Alibaba Cloud
Quick BI

Product Introduction

Issue: 20190419

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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 `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 Quick BI?

Quick BI is a flexible, cloud-powered, self-service BI platform.

Quick BI supports multiple cloud data sources, including MaxCompute (ODPS), RDS, Analytic DB, HybridDB (Greenplum), and user-created MySQL databases deployed on your ECS instances. You can also perform data analysis in Quick BI built-in Explore Space.

For more information about how to connect data sources, see *Create a cloud data source* and *Create a data source from external database*.
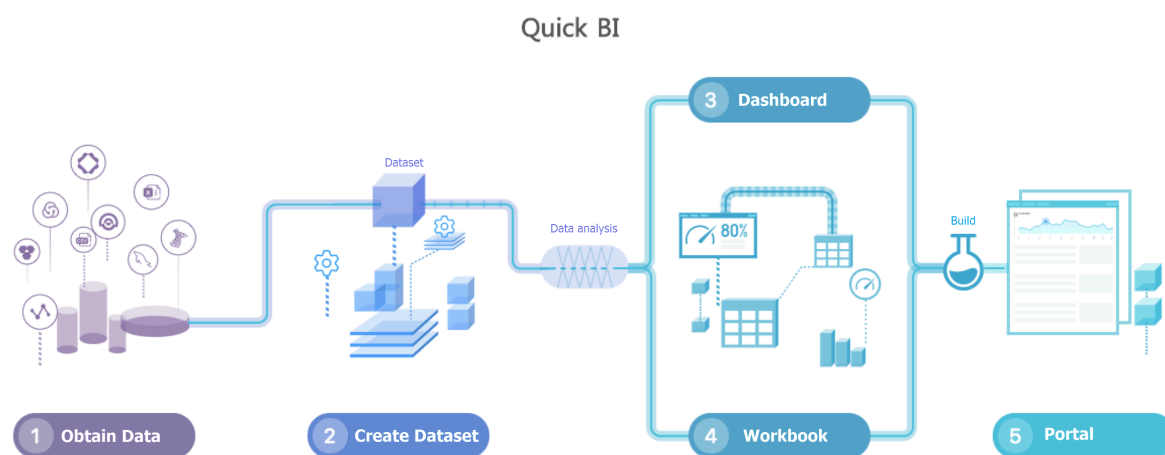
Get business insights with low costs. Taking advantage of cloud computing, Quick BI provides a cost-efficient, high-performance, and stable business platform for you to analyze your data. For more information about Quick BI pricing, see *Quick BI billing methods*.

Go from data to insights in minutes. The built-in query acceleration engine performs real-time analysis on large amounts of data without pre-processing. This helps to develop visual analytics more efficiently.

Model your data with ease. Based on smart modeling tools, Quick BI enables non-technical users to perform analytics and access data at lower costs. In Quick BI, you can author dashboards with widgets and rich visuals. You can quickly obtain data insights, self-service access, and business analytics. You can create reports and build data portals with ease. The self-service Quick BI provides visualized data and empowers non-technical users to become analysts. Quick BI helps to achieve data-driven business operation.

2 Basic concepts

Key procedures

Basic objects

- Data source
- Dataset
- Workbook (for Quick BI Pro and Quick BI Enterprise Standard)
- Dashboard
- Portals

> 📋 **Note:**
>
> For more information about the difference of editions, see the following figure.

Features

Features	Quick BI Basic	Quick BI Pro	Quick BI Enterprise Standard
Workspaces	Personal Workspaces	Personal workspace (as in Quick BI Basic)	Personal workspace (as in Quick BI Basic)
		Group Workspaces	Group Workspaces
User space	1 GB capacity is provided for each account.	1 GB capacity is provided for each account.	1 GB capacity is provided for each account.
Connect to Alibaba Cloud's cloud databases	MaxCompute	MaxCompute	MaxCompute
	(ADS)Analytic DB	(ADS)Analytic DB	(ADS)Analytic DB
	(RDS)MySQL	(RDS)MySQL	(RDS)MySQL
	(RDS)SQL Server	(RDS)SQL Server	(RDS)SQL Server
	HybridDB for MySQL	HybridDB for MySQL	HybridDB for MySQL
	HybridDB for PostgreSQL	HybridDB for PostgreSQL	HybridDB for PostgreSQL
	(RDS)PostgreSQL	(RDS)PostgreSQL	(RDS)PostgreSQL
	(RDS)PPAS	(RDS)PPAS	(RDS)PPAS
		DLA	DLA
			OSS
			DRDS

Data source

When you use Quick BI for data analysis, you must first specify the data source of the raw data. A data source stores your raw data. You can use multiple methods to add data sources:

- Add data sources from cloud database services
- Add data sources from user-created database systems
- Upload local files (only available for Personal Space)

For more information about creating data sources, see *Create a cloud data source*, *Create a data source from external database*, and *Upload local files*.
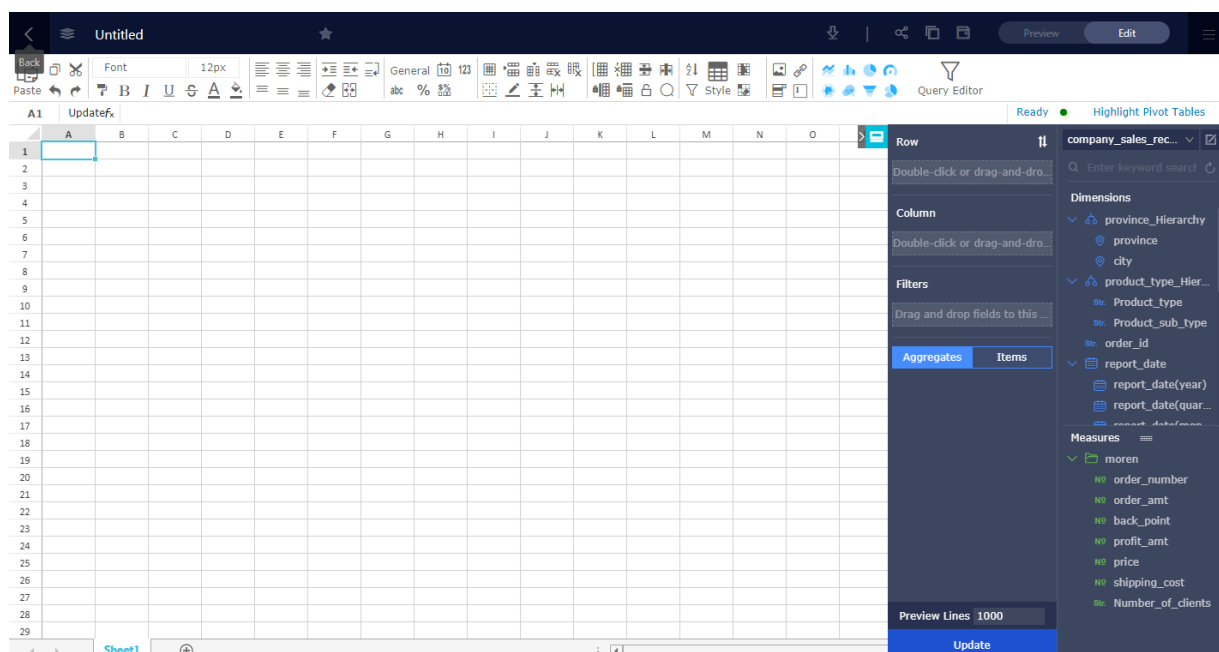
Dataset

You can create datasets by using tables from different data sources. You can edit, move, or delete a dataset in the dataset list.

For more information about datasets, see *Create a dataset*.

Workbook

Workbooks are available for Workspace. You can obtain a workbook by analyzing and processing a dataset. You can use it to reference individual cells, leverage a rich range of functions, and create sophisticated business reports.

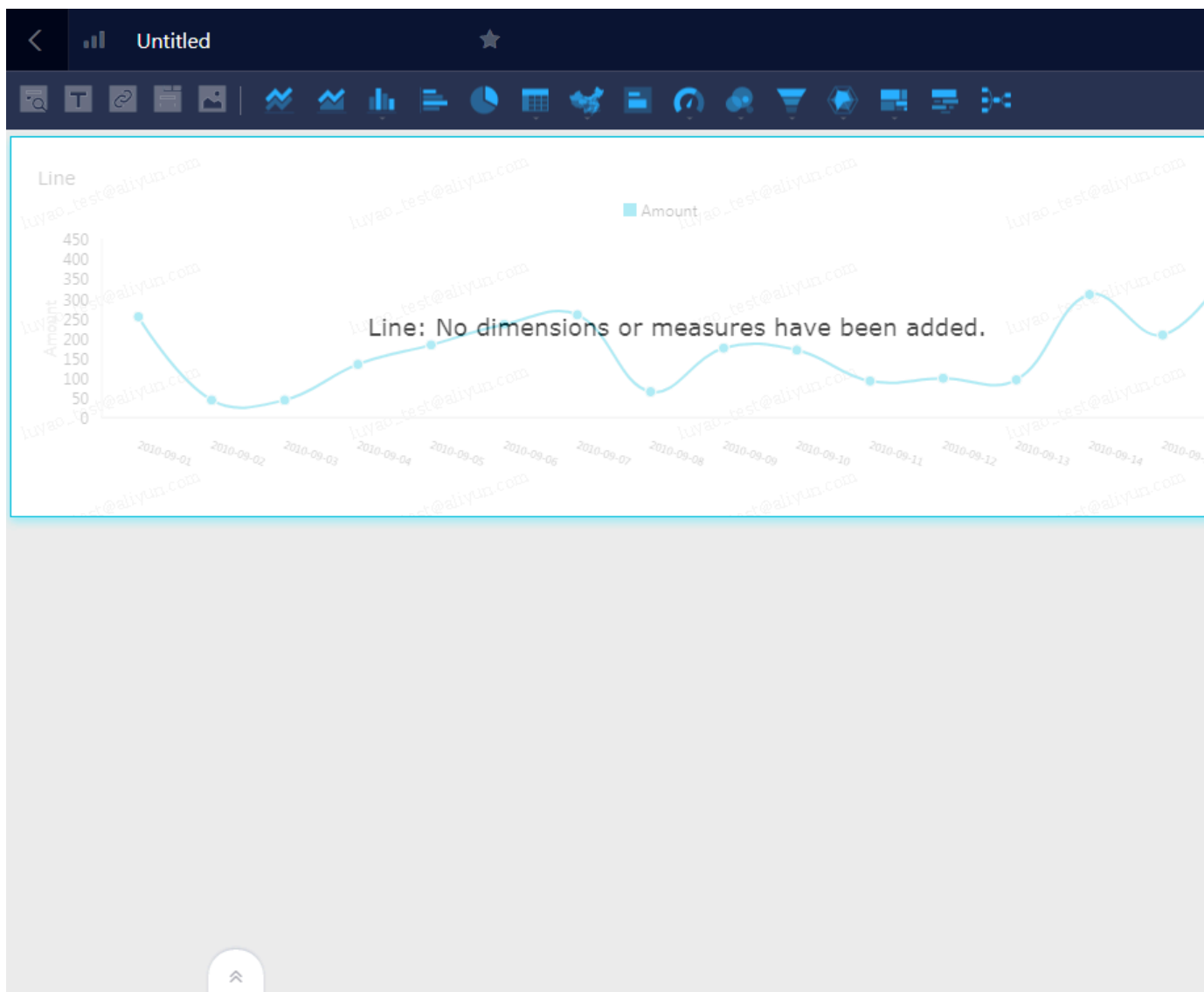For more information about creating workbooks, see *#unique_10*.

Dashboard

Dashboard provides you a more flexible tile layout to create interactive reports with visual analytics. Dashboard supports data filtering, data query, and multiple data display modes to highlight the key fields of data.

Dashboards support two display modes.

· Standard mode (for Quick BI Pro and Quick BI Enterprise Standard)
· Full-screen mode (only for Quick BI Enterprise Standard)

The standard mode supports multiple charts and five layout widgets.

The standard mode supports multiple charts and five layout widgets.
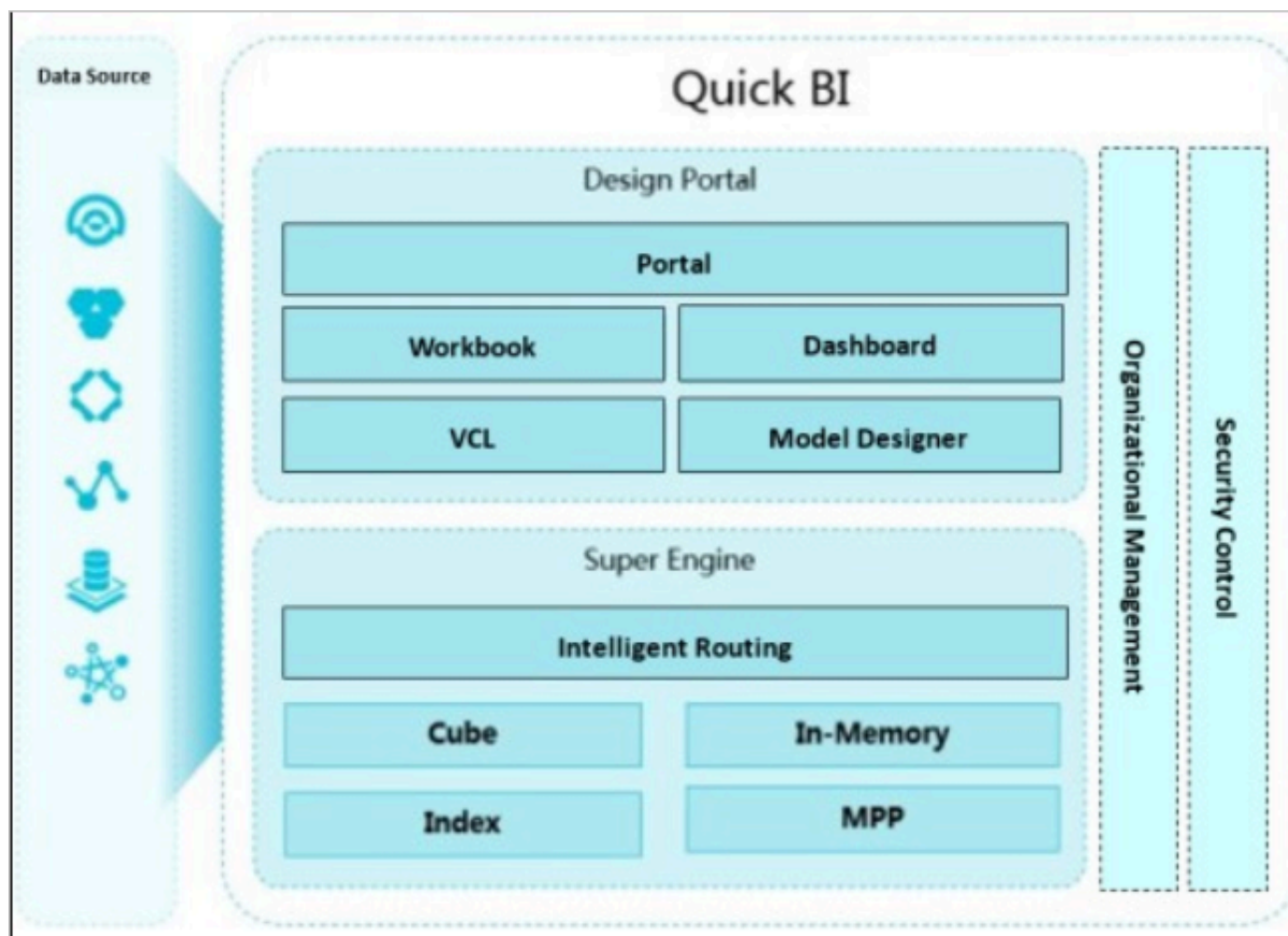
For more information, see *Create charts in a dashboard*.

Portals

The data portal is also known as the data product. and reporting products that use a menu structure. You can use a portal as part of a management analysis system, for it supports to be referenced by external links.

For more information about portals, see *Create portals*.

Product architecture

The product architecture of Quick BI is shown in the following figure.

Modules and functions of Quick BI:

· Data connection module

Quick BI accesses data from multiple supported data sources, including MaxCompute, ApsaraDB for RDS (MySQL, PostgreSQL, SQL Server), Analytic DB, and HybridDB (MySQL, PostgreSQL). Quick BI provides an encapsulation of the
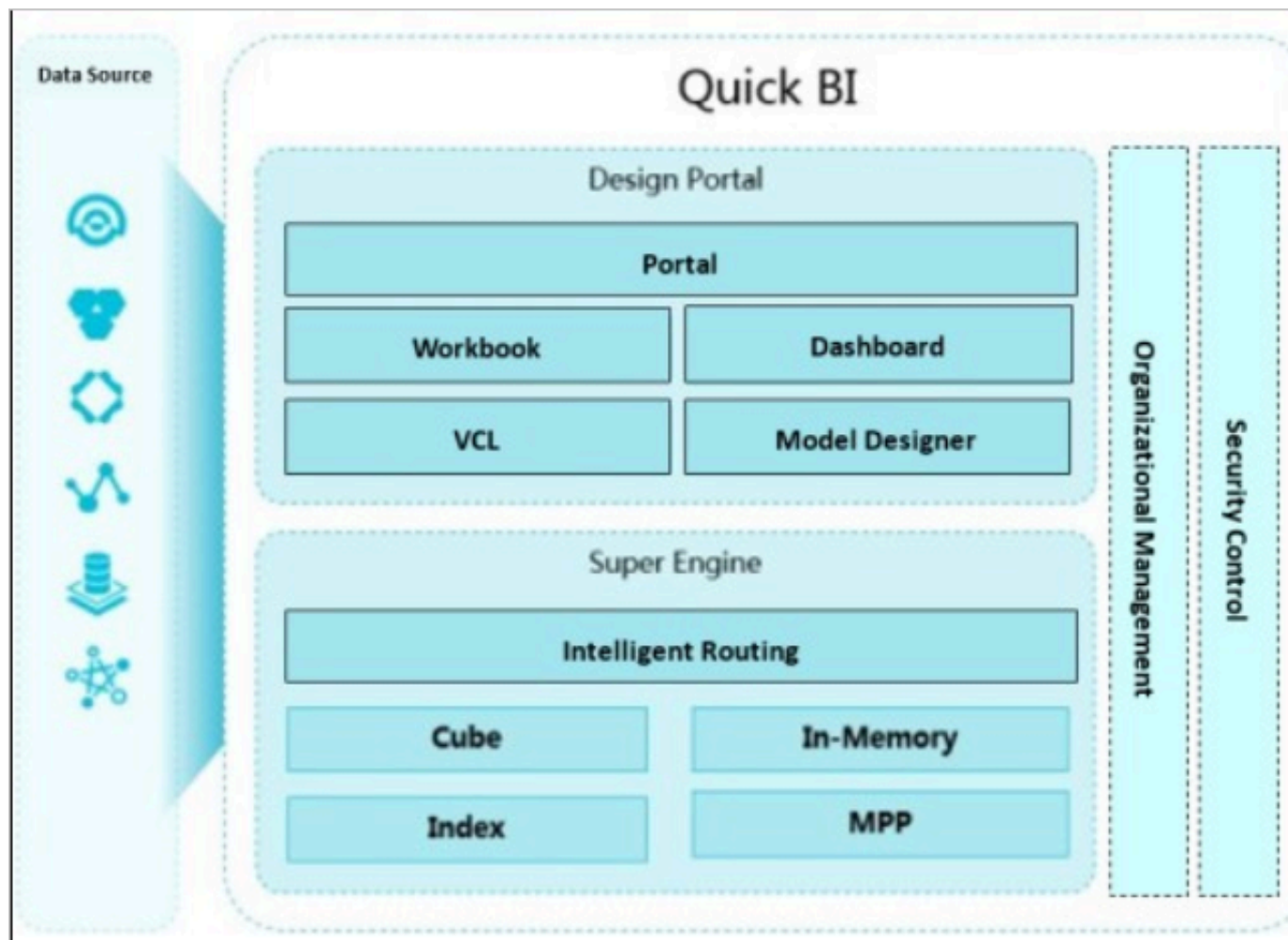
standard APIs that are used for querying the schema and data of these data sources
.

- Data processing module

    - QUERY engine: You can use the QUERY engine to perform queries and retrieve
      data from data sources.

    - Data pre-processing: This feature provides lightweight solutions to extract
      , transform, and load data (ETL processing). Currently, only the custom
       MaxCompute SQL queries are supported, with more data sources to be
      supported in the future.

    - Data modeling: This module provides data modeling features for online
      analytical processing (OLAP). It converts data sources to multi-dimensiona
      l analysis models. Data modeling supports common semantic objects, such
      as dimensions (such as date and location), measures, and star schema. This
      module supports calculated fields. Additionally, it allows you to edit dimensions
      and measures using the SQL syntax supported by the current data source.

- Data visualization module

    - Workbook: Provides operations related to online electronic spreadsheet (
      webexcel), including data analysis (such as row and column filtering, common/
      advanced filtering, classified aggregation, AutoSum, and conditional formatting
      ), data export, text processing, sheet processing, and other operations.

    - Dashboard: In Quick BI, you can easily author dashboards with widgets and rich
       visuals. Quick BI provides 33 charts and diagrams, including line charts, pie
      charts, bar charts, funnel charts, tree diagrams, geo bubble maps, geomaps, and
       card charts. Supported widgets include Filter Bar, TAB, IFrame, Image, and Text
       Area. Quick BI supports filter interactions that allow you to filter data across
      multiple charts.

    - Portal: You can drag and drop components on a dashboard to assemble a portal.
       Quick BI supports embedded links (linked dashboards) and basic settings of the
      template and the menu bar.

    - Share/Publish: You can share workbooks, dashboards, and portals with other
      logged-in users, and publish dashboards on the Internet for non-logged-in users
       to access the dashboards.

· Permission management module

- Organizational unit management and authorizations: Manages authorizations in a three-layer hierarchy: organization - workspace - role, to control access permission of each report.

- Row-level permission management: Control access to data at row-level, enables different roles to have row-level access to data stored in a table.

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    module supports calculated fields. Additionally, it allows you to edit dimensions
    and measures using the SQL syntax supported by the current data source.

· Data visualization module

  - Workbook: The data visualization module provides analytics functions for you
    to operate workbooks with ease. These functions include row filtering, column
     filtering, advanced filtering, subtotals, AutoSum, conditional formatting, data
    export, text processing, and table processing.

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· Permission management module

  - Organization permission management: This feature allows you to manage
    permissions at workspace level and organization level. It also supports role-

based permissions in a workspace. With these mechanisms, you can assign
users different levels of access to view different reports.

- Row-level permission management: This feature allows you to restrict access to
  individual rows in a table, and allows users who access a report to view different
  parts of the report.

4 Benefits and features

Benefits

- Integrated: Supports multiple Alibaba Cloud data sources such as HybridDB for MySQL, MaxCompute, and Analytic DB.
- Fast: Analyzes massive data and generates visuals in seconds.
- Plenty of analysis tools: Fulfills your requirement of different types of report.
- Intelligent: Based on the feature of your data, generates the visualization charts that give you the insight of the data in the most simplified and effective way.

Key features

- Visualization chart 33 built-in types of charts to meet various analytic scenarios. Intelligently recommends visualization based on the data feature.
- Realize real-time analysis of massive data fast Quick BI supports HybridDB for MySQL, Maxcompute (formerly ODPS), and Analytic DB Quick BI's query acceleration engine saves the time of data pre-processing, and helps you to get quick answers from your data.
- Multidimensional data analysis Based on the work environment of web pages, one key import, and real-time analysis. You can flexibly switch the perspective of data analysis, without remodeling the data.
- Acceleration One-key operation to accelerate the processing of billions of lines of data.
- Integration Reports created in Quick BI can be embedded into your own system, so you can access the reports without having to log on to Quick BI.
- Secure Granular permission control built on a three layer hierarchy.

5 Scenarios

Quick BI has numerous customers around the world. The dynamic features meet the requirements in different scenarios.

Dynamic data analysis and effective decision-making

In data-driven business operations and management, we often need to create analysis reports based on data such as the customer retention rate and the active customer rate. Quick BI is easy to use and provides multiple data presentation techniques that support dynamic data analysis and effective decision-making. The following customer issues are resolved:

· Inconvenience to obtain data

For better decision-making, business managers often need to ask technical staff to write SQL statements for querying data based on different conditions.

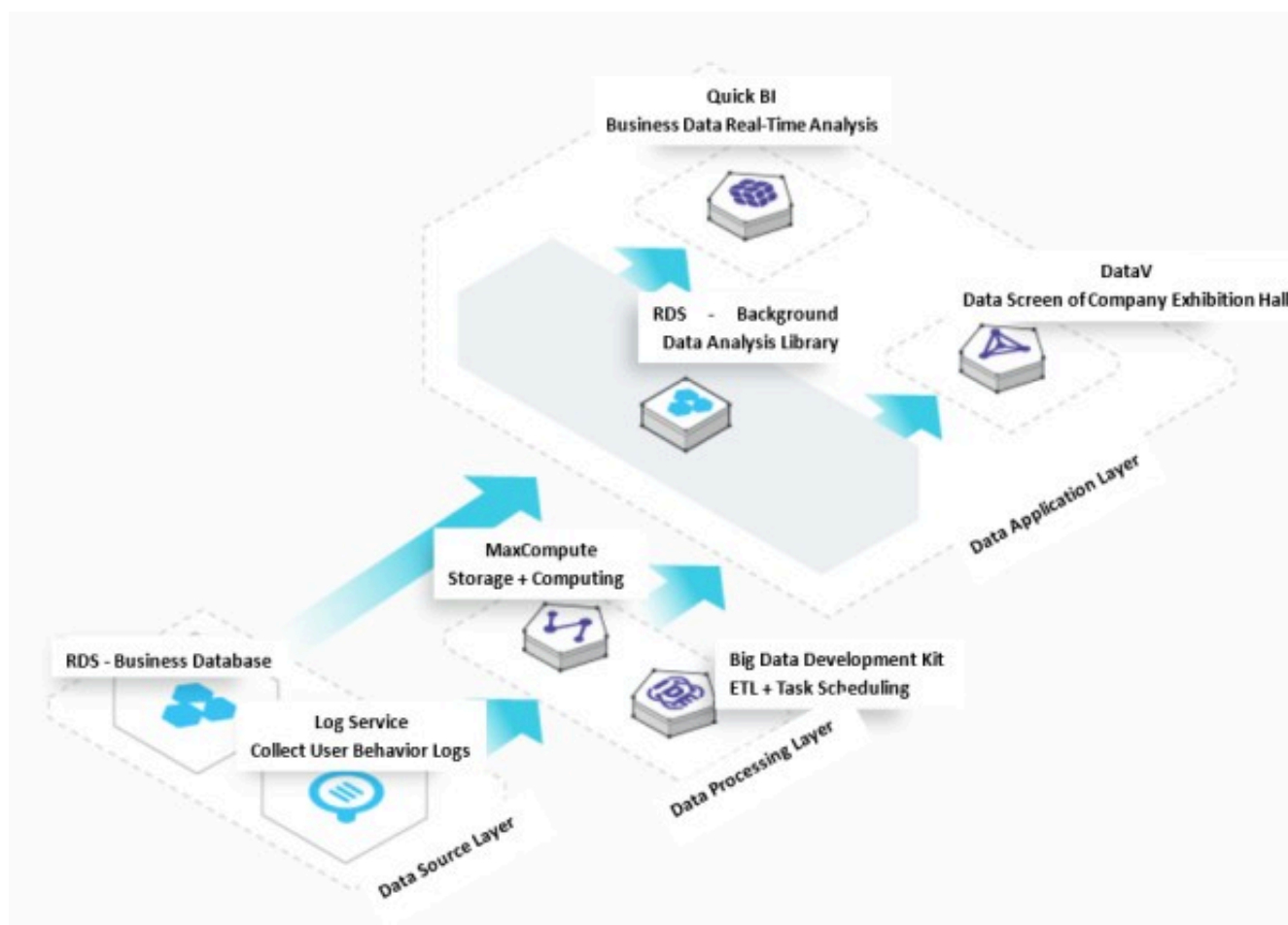· Difficulty to generate and maintain reports

The data of the backend analysis system changes frequently, the development cycle is long, and it is difficult to develop and maintain the system.

· The design of charts is unfriendly and costs large amounts of effort

Reports that are created with tools such as HighChart have a plain visualization and require large amounts of effort.

Recommended services:

RDS + Quick BI

Reports integrated with your own system

A shipping service provider wants to build a simple BI platform that supports data visualization and analysis at the lowest possible cost and in the shortest possible time . The platform is supposed to integrate important business data into the management system of the company and provide employees in different departments and regions with data support. Quick BI resolves the issues of users and provides the following features:

· Easy to use

The system is quick and easy to use. It meets the data requirements for all and is easy to get started.

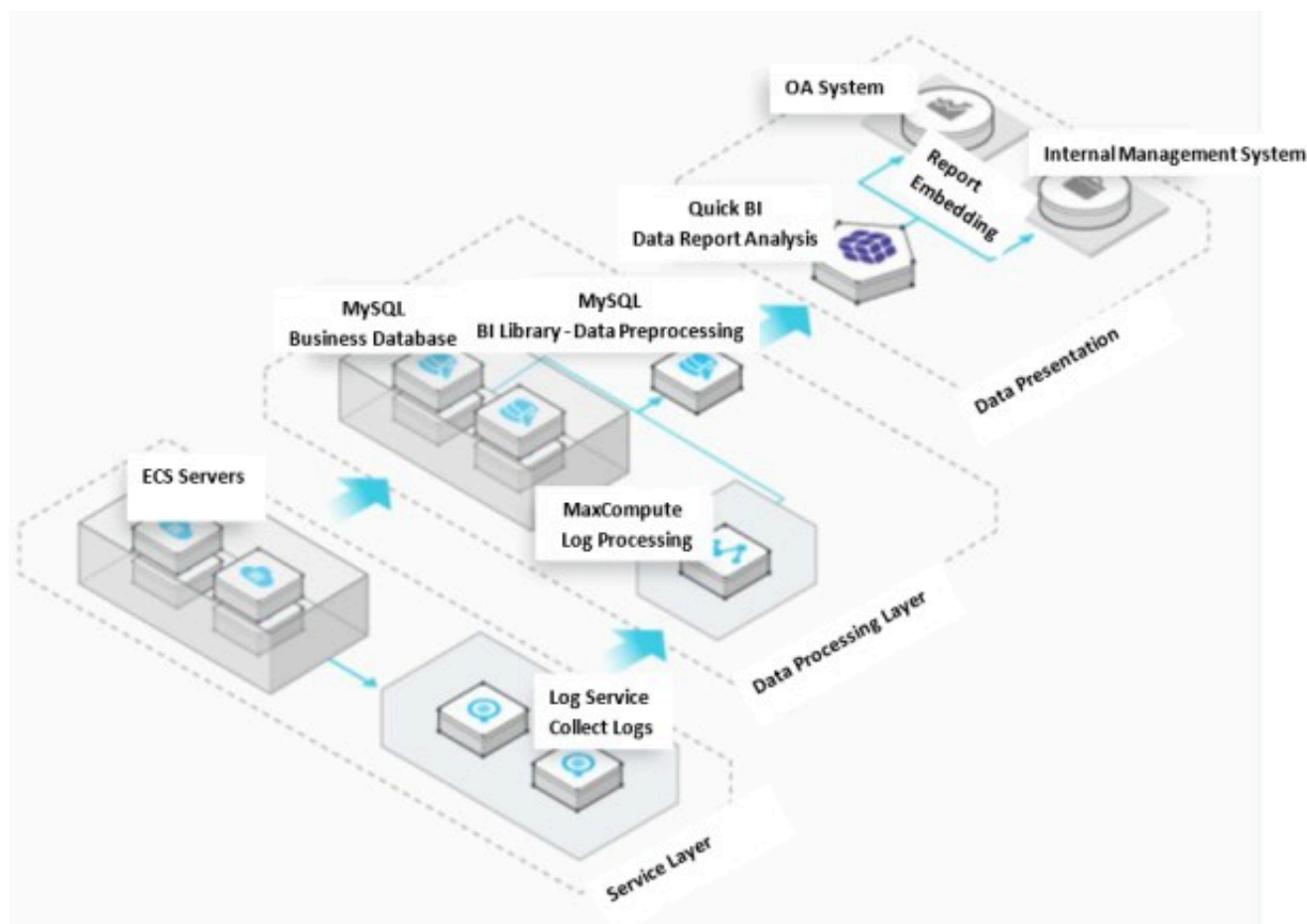· Significantly improved efficiency for data presentation

Integrated with your system to perform data analysis. Significantly improves the efficiency of data visualization and analysis.

· Single entry point

Staff no longer need to switch between multiple systems.

Recommended services:

RDS + Quick BI

Permission management of transaction data

Data is significant to each city manager of a certain payment platform. The managers need transaction data to measure the development of the business in different cities . It is vital that we identify risks in time, drill down to locate the issues, and then resolve them. Data access control is as important as data analysis to a data team. Based on this requirement, Quick BI provides you with the following features:

· Row-level permissions

The same report is displayed differently for each user role. The Shanghai city manager can only view data that is related to the Shanghai marketplace.

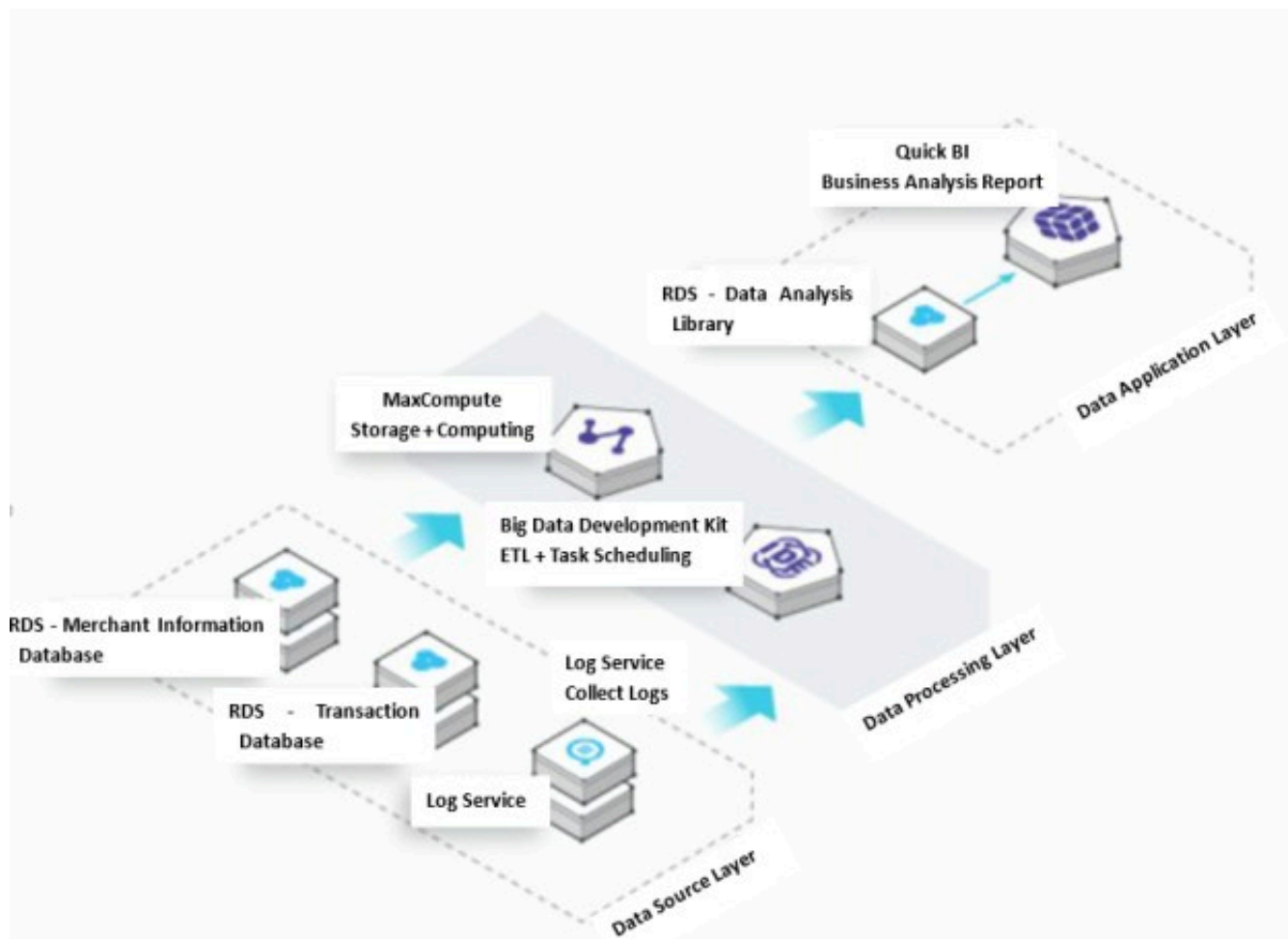· Dynamic business requirements

Statistical indicators constantly change with the growth of a business. When the server cannot handle all the requests, the server response slows down.

· Data integration across sources and high computing performance

You can leverage the BI capabilities of Alibaba Cloud to resolve the issues of data analysis across multiple sources and the computing performance bottleneck.

Recommended services:

Log + RDS + Quick BI + MaxCompute

6 Version history

Quick BI V2.4.0

Feature updates of Quick BI China are as follows:

· Dashboard layout updates.

· Table hyperlinks and filter interaction.

· Drag to add components and charts.

· Quick BI Professional: Existing data source now supports Vertica and IBM DB2 LUW.

· Quick BI Professional: Data in date data type can be recognized in minutes and seconds. Filter data in date data type accurate to seconds.

Quick BI V2.3.0
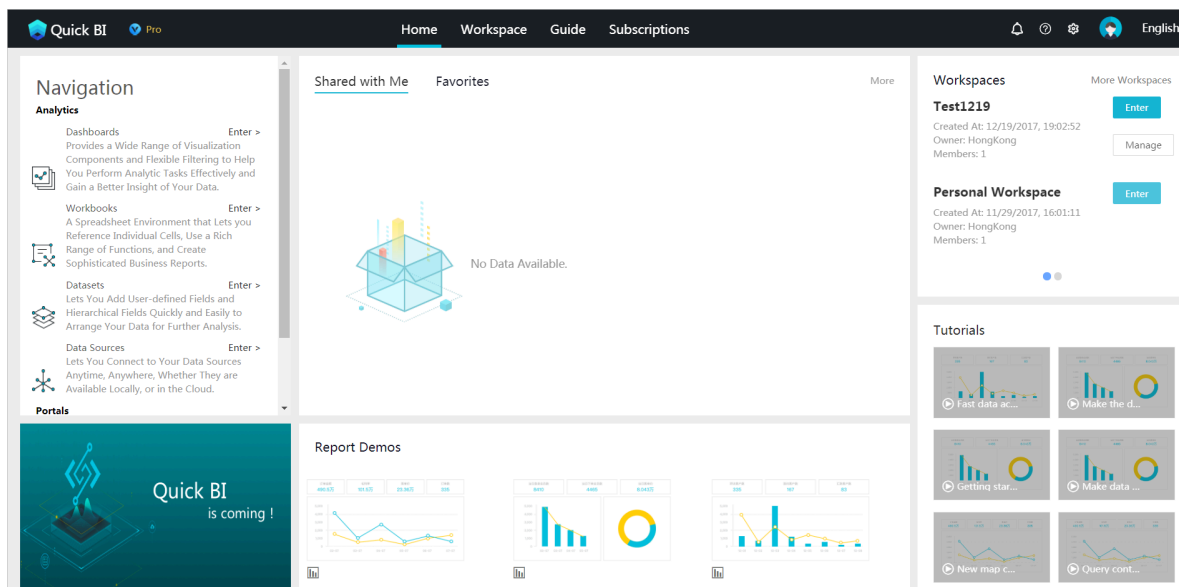
Feature updates of Quick BI International are as follows:

· The visualization of Quick BI is upgraded.

· Quick BI Professional: Supports more data source types including Hive and Oracle.

· Quick BI Professional: Data modeling supports database connections among three different data sources, which are MaxCompute, MySQL, and Oracle.
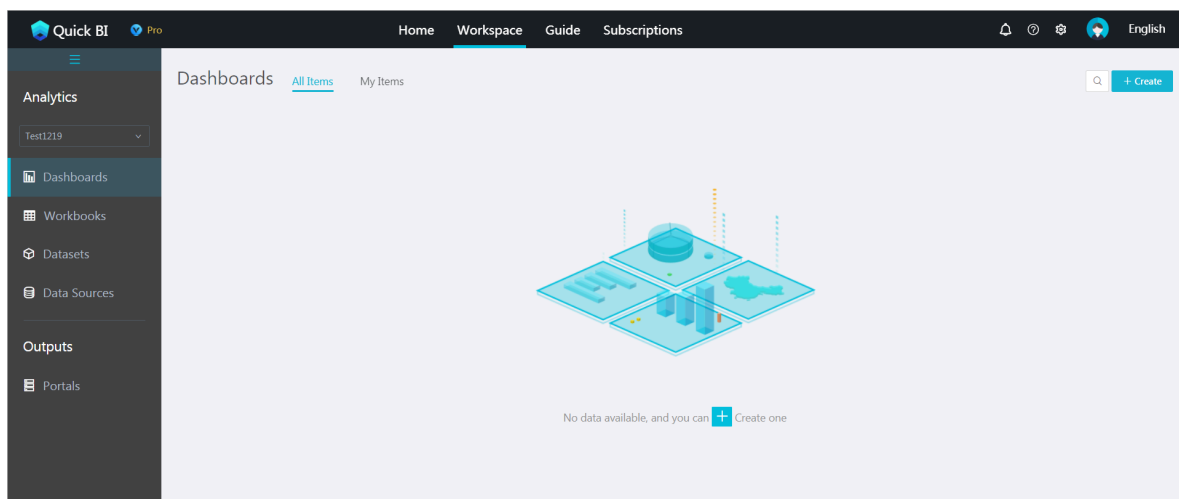
Quick BI V2.0

Product interaction process

The Quick BI interaction is updated to support all features. The Quick BI navigation bar is divided into Home, Workspace, Guide, and Subscriptions.
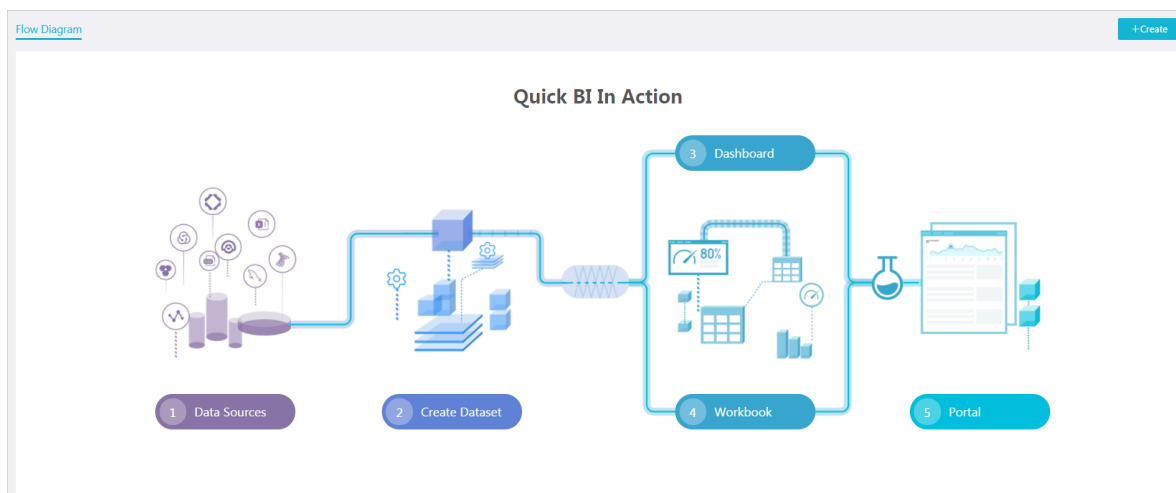
· Home: Visitors can find related reports from shared with me and favorites. New users can quickly view resources in workspaces by installing cases and applying for workspaces.

· Workspace: Supports data sources, datasets, dashboards, and workbooks. Provides optimized visual styles of dashboard components and enhanced features of filter bars.

· Guide: A workflow that provides you with an overview of the production process and a quickstart guide.

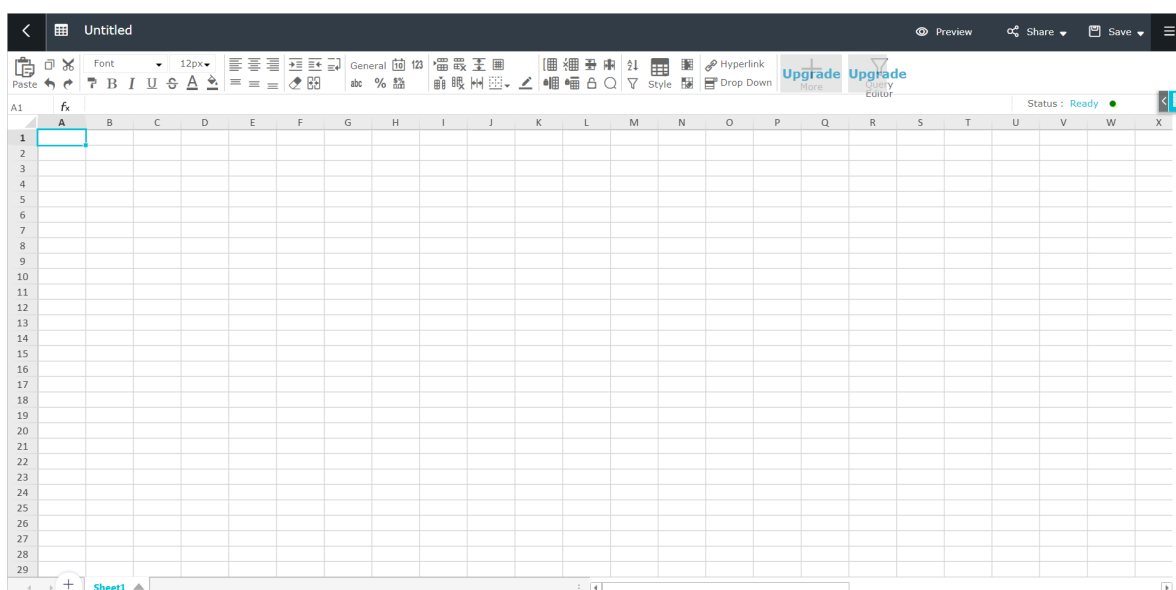· Subscriptions: Create, manage, and monitor related mail tasks.

Updates for the Quick BI Basic

· Data source now supports PostgreSQL, PPAS, and Oracle Data.

· Supports image components (URL)

Updates for the Quick BI Pro

· Workbook

Added new data analysis methods for workbooks. Supports retrieving data from workbook cells, and displaying and processing data from different data sources. Supports more than 200 data processing functions that are similar to those in Excel.

- Subscriptions

  Supports managing mail subscriptions and quickly creating mail tasks in the dashboards.

- Supports team collaboration

  Allows other members of the workspace to collaborate on editing a dashboard or workbook.

- Added the workflow of applying for and approving permission requests

  Supports applying for the permission of dashboards, workbooks, and portals . Supports approving messages. Helps you take the initiative to obtain report permissions.

(Testing) Supports embedding report changes

Quick BI Pro supports a limit of 20 reports to be embedded. Quick BI Basic has disabled third-party embedding. The embedded reports remain editable, but no new reports can be added.

Quick BI V1.12

Feature updates are as follows:

- Data source now supports HybridDB for MySQL.
- An administration page that can be embedded in a third-party system report is added to the personal workspace. You can embed new third-party reports to make the system easier to use.
- The view is now available under the SQL server data source.
- You can now add notes to the calculated fields.

Quick BI V1.11

Feature updates are as follows:

- The following widgets are added to the dashboards:

  - Five chart widgets: Radar, Word Cloud, Tornado, TreeMap, and Conversion Path.
  - One content widget: The iFrame widget.

  More ways to create dashboards.

- New filtering criteria for tables in the dashboards: It highlights the measures in a certain data interval by setting visual attributes such as foreground color, background color, and icon sets. The display of the business data is clearer.

· New filtering criteria for charts in the dashboards: The measure of the criteria now supports filtering based on both the clustered data and distributed data. More ways to filter data.

Quick BI V1.10

The new dashboard (experimental) release has the following features:

· The new dashboard uses the popular tile layout in the industry. You can easily adjust the size and location of the chart block.

· The new dashboard provides 12 charts and 2 widgets to optimize chart functionality. The scatterplot supports up to 1000 dimensions. Date widgets can be combined into filter bars. The chart color scheme is visually enhanced.

· The interaction of the new dashboard caters to user habits. You can configure charts based on the chart logic. It's easier for you to learn and use the dashboard.

· The new dashboard supports filtering dimensions and measures in chart blocks, and the filtering is more flexible.

· The filtering criteria of the new dashboard supports the interaction of datasets in different sources or in the same source, and the widget is more powerful.

· The filter interaction of the new dashboard allows you to cancel the interaction, which is more user-friendly.

· The new dashboard supports querying report data during report editing and provides a higher development efficiency.

Quick BI V1.9

Feature updates are as follows:

· Added support for the SQL Server data source in ECS.

· Supports uploading local Excel files: The supported file formats are .xls and .xlsx, which meet the requirements of uploading Excel files to create reports.

· Schema updates and data updates for the Explore space. Supports adding new fields to tables, updating table data, appending data files to tables, and deleting specified data files that already exist in the tables.

· Optimized display of the dashboard watermark. The watermark in previous versions displayed your baseId, of which the meaning was not clear. The current version displays your logon name instead of your baseId in the watermark.

· Enhanced calculated field: A calculated field is a new column that meets the SQL column syntax of the current data source. The field is created by existing fields

and SQL supported functions. If you need to calculate based on existing data in the data source to get a new value, you can choose to add a calculated field. By using calculated fields, you can implement flexible and dynamic data analysis, such as grouping user by attribution and price interval analysis.

· Quick BI Basic release. Features: Connecting to multiple data sources, using classic workbooks for data analysis, and creating dashboards that support multiple charts. Creating portals and downloading data. Sharing classic workbooks, dashboards, and portals. You can embed dashboards to third-party systems (number <= 2 per account and monthly visiting time <= 10 thousand per dashboard). Uploading local files to the Explore space (capacity <= 100 MB per account).

> 📋 **Note:**
>
> The classic workbook is a beta feature and is not supported in future releases. The classic workbook does not support adding custom grouping fields, data type conversion, dataset snowflake model association, database cross-source association, and other features.

· Supports downloading dashboard data: Downloading data corresponding to the chart widgets in the dashboards in xlsx format.

· Optimized styles for the data line-level permission management: Removed the redundant column display in the permission management from earlier versions. Appended the filtering operations to each specified field. These optimizations for the interaction make granting line-level permissions more fluent and quicker.

· Added the analyst role to the group workspace. Analyst is a role between developer and reader. It can use the data sources and datasets to create new data applications , but it cannot create data sources or datasets. This feature was developed based on user proposals and is a role feature developed from production scenarios.

· In the Org Units page, you can now upload multiple accounts: Earlier versions only allowed administrators to manually add group members. For organizations that have a large number of members to manage, multiple uploading is a required feature. This feature allows the organization managers to fill in the workbooks containing Alibaba Cloud accounts and account names based on the template to add multiple users, with a maximum of 3,000 users at a time.

· Supports using a drop-down list to select users to share reports with or transfer reports to. In earlier versions, when you share or transfer reports, you use the fuzzy search feature to locate users. Only when the keywords are hit, the user list

appears. The current version supports selecting users from the drop-down list, which is more user-friendly.

Quick BI V1.8

Feature updates are as follows:

· Data modeling optimization. In earlier versions, the maintenance for datasets can only be done in classic workbooks. Multiple classic workbooks may affect each other and may cause errors. The new version maintains the datasets centrally instead of working with classic workbooks. It supports creating multiple datasets from a fact table. The user interface for dataset editing is more friendly.

· Unified the terms of various data objects with common terms in the industry. Renamed metric to measure. Renamed drilling group to hierarchy.

Quick BI V1.7

Feature updates are as follows:

· Data source now supports CSV files. CSV files can be uploaded to the Explore space and you are allowed to freely analyze your own data.

· The main navigation is optimized to integrate data sources and datasets to a single data tag.

Quick BI V1.6

Feature updates are as follows:

· The high-speed dataset feature: The integrated Quick BI acceleration engine allows users to create high-speed datasets to create tables in MaxCompute into high-speed datasets, and significantly increase the query speed.

· Added Greenplum data source: The cloud database Hybrid DB is based on the open -source Greenplum database project. Features such as OSS storage, JSON data, and HyperLogLog prediction and analysis are supported by the Alibaba Cloud in -depth extensions. Supports flexible hybrid analysis by using the standard and pre-released query syntax of SQL 2008 and Online Analytical Processing (OLAP) aggregate functions.

· Supports sharing with members: In earlier versions, you can only share content with users under your organization. The new feature makes it easier to collaborate and share content without limit.

Quick BI V1.5

Feature updates are as follows:

- Dashboard publishing features.
- Scenario analysis - The log analysis template for net.cn is online.

Quick BI V1.4

Feature updates are as follows:

- Optimized the distributed execution layer framework.
- Supports data source deletion.
- Supports SQLServer.

Quick BI V1.3

Feature updates are as follows:

- Added user demos.
- Optimized the workflow of creating new applications.

Quick BI V1.2

Feature updates are as follows:

- Simplified tenant models, data source management, work-sharing areas, and the process of authorizations and requests.
- Supports integrating the dashboard to a third-party system for presentation.

Quick BI V1.1

Feature updates are as follows:

- Resolved the issue of connecting user data sources.
- Supports sharing with members.

Quick BI V1.0

Feature updates are as follows:

- Basic features are implemented. Supports the development and production of datasets, worksheets, and dashboards.