WP engine

Winner

Unleashing the full power of the cloud

Recognizes leveraging all five capabilities of cloud computing to improve software delivery and organizational performance

About

WP Engine is a leading platform for hosting WordPress websites and applications. It powers more than 1.5 million sites across 150 countries. The company has been certified as a "Great Place to Work" at all its global locations in recognition of its people-first workplace culture.

Challenge

WP Engine's engineering shared services group serves internal customers on about 40 application engineering teams that run some 100 services. The group saw how gaps and inconsistencies among the application teams caused inefficiencies.

For example, overlapping solutions were in place to solve the same problem. The company worked with multiple cloud vendors and suffered from fragmentation of tools and processes across its application development teams. WP Engine's fragmentation extended to monitoring dashboards, which made it difficult to get a unified view of its operations in real time. This impaired productivity and meant that best practices were not universally applied.

Objectives

WP Engine sought to modernize its infrastructure and standardize its DevOps practices. The support team wanted to provide the foundation for high-velocity, reliable product development, release, and management among its various application teams. The company aimed to consolidate its cloud operations to reduce fragmentation, build reusable patterns to embed best practices, and instill flexibility in its systems to improve its ability to scale.

Achieving these outcomes would enable WP Engine to gain better visibility into its infrastructure costs by application and improve its readiness to grow with rising traffic in services. These steps also opened avenues to stronger security, incident response, and system availability.

Solution

WP Engine addressed fragmentation by unifying its cloud operations in Google Cloud. On top of Google Cloud, WP Engine's internal engineering shared service's group developed an internal software delivery platform called Catalyst. It brings together the tools and streamlines the processes for building, delivering, deploying, and operating the company's applications.

Catalyst provides application teams with a single consistent solution. The software delivery system uses Google's Anthos, a managed platform for application deployment that works in both on-premises and cloud-native environments. The move enabled WP Engine to use infrastructure-as-code to automate the provisioning of computing resources. This ensures consistent configuration management.

In a further step toward standardization and modernization across teams, the project also introduced a common approach for observability, monitoring, and traffic management. The Anthos service mesh simplified and automated enforcement of security and policies across environments.

WP Engine offers on-demand self-service for adding applications to the Catalyst platform, pooling shared computing clusters, autoscaling clusters, and having shared network ingress.

The platform's most important feature is providing infrastructure for continuous integration/continuous deployment (CI/CD) of new software. Its capabilities include configuration, infrastructure building, deployment, runtime infrastructure, authentication management, and integration with multiple observability tools.

Results

Catalyst has delivered operational efficiency and repeatability through automation as well as unified dashboards that provide operational insights. Its adoption by WP Engine application teams has been strong. So far, 16 teams with about 80 concurrent users managing 32 applications and services are working on the platform. WP Engine wants to transition to the platform all its teams, which are spread among two sites in the United States, one site in Ireland, one in Poland, and numerous work-from-home employees. The software delivery platform has already been used to streamline the release of 14 applications, with seven more in the pipeline. All applications on Catalyst use mutual authentication for secure communications among internal services, functionality that WP Engine did not have before.

About 20 teams teams are using the GitOps framework for best practices in infrastructure automation, increasing the consistency that WP Engine targeted. Catalyst has further enabled automated enforcement of three security policies, with a half dozen more in planning.

The Catalyst team surveys new users after onboarding, and the reaction has been very positive. "It lets our team focus more on the application (development) and less on the infrastructure," noted one respondent.

The software development platform embodies the WP Engine core value of being built for growth, offering a foundation for scalability and flexibility as the company's needs change.

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> -WP Engine application developer/team member

Working with Google

WP Engine and Google have a strong partnership. The teams meet weekly and share feedback, and Google team members have provided architecture reviews for Catalyst. The WP Engine and Google development teams have aligned their roadmaps, and the Catalyst team praises Google's commitment to helping resolve problems.

To learn more about WP Engine's successful project, check out this video.