Eckerson Group

Product Brief:
Embedded Analytics

Dundas BI

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This product brief is associated with a report titled **Which Embedded BI Product is Right For You?** *that appeared on April 30, 2016.*

Abstract

Building on its heritage in data visualization, Dundas launched Dundas BI in 2014. The product is a BI platform that enables analysts and developers to build and embed custom analytics applications and interfaces using a rich set of application programming interfaces (APIs). Granular multi-tenant security and licensing controls enable customers to embed analytics into multi-tenant cloud applications or monetize their custom analytics solutions.

Founded in 1991, Toronto, Ontario–based Dundas Data Visualization pioneered its charting and graphing components with Dundas Charts for .NET. Building on this foundation, it shipped Dundas Dashboards in 2010, followed by a full-fledged BI platform called Dundas BI in 2014. Today, more than one-third of Dundas customers embed the product into other on-premises or software-as-a-service (SaaS) commercial software; some do both.

Dundas BI exposes its analysis and administrative interface functionality via APIs, making it easy for customers to create and embed persona-specific analytics experiences and deploy them as multi-tenant cloud applications. Developers can also configure elements and inject custom JavaScript into custom dashboards via the standard Web interface (see figure 1). Developers also have the option to deploy a discovery-oriented visualization canvas for self-service users.

Figure 1. Injecting JavaScript into Dundas BI Visualizations
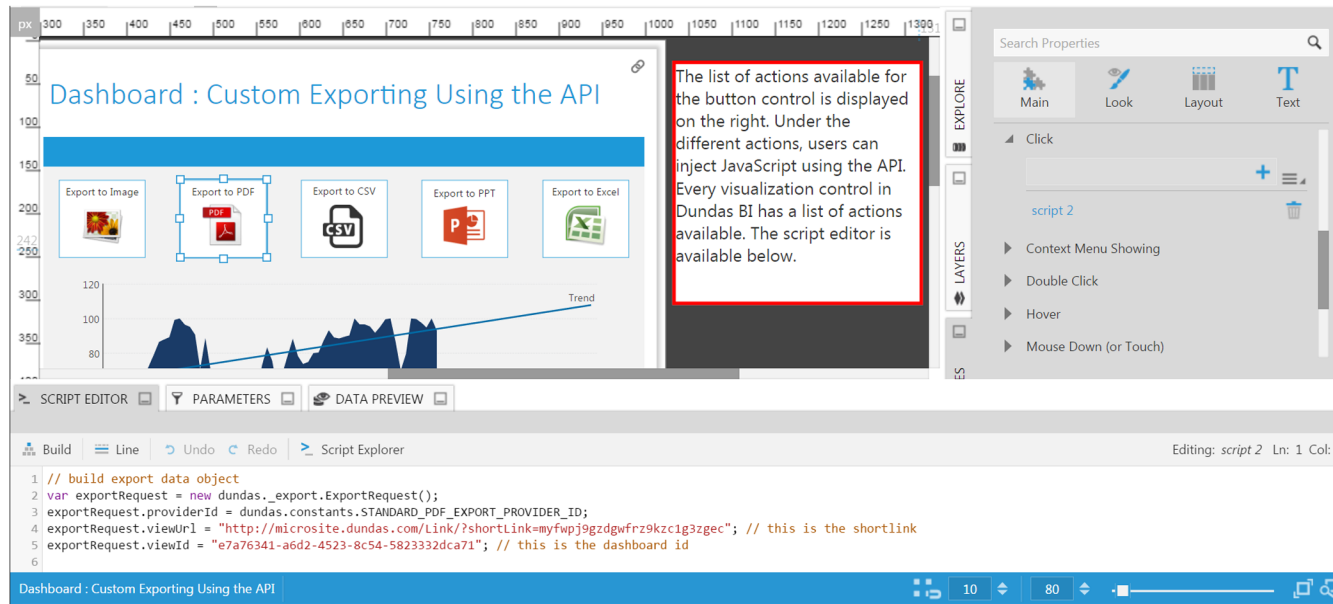
Developers can tailor user experiences in Dundas BI through JavaScript, REST, and .NET APIs. Every visualization includes actions such as hover, double-click, or mouse-click that developers can customize by injecting JavaScript code.

A rich set of visualizations ship with Dundas BI, but the company also supports third-party libraries such as D3.js so customers can tailor visualizations to meet very specific business requirements. Developers can also customize data integration, calculation, and navigation functions through Dundas APIs, as well as manage tenant-specific security (see figure 2), access, scaling, and deployment across large user communities.

Dundas BI's core architecture is cloud ready, supporting both Microsoft Azure and Amazon EC2 cloud platforms through a bring-your-own-license (BYOL) format. The product relies on Microsoft IIS and SQL Server and is offered as a single stack making it easier to embed without having to deploy multiple modules. With more than 25 native data connectors and data integration APIs, built in data transformation, developers can prepare advanced data models from enterprise, social, and unstructured data sources. Customers can query source systems directly or store data model results in memory or in SQL Server, depending on performance requirements.

Dundas BI offers a full set of multi-tenant features. Customers can set license grant policies and CSS styling on a per-tenant basis. The solution integrates with security frameworks such as lightweight data access protocol (LDAP) and Active Directory. It also supports custom attribute configurations where single or multiple security attributes are injected into the data preparation layer to enforce access rules. Dundas BI automatically performs tenant-specific lookups at run time to query the appropriate database tables and rows.

One Dundas OEM customer leveraged Dundas' security APIs to create new analytics accounts whenever new employees were added to its Active Directory system. The automated process sets the proper access privileges; users are authenticated within Dundas through single sign-on (SSO) each time they log on to the company's Windows network environment.
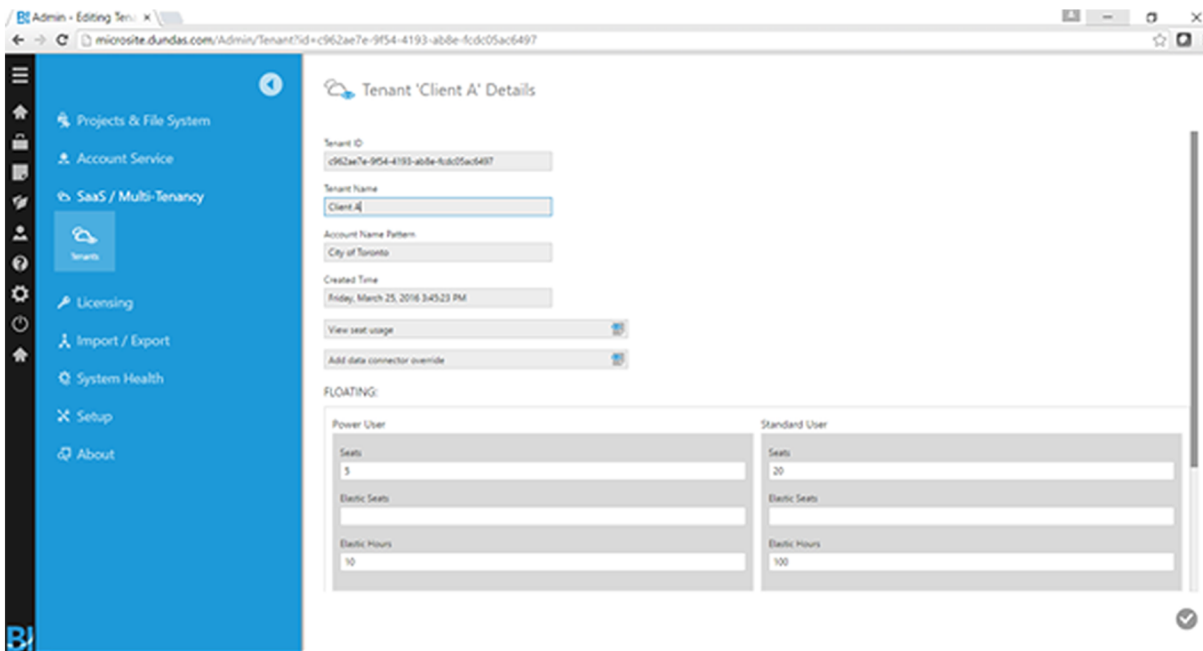

**Figure 2. Multi-Tenant Configuration
in Dundas BI**

Dundas BI customers who operate SaaS applications benefit from multi-tenant administration features and APIs that ease the user, group, security and licensing tasks associated with managing a large community of users or end customers.

The primary Dundas BI licensing model is based on the number of users. However, Dundas offers options that provide additional flexibility for ISVs and service providers. First, customers have an option to implement a concurrent user model, which benefits buyers with many users who do not use Dundas simultaneously. In the event that a customer exceeds the licensed number of concurrent users, Dundas allows them to tap into a bank of hours instead of blocking access. Second, Dundas offers customers perpetual and subscription licensing models, allowing OEM customers to better meet cost and revenue objectives.

Conclusion

With Dundas BI, Dundas continues its heritage of empowering developers with a broad set of open tools for building embedded analytics applications. JavaScript, REST, and .NET APIs empower developers to address domain-specific user experience requirements. Advanced administration features for license management, multi-tenant configuration, and usage statistics, combined with Amazon EC2 and Azure support, enable service providers to host large analytics user communities.

Chor-Ching Fan is an IT and product management leader with deep experience establishing data teams and launching analytics solutions. His client engagements focus on all-source integration for achieving an edge in real-time operations. He can be reached at **ccfan@eckerson.com**.

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