Cognos Analytics R4 and R5, see <https://community.ibm.com/community/user/businessanalytics/blogs/marco-maas1/2020/01/24/ibm-cognos-analytics-forecasting-comparison-r4-r5>.

Improvements to visualization legends

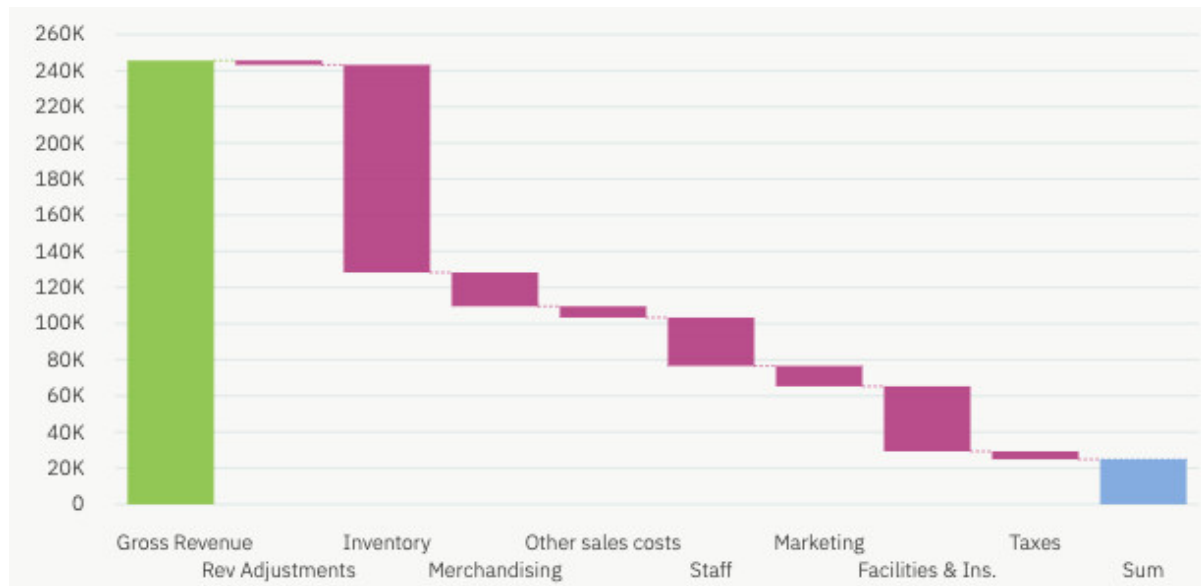
Legends now have a more compact design, taking up less room in a visualization. The default position has changed, it is now above the visualization. You can also adjust the space that the legend takes by dragging the splitter in the visualization.



For more information, see [Working with the legend](#) for dashboards, and [Legends](#) for reports.

Waterfall visualization available in dashboard

You can use the waterfall visualization in a dashboard.



For more information, see [Waterfall](#).

Context-based dashboard generation

From the embedded Assistant, you can now create a dashboard based on column data from your most recently generated charts.

If the charts contain top or bottom aggregations, these modifiers are applied to the generated dashboard.

show total revenue and contract

RK

Here is the chart from source 'Telco customer churn':



[Show related visualizations](#)

[Create dashboard from the charts](#)

KPI visualization available in dashboard

You can use the KPI visualization in a dashboard.

521M ↑

Estimated Gross Loss

507M (+2.69%)

Net Loss



For more information, see [KPI](#).

Improvements to crosstab and table formatting

The formatting for crosstabs and tables was enhanced to improve usability and readability.

Revenue		2015	2016	2017	2018	Summary
Home Theatre	Bronze	#####	4,882,377	6,160,207	7,054,619	22,845,077
	Elite	618,571	736,685	893,196	1,037,927	3,286,379
	Gold	773,540	917,277	1,101,482	1,347,367	4,139,666
	Platinum	52,100	59,988	102,500	106,375	320,963
	Silver	754,392	824,205	944,969	1,136,975	3,660,541
	VIP	61,102	68,882	98,156	132,093	360,233
	Summary	#####	7,489,414	9,300,510	10,815,356	34,612,859
Kitchen Appliances	Bronze	7,801	9,481	3,268	17,117	37,667
	Elite	433,632	513,289	609,331	622,472	2,178,724
	Gold	723,588	730,661	953,064	1,028,857	3,436,170
	Platinum	76,695	63,555	94,582	120,153	354,985
	Silver	413,983	464,529	552,892	618,756	2,050,160
	VIP	79,041	79,405	126,807	136,766	422,019
	Summary	#####	1,860,920	2,339,944	2,544,121	8,479,725
Photography	Bronze	411,559	450,809	571,610	629,242	2,063,220
	Elite	599,092	629,337	781,951	928,177	2,938,557
	Gold	888,178	727,848	1,007,528	1,166,568	3,790,122
	Platinum	#####	3,921,438	5,220,749	6,290,622	19,707,211
	Silver	751,999	708,444	763,496	948,903	3,172,842
	VIP	#####	3,692,376	5,175,996	6,008,316	18,695,469

The enhancements to crosstabs and tables include the following list:

- You can resize column width and row height on a crosstab. Resizing columns is not supported for tables.
- A white border replaces the gray border.
- When you format the cells in a crosstab or table, the main data cells are separate from the summary cells.
- Text formatting such as font family, font size, text color, alignment, and styles are available on an individual row or column.
- Wrap text on header rows and columns is available from the text formatting menu.
- You can drag data from the **Selected sources** pane onto a crosstab or table. When dragging data on your visualization, you can now:
 - Insert data before or after an existing column or row.
 - Drop the data on top of an existing column to replace the data.

Note: When you upgrade a dashboard, you might lose the sizing on a crosstab or table.

For more information, see *Formatting text in a crosstab or table* documentation in the *IBM Cognos Analytics Dashboards and Stories User Guide*.

Null suppression in a crosstab or table

Null suppression is enabled by default to make a crosstab or table easier to read and to hide rows and columns that contain only null values.

If you want to show the suppressed null values, disable the suppression control toggle from the table or crosstab properties.

For more information, see the *Suppressing null values in a crosstab or table* documentation in the *IBM Cognos Analytics Dashboard and Stories User Guide*.

Stories

Stories can help you inform and engage your audience. You can use stories in IBM Cognos Analytics to create scenes that visualize your data and to tell a narrative.

Capability to export a story to PDF

You can now export your IBM Cognos Analytics stories to PDF.

For more information, see [Sharing your story](#).

Multipurpose widgets in scene templates

There are new scene templates that contain multipurpose widgets. Multipurpose widgets allow you to more easily customize the layout of the templates.

For more information, see [Choose a template for a new scene](#).

Exact entry and exit times in a timeline

You can now define the exact entry and exit times for an object in a timeline.

For more information, see [Defining when objects enter or exit a scene](#).

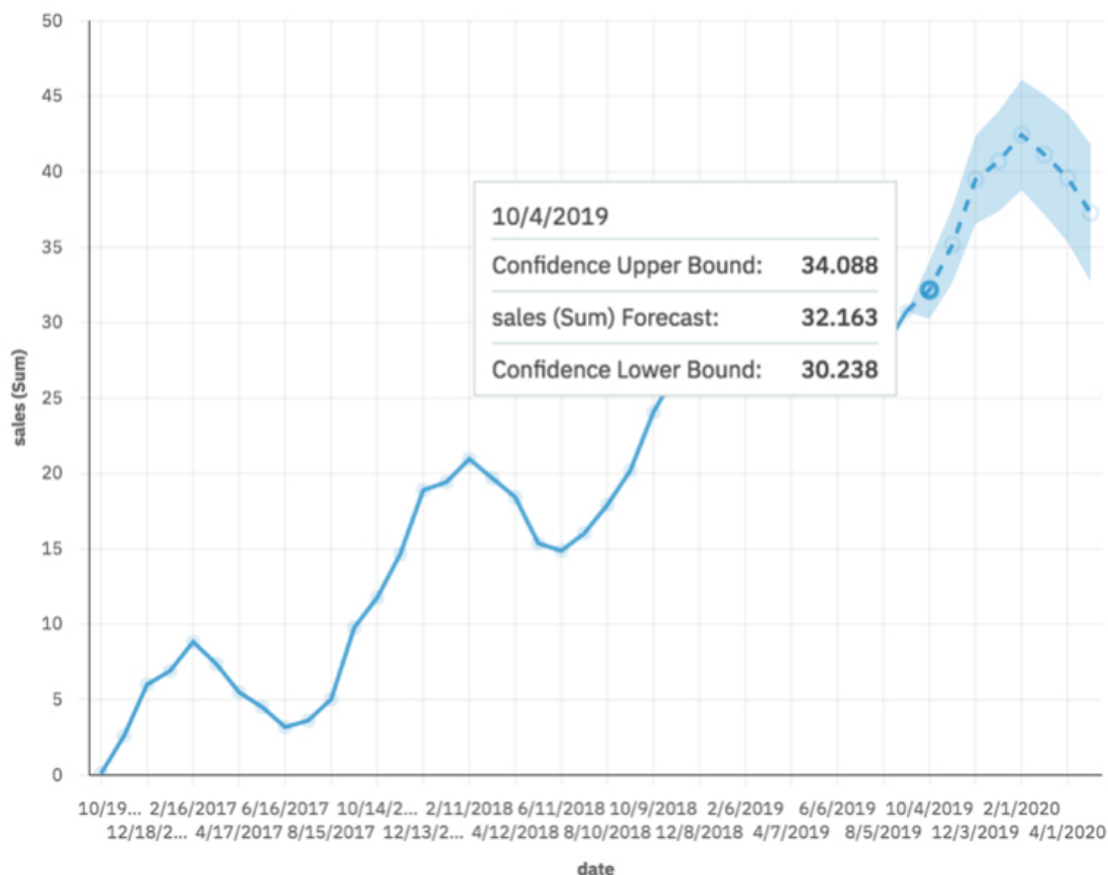
Explorations

Uncover hidden relationships and identify patterns that turn your data into insight with Cognos Analytics explorations.

Forecasting

Forecasting in IBM Cognos Analytics is an automated set of tools for modeling time dependent data. It leverages a popular class of exponential smoothing models to discover and model trend, seasonality and time dependence in the observed data. This makes it applicable to a broad range of time series encountered in business and industry. Automated model selection and tuning makes forecasting easy to use, even for the users not familiar with time series modeling. Forecasts and corresponding confidence bounds are very easy to understand when displayed in a visualization as a continuation of historic data. At the same time, core controls allow additional modeling and forecast flexibility. Statistical details for generated models provide technical background information.

Forecast

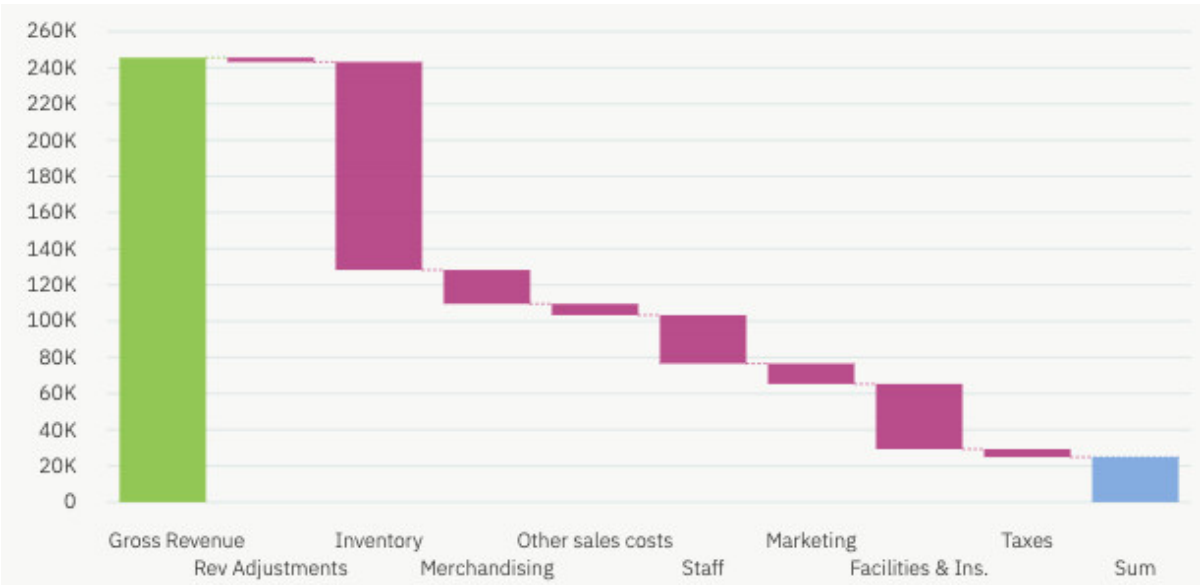


For more information, the *Forecasting* and *Forecasting in visualizations* documentation in the *IBM Cognos Analytics Dashboard and Stories User Guide*.

For a comparison between the forecasting features in Cognos Analytics R4 and R5, see <https://community.ibm.com/community/user/businessanalytics/blogs/marco-maas1/2020/01/24/ibm-cognos-analytics-forecasting-comparison-r4-r5>.

Waterfall visualization available in Explorations

You can use the waterfall visualization in an exploration.

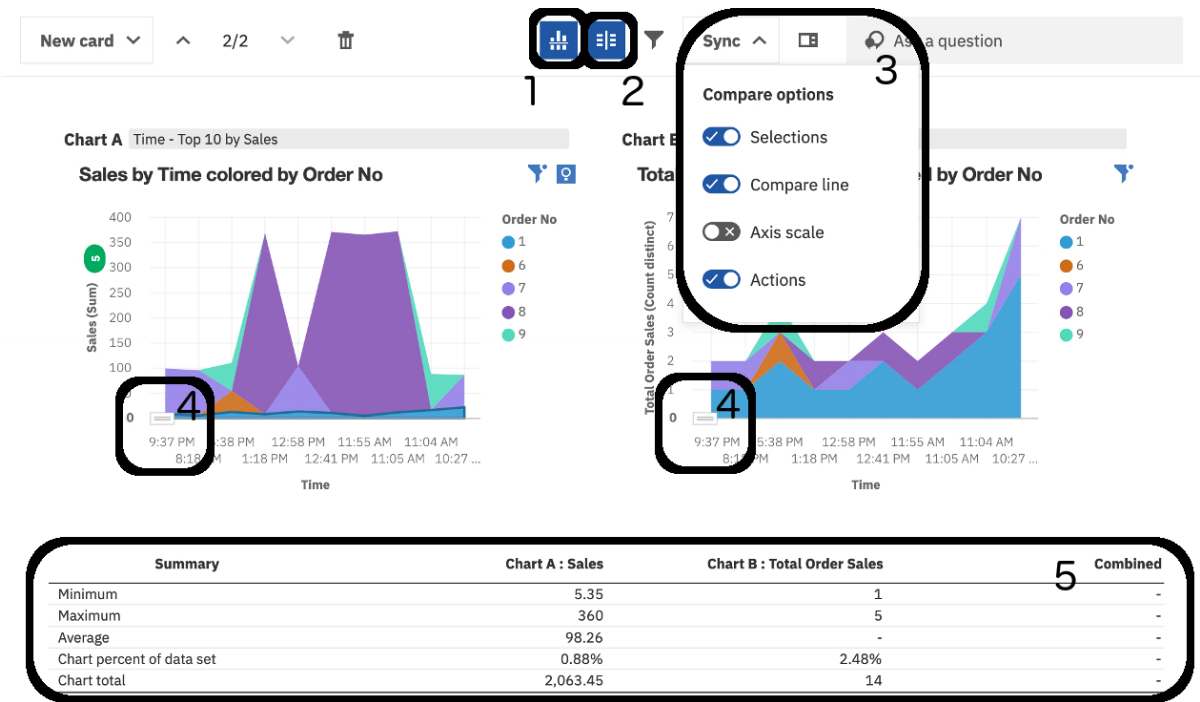


For more information, the *Waterfall* documentation in the *IBM Cognos Analytics Explorations User Guide* .

Improved experience for comparing two visualizations

A new **How do you want to compare?** page in an exploration provides guidance for creating your own visualization and displays recommended comparisons.

To use the compare card, refer to the following information:



1. Use **Hide compare line** to hide and reveal the compare line.
2. Use **Hide compare stats** to hide and reveal the compare table.
3. Use **Compare options** to enable and disable the compare line and other options.
4. Use the handles in the corners of your visualizations to drag the **Compare line** up and down.
5. Use the **Compare table** to analyze your data.

For more information, see *Comparing two visualizations* in the *IBM Cognos Analytics Explorations User Guide*.

Improvements to the starting points page

The starting points page has been enhanced to get you started with a relationship diagram and suggested starting points.

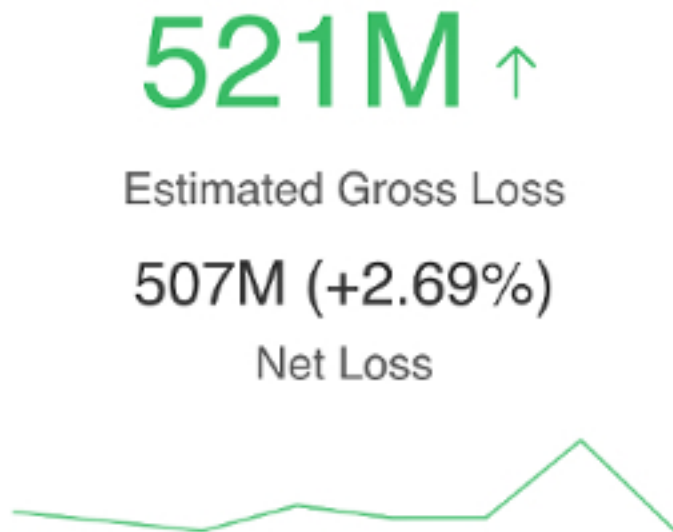
There are many improvements to the starting points page and the relationship diagram, including the following:

- The default layout of the relationship diagram is easier to use.
- You can pan and zoom on the relationship diagram to see relationships up close.
- You can add and remove items to be considered to edit the scope of the diagram. When you open the **Edit scope** dialog, you can see which items are being considered as possible relationships.

For more information, see the *Exploring relationships in your data* documentation in the *IBM Cognos Analytics Dashboard and Stories User Guide*.

KPI widget available in Explorations

You can use the KPI visualization in Explorations.



Use the properties for the visualization to modify the conditional colors.

For more information, see the *Using conditional colors on a KPI visualization* documentation in the *IBM Cognos Analytics Dashboard and Stories User Guide*.

Context-based dashboard generation

From the embedded Assistant, you can now create a dashboard based on column data from your most recently generated charts.

If the charts contain top or bottom aggregations, these modifiers are applied to the generated dashboard.

show total revenue and contract

RK

Here is the chart from source 'Telco customer churn':



[Show related visualizations](#)

[Create dashboard from the charts](#)

Notebooks

The notebooks capability integrates Jupyter notebooks into IBM Cognos Analytics. You can create and upload notebooks into Cognos Analytics, and work with Cognos Analytics data in a notebook using Python scripts. You can also embed notebook output in a dashboard, story, or report.

Jupyter notebook data in a report

You can embed data from a Jupyter notebook in a report.

For more information, see *Including output from a notebook* in the *IBM Cognos Analytics Reporting User Guide*.

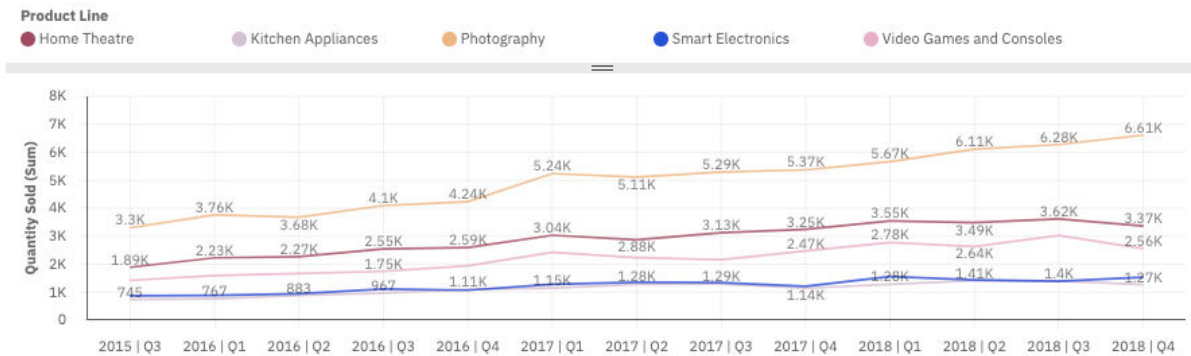
Note: Jupyter notebook data is supported in the interactive viewer only. You can only see it in HTML output.

Reporting

IBM Cognos Analytics reporting is a web-based report authoring tool that professional report authors and developers use to build sophisticated, multiple-page, multiple-query reports against multiple databases.

Improvements to visualization legends

Legends now have a more compact design, taking up less room in a visualization. The default position has changed, it is now above the visualization. You can also adjust the space that the legend takes by dragging the splitter in the visualization.

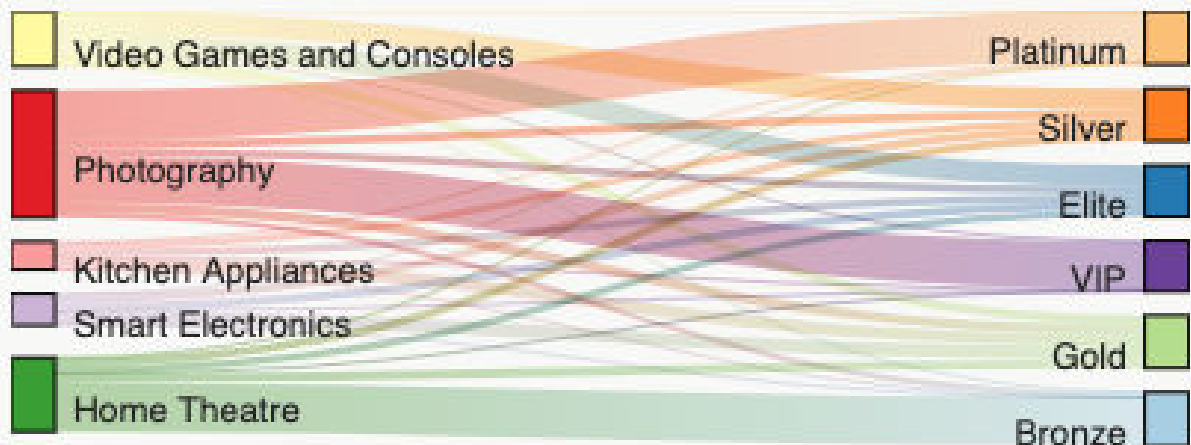


For more information, see [Working with the legend](#) for dashboards, and [Legends](#) for reports.

Custom visualizations

You can create custom visualizations to meet your specific business needs. IBM Cognos Analytics allows developers to create and test custom visualizations locally, before making them available to other users.

Loyalty Risk



For more information on developing custom visualizations, see the *Developing custom visualizations* documentation in the *IBM Cognos Analytics Custom Visualizations Developer Guide*.

Note: Custom visualizations are supported in the interactive viewer only. You can only see them in HTML output.

Jupyter notebook data in a report

You can embed data from a Jupyter notebook in a report.

For more information, see *Including output from a notebook* in the *IBM Cognos Analytics Reporting User Guide*.

Note: Jupyter notebook data is supported in the interactive viewer only. You can only see it in HTML output.

IBM Plex font

The default user interface font in reporting has changed from Helvetica Neue to IBM Plex.

Navigation menu customization

Your administrator can control the items that appear in the navigation menu and the navigation drop-down by customizing the properties of a role. Your administrator can choose to show or hide the pages, prompt pages, queries, classes, and variables items in the navigation menu. For more information about customizing the properties of a role, see *Customizing roles* in the *Managing User Guide*.

For more information about the navigation menu, see *The user interface* in the *Reporting User Guide*.

Modeling

The data modeling component in Cognos Analytics allows you to fuse together multiple sources of data, including relational databases, Hadoop-based technologies, Microsoft Excel spreadsheets, text files, and so on. Using these sources, a data module is created that can then be used in dashboards, stories, explorations, reports, and other content.

Range joins

When you create joins between tables in the relationship editor, you can specify ranges as values for the matched columns by using comparison operators, such as less than (<) or greater than (>).

A relationship that uses this type of join is often created to return a range of dates or serial numbers.

For more information, see "Join operators" in the *IBM Cognos Analytics Data Modeling* guide.

New join optimization filters

Two new filters are available to optimize joins. The two filters are: **Unique values in a subquery** and **Unique or range of values**.

For more information, see "Join optimization filters" in the *IBM Cognos Analytics Data Modeling* guide.

Numeric or text style for numeric data groups

When you create a data group for columns with numeric data types, such as measures, you can use either the numeric data group style (default) or the text style.

You can continue switching between the two styles until the data group is created. The data group is saved in the style that you chose last. The style can't be changed by editing the data group.

For more information, see "Creating data groups" in the *IBM Cognos Analytics Data Modeling* guide.

Automatic data module validation

You can enable automatic validation for a data module.

When automatic validation is enabled, any changes to the data module force the validation to start after about 2 seconds, which allows for buffering of quick changes. A status message in the validation panel informs the users of the current state of validation.

To enable or disable automatic validation, use the toggle switch in the validation panel.

For more information, see "Validating data modules" in the *IBM Cognos Analytics Data Modeling* guide.

New way to access the properties panel

You can now access the properties panel in the modeling view from the application bar. The properties are displayed on the right side of the application page.

Use the **Properties** icon  in the application bar to open and close the properties.

For more information, see "Table and column properties" in the *IBM Cognos Analytics Data Modeling* guide.

The `_as_of_date` parameter available to Cloud and multitenant users

The `_as_of_date` global parameter can now be accessed and customized by the IBM Cognos Analytics on Cloud and multitenant users.

To enable this functionality, use the **Applied to all roles** property on the `_as_of_date` parameter.

Note: The same functionality is available for all global parameters. For more information, see [“Global parameters available to Cloud and multitenant users”](#) on page 100.

Also, a new way of setting up the `_as_of_date` parameter is available where you don't need to import the sample report that contains this parameter. Instead, you can type the parameter in the space provided.

For more information, see "Setting the `_as_of_date` global parameter" in the *IBM Cognos Analytics Modeling Guide*.

Samples

Get a deeper understanding of Cognos Analytics capabilities with updated sample content.

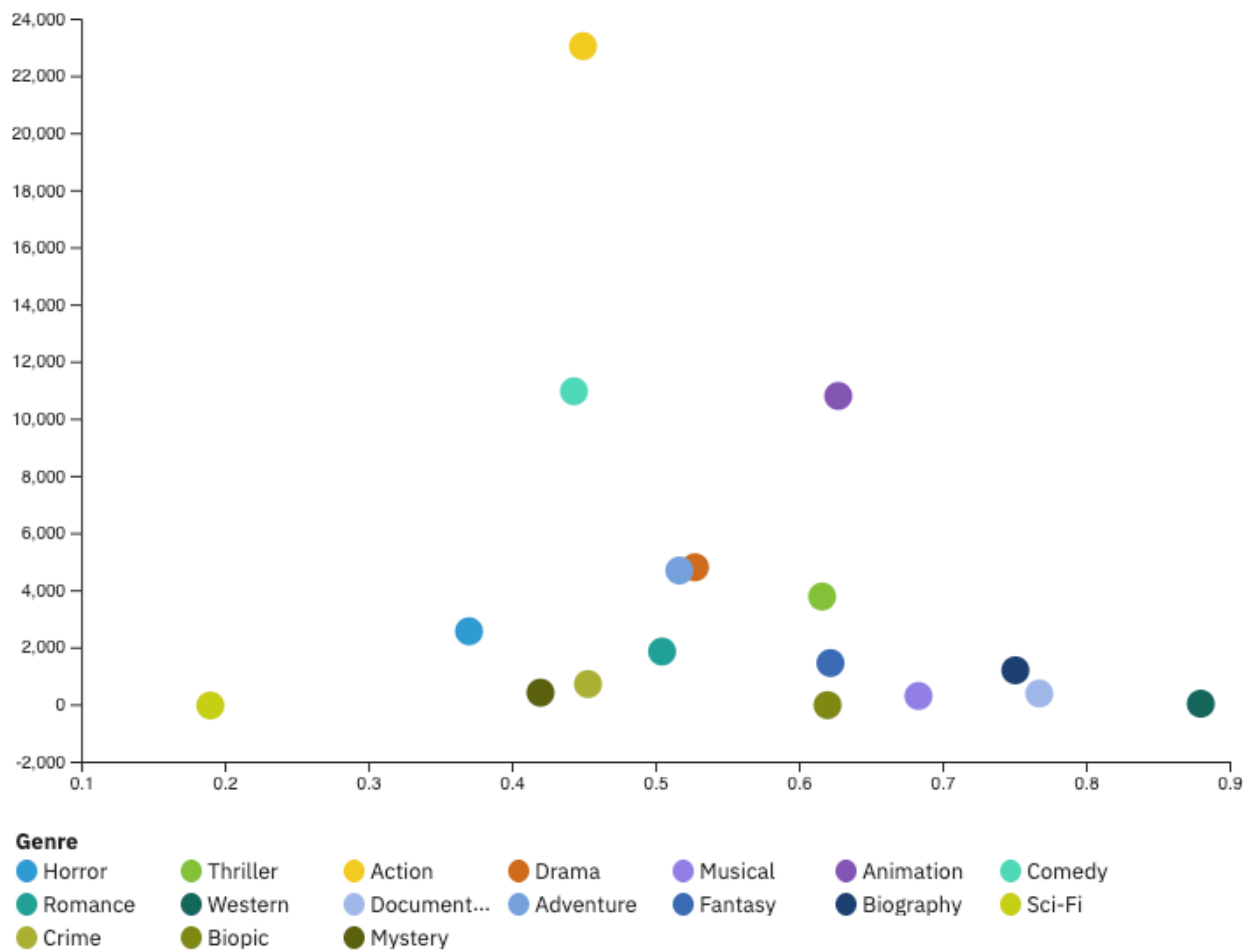
The Weather Company sample

You can use The Weather Company data with your own data to do weather-related analysis and reporting. The Weather Company sample demonstrates how to create a data module that combines The Weather Company data with another data asset. It also includes a report that uses historical weather data.

For more information, see The Weather Company sample in the *Samples Guide*.

Custom visualizations samples

There are code samples available for developers of custom visualizations. The code samples found provided have the purpose of illustrating certain aspects of the customvis library and tools. This means that the main focus of each sample is not completeness of the visualization, showing how certain things work. Each sample is fully documented and tested and can be made publicly available.



For more information, the *Samples custom visualizations* documentation in the *IBM Cognos Analytics Samples guide*.

Administration

Manage the security, access, and functionality of Cognos Analytics components.

Customized alerts

System administrators can create customized messages in the new alerts banner. Users can then stay informed of company-specific details, in addition to maintenance announcements and information on new and changed features.

As mentioned in [“Redesigned welcome page”](#) on page 84, the alerts banner is new for the 11.1.4 release.

For more information, see "Customizing a message in the alerts banner" in the *IBM Cognos Analytics Managing Guide*.

New capabilities and a renamed license role

Three new capabilities are available in 11.1.4: **Manage Visualizations**, **Develop Visualizations**, and **Dashboard > Create/Edit**. In addition, the **Information Distribution** license role is renamed to **Analytics Viewer**.

- The **Manage Visualizations** capability allows users to control access rights to extensible visualizations for individual users, groups, and roles.
- The **Develop Visualizations** capability allows users to develop extensible visualizations.
- The **Dashboard > Create/Edit** capability allows users to create and edit a dashboard or story.

Tip: For 11.1.4 only, follow these steps to modify the new **Dashboard > Create/Edit** capability:

1. Scroll to the **Dashboard** capability, click the three dots, and select **Customize access**. Click the drop down next to **Analytics Viewer** and select **Access**.
 2. Expand **Dashboard**, click the three dots next to **Create/Edit**, and select **Customize access**. Click the minus sign next to **Analytics Viewer**.
 3. Click the plus sign.
 4. Navigate to your namespace and select groups or users from your namespace and click **Add**.
 5. Navigate to the **Cognos** namespace and multi-select **Analytics Users**, **Analytics Explorers**, **Authors**, **Modelers**, and **Report Administrators** and then click **Add**.
 6. For the added users, set the permission to **Access**.
- The **Information Distribution** license role is renamed to **Analytics Viewer** to reflect additional functions in the new role. Users with an Analytics Viewer license can view dashboards and stories, but not edit them; users with the previously named Information Distribution license could neither view nor edit dashboards and stories.

For more information on capabilities, see these topics:

- "Initial access permissions for capabilities" in the *Managing IBM Cognos Analytics Guide*
- "Default permissions based on licenses" in the *Managing IBM Cognos Analytics Guide*

For more information on licenses, see these topics:

- "License roles" in the *Managing IBM Cognos Analytics Guide*
- "Managing licenses" in the *Managing IBM Cognos Analytics Guide*

Global parameters available to Cloud and multitenant users

IBM Cognos Analytics administrators can now set global parameters without having to customize them for roles. A new **Applied to all roles** checkbox is available to administrators when they set any global parameter. When this checkbox is selected, the global parameter is available to all system and tenant roles.

Note: If you want to customize a global parameter for a specific role, see "Setting default parameters for roles" in the *IBM Cognos Analytics Managing Guide*.

For example, if the administrator sets the `_as_of_date` global parameter, users can then change the reference date that they use for relative date analysis.

For more information, see "Setting global parameters" in the *IBM Cognos Analytics Managing Guide*.

Presto driver name change

The Presto driver class name for version 300+ has changed from `com.facebook.presto.jdbc.PrestoDriver` to `io.prestosql.jdbc.PrestoDriver`.

If you prefer to use the older driver, such as version 215 or 214, you must manually change the driver class name back to `com.facebook.presto.jdbc.PrestoDriver`.

For more information, see "Data servers" in *Managing IBM Cognos Analytics*.

Salesforce connection URL change

The Salesforce data server connection now uses the "https://login.salesforce.com" URL.

If your Cognos Analytics environment included a Salesforce data server connection, you must manually update the URL endpoint to "https://login.salesforce.com".

For more information, please refer to the following Salesforce article: [Salesforce.com API Endpoint retirement](#).

Computer Associates IDMS deprecation

Data server connection support for **Computer Associates IDMS** will be deprecated in a future release of Cognos Analytics.

The Weather Company data server connection

You can now use The Weather Company service as a data server.

For more information about how to configure The Weather Company data server connection, see *Creating a data server connection* in the *Managing User Guide* and *Creating a data source connection* in the *IBM Cognos Analytics Administration and Security Guide*.

There are some requirements for modeling The Weather Company service data. You must create a data module that joins your data to the The Weather Company service data by a *postalkey* field that contains a postal code and a country code. For more information, see the The Weather Company sample in the *Samples Guide*.

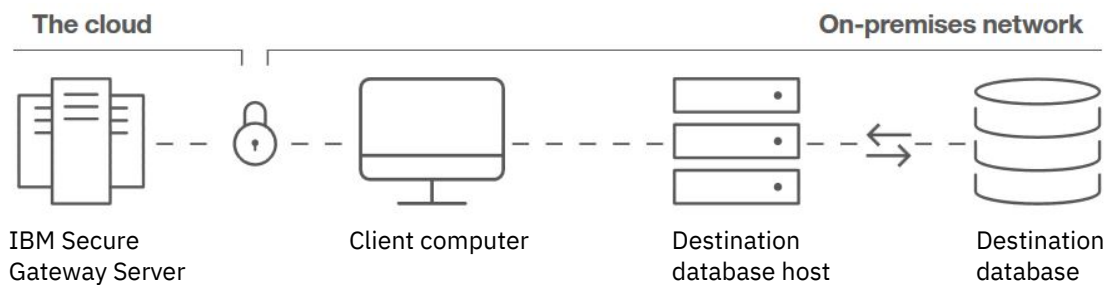
Release 11.1.3 - June 2019

This section describes new features in IBM Cognos Analytics 11.1.3.

Securely consume your on-premises data in Cognos Analytics on Cloud

IBM Secure Gateway allows you to use IBM Cognos Analytics on Cloud in a multitenant environment to consume your on-premises data securely.

Follow the wizard to create an encrypted connection between the on-cloud Secure Gateway server and your on-premises destination database. Now you're ready to access your on-premises data securely using Cognos Analytics on Cloud!



For more information, see *IBM Secure Gateway (on Cloud only)* in the *IBM Cognos Analytics Managing Guide*.

Changes to default map style

The default map style in reports, dashboards, and explorations has changed visually in IBM Cognos Analytics 11.1.3.

If you prefer the default style prior to the 11.1.3 release, select the blue style.

Key drivers available for categorical targets

Key drivers for both continuous and categorical targets are available in the driver analysis and the spiral visualization in dashboards and explorations as of Cognos Analytics 11.1.3 .

For usage details, such as supported lexicon, refer to the *Driver Analysis* and *Spiral* documentation in the *IBM Cognos Analytics Dashboards and Stories User Guide*.

Target for bar and column visualizations

As of IBM Cognos Analytics 11.1.3, you can use the Target data slot in bar and column visualizations in reports, dashboards, and explorations to show measures that need to be compared against a target value.

For more information, see:

- The *Column* and *Bar* documentation in the *IBM Cognos Analytics Explorations User Guide*.
- The *Column* and *Bar* documentation in the *IBM Cognos Analytics Dashboard and Stories User Guide*.
- The *Target column* and *Target bar* documentation in the *IBM Cognos Analytics Reporting User Guide*.

Enhanced Assistant capabilities

The Cognos Analytics Assistant offers type-ahead support to improve usability, understands modifiers like aggregations and filters, and can generate a complete dashboard based on your data.

A type-ahead feature guides you as you enter questions. Suggestions are based on the columns found in your data source.

Include modifiers in your questions to produce more specific results. Supported modifiers include aggregations (e.g., total, average, maximum), top/bottom, filters, and much more.

The keyboard shortcut to retrieve your last question has changed from Up arrow to Shift + Up arrow.

Ask the Assistant to create dashboard and a fully-populated dashboard is generated for you. Content is based on the context of your data source and advanced analytics will automatically determine the key measures to include in visualizations. Upon completion, you can edit the content or save it as-is.

For more details, refer to the *Assistant* documentation in the *IBM Cognos Analytics Dashboards and Stories User Guide*.

Explore only the primary relationships in your data by default

When you start a new exploration and select a data source, the default view is the relationship diagram that displays only primary relationships. You can turn on the secondary relationships view by clicking a check box.

For more information, see *Exploring relationships in your data and using suggested starting points* in the *IBM Cognos Analytics Explorations User Guide*.

Filter on relationship strength with the new slider

From an exploration, select nodes on the new slider to filter on relationship strength. For example, if you might want to see relationship strengths that are more than 30% and less than 80%. Move the first node on the slider to 30% and the second node of the slider to 80%.

You can also adjust the range by dragging the slider to the left and right instead of dragging one node at a time.

For more information, see *Exploring relationships in your data and using suggested starting points* in the *IBM Cognos Analytics Explorations User Guide*.

Improved experience for comparing two visualizations

A new **Compare** toolbar button in an exploration makes it easier to duplicate a visualization and then automatically compare the data between the two. A summary of key information and differences between the two visualizations is generated.

For more information, see *Comparing two visualizations* in the *IBM Cognos Analytics Explorations User Guide*.

Turn your exploration visualizations into a story

Use the new **Save as a story** feature to make a copy of your exploration and convert it into a story. Each explore card is then converted to a scene in your new story.

For more information, see *Converting explorations into stories* in the *IBM Cognos Analytics Explorations User Guide*.

Drill-through in a report on visualizations version 11.1

Drill-through is the process of navigating from a source report, to a target report.

As of IBM Cognos Analytics 11.1.3 you can drill through on version 11.1 visualizations in reports.

To preserve context during navigation, the values that are selected in the source report are usually mapped to parameters defined in the target report.

For more information, see *Create a parameter in the target* in the *IBM Cognos Analytics Reporting Guide*.

Changes to custom filter dialog in reporting

The filtering dialog on a visualization (Create custom filter) has been improved. There is a new search functionality and you can manually input items.


You can also filter on string, numeric range, and dates, as well as empty, null and whitespace strings. For more information, see *Creating a filter based on one data item* in the *IBM Cognos Analytics Reporting User Guide*.

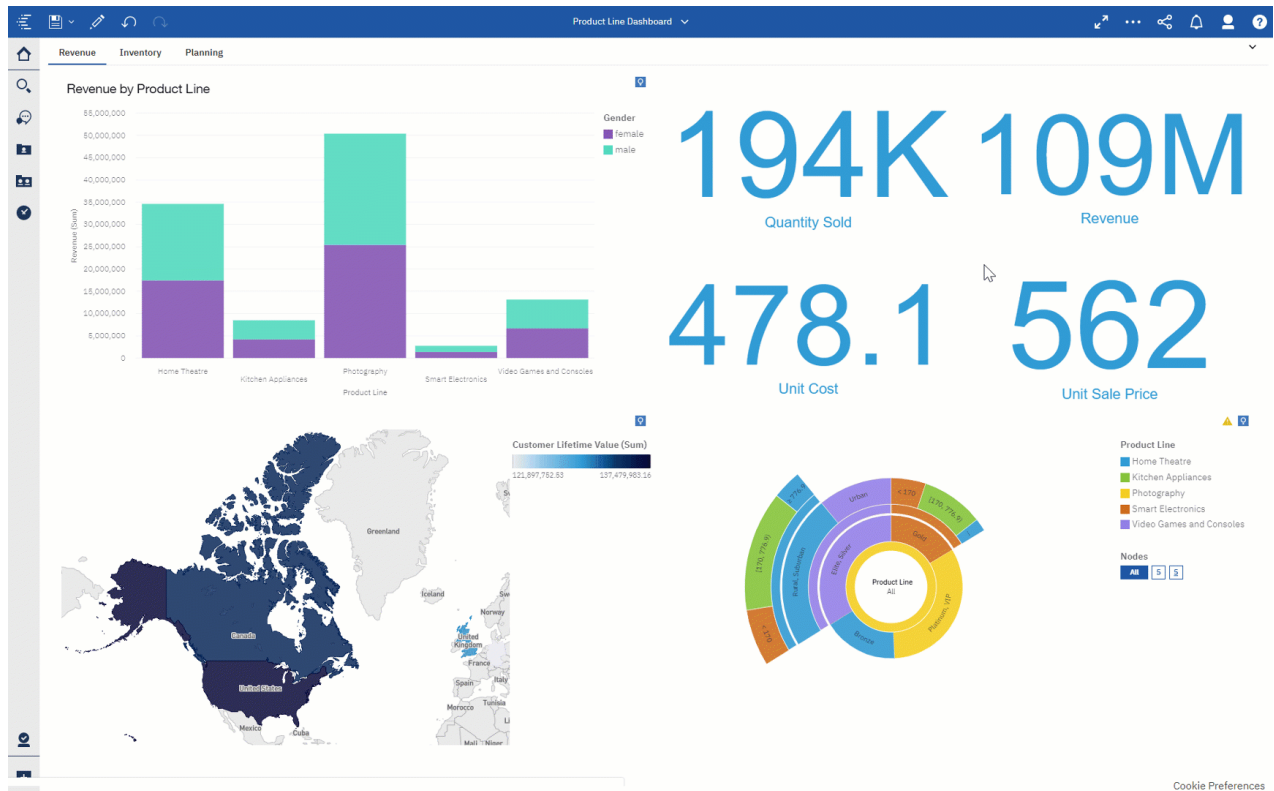
Updated report overview

In reporting, the report overview pane contains information about the report such as the sources and parameters it uses, and the number of each type of object it contains.

For more information, see *The user interface* in *IBM Cognos Analytics Reporting User Guide*.

Share your content by email

You can now share Cognos Analytics content in an email. When you are viewing your content, click the Share button . As an alternative to sharing your content in Slack, you can select **Email** as your delivery vehicle.



For more information, see *Sending content using a collaboration tool* in the *IBM Cognos Analytics Getting Started Guide* and *Enabling content sharing by email* in the *IBM Cognos Analytics Managing Guide*.

Changes to data servers

The changes affect Pivotal Greenplum, and SAP BW data server connections.

For information about deprecated or removed data servers, see [“Cognos Analytics 11.1.x deprecated and removed features”](#) on page 121.

Connect to an open source Greenplum server using the PostgreSQL JDBC driver

You can use the PostgreSQL JDBC driver to connect to an open source Pivotal Greenplum server.

To create a data server connection to an open source Greenplum server, version 5 or later, use the **PostgreSQL** JDBC driver and connection editor. When you test the connection in the administration interfaces, the sub-type of Greenplum is displayed when the connection is successful.

To create a data server connection to a proprietary Greenplum server, use the **Pivotal Greenplum** JDBC driver and connection editor.

SAP BW 7.5 client is required for SAP BW data server connections

The client SAP NetWeaver RFC library 7.20 that was used with previous versions of Cognos Analytics is no longer supported. SAP NetWeaver RFC Library 7.50 is now the supported library.

For more information, see "Creating a data server connection" in *Managing IBM Cognos Analytics*.

Modeling enhancements

The modeling new features include enhancements in numeric data groups, using Excel data formats as default formats in data modules, zoom controls in the relationships diagram, and data module validation improvements.

Enhancements in numeric data groups

The following enhancements are added for numeric data groups:

- Ability to set fixed high and low range border values.

The **Higher** and **Lower** range border values in the **Create a data group** and **Edit a data group** dialog boxes can be changed to numeric inputs.

- Support for multiple languages.

The default **Group names** (ranges) that are generated during the binning process are automatically translated, and reflect the product and content locale settings. The custom **Group names** that are specified by users during the binning process are not translated.

For more information, see "Creating data groups" in the *IBM Cognos Analytics Data Modeling* guide.

Using Excel data formats as default formats in data modules

Uploaded Microsoft Excel spreadsheets retain the columns data formats, such as percent, currency, date, that were defined in Excel. These formats are set as default data formats in the base data modules that are created from these spreadsheets.

For more information, see "Formatting data" in the *IBM Cognos Analytics Data Modeling* guide.

Zoom controls in the relationships diagram

Zoom out and zoom in buttons are added to enlarge or reduce the diagram.

For more information, see "Modeling user interface" in the *IBM Cognos Analytics Data Modeling* guide.

Data module validation improvements

The following new and changed features make it easier to notice, analyze, and work with validation issues in data modules.

- The data module validation icon is added to the application bar. When the module contains validation issues, the number of issues is displayed on top of this icon.
- The validation tab was replaced by a validation panel that opens when you want to view validation issues.

- The error details can now be copied to the clipboard making it easier to search for and analyze the issues, and print the details if needed.

For more information, see "Validating data modules" in the *IBM Cognos Analytics Data Modeling* guide.

Changed location for type 2 JDBC driver libraries

When using type 2 JDBC drivers, you need to copy the accompanying non-JAVA libraries to the Cognos Analytics *install_location\drivers* directory.

In previous releases, the *install_location\BIN64* directory was used to store the libraries.

This change is a result of `java.library.path` now using the *install_location\drivers* directory in the path.

Type 2 JDBC drivers might still be used with SQL Server and Oracle databases.

Release 11.1.2 - April 2019

This section describes new features in IBM Cognos Analytics 11.1.2.

General

The following features are new in Cognos Analytics 11.1.2, and they affect multiple product components.

Integration with Jupyter notebooks

The notebooks capability integrates Jupyter notebooks within IBM Cognos Analytics. Using notebooks, users can execute Python scripts against Cognos Analytics data.

The users can:

- Analyze data for actionable insights using Python and save notebooks as a Cognos Analytics asset that can be shared and scheduled.
- Shape data and make new data assets available to Cognos Analytics users. These data assets can be used to build dashboards, reports, data modules, and other content.
- Embed notebook output cells in the Cognos Analytics dashboards.

For a demonstration of how to use Cognos Analytics for Jupyter Notebook, [watch this video](#).

Currently, the notebook capability is supported with on-premises installations of Cognos Analytics. An administrator must give users access to the **Notebooks** capability before they can perform any of the notebook activities.

For more information, see *Notebooks* in the *IBM Cognos Analytics Getting Started User Guide*.

Cognos Analytics includes a few notebook samples to help you get started. For more information, see *Cognos Analytics samples* in the *Samples Guide*.

Uploading files to a specific folder

You can initiate a file upload from a folder in **Team content** or **My content**. The files are saved to the folder from which you initiated the upload. This feature allows you to keep the uploaded files together with the reports, dashboards, or explorations that use them as a source.

For more information, see *Uploading files* in the *IBM Cognos Analytics Getting Started User Guide*.

Installation and configuration

The following installation and configuration features are new or changed in Cognos Analytics 11.1.2.

Installing IBM Cognos Analytics for Jupyter Notebook Server

You can install a version of Jupyter Notebook Server that is integrated with Cognos Analytics. After Jupyter Notebook Server is configured, Cognos Analytics users can create and edit Jupyter Notebook in Cognos Analytics.

For more information, see "Installing IBM Cognos Analytics for Jupyter Notebook Server" in *Installing and configuring Cognos Analytics*.

Administration

The following administration features are new or changed in Cognos Analytics 11.1.2.

New capabilities

The administrator can assign new capabilities to selected users, allowing them to perform specialized tasks. Two new capabilities are available in 11.1.2:

- The job capability allows a user to create jobs. For more information, see "Job capability" in *Managing Cognos Analytics*.
- The notebook capability allows a user to create and edit Jupyter notebooks, which are integrated with Cognos Analytics. For more information, see "Notebook capability" in *Managing Cognos Analytics*.

Enabling Cognos Analytics for Jupyter Notebook

Administrators can configure IBM Cognos Analytics to connect to a computer that is running IBM Cognos Analytics for Jupyter Notebook Server.

For more information, see "Enabling IBM Cognos Analytics for Jupyter Notebook" in *Managing Cognos Analytics*.

Support for new versions of Microsoft Analysis Services data servers

Cognos Analytics now supports the following versions of Microsoft Analysis Services data servers:

- Microsoft Analysis Services (HTTP XMLA)

Existing connections to a Microsoft Analysis Services 2017 server still work. Reports that were created against previous versions of the data server work after they are switched to use the new server.

- Microsoft Analysis Services 2017 (ODBO)

Existing connections that are moved to this server might lose signons. Reports that were created against previous versions of the data server still work after they are switched to use the new client and server. The client and server versions must match.

Similar to other Microsoft Analysis Services MSOLAP versions, the Microsoft Analysis Services MSOLAP client must be installed to the same location as the report server. For this version of Microsoft Analysis Services, the MSOLAP version 14 client is required.

For more information, see "Data servers" in *Managing IBM Cognos Analytics*.

Support for JWT authentication with SAP HANA data server connections

A connection to an SAP HANA data server that uses the SAP HANA JDBC driver can be configured to pass a JSON Web Token (JWT) when authenticating to the database.

To use this functionality with an SAP HANA data server connection, Cognos Analytics must be configured to use an OpenID Connect authentication provider. To provide the token, the connection settings must specify the OpenID Connect namespace that was configured as an identity provider. The identity provider namespace must be capable of returning claims in the JWT that SAP HANA requires.

When setting the SAP HANA data server connection, choose the **Use an external namespace** authentication method. For more information, see "Creating a data server connection" in *Managing IBM Cognos Analytics*.

For information about configuring an OpenID authentication provider, see "OpenID Connect authentication provider" in *IBM Cognos Analytics Installation and Configuration Guide*.

Modeling

The following modeling features are new or changed in Cognos Analytics 11.1.2.

Diagram enhancements

The following features were added to the diagram:

- **Focus mode**

In a diagram with a large number of tables, use this feature to work with one or a few selected tables and their relationships.

- **Auto-arrange**

A diagram can be redrawn around the tables that you select, allowing you to focus on the selected tables and their relationships. The data module can be saved with the diagram modifications.

For more information, see "Modeling user interface" in the *IBM Cognos Analytics Data Modeling* guide.

Calculating values before or after aggregation

When creating a calculation, you can specify if the calculation must be performed before or after values are aggregated. In the first case, the calculation is performed on the most granular level of data. In the second case, the calculation is performed on the aggregated data. The calculation results can be different in each case.

This option is also available for calculations in dashboards.

For more information, see "Calculations" in the *IBM Cognos Analytics Data Modeling* guide.

Dashboards and stories

The following dashboards and stories features are new or changed in Cognos Analytics 11.1.2.

Create your own custom sort order

From an axis label on a visualization, or from the data slots on an expanded visualization, you can create a custom sort order on the displayed data.

For more information, refer to the *Custom sorting* documentation in the *IBM Cognos Analytics Dashboards and Stories User Guide*.

Create your own custom data group

You can organize column data into custom groups so that the data is easier to read and analyze. Create custom data groups directly in a dashboard without having to open the data modeling component.

For more information, refer to the *Creating custom data groups* documentation in the *IBM Cognos Analytics Dashboards and Stories User Guide*.

Add a Jupyter Notebook cell

You can use the **Notebook** widget to add notebooks to a dashboard or story.

For more information, refer to the *Adding a Notebook widget* documentation in the *IBM Cognos Analytics Dashboards and Stories User Guide*.

Create ordered or unordered lists

From the properties for a text widget, you can select an ordered or an unordered list for your dashboard or story.

For more information, refer to the *Adding text* documentation in the *IBM Cognos Analytics Dashboards and Stories User Guide*.

Automatically refresh the data each time your story starts

You can set your story to refresh the data source each time that the story starts from the beginning.

For more information, refer to the *Refreshing the data each time your story starts* documentation in the *IBM Cognos Analytics Dashboards and Stories User Guide*.

Release 11.1.1 - November 2018

This section describes new features in Cognos Analytics 11.1.1.

This version represents the initial release of Cognos Analytics and includes features listed in [Release 11.1.0](#).

General

The following general features and updates are new in Cognos Analytics 11.1.1.

New publications

Documentation pertaining to Cognos Analytics has been added:

- Administering
- Analysis Studio
- Cognos for Microsoft Office
- Cognos Software Development Kit
- Cognos Workspace
- Dynamic Cubes
- Dynamic Query
- Event Studio
- Framework Manager
- Installing and Configuring
- Query Studio
- PowerPlay
- Transformer
- Troubleshooting

Upgrading data between Cognos Analytics 11.0.x and 11.1

To support the optimized user experience in dashboards, explorations, and other components, and to improve query performance, the data from IBM Cognos Analytics version 11.0.x must be upgraded.

The upgrade is needed for two reasons: to retrieve some deeper data characteristics from data servers, packages, uploaded files, and data sets, and to upgrade the Parquet file format in uploaded files and data sets.

The deeper data characteristics support the product functions that are behind the optimized user experience in dashboards, explorations, and other components. These characteristics are captured from samplings of data from the underlying sources.

For more information, see the section on data upgrade tasks for Cognos Analytics version 11.1 in the *IBM Cognos Analytics Configuration Guide*.

Installation and configuration

The following are changes in the Installation and configuration of Cognos Analytics 11.1.x.

- IBM Cognos Analytics installation now consists of two components: Installer file and a repository compressed file. When the installer is run, you must point to the appropriate repository (options include server and client).
 - The server repository consists of the Cognos Analytics Server and Life-Cycle Manager.

- The client repository consists of Framework Manager, Life-Cycle Manager, Cube Designer, and Dynamic Query Analyzer.
- Oracle Solaris is no longer a supported operating system.
- Software Development Kit now installed by default with Cognos Analytics server installation.
- Uninstall and upgrade will fail if program is running. Ensure that all services are stopped before uninstalling or upgrading.
- If an attempted upgrade fails, the installation is rolled back. Install the new version in a new directory and copy the install_backup folder (which is created when the upgrade fails), to the new installation directory.
- Port Verification in **Cognos Configuration**. See Configuration Options in Installing and configuring Cognos Analytics Guide for 11.1.1.
- **Connect and Install** option removed.
- Installation log files can be found in installLocation/uninstall/logs.
- Installed build version can be found in cpmlst.txt file under **Manifest Version**.
- The Uninstall/logs/installlogs list installed features.
- Additionally, the cpmlst.txt contains the following information:
 - Gateway -C8GATE_version=<version>
 - Application tier -C8RS_version=<version>
 - Content Tier -C8CM_version=<version>
- In the cpmlst.txt, the product version aligns with the R release number.
- **Easy Install** Uninstallation removes installed Informix database. Back up your Content before uninstalling, if required.
- SWID (Software ID) tags removed from Framework Manager, Dynamic Query Analyzer, and Cube Designer.

Administration

The following administration features are new or changed in Cognos Analytics 11.1.1.

Simplified creation of routing rules

When creating routing rules, you no longer need to navigate multiple tabs in Cognos Administration. You define routing rules and associate them with data objects, groups, roles, and server groups - all from the **Routing rules** page. This page is available from the **Manage > Configuration** pane.

For more information, see "Dispatcher routing" in the *IBM Cognos Analytics Managing Guide*.

Configuring the system

You can make selected changes to your Cognos Analytics environment without re-starting the Cognos Analytics service. From **Manage > Configuration > System**, you can apply certain settings that were defined in Cognos Configuration, but do not require the service to be restarted.

For more information, see "Configuring system settings" in the *IBM Cognos Analytics Managing Guide*.

Capabilities

A new **Capabilities** tab in the **Manage > People** pane allows you to grant capabilities to users, groups, and roles.

For more information, see "Setting Access to Secured Functions or Features" in the *IBM Cognos Analytics Managing Guide*.

Contacts and distribution lists

Using the **Contacts** tab in the **Manage > People** pane, administrators can create and manage contacts, distribution lists, and folders. You can search, filter, and sort entries. You can also apply group and role permissions to contacts, distribution lists, and folders.

For more information, see "Creating contacts, distribution lists, and folders" in the *IBM Cognos Analytics Managing Guide*.

New jobs

You can create jobs using a redesigned user interface. From the **New job** page, you add job steps, define the run order, and then set run options.

For more information, see "Using jobs to schedule multiple entries" in the *IBM Cognos Analytics Managing Guide*.

Palettes

A new **Palettes** tab on the **Manage > Customization** pane allows you to create and modify custom palettes. You can duplicate palettes for further editing. You can also select a palette as the global palette that is available to all users.

For more information, see "Creating a global color palette" in the *IBM Cognos Analytics Managing Guide*.

Profile

Using the **Profile** tab on the **Manage > Customization** pane, you can set the default profile for users and tenants. You can assign roles or groups to the default user. You can also specify the report format, turn on accessibility features, and specify regional options for the default profile.

For more information, see "Managing User Profiles" in the *IBM Cognos Analytics Managing Guide*.

Collaboration

The new **Manage > Collaboration** pane allows a directory administrator to configure one or more Slack servers. Cognos Analytics users can then connect to the Slack servers to share messages and Cognos Analytics content.

For more information, see "Integrating with a collaboration platform" in the *IBM Cognos Analytics Managing Guide*.

Faster queries on uploaded files and data sets

The query service has introduced a new co-process called **Compute service**, which increases the performance of queries on uploaded files and data sets. Queries on uploaded files and data sets are performed in whole or in part by the **Compute service**. Depending on the query, potentially the whole query can be evaluated by this service, and the result returned to the query service. In other cases, some additional local query processing of the result might be performed by the query service.

For more information, see the query service administration chapter in the *IBM Cognos Analytics Administration and Security Guide*.

Release 11.1.0 - September 2018

This section describes new features in Cognos Analytics on Cloud 11.1.0.

General

The following general features are new in Cognos Analytics 11.1.0.

Upload files and launch components at the same time

Use **Quick launch** to upload files to Cognos Analytics 11.1.0 and simultaneously start a data module, exploration, or dashboard. Drag files onto the **welcome** page to activate quick launch. When **Quick launch** appears, drop the files into the appropriate box to immediately start building a data module, exploration, or dashboard. The uploaded files are stored in your **My content** folder.

Enhanced support for uploaded files

The following new features were added for uploaded files:

- Support for multi-tab spreadsheets.

You can upload spreadsheets with multiple tabs. Each tab appears as a separate table.

- Support for the compressed (.zip) file format.

Multiple .csv (only) files can be compressed into a .zip file for a quick upload.

- Support for multi-file upload.

You can upload multiple files concurrently by using the **Quick launch** functionality or multi-selecting them.

- Providing progress and error details for single-file uploads, and consolidated progress percentage for multi-file uploads, at different upload stages.
- Updating data in uploaded files.

Use the **Append file** option to append new rows of data to your source file from a different file. Use the **Replace file** option to replace all rows of data in your source file with data from a different file. For a successful update, the column names and data types, and the order of columns must be identical in both files.

For more information about uploading files, see the *IBM Cognos Analytics Getting started* guide.

Support for relative dates

The relative dates feature makes it easier to do "as-of-date" analysis. Examples include current quarter, quarter-to-date, month-to-date, and so on.

Relative date analysis in Cognos Analytics uses a set of prebuilt relative date filters, such as current quarter, quarter-to-date, or (MTD) month-to-date, in a sample calendar data module. To do relative date analysis against your data, you must create a data module that maps your data to the sample calendar, where at least one date column from your data is associated to the calendar, and at least one measure column from your data is associated to the date column. This data module can then be used as a source for relative date analysis in reports and dashboards.

For more information about relative date analysis, see the *IBM Cognos Analytics Data Modeling* guide.

Enrich Framework Manager relational packages

Relational packages can be enriched to apply the Cognos Analytics concepts (taxonomy) to query items in the packages.

There are two ways to enrich the package metadata: automatic and manual. When using automatic enrichment, all query items of all visible query subjects in the package are evaluated, and the concepts are automatically applied. When using manual enrichment, the concepts must be set explicitly for each query item. Any concepts that are set by the manual option override any concepts that are set by the automatic option.

For more information about enriching packages, see the *IBM Cognos Analytics Managing Guide*.

Shortcuts and their targets provide the same context menu options

The shortcut context menu now provides the same options as the target context menu. For example, the **Run as** option is available from both the report and its shortcut context menus. In previous releases, only a set of default context menu options was available for all shortcuts.

Explorations

Explore offers a flexible workspace where you can explore data and is new in IBM Cognos Analytics 11.1.0. You can also explore an existing visualization from a dashboard, story or report. Correlated insights are represented by a green icon with a number on either the x-axis or y-axis of a visualization.

Starting an exploration

There are several different ways to get started in Explore.

You can start an exploration from the **New** menu on the **welcome** page. The data pane opens so that you can add data.

You can also start a new exploration from an existing visualization in a dashboard or story. Create a new exploration or add to an existing. If you choose to add to an existing exploration, the folder view displays only folders and explorations. Browse to and open the existing exploration you want to work with. The visualization(s) and the data are transferred to the exploration.

A third way to start Explore is from the **Action menu** icon on a data asset on the **welcome** page. Click **Create exploration** to create a new exploration with the data you selected.

Relationship diagram

When you start a new exploration and select a data source, the relationship diagram is the default view.

The field of interest is the focal point and is represented by a blue circle. Related fields are organized into green circles.

The system analyzes the data and identifies interesting items. The relationship diagram plots these fields based on a statistical evaluation of related items. The relationship diagram is not a picture of the data model. However, the model might be an influencing factor in the analysis. To improve performance when there are many rows in the data source, the analysis is based on a representative sample of the entire data.

Lines connect the concepts and represent relationships. The thickness of the line indicates the strength of the relationship.

You can interact with the relationship diagram by selecting one or more fields that you are interested in. As you do, the list of suggested starting points to the left of the diagram updates to include the fields you selected.

Suggested starting points

You can select items in the relationship diagram to generate visualizations to use as starting points. Click a visualization if you want to add it to your exploration and to view it at the same time. Click the plus icon on the starting point visualization to add it to your exploration and maintain the current view.

Navigation panel

You can see the visualizations in your current Exploration in the navigation panel to the left of the main view. To open the navigation panel, click the **Explorations** icon in the side panel. From the navigation panel, select the visualization that you want to bring into the main view.

Automatically generated insights

The system automatically generates details, recommends related visualizations, and displays badge insights.

Details

Text is generated to describe aspects of the visualized data that is not obvious from looking at the visualization. For example, the details could display an average of the values over time.

Related visualizations

When a visualization is in focus in an exploration, the system recommends related visualizations that are related to what you are currently looking at. Based on the data analysis, these related visualizations might be of interest to you.

Related visualizations replace one of the data elements in the visualization or add another data element to create a new visualization. Related visualizations use a combination of statistics and “interestingness” to suggest useful next steps.

Correlated insights

If one of the data items in a visualization is determined by the system to be a “target”, correlated insights indicate that the system has identified “drivers”. Correlated insights are displayed as green ovals with a number. The number represents the number of drivers or driver combinations that were

identified. Click a correlated insight to get additional information on what these drivers are and how they matter.

Driver analysis

Click an item from the correlated insights menu on the visualization to generate a driver analysis.

A driver analysis visualization shows you the key drivers, or predictors, for a target. The closer the driver is to the right, the stronger that driver is.

IBM Cognos Analytics uses sophisticated algorithms to deliver highly interpretable insights that are based on complex modeling. You don't have to know which statistical tests to run on your data. Cognos Analytics picks the right tests for the data.

Comparison

Create a single blank card or a comparison blank card from the **New** menu in the toolbar. Click the single blank card to start creating a visualization or click the comparison blank card to create two related visualizations and then automatically compare the data between the two. A summary of key information and differences between the two visualizations is generated.

You can also create a comparison card from existing visualizations by selecting two cards from the navigation panel then using the **Action menu** to **Compare**. Or, you can select two data points on an existing visualization and select **Compare by** from the right-click menu.

Copy and paste

You can copy and paste visualizations from a dashboard, story, or exploration to another dashboard, story, exploration or report. To copy and paste, select a visualization, then use keyboard shortcuts such as Ctrl+C and Ctrl+V.


In Explore, you can also select the **Action menu** on a card, select **Copy**, then open a dashboard and use the keyboard shortcut Ctrl+V to paste to the dashboard.

Compare by

Compare by is similar to navigating a pre-built navigation path or a hierarchy except that you don't need anything pre-defined. You can select one or more data points, for example, bars on a bar chart, then right-click and select **Compare by**. You are prompted for a field name. The result is a new visualization on a new card that replaces the category of the previous chart and is filtered by your selection.

Assistant

You can type in English text to discover patterns and relationships in your data, as well as generate visualizations that can be added to an existing dashboard or exploration. Enter text related to your analytical intentions and an AI conversational agent will respond with visualizations and other information to satisfy your request.

Open the full assistant panel by clicking the **Assistant** icon . If you're using the compact assistant panel, you can switch to the full panel by clicking **Open in full view**. The compact panel is available in explorations only.

For usage details, such as supported lexicon, refer to the *Assistant* documentation in the *IBM Cognos Analytics Explorations User Guide*.

Dashboards and stories

The following features are new or changed in IBM Cognos Analytics 11.1.0. Dashboards and stories.

Copy and paste

You can copy and paste visualizations from a dashboard to another dashboard. To copy and paste, select a visualization, then use keyboard shortcuts such as Ctrl+C and Ctrl+V.

Canvas layout positioning

In the properties for a dashboard or story, you can set whether the layout positioning is relative or absolute. In a relative layout, the size and position of widgets adjust to fit into the screen. Widgets in an absolute layout appear exactly as you size and place them in the view, regardless of the screen size.

Page size

You can choose a pre-set page size for a dashboard such as letter or legal. You can also set the height and width of a dashboard. This feature gives you control of the display of your dashboard or story for different screen sizes.

Smart visualization recommender

When you drag data items from the metadata tree on to the report canvas, Cognos Analytics renders the visualization that best represents the data. You can choose other visualizations from the list if you don't like the one selected by Cognos Analytics.

Show grid, snap to grid, and snap to objects

The default view for a new dashboard or story displays a grid on the canvas that provides a guide for you to snap objects to. Also, you can snap objects to other objects. You can enable and disable these features in the dashboard or story properties.

Create custom color palettes

You can view the default color palette, change the palette, and create your own palettes for your dashboard or story in the dashboard or story properties.

Hide tabs

The default dashboard style is now a tabbed dashboard. If you want to create a dashboard with only one tab, you can hide the tab and the **Create tab** button to save screen space. The show and hide tabs feature is available from the dashboard properties.

Modify colors on tab titles and tab selection indicators

For titles on tabs, you can quickly choose a basic color or create a custom color by using a color picker. The line under a tab title shows the tab that is selected and is called the selection indicator. You can modify the selection indicator color too. These new features are available from the dashboard properties.

Widget title enhancements

For a widget title, you can modify the font family, font size, text color, alignment, and styles. This feature is available from the **Text details** tab in the visualization properties and from the on demand tool bar when you select the title text in a visualization.

Auto-group

You can enable auto-group from the on-demand toolbar. When auto-group is enabled on a column, for example Years, the years are automatically categorized by a group of years such as a decade.

Reorganized properties

The properties in the properties pane are now grouped by categories such as **Canvas**, **Color and Themes**, and **Tabs**. These groups are also collapsible and expandable to improve organization and usability of the properties pane.

Align objects

When you drag an object on the canvas, guidelines appear to assist with alignment with other objects on the canvas. These guidelines help you place objects exactly where you want them.

Size and position widgets from the properties pane

From the visualization properties, you can align widgets relative to one another, precisely position, and adjust the height and width of widgets on your dashboard.

Customize axis labels for charts

From the visualization properties for a chart, you can customize the axis scale, axis titles, axis label orientation, and so on.

Show visualization data

From the on-demand toolbar for a visualization, or from the data tray, you can view the data that makes up your visualization.

Launch Explorations

From the on-demand toolbar on a visualization, you can launch Explorations where you can explore the data that is used in your visualization in much more detail.

Share dashboards or stories on Slack

Share your dashboard or story with your team on Slack where you can collaborate and discuss your findings. You can also annotate screen captures of your dashboard or story to share on Slack. This feature requires some additional configuration.

Format numbers to display currency and percentage

From the on-demand toolbar, you can format numbers to display in the currency you choose. You can also format numbers to show as a percentage and set the number of decimal places to display.

Insights

You can enable **Insights** on a visualization to learn more about the data such as the average or the meaningful differences.

Use the selection tool to analyze specific data on a visualization

From the on-demand toolbar, you can use the selection tool to highlight an area on a chart or map.

Export as a story

From the list beside the save button, you can select **Export as a story** to make a copy of your dashboard and convert it into a story.

Matching color palettes on multiple visualizations

When multiple items on the canvas share a category or value, you can use the **Color consistency** setting to automatically adjust the visualization colors to match each other.

New scene templates for stories

You no longer start from scratch when you add a new scene to a story. Now, for a new scene, a default template is displayed that includes a title, a text widget, and a blank visualization to assist you with getting started on the new scene. And, there are many other templates to choose from. To see all the template options, click the down arrow beside the **Add a new scene** plus sign.

Data entrance inside a chart

From the visualization properties for a chart, on the **Animation** tab, you can animate how data is presented within a chart. For example, you can set the animation properties for a bar chart to have the bars grow and other data on the chart appear gradually as the scene plays.

Navigate markers in a scene

Enable **Navigate markers** to allow a presenter to control how widgets are revealed in a scene. With this feature enabled, each widget in the scene is represented by a mark on the timeline. A presenter can click the **Next marker** button to go from one marker to the next to reveal a new widget for each marker.

Change story type

In the story properties, you can easily change the story type from slide show to guided journey and vice versa.


New and updated visualizations

- Area
- Bar

- Bubble
- Bullet
- Column
- Crosstab
- Data player
- Decision tree
- Driver analysis
- Heatmap
- Hierarchy bubble
- Legacy map
- Line
- Line and column
- List
- Map
- Marimekko
- Network
- Packed bubble
- Pie point
- Radial
- Scatter
- Spiral
- Stacked bar
- Stacked column
- Summary
- Sunburst
- Table treemap
- Word cloud

Assistant

You can type in English text to discover patterns and relationships in your data, as well as generate visualizations that can be added to an existing dashboard or exploration. Enter text related to your analytical intentions and an AI conversational agent will respond with visualizations and other information to satisfy your request.

Open the full assistant panel by clicking the **Assistant** icon . If you're using the compact assistant panel, you can switch to the full panel by clicking **Open in full view**. The compact panel is available in explorations only.

For usage details, such as supported lexicon, refer to the *Assistant* documentation in the *IBM Cognos Analytics Dashboards and Stories User Guide*.

Reporting

The following features are new or changed in Cognos Analytics 11.1.0 Reporting.

Guided report layout

You can place report objects at different locations on the canvas by using visual guidelines. Table structures are used and automatically created based on where objects are placed. All tables that are

created use percentage sizing to ensure that different screen resolutions are supported. For more information, see *Guided report layout* in *IBM Cognos Analytics Reporting User Guide*.

New navigation user interface

You can easily switch between report pages and report queries using the new navigation menu, which is at the top of the authoring interface. The on-demand toolbar can also be fixed at the top of the report canvas instead of floating with selected objects. For more information, see *The user interface* in *IBM Cognos Analytics Reporting User Guide*.

Smart visualization recommender

When you drag data items from the metadata tree on to the report canvas, Cognos Analytics renders the visualization that best represents the data. You can choose other visualizations from the list if you don't like the one selected by Cognos Analytics. You can disable this feature in the report options. For more information, see *Recommended visualizations* in *IBM Cognos Analytics Reporting User Guide*.

Visualizations

You can use the following new visualizations:

- Area
- Box plot
- Bubble
- Bullet
- Clustered bar
- Clustered column
- Floating bar
- Floating column
- Heat map
- Hierarchical packed bubble
- Line
- Map
- Marimekko
- Network
- Packed bubble
- Pie
- Point
- Radar
- Radial
- River
- Scatter plot
- Simple line and column
- Smooth area
- Smooth line
- Stacked bar
- Stacked column
- Step line
- Stepped area
- Treemap
- Waterfall
- Word cloud

The visualizations support the following new features:

- Custom palettes
- Animations
- Use percentage size so the visualizations resize based on-screen resolution
- Client-side data storage

All new visualizations have client-side rendering capability. The visualizations can use and interact with data stored on the browser side. Report authors can include extra data to be stored on the browser side when you create visualizations. Report consumers can filter visualizations directly on the report output using data that is already retrieved from the database. For more information, see *Visualizations version 11.x in IBM Cognos Analytics Reporting User Guide*.

Custom palettes

You can view the default color palette, change the palette, and create your own palettes for reuse in a report, a dashboard, or a story. Standard and continuous palettes are supported on various visualizations. For more information, see *Creating a color palette in IBM Cognos Analytics Reporting User Guide*.

Enhanced mapping support

Report consumers can interact with different map layers to customize how a map is displayed.

Map clustering

You can group points on a map to help report users to better analyze data at different zoom levels. Map clustering is available as a property on both points and latitude and longitude layers.

Heatmap

You can visualize data by location using a heatmap layer on a map. The heatmap layer is available as a property on both points and latitude and longitude layers.

For more information, see *Adding custom points or regions to a map in IBM Cognos Analytics Reporting User Guide*.

Reusable styles

Styling functions are now consolidated into a single window that's directly available from the on-demand toolbar. Report authors can customize any object in one location and save the customized style for reuse in other reports. For more information, see *Reusing a style from another object in IBM Cognos Analytics Reporting User Guide*.

Copy and paste

You can quickly assemble a report by using existing assets. Copy and paste is available from a dashboard, a story, or a report to a report by using the Ctrl+C and Ctrl+V key strokes. Data sources, queries, visualization types, and all common properties are copied and pasted. For more information, see *Copying and pasting visualizations in IBM Cognos Analytics Reporting User Guide*.

Modeling

Data modeling user interface in Cognos Analytics 11.1.0 is significantly changed, and new modeling capabilities are introduced.

New user interface experience for creating base data modules

The manual and intent-based process of creating a base data module was redesigned and enhanced in the following ways:

- Improved source selection.

You can use search and filtering options to locate different source types in **Team content**, **My content**, and **Recent** folders. Data server connections are grouped in a separate folder for ease of access. You can also upload new files while creating a data module.

- Adding tables manually or engaging the system to discover related tables for you.

When using data servers or multi-tab spreadsheets as data module sources, a choice dialog box is presented where you can select the option to manually add tables or let the system discover related

tables for you. In both cases, after the table selection, the data module is created based on the chosen tables.

For more information, see the *IBM Cognos Analytics Data Modeling* guide.

Multifunctional, robust expression editor

The redesigned expression editor provides robust user interface for creating and editing tables, filters, and calculations.

You can create expressions by typing the code or dragging items from the source and functions panels. The validation and data preview capabilities help to quickly verify and troubleshoot the expressions. The code editing capabilities include: inserting comments, function auto-complete, pretty-print, high-contrast mode, and different font sizes. The information panel shows details and provides examples of functions that are used in the expressions.

For more information, see the *IBM Cognos Analytics Data Modeling* guide.

Create folders in data modules

Starting with this release, you can create folders in data modules to organize tables and columns.

You can create a folder at the root of the data module, within a table, and within another folder. Drag tables, columns, and other folders to add them to folders. Tables can be added only to folders that are for table filters and calculations. Columns can be added only to table-level folders.

Folders can be moved, copied, and deleted. These actions can be undone before the data module is saved.

Create new tables by combining existing tables

You can create new tables to combine data from multiple tables into one query. Tables from all supported sources can be combined.

Depending on the number of source tables that you select, you can create a copy or a view of an existing table, or you can join two tables into a new table. Using the union, intersect, or except SQL operations, you can define a table to merge, compare, or equate similar data from different sources. The new tables can be modeled and used in the same way as other data module tables.

For more information, see the *IBM Cognos Analytics Data Modeling* guide.

Create new tables using SQL

You can create new tables that are based on SQL syntax that you provide. The following types of SQL are supported: Cognos SQL, native SQL, and pass-through SQL. Stored procedures are not supported. The new tables must be associated with valid sources.

Enter the SQL statements in the table editor, and validate the syntax. You can view the syntax errors in the validation panel. You can resolve the errors, or save the SQL table with errors. If the validation is successful, the table is populated with a set of column names that is obtained from the projected columns in the SQL result set. If the syntax is not successfully validated, the table contains no columns. You cannot modify any aspect of the SQL table until it is successfully validated. To remove or reposition columns within the SQL table, you need to modify the SQL.

The SQL-based tables can be modeled and used in the same way as other data module tables.

For more information, see the *IBM Cognos Analytics Data Modeling* guide.

Support for relative dates

The relative dates feature makes it easier to do "as-of-date" analysis. Relative date analysis in Cognos Analytics uses a set of prebuilt relative date filters in a sample calendar data module. To do relative date analysis against your data, you must create a data module that maps your data to the sample calendar. This data module can then be used as a source for relative date analysis in reports and dashboards.

The implementation of this feature depends on using the sample calendar data module. The sample calendar data modules, Gregorian Calendar, and a number of fiscal calendars, are included with the

Cognos Analytics 11.1.0 base samples. These sample data modules are used to create another data module where at least one date column from your data is associated to a calendar, and at least one measure column from your data is associated to the date column. This association is done by using a new column property named **Lookup reference**. When this property is specified in a data module for a date column, the relative date filters, such as prior month, current quarter, MTD (month-to-date), appear under the date column. You can use these filters to filter data in reports and dashboards. When this property is specified for a measure column, a set of date-filtered measures appears under the measure column name. You can use these measures in reports and dashboards.

For more information, see the *IBM Cognos Analytics Data Modeling* guide.

Data-level security

You can implement data-level security in data modules by using security filters. A security filter specifies which users, groups, or roles can access specific data values in a source. When the source is used in reports or dashboards, the secured data values are visible only to the specified users, groups, or roles.

Data-level security is supported for data server sources only. You must have write permissions for the related data server connections and signons to use this functionality.

For more information, see the *IBM Cognos Analytics Data Modeling* guide.

Data caching

You can enable data caching in a data module and specify the cache options.

To specify the data cache options at the source level, from the source context menu in the **Source** panel, click **Data cache**. To specify the data cache options at the table level, from the table context menu in the **Data module** panel, click **Data cache**.

For more information, see the *IBM Cognos Analytics Data Modeling* guide.

Specify column dependencies

The column dependencies feature allows you to define how columns are related to each other. This feature is an equivalent of determinants in Framework Manager, but provides more flexibility because you can specify more than one hierarchy per table, view, query subject, or data set.

There are three scenarios where column dependencies are specified to avoid double counting.

- When a table contains replicated data (denormalized table).

For example, a table that contains **City Population** and **Country Population** has the values for the **Country Population** repeated for all the cities that belong to a certain country.

- When a table is related to a fact table and the relationship uses columns from the first table that have repeating values (blending data).

For example, a table that contains data for each calendar date is related to a table that contains data at a year level. The values for each year will be accessed for every date value, ending up with values that are inflated by a factor of 365.

- When measures in a dimension table are involved.

Using the column dependencies feature, you create groups of columns that depend on a specific attribute. The groups are related to each other in an order from coarse to fine granularity.

For more information, see the section on "Column dependencies" in the *IBM Cognos Analytics Data Modeling* guide.

Formatting columns

You can view and overwrite the format type and format type properties of columns.

Splitting columns

You can split values in a column into multiple columns. For example, you can split a geographic coordinates column into latitude and longitude columns, a date column into year, month, and day, or an address column into city, street, and postal code.

Collaborating

Cognos Analytics 11.1.0 provides several collaborative features in the new **Share** panel. Cognos Analytics is now integrated with the Slack application, allowing you to send messages and content to other Slack users. Also bundled are existing features to create links to content and to export dashboard content to a PDF.

Sending messages and content using Slack

From the **Send** tab, you can post a message to a Slack channel or directly to another Slack user, along with a link to a piece of analytic content. If your content is open, you can send an annotated image of the content via Slack.

Linking to Cognos Analytics content

The **Share** and **Embed** options available in the content explorer and within an open piece of content are available in the **Link** tab.

Exporting to PDF

The export to PDF feature of dashboards is now available in the **Export** tab.

For more information, see the Blog post [Increased Collaboration with Slack Integration in IBM Cognos Analytics 11.1!](#)

Cognos Analytics 11.1.x deprecated and removed features

This section provides information about features that are deprecated or removed from IBM Cognos Analytics 11.1.x versions.

For a list of data servers that were deprecated or removed in different releases, see "Data sources that are no longer supported in Cognos Analytics" in *IBM Cognos Analytics Managing* guide.

11.1.5 - December 2019

Removal of startup/shutdown scripts

Beginning in version 11.1.5 the following scripts will be removed from the product as they are not maintained and do not conform to desired JVM settings:

```
<caroot>/bin64/startup.bat
<caroot>/bin64/startwlp.bat
<caroot>/bin64/stopwlp.bat
<caroot>/bin64/shutdown.bat

<caroot>/bin64/startup.sh
<caroot>/bin64/startwlp.sh
<caroot>/bin64/stopwlp.sh
<caroot>/bin64/shutdown.sh
```

11.1.4 - October 2019

Deprecation of Computer Associates IDMS data server

Support for **Computer Associates IDMS** data server will be deprecated in a future release of Cognos Analytics.

11.1.3 - June 2019

Removed support for Pivotal HDB data server

Cognos Analytics no longer supports data server connections to the Pivotal HDB data server.

The associated data server type in the administration interfaces, **Pivotal Greenplum and HDB**, is changed to **Pivotal Greenplum**.

