

Alibaba Cloud DataV

Introduction

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Generic conventions

Table -1: Style conventions

| Style | Description | Example |
|---|--|--|
|  | This warning information indicates a situation that will cause major system changes, faults, physical injuries, and other adverse results. |  Danger: Resetting will result in the loss of user configuration data. |
|  | This warning information indicates a situation that may cause major system changes, faults, physical injuries, and other adverse results. |  Warning: Restarting will cause business interruption. About 10 minutes are required to restore business. |
|  | This indicates warning information, supplementary instructions, and other content that the user must understand. |  Notice: Take the necessary precautions to save exported data containing sensitive information. |
| | This indicates supplemental instructions, best practices, tips, and other content that is good to know for the user. |  Note: You can use Ctrl + A to select all files. |
| > | Multi-level menu cascade. | Settings > Network > Set network type |
| Bold | It is used for buttons, menus, page names, and other UI elements. | Click OK . |
| Courier font | It is used for commands. | Run the <code>cd / d C :/ windows</code> command to enter the Windows system folder. |
| <i>Italics</i> | It is used for parameters and variables. | <code>bae log list --instanceid <i>Instance_ID</i></code> |
| [] or [a b] | It indicates that it is an optional value, and only one item can be selected. | <code>ipconfig [-all -t]</code> |

| Style | Description | Example |
|---------------------------------------|--|------------------------------------|
| <code>{}</code> or <code>{a b}</code> | It indicates that it is a required value, and only one item can be selected. | <code>swich {stand slave}</code> |

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1 What is DataV?

DataV is an Alibaba Cloud data visualization service that allows you to analyze and present huge amounts of complex data as visual dashboards. DataV aims to bring the experience of data visualization to a wider audience, helping less-experienced engineers easily build professional visual applications through a graphical user interface. DataV can satisfy your data presentation requirements in scenarios such as conference exhibitions, business monitoring, risk warning, and geographic information analysis.

Background information

DataV displays complex and dynamic business data in a more lively and user-friendly way than traditional charts and data dashboards, and delivers real-time insights to drive rapid, informed decisions. DataV can be used in a variety of industries including retail, transportation, logistics, electric power, water conservation, and environmental protection. DataV provides interactive data dashboards to enable easy identification and diagnosis of business problems and has become an essential part of big data solutions.

When creating a visualization project, you may encounter the following challenges:

- You are unfamiliar with how to use data visualization tools and lack experience.
- It is time-consuming and requires a lot of effort to develop charts and visual effects.
- Necessary widgets or tools for presenting and analyzing non-traditional data such as spatio-temporal or relational data, are not accessible or available for use.
- The tools that you use have resolution problems when presenting data on large screens.
- The tools that you use cannot properly present data visualizations for big data analysis.

Why DataV?

DataV enables you to:

- Develop data visualization projects similar to those used for the Tmall Double 11 Shopping Festival and Alibaba Cloud City Brain.

DataV provides a variety of visual tools to present data in a wide range of scenarios.

- Use high-performance 3D rendering engines.

DataV incorporates 3D rendering capabilities for geographic displays. It uses GPU power to render large volumes of data and provide low-cost, reusable 3D visualizations for fields such as smart city, smart traffic, security monitoring, and business intelligence.

- Use a wide variety of charts and widgets.

DataV provides a wide variety of basic and third-party chart libraries to build professional visualizations.

- Build professional geographic visualization projects.

DataV allows you to overlay geographical data and plot effects such as geographical trajectories, geographical flying lines, heatmaps, regional chunks, and 3D globes.

- Create visualization projects from templates designed for different industries.

DataV provides dozens of customized data templates for different industries to better suit your business.

- Connect and display a wide range of data sources.

DataV supports Alibaba Cloud AnalyticDB, Relational Database Service, local CVS files, online APIs, and can send requests to data sources dynamically.

- Build visualization projects easily.

DataV requires minimal programming skills and allows you to create professional visualization projects with simple drag-and-drop operations.

- Flexibly deploy and publish visualization projects.

DataV visualization projects can be adapted and split in many non-conventional configurations. You can publish projects with password or token authentication to implement access control and secure information shown on the dashboards.

DataV editions

There are several different editions of DataV. The features of each edition are described as follows:

- Basic Edition



Note:

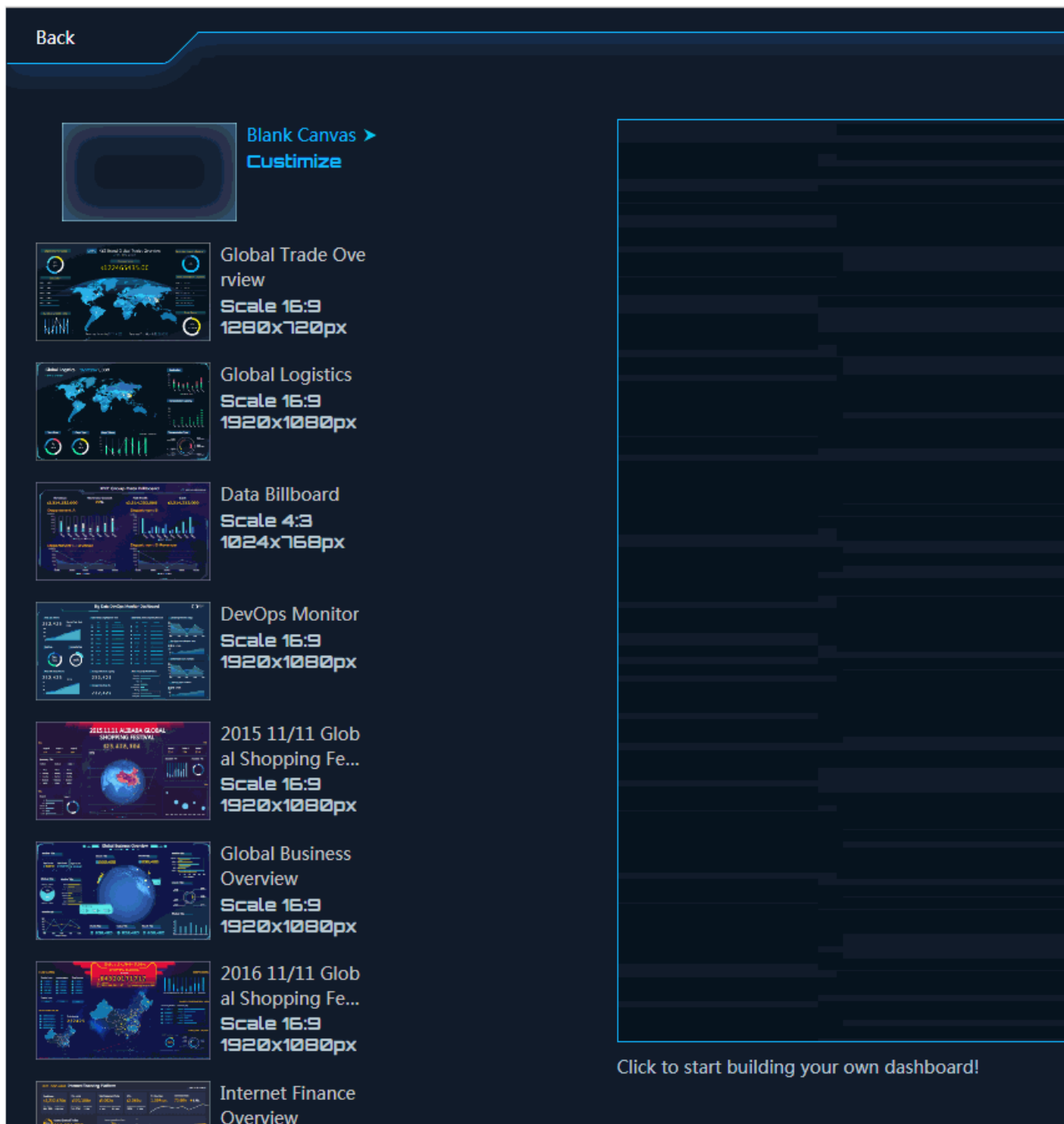
DataV Basic Edition offers a free 30-day trial for new users to try the DataV service.

- Allows you to publish visualization projects to the public.
 - Supports seven types of data sources such as RDS for MySQL, AnalyticDB, CSV, and HTTP API.
 - Provides eight basic templates and supports standard charts and basic map widgets.
 - Allows you to create a maximum of five visualization projects. This limit cannot be increased.
 - Allows you to manage workspace accounts.
- Enterprise Edition
- Allows you to publish visualization projects with password or token authentication.
 - Also supports Oracle, SQL, and several other types of data sources, in addition to the data source types supported by DataV Basic Edition.
 - Has no limits on the number of templates and widgets that you can use, and supports third-party widget libraries, such as ECharts and G2.
 - Allows you to create one independent workspace and up to 20 visualization projects. You can increase the maximum number of visualization projects by purchasing a project expansion package.
 - Other features:
 - Allows you to manage workspace accounts and customize widgets.
 - Allows you to publish visualization projects as Web pages requiring password or token authentication. To access these visualization projects, users must enter specified passwords or tokens. This prevents the business information contained in the projects from being divulged to malicious parties.

2 Features

Various scenario templates

The most difficult part of data visualization design lies in understanding the structural hierarchy and the relationship between various sources of data in only one single article. This involves comprehensive use of colors, layouts, and charts to create a successful visualization. DataV provides multiple templates for scenarios including a control center, geographical analysis, real-time monitoring, reporting, presentation, and many others. Your data visualization presentation can have a high level of design and impact without engaging a professional designer.



Rich visualization widget libraries

In addition to basic charts, DataV skillfully and effortlessly combines data with geographical information such as air transportation routes, heat maps, and scatter diagrams based on both 2D and 3D maps. Third-party chart libraries such as Echarts and AntV-G2 are also perfectly integrated into DataV.

Various data sources

DataV supports access to Alibaba Cloud AnalyticDB, Relational Database Service (RDS), local CSV files, online API, and dynamic requests to various data sources. DataV meets your demands related to real-time big data computation and monitoring. DataV makes full use of big data and cloud computing opportunities.

Regular Data Source (Basic & Enterprise Edition)

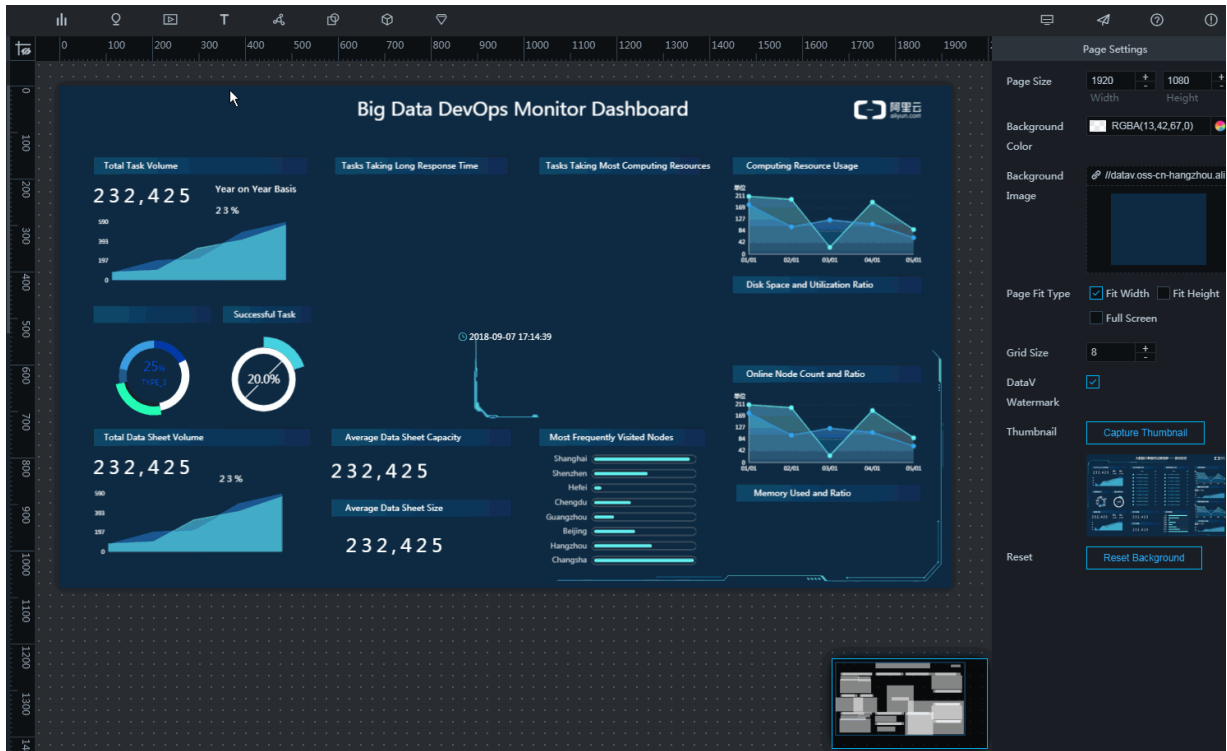


More Data Source (Enterprise Edition)



User-friendly interfaces

With graphic interfaces and configurable widgets, users can create professional visualization projects by using simple drag-and-drop operations. Minimal programming skills are required.



Multiple scales of resolution and publish methods

DataV projects can be published as webpages or with passwords or access tokens to control access and secure information shown on the dashboard. Optimization improvements have been made to the resolution when splicing screens.



3 Concepts

Visualization projects, applications, and dashboards

The presentation of data generated by DataV in dashboards is known as a visualization project. It is also called as a visualization application or a large screen project. DataV is a tool that converts data into various charts and maps in order to present data to users dynamically and in real time.

Data sources

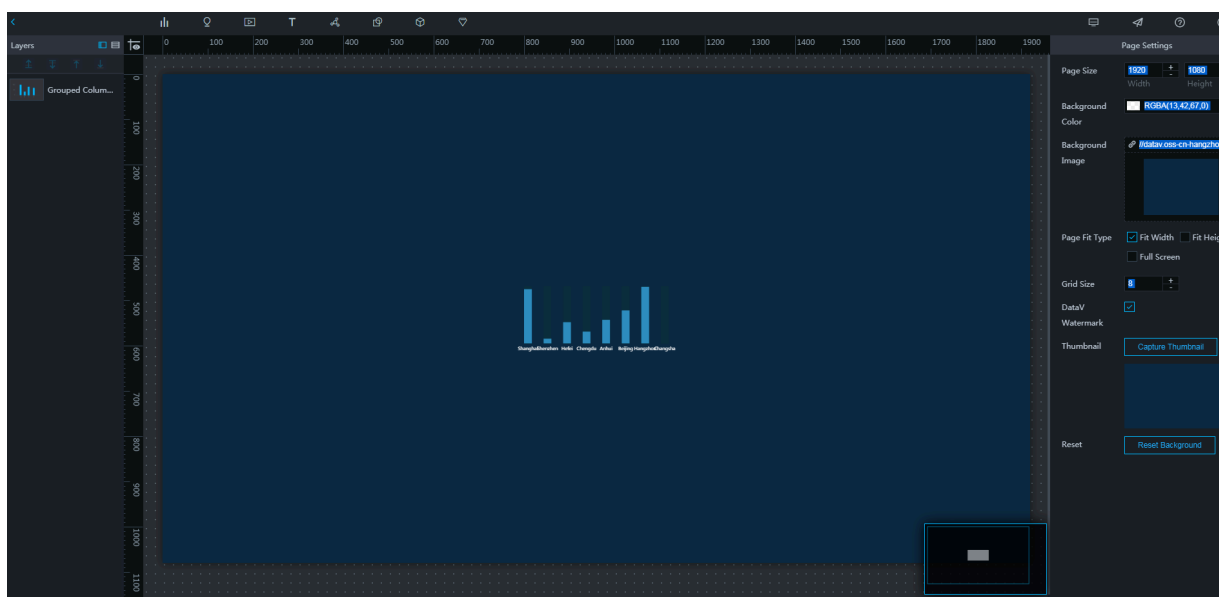
When you create a large screen project with DataV, you must specify the source of the original data. Data sources used with DataV can include the following:

- Database
- Static data
- API
- Others

For more information about adding a data source, see [Add a Data Source](#).

Canvas

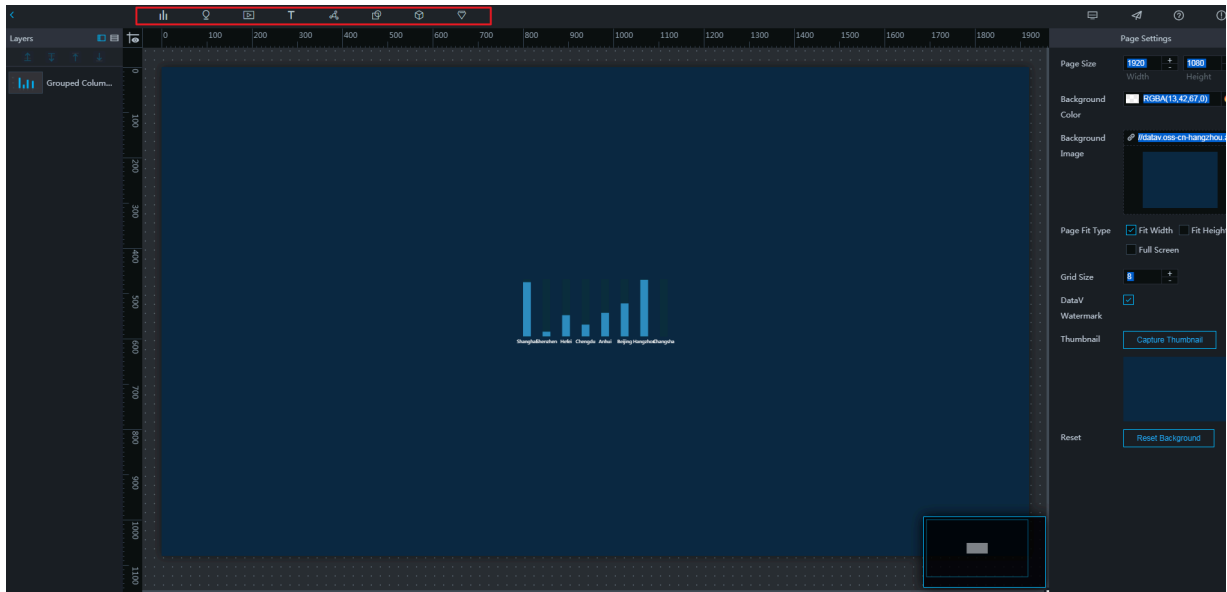
A canvas is also called an interface editor and is the main functional area of DataV. You can adjust settings like layouts and colors for a project, bind data sources with charts, and publish various applications in a canvas.



For more information about canvas functions, see [Canvas Operations](#).

Toolbar

The toolbar is placed at the top of the canvas where you can select widgets, preview, publish, and search for help.



Widgets

Widgets can be added to a canvas from the widget menu in the toolbar.

Widgets supported by DataV include the following:

- Charts
- Maps
- Media
- Text
- Networks
- Material
- Interact
- More widgets