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Dash Enterprise vs. Dash Open Source

Plotly's open-source visualization libraries are used by a wide range of individuals and organizations, including Data scientists and analysts who need to create interactive visualizations for exploring and presenting data, software developers building data-driven applications and dashboards, researchers in academia who need to visualize experimental results and scientific data, financial analysts creating interactive charts for market data and financial reporting, startups and enterprises that incorporate data visualization into their products, and many more professionals across media, healthcare, education, government and more.



Dash Open Source

Alongside the graphing libraries, Plotly Dash is an open-source Python framework for building web-based data visualization applications. It allows developers to create interactive, web-based dashboards and applications entirely in Python, without requiring expertise in web development technologies like HTML, CSS, or JavaScript. Open source Dash has comprehensive documentation and a thriving community, with over three million downloads per month, a large user base and forum-based Q&A.

Plotly Dash Enterprise

For business, Plotly offers Dash Enterprise; a commercial, enterprise-grade version of Plotly's open-source Dash framework. It's designed for organizations that need to develop, deploy, scale, and manage multiple data applications in production environments with enhanced security, reliability, and collaboration features. The platform accelerates development through AI-powered code completion and prompt-driven development that automate routine coding tasks, reduce errors, and enable data scientists to focus on high-value analytics rather than implementation details.

Dash Enterprise integrates with existing IT infrastructure through authentication supporting SAML/OIDC standards while offering flexible deployment options and role-based access controls. Its App Portal enables one-click deployment with built-in load balancing to efficiently scale applications from small teams to enterprise-wide adoption.

Dash Enterprise includes award-winning support, including expert advice and assistance for app development, platform setup, installation, and more. This can be augmented with Plotly Professional Services expertise delivering custom app development and hands-on project execution.

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Accelerated Development

Dash Enterprise accelerates data app development through Vibe Analytics with Plotly Studio, AI chatbot assisted visualization tools, AI code completion, and pre-built components that eliminate the need for frontend expertise. It streamlines workflows with no-code data manipulation, simplified deployment, and seamless Python version management. By automating technical aspects and reducing implementation complexity, Dash Enterprise enables data teams to focus on insights rather than code, delivering interactive data applications in significantly less time.

- **Plotly Studio:** Vibe Analytics enables anyone to use Plotly's expert AI to create professional Dash data applications in minutes without needing any development skills. Your data is the prompt - fully functional interactive visualizations in two minutes.
- **Chatbot Builder:** Develop a bespoke AI assistant within your data apps, providing fast and powerful insights, including information from external sources.
- **Data App Workspaces:** Write and execute Python code using a browser-based onboard code editor, with no downloads or installation required.
- **Design Kit:** Style, brand, and tailor your Dash apps easily and quickly, without HTML or CSS.
- **Snapshot Engine:** Save and share Dash app views as links to interactive documents or attachable PDFs.
- **AI code completion and editing:** Boosts productivity through intelligent suggestions, reduces errors, and automates routine coding tasks.

Deployment & Scaling

Dash Enterprise streamlines data app deployment through its App Portal, offering one-click publishing from workspaces while handling containerization automatically. The App Portal provides centralized authentication with role-based access controls that allow secure scaling to large user bases. The platform includes built-in load balancing for handling increasing traffic and data volumes, while supporting responsive layouts across all devices. Its flexible Python version support (3.9-3.12) and white-labeling capabilities in the App Portal ensure consistent performance and branded experiences as applications scale from development to enterprise-wide deployment.

- **Centralized Deployment:** Edit, deploy, and manage Dash, Streamlit, and Django apps in a unified platform.
- **App Manager:** Securely organize, access, and share apps using a single, scalable portal, without IT or DevOps support.
- **Job Queue:** Build scalable apps by moving CPU-intensive tasks from synchronous callbacks to asynchronous background processing.
- **Embedding Middleware:** Easily embed Dash apps into existing web platforms, without using iframes.
- **Persistent Filesystem:** Upload, update, and cache up to 25GB of flat files or 500 million rows of data directly in your browser, using a drag-and-drop interface.
- **Command Line Interface:** Automate CI/CD pipelines without needing to handle SSH keys.
- **Viewer Analytics:** Track end-user behavior for all apps to gain insight into organizational usage.
- **Data Integration:** Handles growing data volumes and complexity more effectively by integrating multiple datasets in one environment

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Enterprise IT Integration

Dash Enterprise streamlines enterprise IT integration through comprehensive authentication that works with existing identity systems via Keycloak, supporting SAML and OIDC standards for single sign-on across cloud platforms. The system provides RBAC and ABAC capabilities while maintaining flexible deployment options that work with existing infrastructure. It supports multiple Python versions to maintain organizational compatibility and enables secure data integration without exposing sensitive information. By aligning with enterprise security protocols and compliance requirements, Dash Enterprise ensures data applications integrate seamlessly into established IT ecosystems.

- **Database Integration:** Link Dash apps to major back-end databases like Snowflake, Postgres, BigQuery, Databricks, and Salesforce using Python connector libraries.
- **CI/CD Integration:** Simplify deployment management, including automated quality assurance (QA), pre-production app review, and more.
- **Authentication Middleware:** Control access to Dash applications in a few clicks using the App Manager — supports LDAP, AD, PingFederate, Okta, SAML, SSO, and more.
- **Data Source Authentication:** Implements Keycloak as an Identity Provider (IdP) to manage authentication across Azure and AWS. Supports standard protocols like SAML and OIDC ensuring compatibility with enterprise identity systems. Enables centralized identity management to eliminate multiple logins. Provides Role-Based Access Control (RBAC) and Attribute-Based Access Control (ABAC) capabilities.
- **White-labeling:** Offers flexible deployment options to integrate with existing infrastructure. Enables granular access controls for enhanced data governance. Automates access management processes. Simplifies compliance reporting with automatic logging.
- **Data Integration:** Maintains data security by performing analyses without sending information to external AI services. Breaks down data silos across the organization. Supports integration of diverse enterprise datasets while preserving security.

Dash Enterprise vs. full-stack data application development

Dash Enterprise offers significant advantages over traditional full stack development for data applications. It dramatically accelerates development through AI-powered code completion and prompt-driven development, allowing data scientists to create interactive applications directly in Python without needing separate frontend expertise in HTML, CSS, and JavaScript. This resource efficiency eliminates the need for dedicated frontend developers and reduces communication overhead between teams. Dash Enterprise includes robust enterprise integration with built-in authentication that works with existing identity systems, deployment infrastructure compatible with enterprise IT requirements, and out-of-the-box role-based access controls. The platform's unified framework is easier to maintain than multiple technology stacks and comes with award-winning support for troubleshooting and optimization, plus professional services for advanced customization when needed. Ultimately, organizations can build and deploy data applications in a fraction of the time compared to full stack development, while requiring fewer specialized resources and maintaining enterprise-grade security and scalability.

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What are Dash Enterprise customers saying?

"Dash Enterprise enables our Analytics team to deploy at scale, and its security and authentication allow them to deliver quickly across the organization, without requiring IT support. The apps we've created really have been a game-changer."

Michael Ragsdale
VP of Finance, Strategy and Analytics, Kansas City Chiefs

"In an external application going to clients, everything from the engineering, to the models, to the UI, to performance testing requires a lot of effort and building. Dash Enterprise effectively allows us to accelerate the process."

Onik Kurktchian
Head of S&P Global Marketplace Workbench

S&P Global

"Dash Enterprise marries the strengths of many tools into one — designing beautiful dashboards and applying statistical algorithms behind the scenes. Adopting Dash Enterprise allows us to create tools and services that everyone at the company can leverage, without the typical development cycle."

Russ Zaliznyak
Principal Data Scientist and Experimentation Team Lead, Intuit

INTUIT

"Dash has been a valuable outlet to make the best use of people's skills and creativity. It allows them to very quickly turn an idea into a useful tool, usable by the rest of the team."

Gareth Stoyle
CIBC

CIBC

"One thing that brought us to Dash is the fact there is no ceiling to what your visualizations can look like. You cannot build what we have created with other vendors. We needed to evolve our data visually, and achieved that with Plotly."

Wesley Priest
Data Engineering Specialist, Expand Energy

expand

To learn more about how Dash Enterprise can help your organization's data initiative, contact us.

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Checklist: Determine if your team or organization should transition to Dash Enterprise from Dash Open Source

If you are already using Dash Open Source to build your data science projects, it might be sufficient for your needs. In some cases, especially when external stakeholders outside your team need to access your apps, there are a few additional factors to think about.

This checklist helps you decide between continuing to develop your data apps with Dash Open Source, or moving to Dash Enterprise for scaled needs.

Do I need a way to efficiently manage and scale the growing number of data apps being requested?	☐
Do I want to professionally style and brand my Dash apps to align with organizational standards?	☐
Do I need functionality like interactive reports on demand or integration with ML models and LLMs?	☐
Do I need to scale up my exploratory data analysis in Python notebooks into production-ready data apps that can be shared across my organization?	☐
Do I need a minimal-code way to build aesthetic, interactive data apps without relying on extensive front-end development?	☐
Do I need to control user access, authorizing different users to see specific charts and objects?	☐
Do I need a reliable way to deploy Dash apps and set up a central server or cluster for access?	☐
Does my organization mandate integration with IT systems like Active Directory or infrastructure standards like Kubernetes for application deployment?	☐
Do I want users to view or use data apps as standalone tools or embedded within other applications?	☐
Do I need users to configure or use data apps independently, without requiring a developer to edit Python code for minor changes?	☐
Do I want tools to simplify the maintenance of data apps, including administration, scaling, and DevOps?	☐
Does my organization require data apps to be secure with login screens that comply with standards like SOC2?	☐
Do I need access to reliable support for troubleshooting and performance issues?	☐
Do I want to avoid the time, cost, and effort of building a solution from scratch?	☐