

Case Study



Client Profile:

FusionCharts is a private software provider of data visualization products. They host best looking chart solutions with exciting animation and smart designs which has been a delightful experience to the users. Client use their beautiful dashboards to drive sale or to adopt them in the organization. Their software package FusionCharts Suite XT is best suited for executive dashboards and plotting key performance indicators. The FusionCharts Suite XT comes with 1,500+ pages of exhaustive documentation having complete API and attribute definitions, integration examples, and tutorial-style explanation of all the advanced capabilities.

Tecnology Used:

Node.js, Phantomjs, Javascript, JSDoc and libraries

Business Situation:

FusionCharts is a multi-million dollar business company with over 22,000 customers and 500,000 developers in 120 countries. FusionCharts wanted certain structure in their data display. For an effective visual display client wanted us to develop plugins for JSDoc. To make sorting and accessing of data easy they approached us to make customizations in docstrap for grouping of their API items. They also wanted us to provide them with a tag for chart rendering in their API items as well as tutorials. They also wanted us to provide a data tag for displaying data in XML/JSON format.

One other major challenge they faced is with regard to exporting the Charts generated on the web to image or PDF. They used Java-based toolkit "Batik" for this purpose and its development stopped in 2010. They now faced performance issues rendering to which was difficult. To overcome this issue we were approached to build a solution using which they could customise their output.

Solution Approach:

The Compassites team undertook a detailed study of their rendering and display issues and catered to their problem by providing them apt solution. Team of experts at Compassites built plugins for JSDoc. Our developers also customized docstrap. Some of the features the client could achieve with the help of our expertise are:

❑ Grouping of API items:

This enabled grouping of similar API items in one class. A common description of data in a group was displayed. This common description was also made to appear wherever that group of items were displayed. All items were categorized and items under them were sorted.

❑ Chart Rendering:

Charts were served wherever the specified tag appeared in both API items and tutorials using FusionCharts API.

❑ Display of chart attributes:

The chart attributes were grouped according to the chart type. Their input which was previously keyed using CSV file was replaced with creation of database such that access to any data is easier.

❑ Data display:

All data that were displayed in chart rendering was displayed in XML/JSON.

These features were all developed using server side javascript coding, JSDoc customization or extensions, and using our own templates. So it involved writing plugins for each tag specified by the client and extending the docstrap template for almost all cases.

Now to tackle rendering issues in exporting charts to image that came up as the client used Java-based toolkit (Batik) which is currently stopped developers at Compassites developed an export server for exporting charts (SWF) as an image or PDF. This was an alternate approach to Batik Java-driven approach that the client used. To go about this, experts here made sure to develop an application that initialises an HTTP server to receive requests for exporting. Scripts were built to accept JSON object that is passed as argument. Upon loading, the scripts were enabled to read from the configuration file. Also server communication security and load balancing were taken care.

All these gave a well-rounded solution for the client's problem.

Benefits & Results:

- ❑ Performance and rendering issues were solved.
- ❑ Enabled criteria-based search for report generation.
- ❑ Enabled better access to data and better document search.
- ❑ Enable dynamic charts in client tutorials.
- ❑ Helped improve performance when the chart data and appearance changed frequently.
- ❑ Enable better display solutions in client data.

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