



## DevOps Automation

### Why Agile Stacks?

- 10x faster DevOps automaton
- Enables organizations to have a DevOps-first architecture out of the box, helping teams to automate repeatable error-prone tasks
- Incorporates a range of popular, best-of-breed open source products that are pre-tested, integrated and work together the moment they are deployed with an emphasis on scalability, performance, reliability, and agility
- Governance and change control for custom stacks built with Terraform, CloudFormation, and Helm charts
- DevOps automation allows companies to produce software faster and be more efficient in the way they operate
- Deploys the same technology stacks on AWS, GCP, Azure, and on-prem



### Overview

Agile Stacks DevOps platform enables teams to focus on building products instead of building DevOps automation. Easier than ever before, engineers can use low-code approach to implement infrastructure-as-code. Composable stacks include everything from network, compute, storage, containers to cloud native services and CI/CD. Full stack automation allows push button deployments of complete environments in the cloud, private data centers, and at the edge.

### Product features

#### Automate and Manage Infrastructure as Code

Accelerate your DevOps implementation by using proven, reliable infrastructure code templates and best practices:

- Stack templates allow repeatable and reliable distribution of environment and application configurations
- Properly scalable Kubernetes cluster within minutes
- Integrated security embedded in every stack deployment
- No lock in: current infrastructure can be saved in Git as Terraform and Helm IAC code
- Define environment templates once, no matter how many cloud accounts you manage

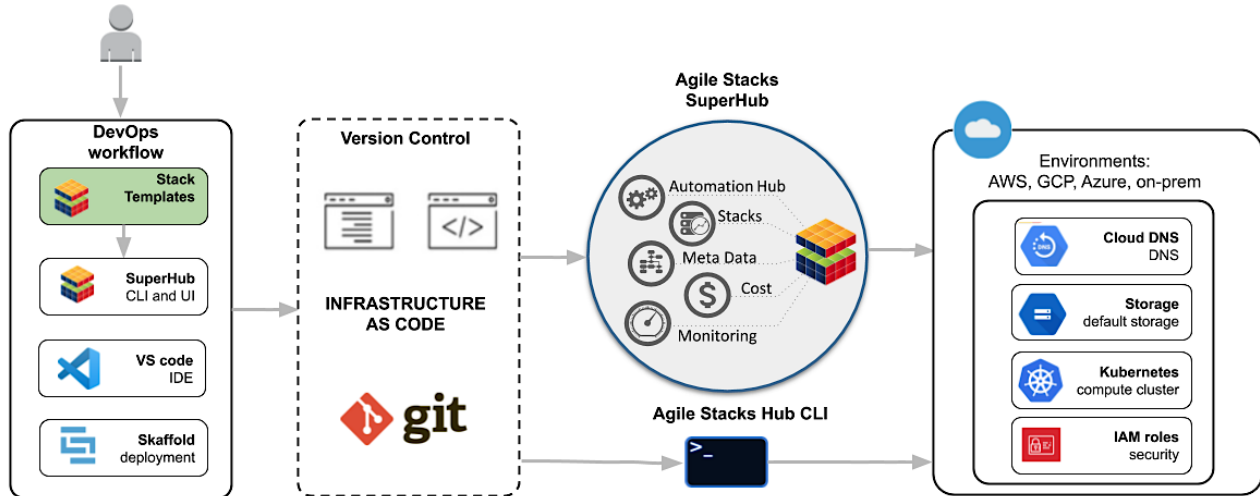
### Certified Stack Templates

Deploy composable, flexible, automated cloud stacks that work from the instant they are deployed:

- Off the shelf pre-integrated stacks: ML Stack, Application Stack, Cost Optimizer, GitLab, Harbor
- Stack templates can be extended using most popular automation tools: Terraform, CloudFormation, Helm
- Software developers can use code to provision and deploy cloud services and applications, rather than rely on system administrators in a DevOps environment.
- By standardizing the templates, security teams can efficiently audit and approve the deployed applications.
- Certified stacks are continuously tested to deploy and operate on supported cloud providers.

## How it works

The Agile Stacks automation hub deploys stack templates from a catalog of composable open source and commercial software. A stack template is configured for the target environment and versioned in Git. The code repository is used as the central-source-of-truth for all of the infrastructure required to run applications. Automation hub implements state management, environment configuration, and automatic infrastructure provisioning across multiple development, testing, and production environments.



## Differentiators

- Full Stack automation allows to launch and maintain production-grade infrastructure in days, not months
- Automated deployments of Kubernetes extended with monitoring, logging, ingress, service mesh, and more
- Built-in best practices for secure, scalable, reliable, cost-optimized deployments
- Self-service deployment for developers while giving operations all tools for security, monitoring, upgrades
- Stack components are configured to automatically deploy, upgrade, backup, and restore
- State management, connectors, and change control for Terraform, CloudFormation, Helm, and Ansible
- GitOps process allows to simplify, standardize, and automate stack deployments
- Customizable GitOps templates are available on GitHub: <https://github.com/agilestacks/stack-ml-eks>

## Certified Stack Templates

Stack Name	Stack Description	Available Tool Choices
Machine Learning Stack	Machine learning toolset that supports the full lifecycle of an ML application.	Kubeflow, Jupyter Notebook, TensorBoard, Seldon, Minio, Spark, Amazon SageMaker, Istio, ACM, Dex, Okta, DNS, SSL cert manager, cluster auto-scaler
Application Stack	A set of tools for continuous integration, testing, and delivery of applications.	Harbor, Minio, Postgres, Traefik, Istio, Letsencrypt, ACM, Dex, Okta
Cost Optimizer Stack	Optimization tools for automated tagging, cost management, right sizing and auto-scaling	KubeTagger, KubeCost, autoscaler, Prometheus