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.	① 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 `cd / d  C :/ windows` command to enter the Windows system folder.
Italics	It is used for parameters and variables.	`bae  log  list -- instanceid` *Instance_ID*
[] or [a|b]	It indicates that it is a optional value, and only one item can be selected.	`ipconfig [-all|-t]`

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

Contents

1 What is DataV?

DataV is an Alibaba Cloud data visualization tool that displays data in a more user-friendly way. Through using DataV, you can gain insights into complex and dynamic business data in real time, while also learning about business obstacles and opportunities by using interactive video walls. DataV can be used in a great variety of industries including, but not limited to, retail, transportation, logistics, electric power, water conservation, and even environmental protection.

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

· The visualization of complex data may pose processing difficulties.

· Developing charts and visual effects is time consuming.

· Necessary components or tools for presenting and analyzing non-traditional data, such as spatio-temporal or relational data, are not easily accessible or available for use.

· The target presentation screens do not support the required display resolution necessary for big data visualizations.

· Existing visualization tools are not designed to present visualizations based on big data analytics.

DataV provides various visualization templates, which can help non-technical personnel be able to create professional-level data visualization projects directly by using the DataV console. In other words, various data presentation requirements, such as exhibitions, business monitoring, risk warning, and geographic information analysis, can be met by using DataV.

DataV editions

DataV has four editions. The features of each edition are detailed as follows:

· Basic Edition

  - Allows you to publish projects to the public.

  - Supports seven data sources, including data from RDS for MySQL, Analytic DB, CSV, and API.

  - Provides eight basic templates and supports standard chart types and basic map types.

  - Allows you to create up to five projects.

  - Allows you to manage several workspace accounts.

· Enterprise Edition

  - Allows you to publish projects using password or access token authentication

  - Supports more than seven data sources, including data from Oracle or SQL Server.

  - Has no restriction on the number of templates and widgets that you can use, and supports third-party visualization libraries, such as ECharts and G2.

  - Allows you to create up to one workspace and 20 projects.

  - Allows you to manage several workspace accounts and customize widgets.

  - Allows you to publish projects as a Web page on which you can publish a project using password or access token authentication to make your projects more secure.
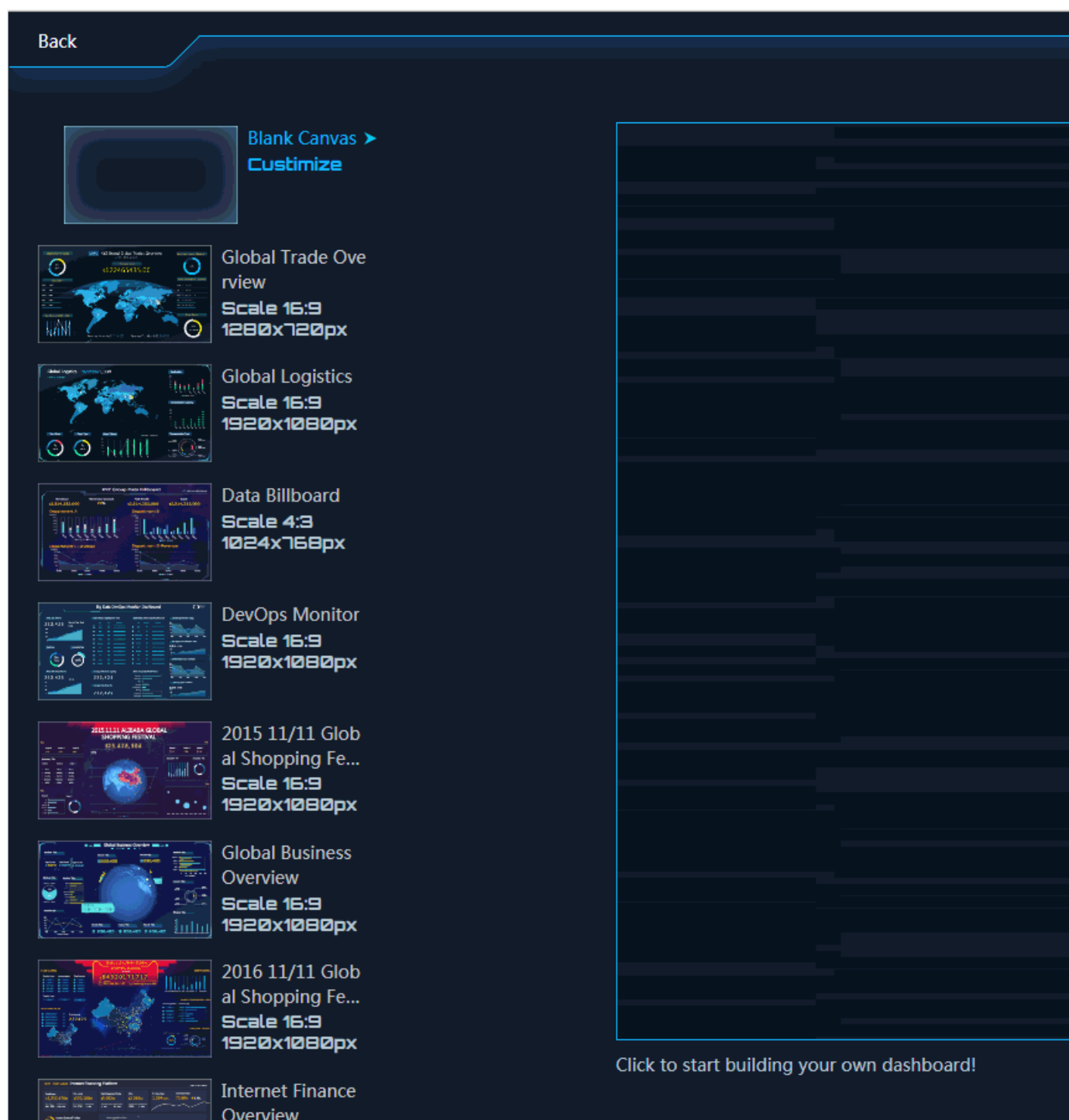
· Developer Edition

  The Developer Edition is developed for independent software vendors (ISVs) and visualization application developers that have complex development requirements , such as developing monitoring projects, data analysis projects, and visualization Web pages.

· Local Deployment Edition

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.

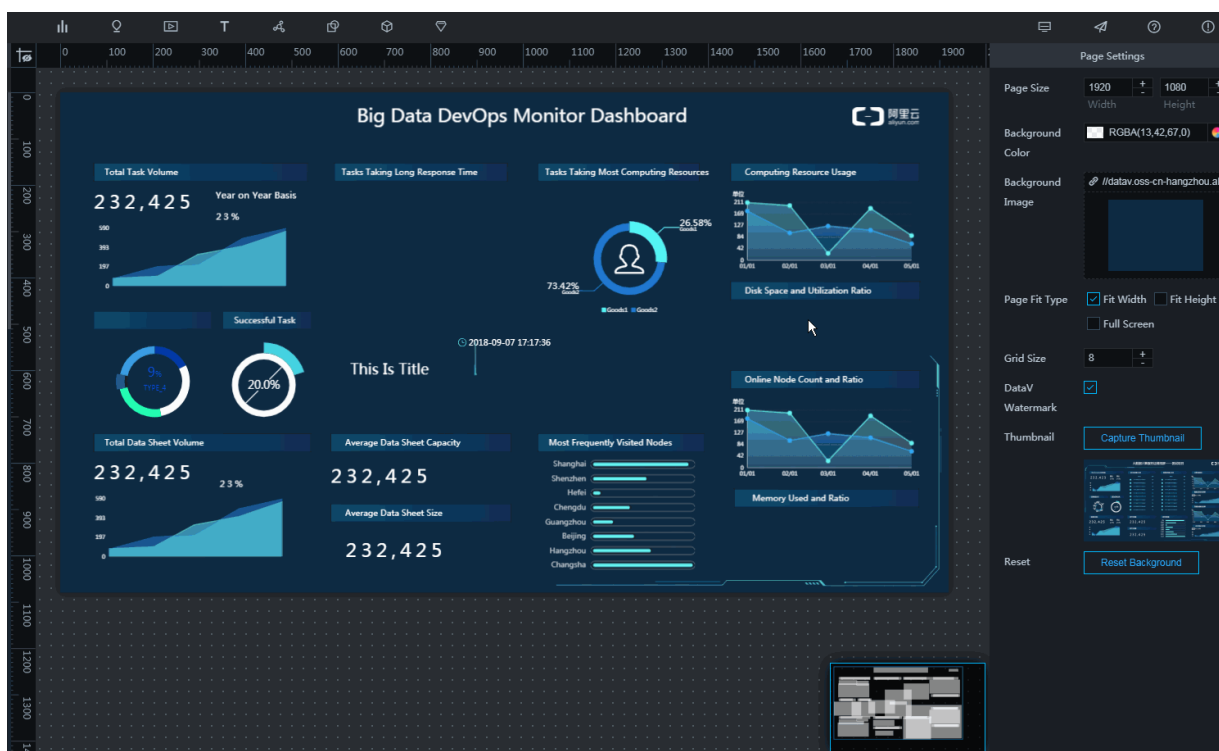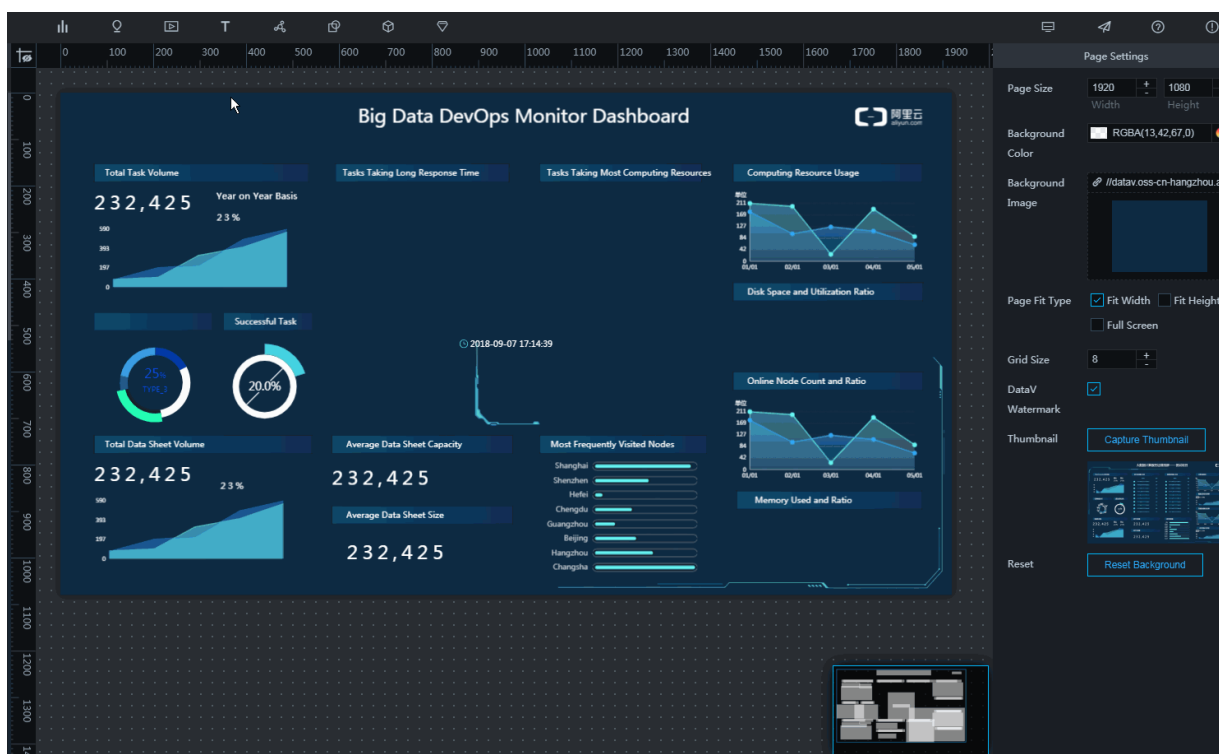## Regular Data Source (Basic & Enterprise Edition)

MySQL	AnalyticDB (ADS)	MySQL	CSV
RDS for MySQL	AnalyticDB (ADS)	Oracle	CSV
API	JSON		
API	Static JSON		

More Data Source (Enterprise Edition)

SQL Server	PostgreSQL	ORACLE	PostgreSQL
RDS for SQLserver	RDS for PostgreSQL	Oracle	HybridDB for PostgreSQL
Alibaba Cloud API Gateway	Table Store	DataV Proxy	

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.
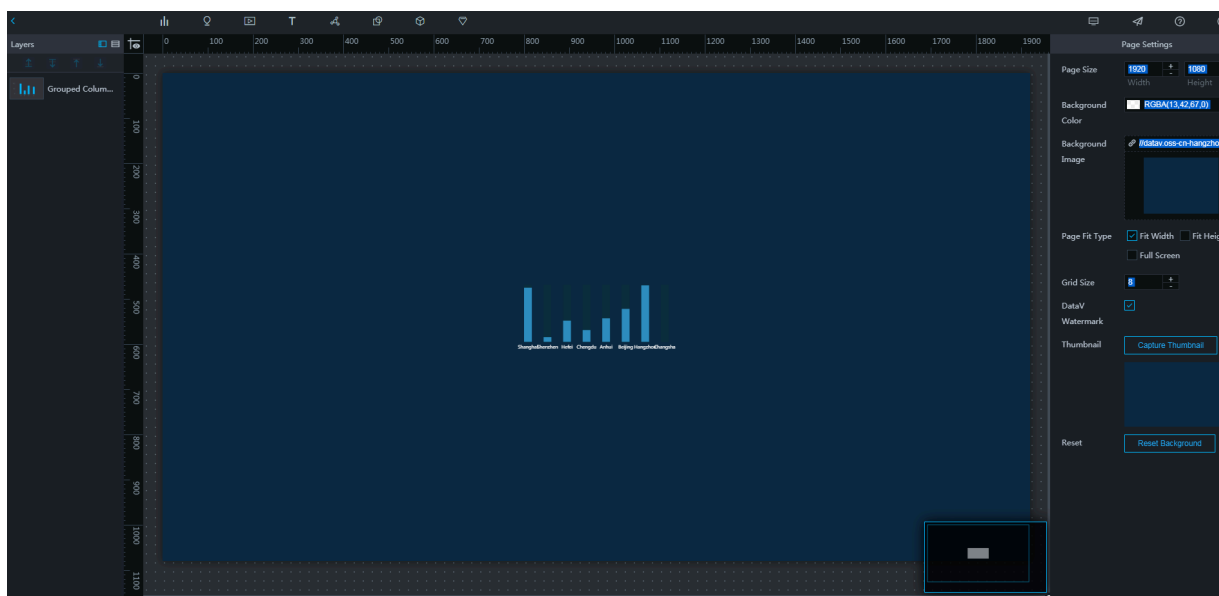
Data sources

> 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*.
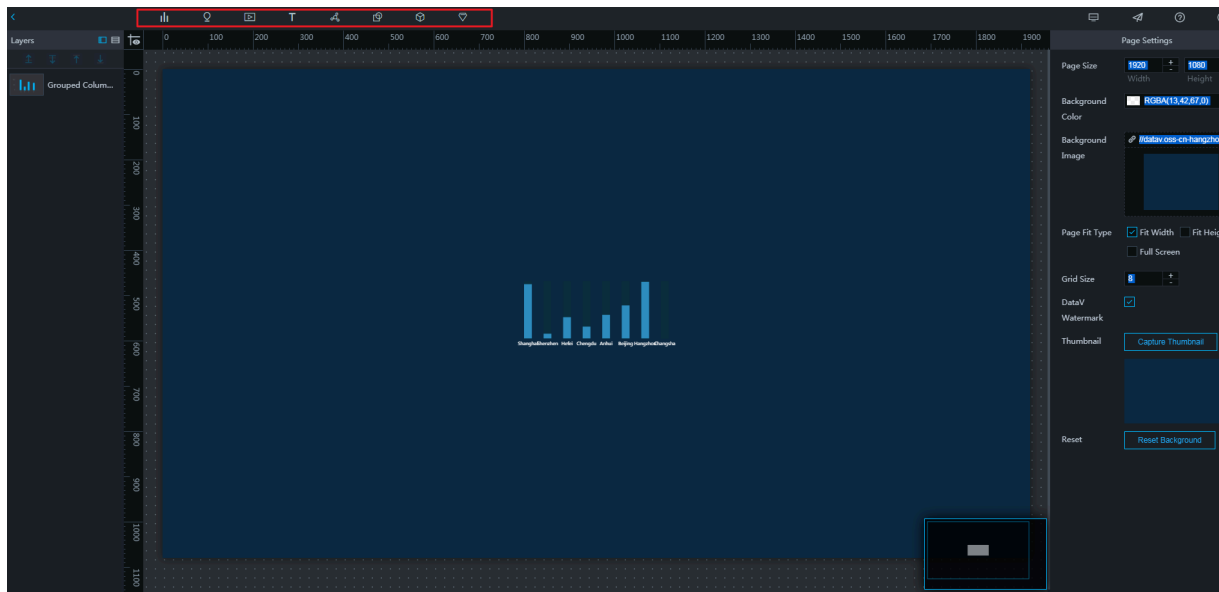
Canvas

> 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