



Sisense

Product Highlights

Introduction

Sisense is a business intelligence solution that simplifies analytics for complex data by offering an end-to-end platform that lets users easily prepare and analyze both big and disparate datasets. Sisense handles the full cycle of BI, from data preparation to analysis and dashboard visualization, along with robust extensibility and governance. Sisense is a single stand-alone solution that can also be delivered as embedded analytics. Key components of Sisense software include:

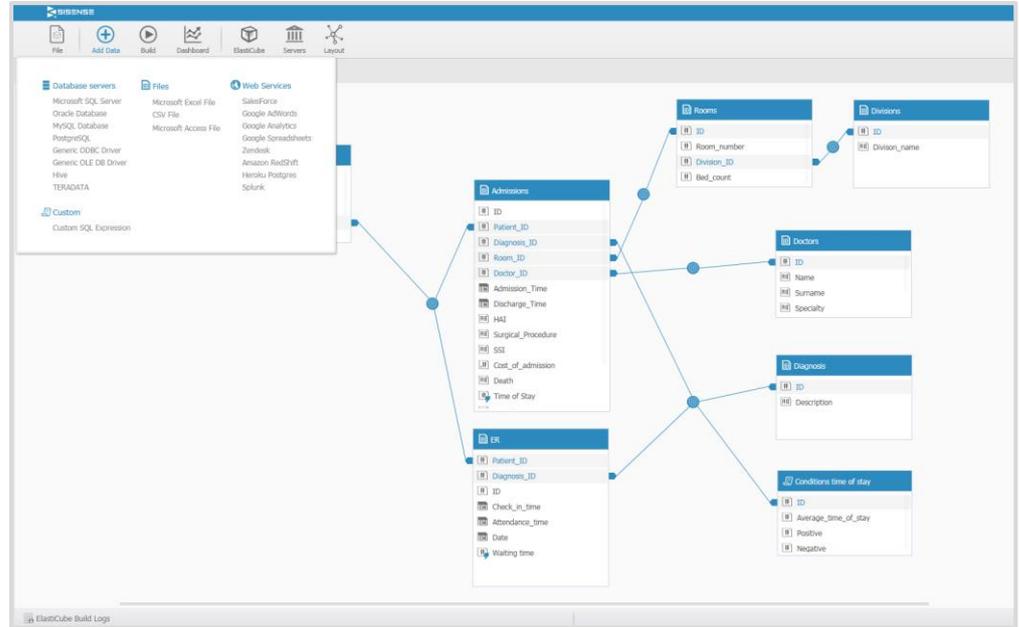
- ▶ **Elasticube Manager:** A visual environment to import, structure and prepare data for analysis.
- ▶ **Sisense Web:** A browser environment to create, share, view and administer dashboards.
- ▶ **Server Console:** A desktop application to manage system resources and Elasticubes.
- ▶ **Third-Party Data Access:** Open components to access and control Sisense.

Core features are outlined below.

I. Elasticube Manager: Manage and Prepare Data

In Sisense all required data is prepared and stored in Elasticubes. An Elasticube is a super-fast columnar data store which is specifically designed to optimize the extensive querying typically required for business intelligence. These cubes form the basis for all data exploration and analysis within Sisense.

The Elasticube Manager is a visual environment where you import and structure multiple data sources, create relationships between data, and perform ETL (extract, transform, and load) processes to prepare data and create an Elasticube for analysis and visualization.



I.1 Connect to Data

Data Schemas

Use Sisense visual schemas to rapidly develop data models for analysis. Quickly map out and manage all data sources, relationships and enrichment steps.

Data Access & Connectors

Access data without any pre-aggregations from applications, databases, flat files, machine data and custom written scripts. Only location and login credentials are required to connect to sources. The following data sources are supported natively.

Databases	MS SQL Server, Oracle, MySQL, Hive, Teradata, PostgreSQL, DB2, Generic ODBC/ OleDb Driver, MongoDB, Google Big Query
Applications	Salesforce, Splunk, Zendesk, QuickBase, Google Adwords, Google Analytics, Google Spreadsheets, Amazon Redshift, Heroku Postgres
Files	MS Excel, CSV, MS Access
Custom	Custom SQL Tables, ODBC connectivity

I.2 Work with Data

Mashup Data Sources

Use simple drag and drop to join large data sets from multiple sources to create one neat and centralized repository of all data.

Data Transformation Functions

Sisense has robust built in functions to help enrich and transform any data in the Elasticube. Available functions are described in the table below.

Function	Description
Mathematical	Convert, order, apply trigonometric functions and calculate numeric data
Date And Time	Convert, edit and extract information from time-date fields
String And Text	Convert, replace, edit, remove and extract information from text fields.
Logical	Compare and evaluate data using logical conditions
Web	Extract and compare data from URLs
Miscellaneous	Various functions to extract data

Calculated Columns and Tables

If needed, add custom tables and columns to combine data from different data sources, and cleanse and prepare any data in the Elasticube. New tables and fields provide dashboard designers with additional fields to use for even more advanced calculations and visualizations. Use built-in functions or SQL to structure data within the custom tables and fields.

SQL Support

If you prefer, leverage your SQL knowledge to prepare data in the Elasticube with full support for SQL.

1.3 Manage Data

Synchronization and Connectivity

Automate the import and transformation of data on scheduled basis determined by;

- Time of day
- Day of week
- Day of month
- Specific time intervals

Data Source Management

Manage how values and fields from each data source appear in the Elasticube. Apply settings to rename, delete, hide and control data import settings.

Activity Log

View details on previous updates to an Elasticube and logs on data imports and errors.

Elasticube Plugins

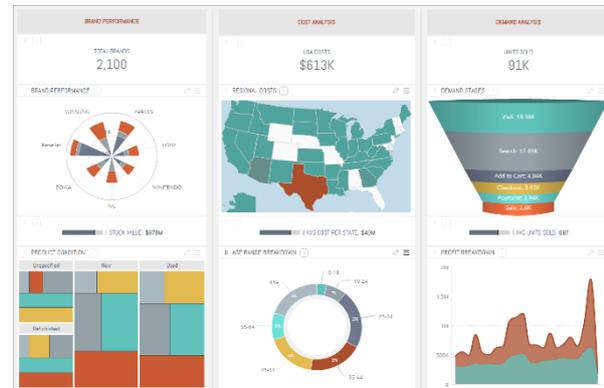
Plugins run predefined code before or after data is imported into an Elasticube. Add custom functionality with pre- and post- execution plugins to determine what must happen before or after data imports. Use .Net or Python to easily create your own plugin.

Help Resources

Access support resources directly from the Elasticube Manager that include getting started guides and online support and forums.

2. Sisense Web: Analyze and Visualize Data

Sisense Web is a responsive browser-based environment to develop rich dashboards and easily visualize, analyze and explore data sets. The responsive web environment means once designed, dashboards automatically adjust and optimize based on screen size. Designed for simplicity, business users can perform advanced analysis on complex and large data sets quickly, and answer adhoc questions with little to no involvement from IT. The web environment enables administrators to easily govern Sisense, quickly control access, security, and settings, and leverage Sisense robust extensibility.



2.1 Visualize and Analyze

Visualizations

Graphically represent data to communicate large data sets clearly and efficiently. Sisense offers out-of-the-box data visualizations delivered on the web including Pivots, Table, Bar, Line, Area, Gauges, Pie, Maps, Scatter, Calendar Heatmap, Bubble Chart, Treemap, Sunburst and Polar.

Custom Formula Builder

Combine any data in an Elasticube with rich functions to create custom formulas on the fly which accurately analyze data and express business logic. Users are able to work with raw data without the need to summarize data sets before creating formulas.

Advanced Analytics

Use a growing library of built-in statistical functions to quickly run statistical methods on complex data. Leverage Sisense R integration to access a rich library of statistical techniques and models and implement advanced analytics within a Sisense dashboard.

2.2 Dashboards and Interactivity

Interactivity

Sisense dashboards are fully interactive with all dashboard components such as visualizations, filters and drill downs enabled to refine the analysis and determine what view of data is presented. Core interactivity includes selecting visualization elements, drills, filters and zooms.

Filters

Filters act to refine data based on a selected value or criteria. Filters can be applied on a dashboard or visualization. The primary filters types are include/exclude, text, numeric, time-date and ranking filters.

Custom Dashboard Design

Each visualization can be customized including colors, labels, number formats and layouts. Color palettes can be set and instantly applied. Visualizations can be readjusted and sized using an easy drag and drop.

Sharing and Collaboration

Dashboards can be shared for viewing, and further data exploration and design. A dashboard is shared via a web accessible link. Dashboard designers can define the access rights for each collaborator. Each recipients can schedule to receive email notifications at specified time intervals. In addition, offline access is available with dashboards and visualizations that can be exported as either a PDF or as image file.

Export Data

Export data presented within a visualization in CSV format. The data is exported according to the current selected filters.

Dashboard Management

Dashboards can be grouped into folders or as single dashboard. From the navigation menu dashboards can be selected, edited, deleted or exported for backup or transfer.

Mobile Access

Native apps are available for both iOS and Android. Access to dashboards via mobile devices is also supported with any HTML5 compliant browser.

OEM and Embedded Analytics

White labeling: Dashboards can be completely customized to match your look and color scheme, including icons and system emails via Sisense REST API. Style sheets and set color pallets are also supported.

Sisense embedded analytics can integrate into software, SaaS or cloud application to offer data analytics and BI feature to third parties.

2.3 Access, Security & Settings

Users, Groups and Access Management:

Quickly create and configure users and user groups easily from your web browser. Set user roles, access rights and control permissions to data and dashboards. Roles can be customized, but by default there are three roles;

1. *Designer:* Create, design, edit and share dashboards. Sisense Designers determine whether the user with whom they share a dashboard has editing rights (Designer) or only viewing rights (Viewer).
2. *Viewer:* View, explore, drill down, make selections and filter the dashboards that Designers have shared.
3. *Admin:* Admins have all the rights of Designers and Viewers. In addition, only admin users can access governance and management settings which enables them to manage Elasticubes, users, user groups, APIs, integration and security.

Active Directory

Easily setup and govern user access by integrating your existing Active Directory users and user groups. This works in parallel with Sisense's existing User Management to support users and groups not part of the Active Directory domain.

Security

A robust and flexible security architecture is both comprehensive and intuitive. This architecture has been designed to ensure security processes are enforced while scaling to enterprise deployments of Sisense. Security settings can be applied on a system, object and data level, including row level security permissions. Sisense is complies to The Federal Information Processing Standard (FIPS) .

Single Sign-on (SSO)

Seamlessly integrate other applications to enable authenticated access to Sisense without being prompted to enter separate login credentials.

2.4 API

JavaScript API

Use JavaScript to create new visualizations, enhance or disable existing functionality. Add JavaScript code to a dashboard or visualizations in the Sisense web app, or by creating plugins. Detailed documentation and examples are available on developer.sisense.com.

Rest API

Access a comprehensive REST API to perform many of the tasks available from the web interface, as well as additional advanced tasks. These include managing Elasticubes, dashboards, user and group management, white labeling, user roles, reporting and security. Use the built-in API visualization tool, and execute direct API calls from your browser to your dashboards. Detailed documentation and examples are available on developer.sisense.com.

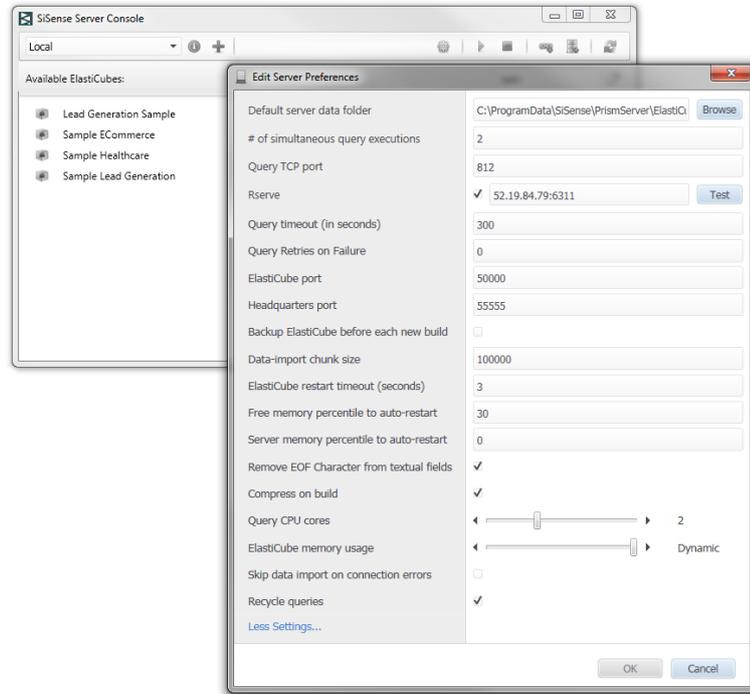
2.5 Plugins

Plugin Framework

Plugins are custom developed visualizations that can be saved and function as if a native component of Sisense. A plugin will appear in the standard list of visualizations presented in Sisense web. The advantage is end users can apply and configure plugins with the same ease as out-the-box visualizations. Example plugins include Sankey Diagrams, Funnel Chart, Gantt chart and Tree Ring Charts, and more examples can found in [Sisense Forums](#). Various visualization libraries like D3 can quickly be modified to create a broad range of new and custom visualizations.

3. Server Console: Manage Cubes and Machine Resources

Sisense Server Console is a desktop application used to manage Elasticubes, system resource and performance settings for local and remote Elasticube Managers.



Data Management

Access Sisense Server Console to view and manage existing Elasticubes. Configure data import and synchronization settings.

Deployment Management

Quickly backup or restore Elasticubes. Manage access to Elasticubes on remote servers.

Resource Utilization

Set and optimize the use of available machine resources such as RAM, CPU and disk. Control querying and import behavior based on user and processing needs.

4. Third-Party Data Access

ODBC Provider

Third-party applications such as reporting, analysis and visualization tools which support ODBC connections can connect directly to an Elasticube to import and query data at speed.

Command Line Access

Use Sisense Shell to execute Elasticube related commands using the Windows command line. This includes commands to restart, import data, edit schemas, rename, access system information, start and stop processes.

SQL Runner

Run standard SQL queries on data within an Elasticube, and see results in a JSON format. Use API calls from other applications to extract data from an Elasticube.