

EMA Products to Watch in 2022/2023

Pulumi

2022 EMA Products to Watch Report

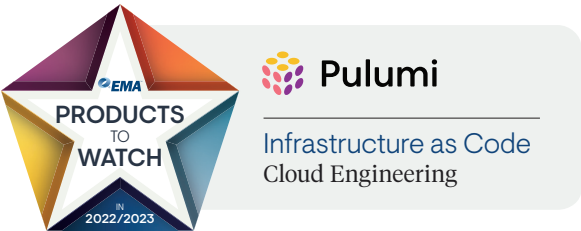
By Torsten Volk

Managing Research Director for Cloud-Native, DevOps, Machine Learning, and AI



Infrastructure as Code
Cloud Engineering

EMA Product to Watch



Developer-centric infrastructure for enhanced productivity, simplified cloud engineering, and continuous compliance.

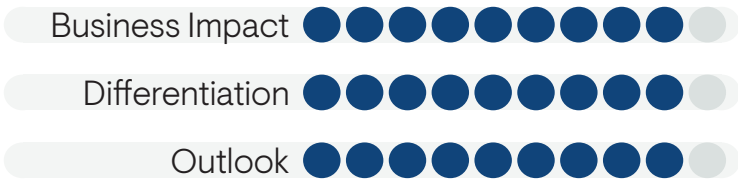
Pulumi enhances the productivity of software developers by enabling them to define cloud infrastructure requirements directly from their development environment. Instead of having to learn how to write and manage YAML code, developers can directly call Pulumi’s infrastructure functions from their preferred development language.

Simplified and Compliant Cloud EngineeringDevOps engineers create, monitor, and update templates for building, deploying, and managing distributed and traditional applications. When developers consume these templates to tie infrastructure requirements to their application code, they automatically implement policies that ensure compliance, security, cost control, reliability, scalability, and the overall adherence to best practices.

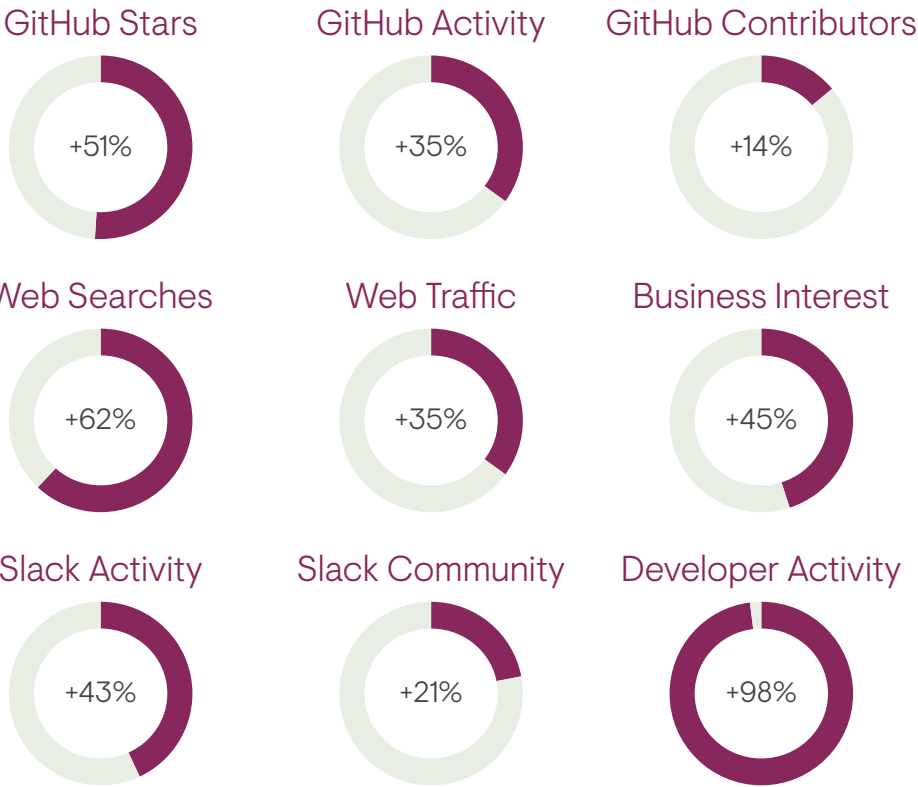
EMA Perspective

Pulumi created a cloud engineering platform that allows developers, operators, and security staff to apply standard software engineering principles to creating infrastructure code and policies alongside application code. This brings the ultimate degree of consistency, compliance, and efficiency to software development, deployment, and day-2 management.

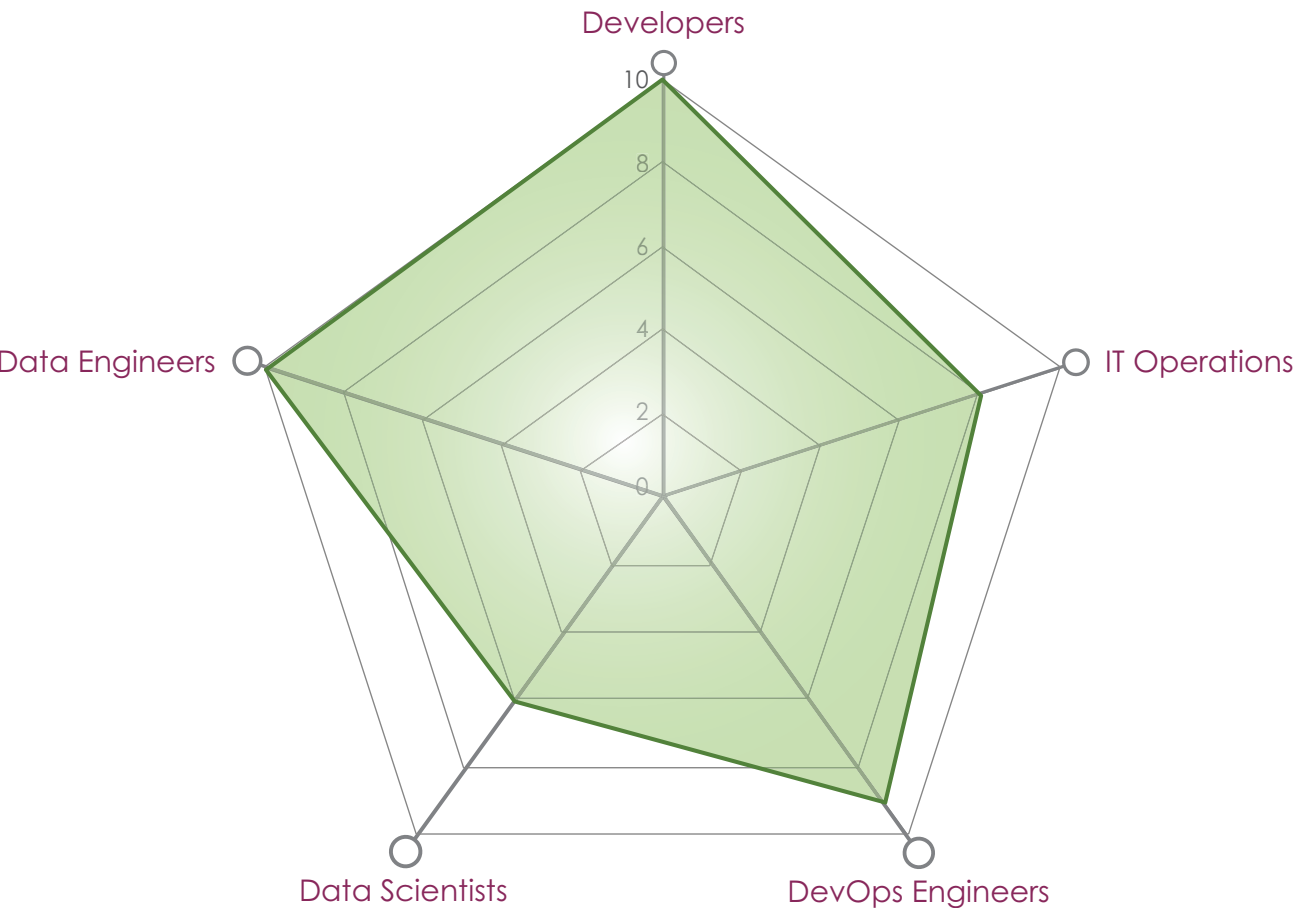
EMA Product Score



Year over Year Comparison



Impact by Persona



Highlights

Native Kubernetes and Helm Support

Pulumi delivers infrastructure for Kubernetes applications directly via the Kubernetes API and within Helm templates.

Continuous Compliance

Operators, DevOps engineers, and data engineers create and manage reusable compliant infrastructure templates for consumption by developers or data scientists.

Developer Productivity

Developers define cloud infrastructure requirements as part of their application code. This can include complex logic for application scalability, performance optimization, and performance.

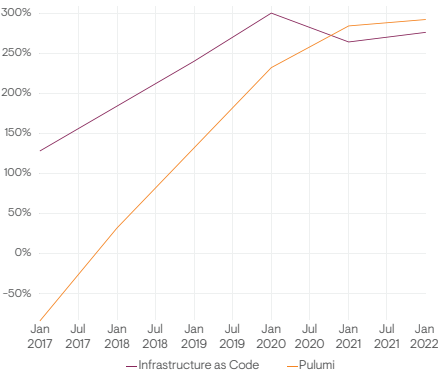
Consistency Across Languages and Clouds

Users have easy access to fully consistent infrastructure and policy templates across development languages (Python, C#, F#, Go, JavaScript, and TypeScript), clouds, data centers, and edge.

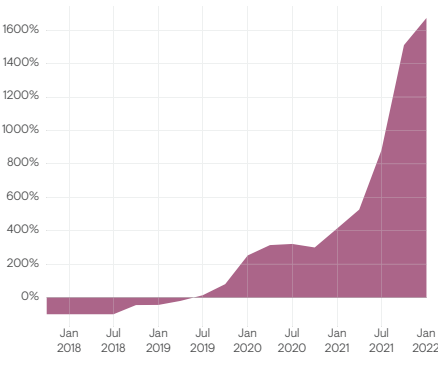


Product Metrics: Pulumi

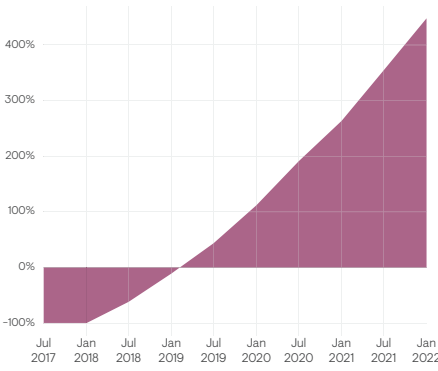
Google Searches



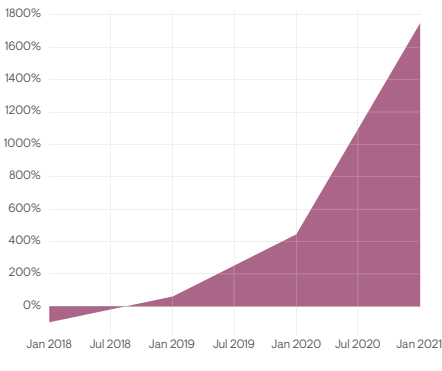
Website Traffic



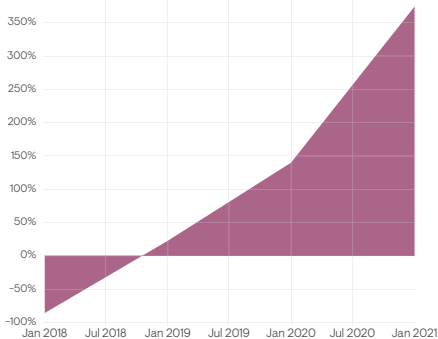
GitHub Stars



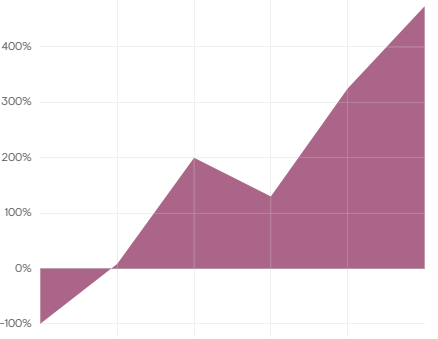
Python Developer Library Downloads



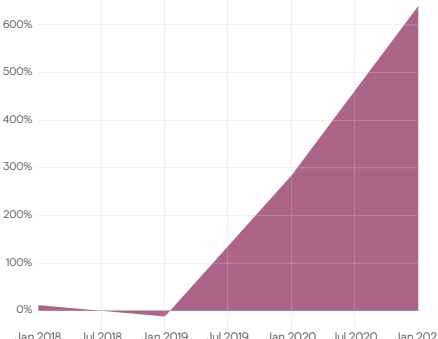
Stackoverflow Developer Activity



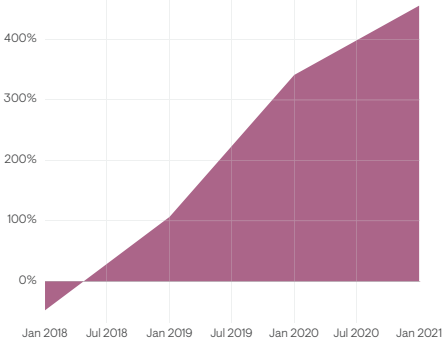
GitHub Developer Activity



Reddit Technical Discussions



Y Combintor Business Discussions



How It Works

Pulumi's declarative approach toward the deployment and management of cloud-native application stacks enables developers to efficiently define application requirements while Pulumi takes care of creating the specific stack on the target cloud. At the same time, IT operators and security engineers can rely on the fact that only application infrastructure that is declared via code can exist within their cloud accounts. This high level of control helps prevent waste and accelerates audit readiness. Pulumi's policy packs enable IT operators to define universal controls for reporting, proactive alerting, and enforcement of best practices for cost control, scalability, reliability, performance, or other domains.

EMA Perspective

Pulumi makes “shifting left” easy to implement while increasing developer productivity. The platform enables organizations to unify DevOps pipelines independently of cloud, application type, product team, or development language. Providing a high level of standardization and operational control while at the same time enhancing application developer productivity was the core factor for selecting Pulumi as the IaC Product to Watch in 2022/2023.



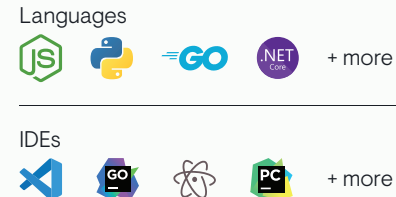
Pulumi
Infrastructure as Code
Cloud Engineering

Provide, Deploy, and Manage Application Stacks in Six Steps

- 1 Create app templates based on packages from the Pulumi registry.** Packages include multi-cloud best practices templates, cloud specific deployment and management patterns, and foundation providers for cloud infrastructure.



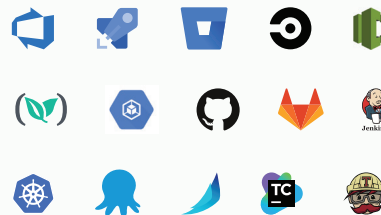
- 2 Developers consume application templates** in any supported language and from the comfort of their preferred IDE.



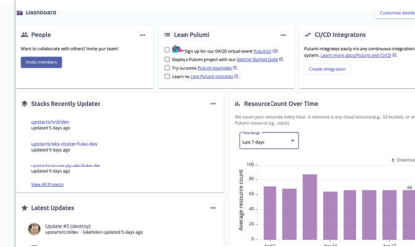
- 3 Pulumi creates, updates, and disposes of application stacks** more components based on declared or deleted code objects.



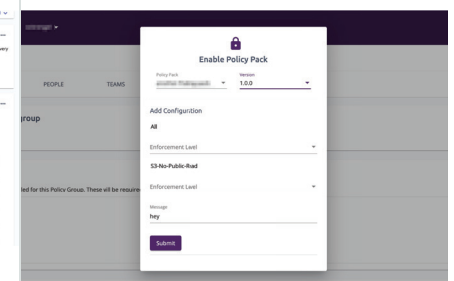
- 4 Use existing CI/CD Tools to create unified pipelines** between application stacks, development languages, and clouds.



- 5 Unified dashboard for observability** across clouds, stacks, teams, and policies.



- 6 Policy packs** can report on or enforce compliance controls based on clouds, application stacks, or teams.



Use Cases

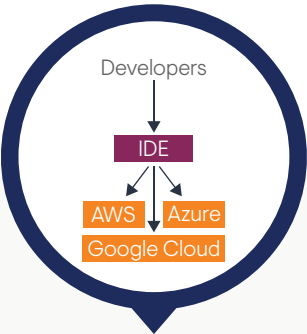
The overarching theme of Pulumi’s key use cases lies in the platform’s ability to bring operational control and compliance across multi-cloud environments and multiple Kubernetes clusters while at the same time increasing developer productivity.

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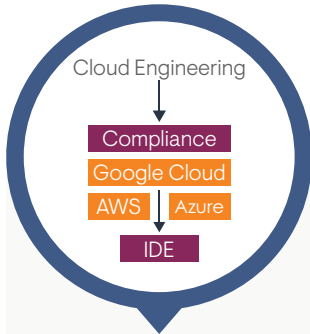
Scaling distributed applications is not trivial. Developers providing code for reliable scalability drastically simplifies application scaling.

Application Engineer, Professional Services Provider

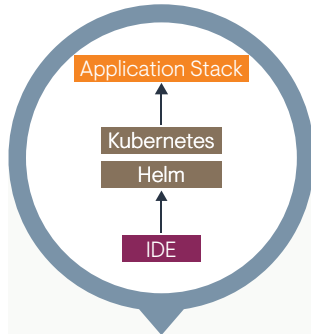
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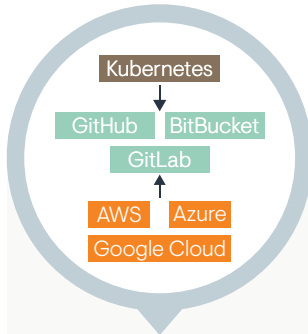
Accelerate Cloud Adoption
Developers access cloud infrastructure templates directly from their IDE and can make infrastructure requirements part of the application code.



Ensure Continuous Compliance
Cloud engineers set the compliance parameters for developers to consume through their IDE.



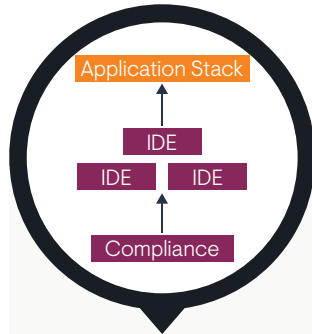
Offer Self-Service Kubernetes
Developers create Kubernetes resources through their IDE in a self-service manner, directly through the Kubernetes-native API and CLI.



Accelerate GitOps Adoption
Pulumi enables organizations to consolidate application code, infrastructure code, and policies into one unified repository.



Lower Operations Cost
Developers, cloud engineers, and security engineers can collaboratively automate management and automation tasks to minimize operations cost.



Adopt Best Practices at Scale
Cloud engineers and security engineers create templates for the optimal deployment, configuration, and management of application stacks across the enterprise.



Product to Watch

Quotes From the Field

“

I love the concept of using standard Python libraries to implement infrastructure code.



Software Engineer, Large Utility

”

“

If it is not declared in your infrastructure as code project, it does not exist in your AWS, Azure, or Google accounts. As easy as that.”



Security Engineer, University

”

“

After many years as a software developer, I became a DevOps engineer. I feel too inexperienced to simply start using my Bicep templates to deploy cloud infrastructure in production.

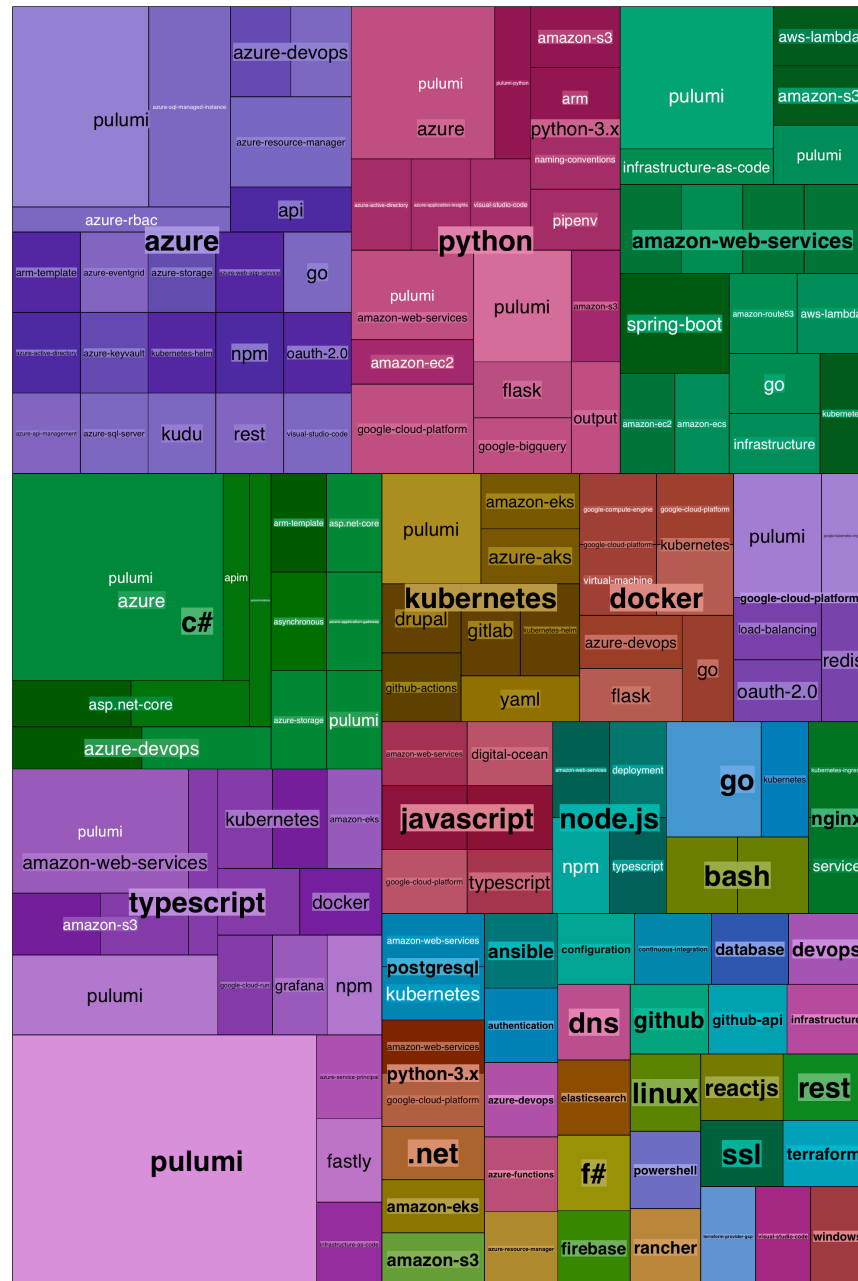


DevOps Engineer, Professional Services Provider

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Infrastructure as Code
Cloud Engineering



The chart shows Pulumi within its real-life context based on the number of views on the Stackoverflow forum between Jan 1 and Feb 28, 2022.



About Enterprise Management Associates, Inc.

Founded in 1996, Enterprise Management Associates (EMA) is a leading industry analyst firm that provides deep insight across the full spectrum of IT and data management technologies. EMA analysts leverage a unique combination of practical experience, insight into industry best practices, and in-depth knowledge of current and planned vendor solutions to help EMA's clients achieve their goals. Learn more about EMA research, analysis, and consulting services for enterprise line of business users, IT professionals, and IT vendors at www.enterprisemanagement.com. You can also follow EMA on [Twitter](#) or [LinkedIn](#).

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