

Better Together: Pulumi and AWS for AI-Era Infrastructure



Native infrastructure automation across 200+ AWS services, enhanced with AI through Amazon Bedrock

AT A GLANCE

Pulumi Platform on AWS

Pulumi Platform on AWS Enterprise infrastructure automation across 200+ AWS services with AI-powered workflows

What Makes It Different

- Infrastructure as Code with familiar languages (Python, TypeScript, Go)
- Native support for all AWS services (EKS, Lambda, Bedrock, Control Tower)
- Centralized secrets (ESC) via AWS Secrets Manager integration
- Real-time AWS cost analytics (Insights)
- AI automation (Neo) powered by Amazon Bedrock's models
- Multi-account governance

Key Capabilities

- Self-service AWS infrastructure provisioning
- 10x infrastructure request handling capacity
- Auto-remediate AWS security policy violations
- Zero-downtime EKS cluster upgrades
- Continuous AWS compliance monitoring
- Enterprise workflows with AWS IAM integration

INTRODUCING PULUMI: INFRASTRUCTURE AS CODE MEETS AI

Infrastructure as Code (IaC) has transformed how teams manage cloud resources, but traditional tools require domain-specific languages and lack deep cloud provider integration. Pulumi provides native support for all 200+ AWS services including Amazon EKS, AWS Lambda, Amazon Bedrock, and AWS Control Tower using familiar programming languages like Python, TypeScript, Go, and .NET.

WHY PULUMI AND AWS ARE BETTER TOGETHER

With 75% of enterprise software engineers expected to use AI code assistants by 2028 and 45% of AI projects remaining operational for at least three years, infrastructure teams face unprecedented pressure to deploy and maintain applications faster without compromising governance.

Pulumi Platform on AWS delivers an integrated solution where infrastructure as code, secrets management, cost analytics, and AI-powered automation work as a unified system rather than disconnected tools. This unified approach eliminates the complexity and operational overhead of managing multiple vendor solutions.

Pulumi ESC automatically manages credentials and secrets across all AWS accounts through native IAM and Secrets Manager integration, removing the security risks of hardcoded credentials and manual secret rotation.

Security policies enforce compliance at deployment time, preventing violations before they reach production. Pulumi Insights provides continuous visibility across the entire AWS footprint, enabling teams to search resources, track dependencies, and identify cost optimization opportunities.

This intelligence feeds directly into decision-making without requiring separate analytics tools or manual audits, reducing the operational burden on platform teams.

THE EVOLUTION OF INFRASTRUCTURE MANAGEMENT

Neo is built on 8+ years of AWS infrastructure intelligence, not generic AI training data. It manages your entire platform with full governance and audit capabilities, not just code generation. You maintain full control with configurable approval workflows where Neo can operate with human review for every action or with trusted automation for routine tasks. And it integrates seamlessly with your complete DevOps workflow on AWS as part of a unified platform solution.

Whether you're modernizing existing applications or building new cloud-native solutions, Pulumi Platform on AWS provides the foundation for scalable, secure, and intelligent infrastructure operations that evolve with your business needs.

Business Impact

Operational Efficiency: Organizations typically see 10x improvement in infrastructure request handling capacity while reducing deployment times from days to minutes. Platform teams shift from reactive ticket management to strategic innovation work.

Pulumi Platform combines infrastructure as code with centralized secrets management via AWS Secrets Manager (Pulumi ESC), resource search and cost optimization capabilities for AWS resources (Pulumi Insights), and developer self-service with AWS Control Tower governance (Pulumi IDP). With AI assistance through Amazon Bedrock, Pulumi Neo automates infrastructure code generation, review, and optimization while maintaining enterprise-grade security and compliance across your AWS environment.

Infrastructure drift detection ensures environments remain in their intended state, catching unauthorized changes immediately and maintaining compliance with organizational standards across AWS deployments.

Pulumi Neo, powered by Amazon Bedrock, elevates this foundation with intelligent automation that understands infrastructure context and organizational policies. Neo works with your Pulumi infrastructure state and relationships to ensure safe orchestration of changes across connected AWS resources.

Complex operations like upgrading Amazon EKS clusters across multiple AWS accounts, remediating AWS Security Hub findings, and maintaining compliance happen through automated workflows while preserving governance controls and approval workflows. The platform scales with organizational growth, handling everything from initial deployments through ongoing operations. Organizations dramatically improve infrastructure request capacity while accelerating deployment cycles. Platform teams shift from managing tickets to enabling innovation. The AWS and Pulumi partnership transforms infrastructure management into a strategic capability.

Competitive Advantage: AI-powered automation enables faster time-to-market for new applications while maintaining enterprise governance, security, and compliance automatically. Development teams focus on building innovative solutions rather than waiting for infrastructure provisioning.

Pulumi and AWS enable organizations to harness AI-driven automation while maintaining enterprise-grade security and governance that modern businesses demand.

Get Started

Visit pulumi.com/AWS to begin your free trial and experience the evolution of infrastructure management with Pulumi Platform on AWS.



• Amazon EKS Ready
• Amazon RDS Ready
• AWS Lambda Ready
• DevOps Software Competency

• Containers Software Competency
• Migration & Modernization Software Competency