



Amazon QuickSight

Amazon QuickSight is a cloud-based business intelligence (BI) service offered by Amazon Web Services (AWS). It is designed to help organizations analyze their data and create interactive visualizations and dashboards. Here are the main components and features:

Key Features

1. **Data Sources:**
 - QuickSight can connect to a variety of data sources, including:
 - AWS services (Amazon S3, Redshift, RDS, Athena)
 - On-premises databases (via AWS Direct Connect)
 - Third-party data sources (such as Salesforce, MySQL, and more)
2. **Data Visualization:**
 - Users can create a wide range of visualizations, including line charts, bar graphs, pie charts, heat maps, and geospatial maps, to represent data insights effectively.
3. **SPICE Engine:**
 - SPICE (Super-fast, Parallel, In-memory Calculation Engine) enables fast querying and processing of large datasets, allowing for quick response times even with complex calculations.
4. **Interactive Dashboards:**
 - Dashboards can be customized and published for users to interact with, including filtering and drilling down into data for deeper insights.
5. **Machine Learning Insights:**
 - QuickSight provides built-in machine learning capabilities, enabling users to uncover trends, forecast data, and identify anomalies without requiring data science expertise.
6. **Collaboration and Sharing:**
 - Dashboards can be easily shared with other users or teams, allowing for collaborative decision-making. QuickSight also supports embedding dashboards in applications or websites.
7. **Security and Compliance:**
 - QuickSight integrates with AWS Identity and Access Management (IAM) for user authentication and access control, ensuring that data is secure and compliant with regulations.
8. **Scalability:**

- As a cloud-native service, QuickSight can scale automatically to accommodate varying workloads and data sizes.

Use Cases

- **Business Analytics:** QuickSight is often used for performance tracking, sales analysis, and operational reporting.
- **Financial Reporting:** It enables finance teams to visualize revenue, expenses, and profitability metrics.
- **Customer Insights:** Marketing teams can analyze customer behavior and campaign performance.

Pricing

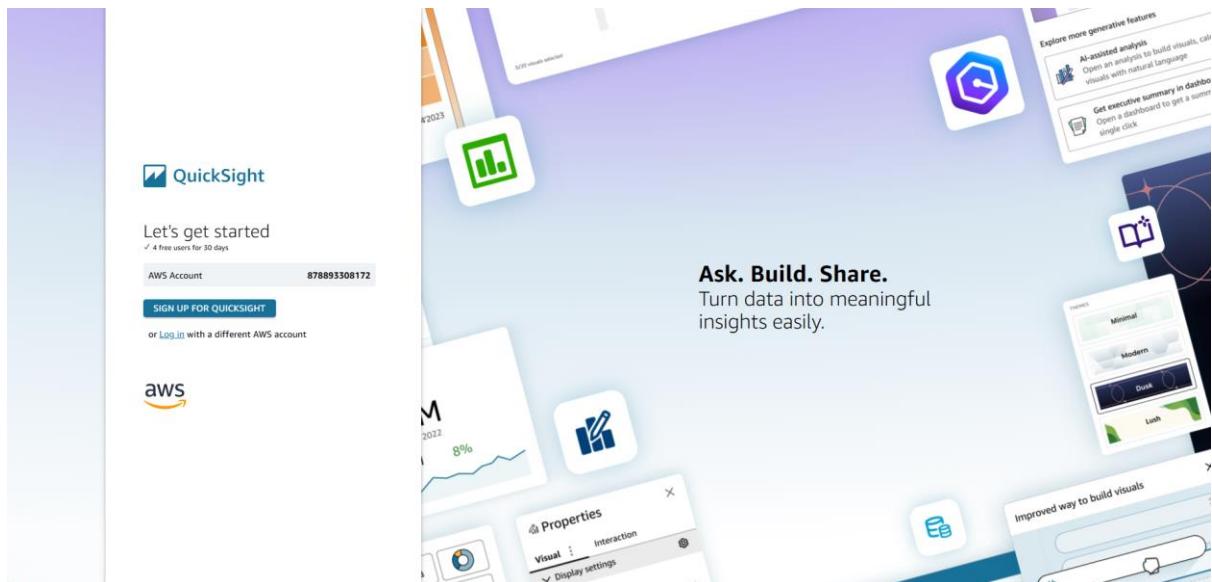
QuickSight uses a pay-per-session pricing model, which can be cost-effective for organizations with varying usage patterns. Pricing typically includes charges based on the number of users and the amount of data processed.

Conclusion

Amazon QuickSight provides a powerful and user-friendly platform for data analysis and visualization, making it suitable for businesses looking to leverage their data for informed decision-making without the need for extensive IT resources.

To begin with the Lab:

1. Log in to your AWS Console and search for QuickSight. Then you will see the screen shown below. You need to click on Sign up for QuickSight.



2. Then for sign-up details you can provide your Email Address and the account name. Choose a region of your choice.

Sign up for QuickSight

Contact information

Email for account notifications

Enter email address

Authentication method

- Use IAM federated identities & QuickSight-managed users
 - Authenticate with single sign-on (SAML or OpenID Connect), AWS IAM credentials, or QuickSight credentials
- Use AWS IAM Identity Center
 - Authenticate using AWS IAM Identity center
 - i AWS IAM Identity Center is not enabled for this AWS account. [Go to IAM Identity Center console.](#)
- Use IAM federated identities only
 - Authenticate with single sign-on (SAML or OpenID Connect) or AWS IAM credentials
- Use Active Directory
 - Authenticate with Active Directory credentials

QuickSight region

Select a region



US East (N. Virginia)



Account info

QuickSight account name

You will need this for you and others to sign in



Enter a unique QuickSight account name

3. After that keep everything to default and cancel the add-on optional feature. Click on finish.

Optional add-on

Add Pixel-Perfect Reports

i Monthly charges begin immediately

\$500 /month* 500 unique report units **/month

Create, schedule, and share operational reports and data exports from a single fully-managed business intelligence (BI) cloud solution.

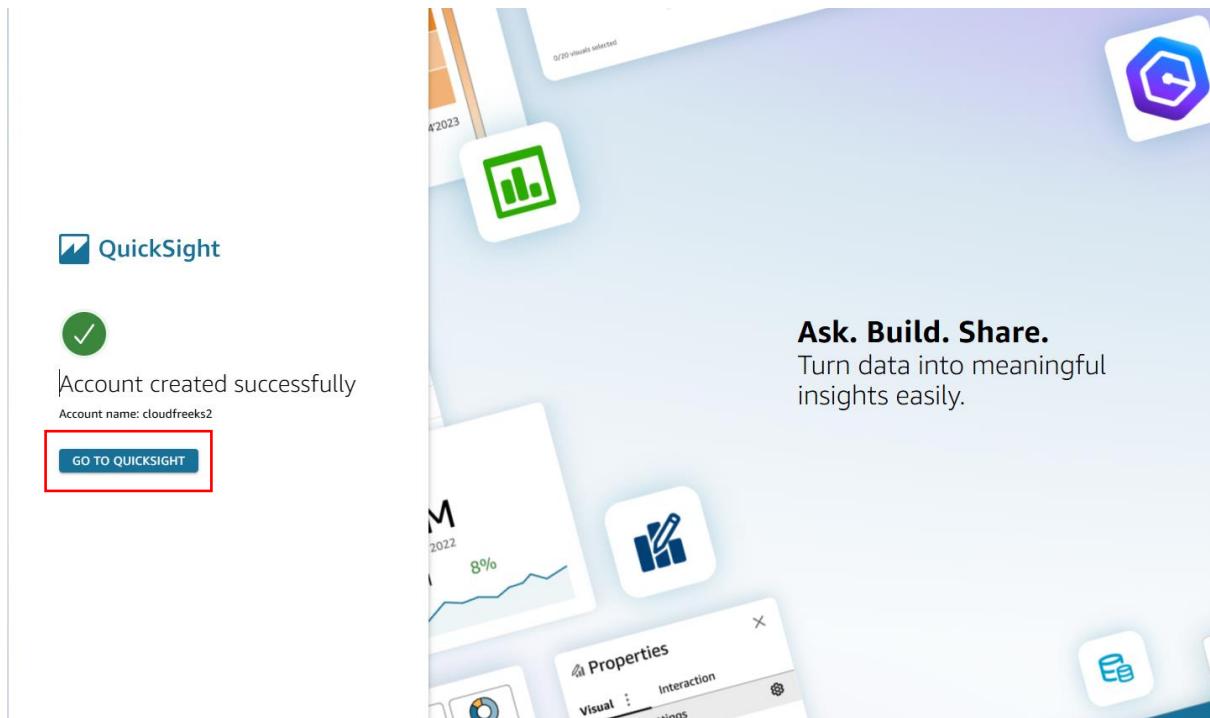
[Learn more](#)

*A unique report unit is defined to be up to 100 pages long (PDF) or 100MB in size (CSV/Excel). For example, a 200-page report constitutes 2 unique report units.
**First month charges and usage are prorated. Annual plan is available after sign up from the "Manage Subscriptions" page.

[Finish](#)



4. Below you can see that our QuickSight account has been created.



5. Below you can see the dashboard of QuickSight. Click on New Analysis.

A screenshot of the QuickSight dashboard. On the left, a sidebar lists categories: Favorites, Recent, My folders, Shared folders, Dashboards, Data stories, Analyses (which is selected and highlighted in blue), Datasets, Topics, and Community. The main area is titled "Analyses" and shows a message "No analyses" with a "Create an analysis to share your insights." button. At the top right, there are filter and search options, and a blue button labeled "New analysis" is highlighted with a red box.

6. Click on New dataset. Then choose Upload a file, after that you need to choose the with name web-and-social-analytics and upload it.

A screenshot of the QuickSight "Your Datasets" page. A blue button labeled "New dataset" is visible at the top left. The main area is titled "Your Datasets" and shows a message "No datasets found" with a "Create a dataset" button below it.

Create a Dataset

FROM NEW DATA SOURCES



Upload a file
.csv, .tsv, .clf, .elf, .xlsx, .json

7. Then it will ask you for the confirmation, click on next.

Confirm file upload settings

X

[Learn more](#) to adjust the file upload settings.

Settings

csv file, web-and-social-analytics.csv

Date	New visitors	New visitors	New visitors	Return visitors	Twitter
2013-01-01...	2194	338	56	225	1
2013-01-02...	1653	254	42	169	0
2013-01-03...	2213	340	57	227	2
2013-01-04...	2223	342	57	228	0
2013-01-05...	1674	258	43	172	0

[Edit settings and prepare data](#)

[Next](#)

8. In the end just click on visualize.

Data source details

X

Table: web-and-social-analytics.csv

Estimated table si... 296.4KB **SPICE**

Data source: web-and-social-analytics.csv

Import to SPICE

SPICE

Edit/Preview data

Augment with SageMaker

Visualize

9. After that choose the interactive sheet and click on create.

New sheet

X



Interactive sheet

Single page, interactive content

Layout

Tiled

Optimize for viewing on

1600px



Pixel-Perfect report **New**

Multi-page, highly formatted document

Paper size

US letter - 8.5 x 11 in

Portrait Landscape



Pixel-Perfect Reports allows you to build highly formatted multi-page reports. [Get Pixel-Perfect Reports](#)

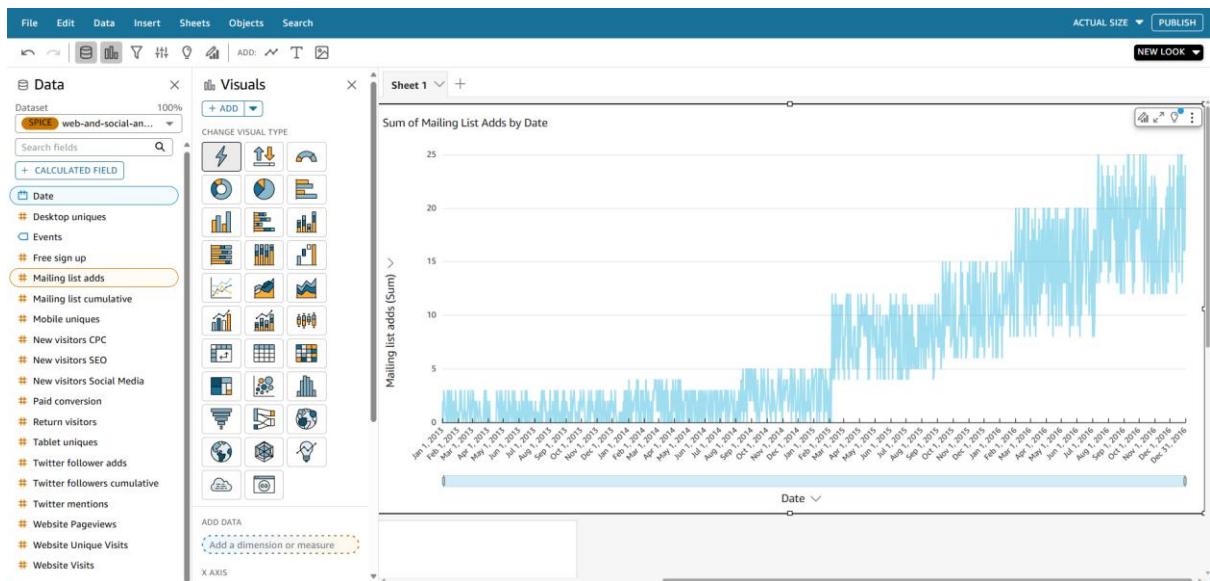
CANCEL

CREATE

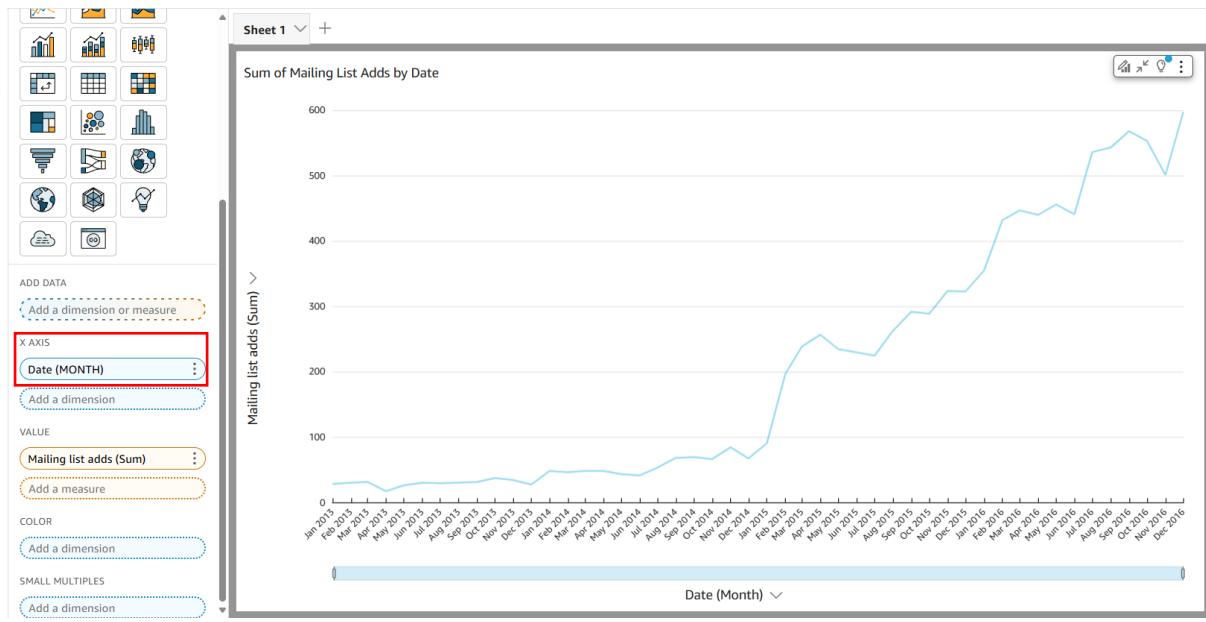
10. Below you can see that you have multiple options available.

The screenshot shows the SPICE Data Studio interface. On the left, the "Data" panel lists various metrics under the dataset "SPICE web-and-social-an...". Under the "Date" section, "Mailing list adds" is selected. The "Visuals" panel shows a preview of a bar chart and a pie chart. The main workspace, titled "Sheet 1", displays the text "AutoGraph" and "Add 1 or more fields to build a visual.".

11. To visualize our data we chose Data and Mail list adds and you can see the visualization.



12. Below you can see that on the X-axis I have changed the date to Months and you have the data in more interactive manner.



13. In summary, Amazon QuickSight is a cost-effective, fast, and interactive business intelligence tool designed for enterprises. It can handle multiple large data sources and enables smart visualizations, enhancing data analysis. QuickSight also boosts productivity with features like an interactive graphical user interface and the ability to share visualizations easily.