



NTS WEBINAR

PLATFORM PANORAMA



DATA CENTER | PLATFORM



INFRASTRUCTURE



PLATFORM



OBSERVABILITY



CLOUD



AI

Compute | Storage

Virtualization

End to End

Hybrid

Platform

DC Network

Containerization

App Performance

Hyperscaler

Consulting

Security

Microsoft

Digital Experience

Private Cloud

As a Service

Backup & Recovery

IAC | Automation

LOG | ITSM | OT

Disaster Recovery



NTS

PLATFORM PANORAMA

NTS Partner



- Kubernetes Platform & Virtualization → Red Hat OpenShift, OpenShift AI, Ansible Automation Platform



- Infrastructure-Automation, Secrets Management



- Application Security & Web-Application-Firewall, Content-Delivery-Network



- Version-Control-System & DevSecOps-Platform

Consulting | Design & Implementation | NTS Support | Managed Services | as-a-Service



ENTERPRISE KUBERNETES DEVSECOPS-PLATFORM

Till Mertlitz



NEUIGKEITEN UND BEST PRACTICES ZU **RED HAT OPENSIFT**

QUICK FACTS

“Mehr als nur Kubernetes”:

- “Batteries included”
- Security & Compliance "By Default"
- Automatisierter Betrieb
- Developer Experience
- Zertifizierter Support & Ökosystem



OPENSIFT

Anwendungs-Plattform:

- Container
- Virtuelle Maschinen
- AI Workloads

Deployment:

- On-Premise
- Public Cloud
- Hybrid
- Bare-Metal
- Virtuell
- Edge / IoT

OPENSIFT EDITIONEN & ADDONS



AI Capabilities
Model Development | Serving
Lifecycle | Agentic | RAG | Fine Tuning



Middleware
Application Servers | Integration | Messaging



Advanced Development Capabilities
Internal Development Portal | Secure Software Delivery | Developer Tools



Advanced Management & Security
Multicenter Management | Cluster Security | Global Registry | Cluster Data Management



Foundational Application Platform Capabilities
Service Mesh | Serverless | Builds | Pipelines | GitOps | Tracing | Log Management | Cost Management



Kubernetes
Run Containers and Virtual Machines | Run Virtual Machines Only



Linux
host operating system

Red Hat OpenShift
Cloud Services



Red Hat
OpenShift
Service on AWS



Azure Red Hat
OpenShift



Google Cloud

OpenShift
Dedicated



Red Hat
OpenShift on
IBM Cloud



Physical



Virtual



Private cloud



Public cloud

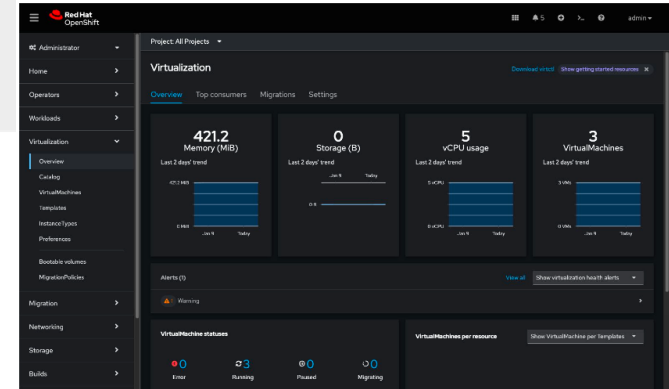
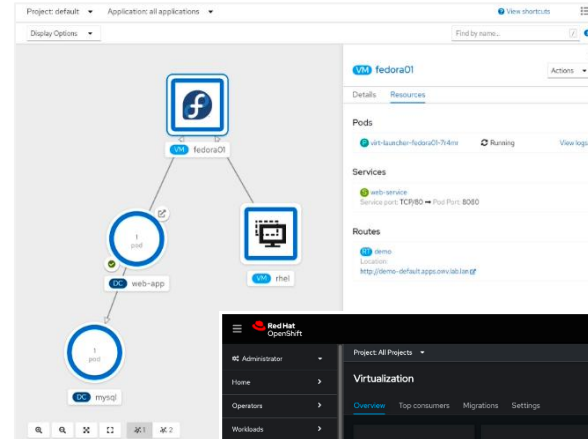


Edge

OPENSIFT VIRTUALIZATION

Merkmale:

- “Unified platform” für Container und VMs
- KubeVirt & KVM
- Management über GUI & Deklarativ
- Netzwerk:
 - SDN (VMs <-> Container)
 - Multus (physikalisches Netzwerk)
- Storage:
 - CSI
 - PV/PVC
- Live Migration
- Self-Service

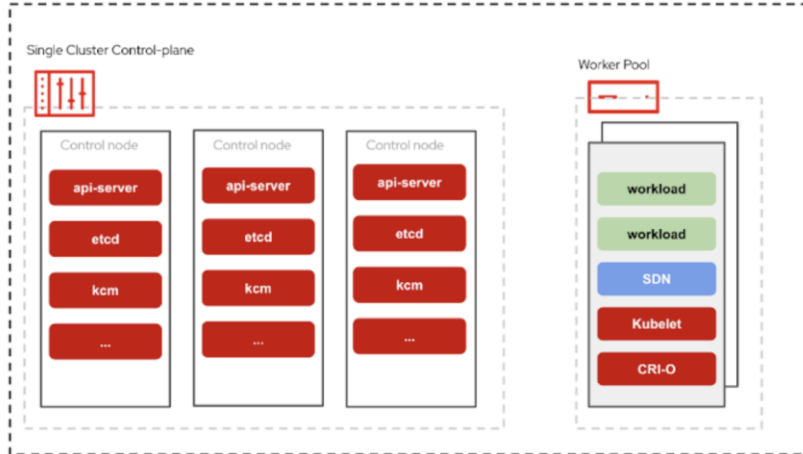


HOSTED CONTROL PLANES

Standalone OpenShift

Control-Plane (CP) + Workers

Standalone OpenShift **Cluster** (dedicated CP nodes)



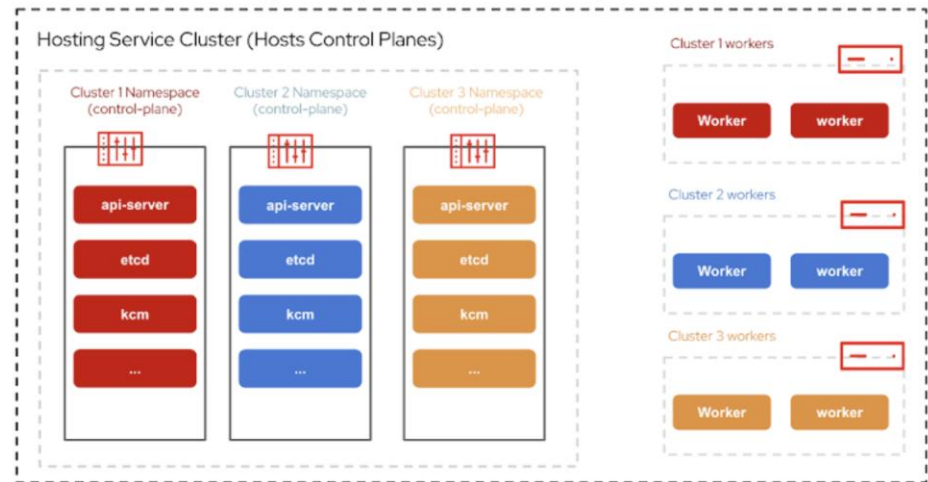
hosted control planes for Red Hat OpenShift

Control-Plane (CP)

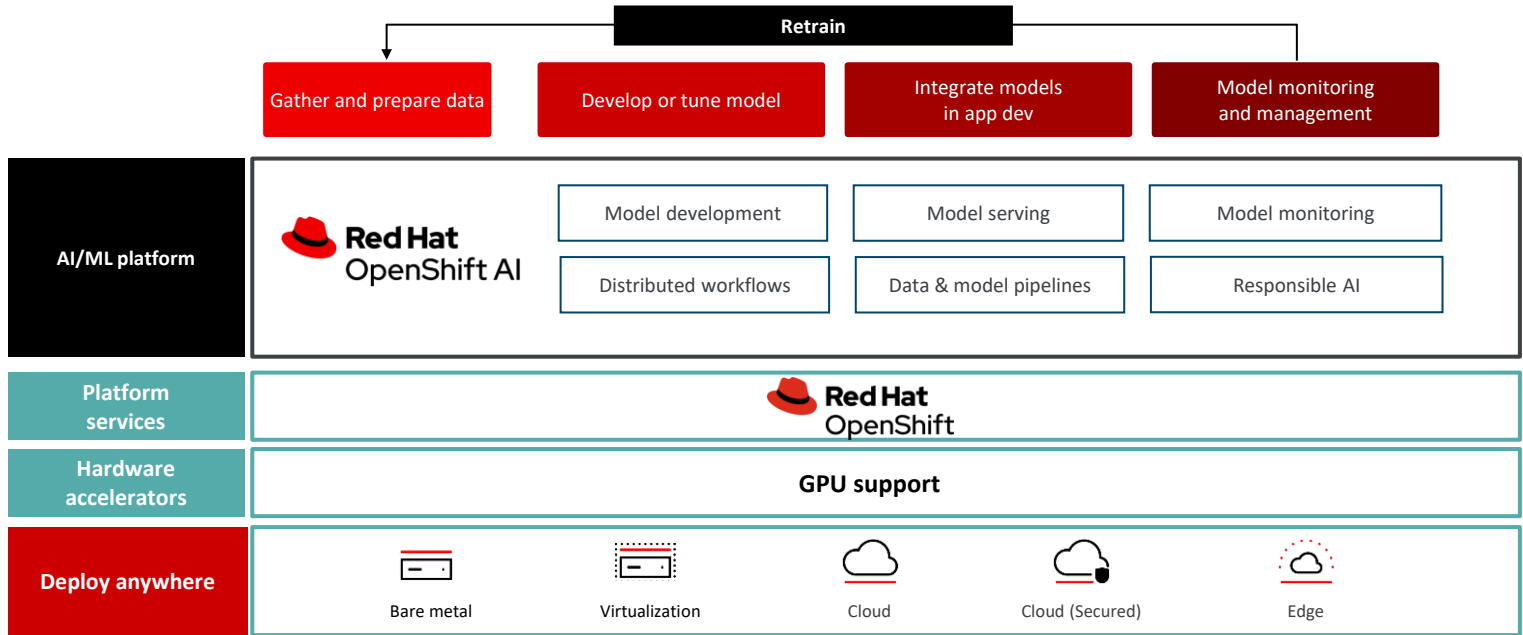
+

Workers

Hosted control planes via **HyperShift** (decoupled CP and workers)



OPENSIFT AI



NEWS

Aktuell: Release 4.20 (10/2025)

- **Core:**
 - Kubernetes 1.33
 - Bring your own OIDC
 - User namespaces
 - Two node OpenShift with Arbiter
- **Virtualization:**
 - CPU load aware rebalancing
 - ARM Support
 - Faster live migrations
- **AI:**
 - Distributed AI workloads (Leader/Worker)

Ausblick 2026:

- Verbesserung und stärkere/tiefere Integration von OpenShift Lightspeed
- Zusätzliche Deployment/Architektur-Optionen (für 2 Datacenter Layouts)
- **Fokus Virtualization:** Live Migration zwischen Clustern, Incremental Backups, File level restore, uvm.
- **Fokus AI:** Intelligent workload scheduling, Dynamic resource allocation (z.B. GPUs), uvm.
- Security & Compliance: Conf. Computing, Zero-trust Workload Identity Manager, uvm.

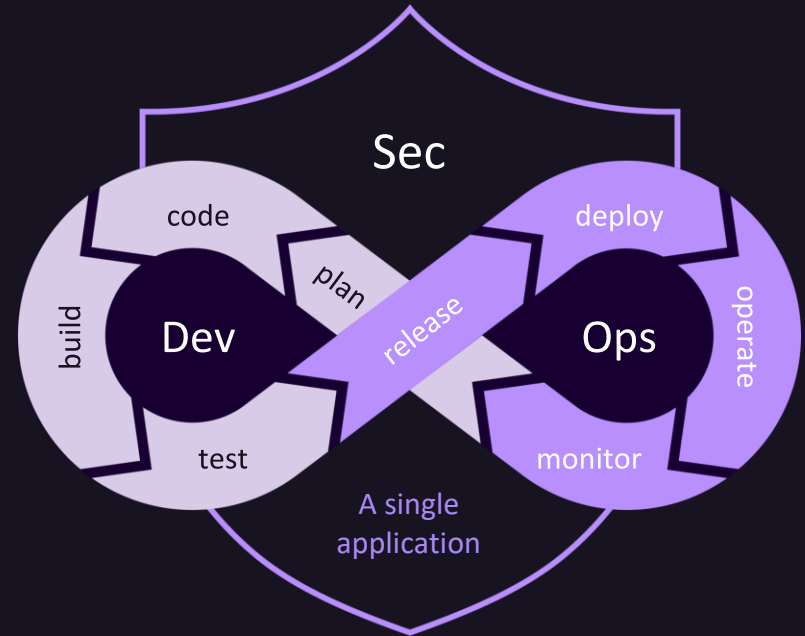


AI GESTÜTZTE DEVSECOPS MIT **GITLAB**

GitLab is **THE** DevSecOps Platform

Empower development, security, and operations teams to build better software, faster

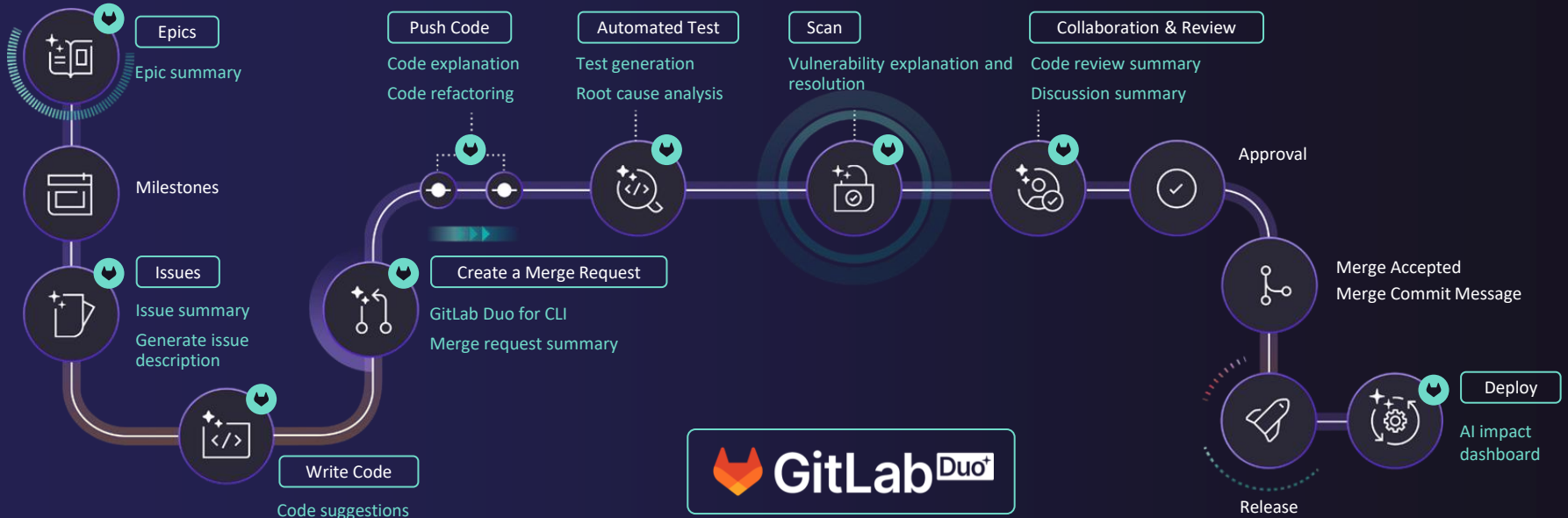
- ✓ **Better insights:** End-to-end visibility across the software delivery lifecycle
- ✓ **Greater efficiency:** built-in support for automation and integrations with third-party services
- ✓ **Improved collaboration:** One workflow that unites developer, security, and ops teams
- ✓ **Faster time to value:** Continuous improvement through accelerated feedback loops
- ✓ **Ease of Adoption:** Integrates with your existing toolchain; adopt at your own pace



How we differentiate

An end-to-end software development and deployment workflow powered by AI

GitLab Duo Chat



GitLab Editions

Free

Essential features
for individual users

Community Support

Basic DevOps

Premium

Improve Efficiencies
& Control

Advanced CI/CD

Enterprise Agile Planning

Self Managed Reliability
(high availability, disaster recovery, GitLab
Geo, scaled architectures)

Priority Support

Ultimate




Improve Security,
Compliance & Planning

Advanced Security Testing

Global Governance

Value Stream Management

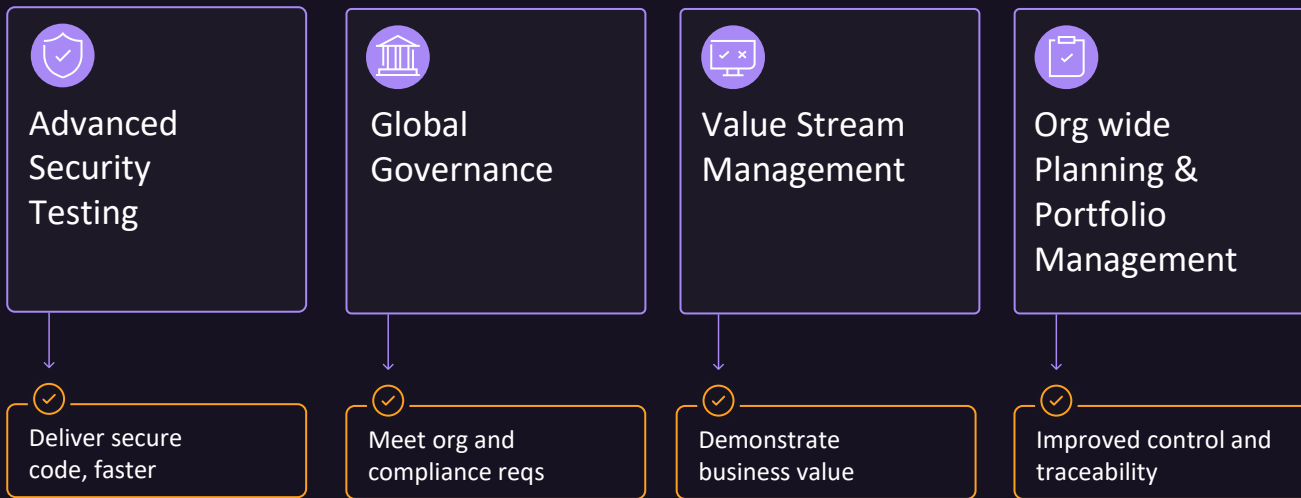
Org-wide Planning & Portfolio
Management

+ AI Add On 
Improve Productivity For All
Stakeholders 




GitLab Ultimate

Organization wide security, compliance and planning



AI-Assisted Workflows

Ship more secure software faster with AI

Enterprise Agile Planning Add-On

One workflow for everyone involved in the software development lifecycle



NEWS

Aktuell: Release 18.8 (15.01.2026)

- **GitLab Duo Agent Platform – GA**

Autonome Duo-Agents können in den gesamten Software Development Cycle integriert und orchestriert werden – von Coding, Planung bis hin zu Fehlerbehebung.

Verfügbar in Premium und Ultimate.

- **GitLab Duo Planner Agent – GA**

- **GitLab Duo Security Analyst Agent – GA**

- GitLab Runner 18.8

- Multiple container scanning

- C/C++ support in Advanced SAST

- div. Bugfixes und Improvements



AUTOMATISIERUNG

INFRASTRUKTUR | SECRETS

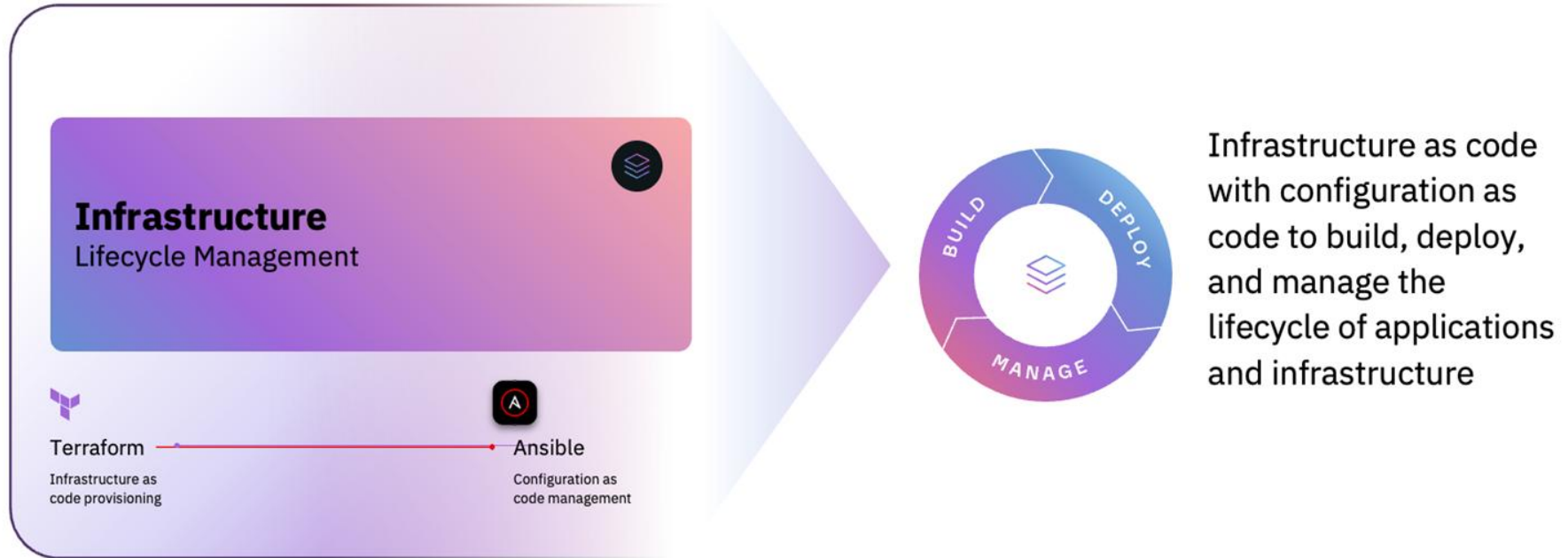
Bernhard Waldecker



AUTOMATION MIT **TERRAFORM ENTERPRISE** & **ANSIBLE AUTOMATION PLATFORM**

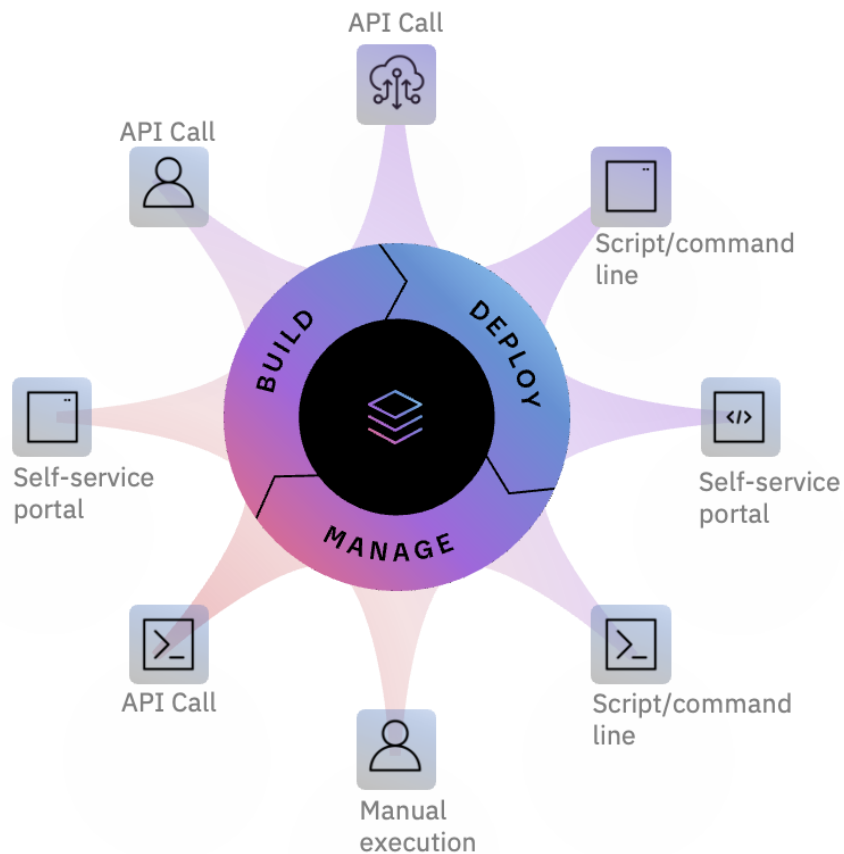


Infrastructure lifecycle management



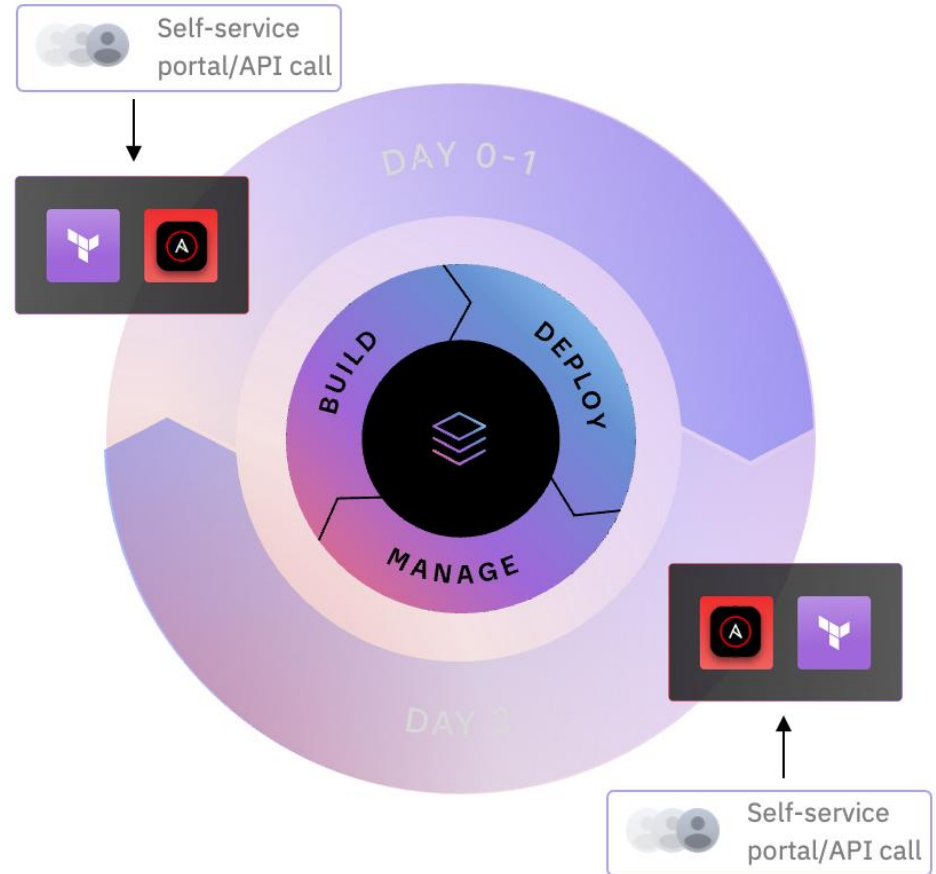
Challenges in infrastructure lifecycle management with multiple tools and touch points

- ❌ Proliferation of tools, increased pressures on budgets
- ❌ Technical debt, increased maintenance costs
- ❌ Skill gaps, skilled operators required
- ❌ Security and compliance challenges
- ❌ Manual toil, human driven processes, prone to error and inconsistent application of security
- ❌ Multiple points of consumption and bottlenecks resulting from dependency on external siloed teams

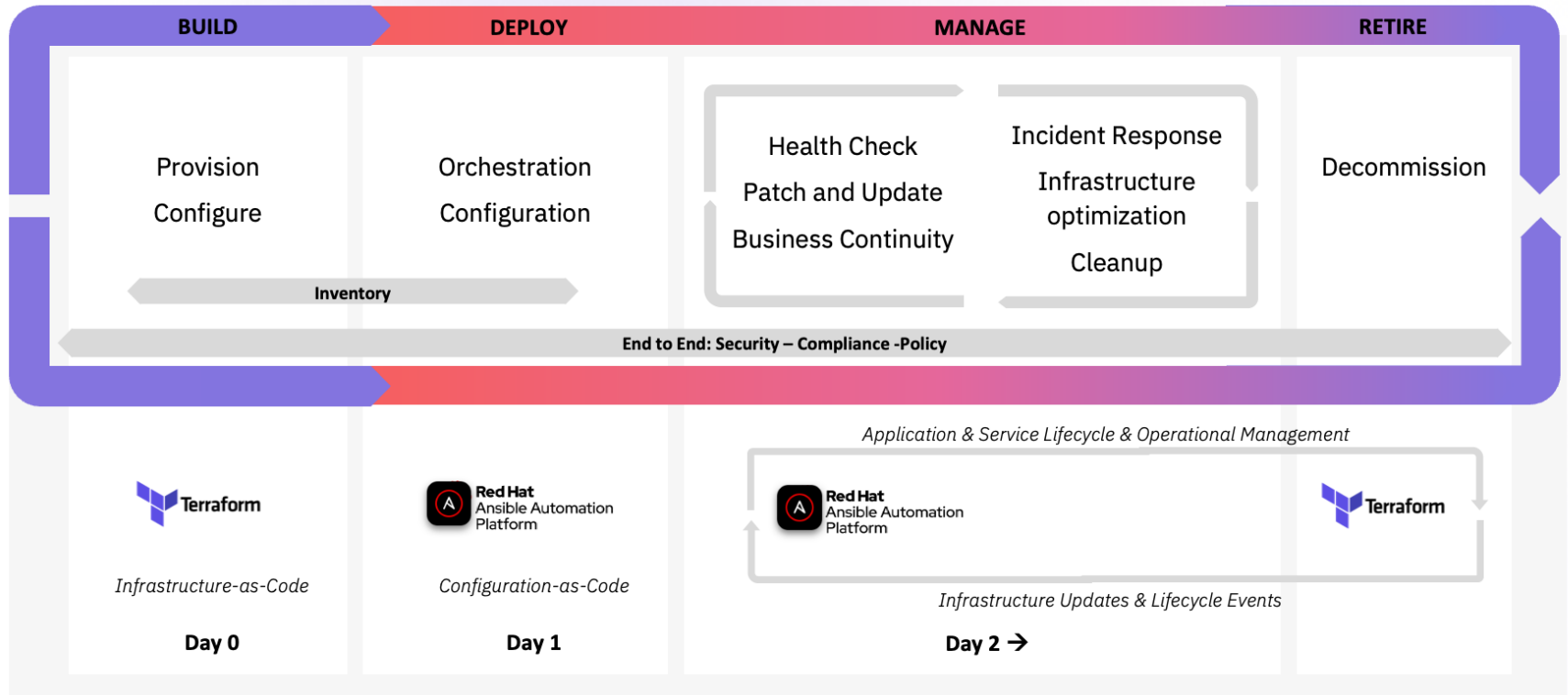


Automated infrastructure lifecycle management with a unified tool set

- ✓ Orchestrated, standardized lifecycle with Terraform + Ansible accelerates time-to-value
- ✓ End to end automated workflows
- ✓ Security and operational consistency for cloud infrastructure
- ✓ Eliminate developer bottlenecks from operational silos, enable self-service
- ✓ Seamless infrastructure + application performance

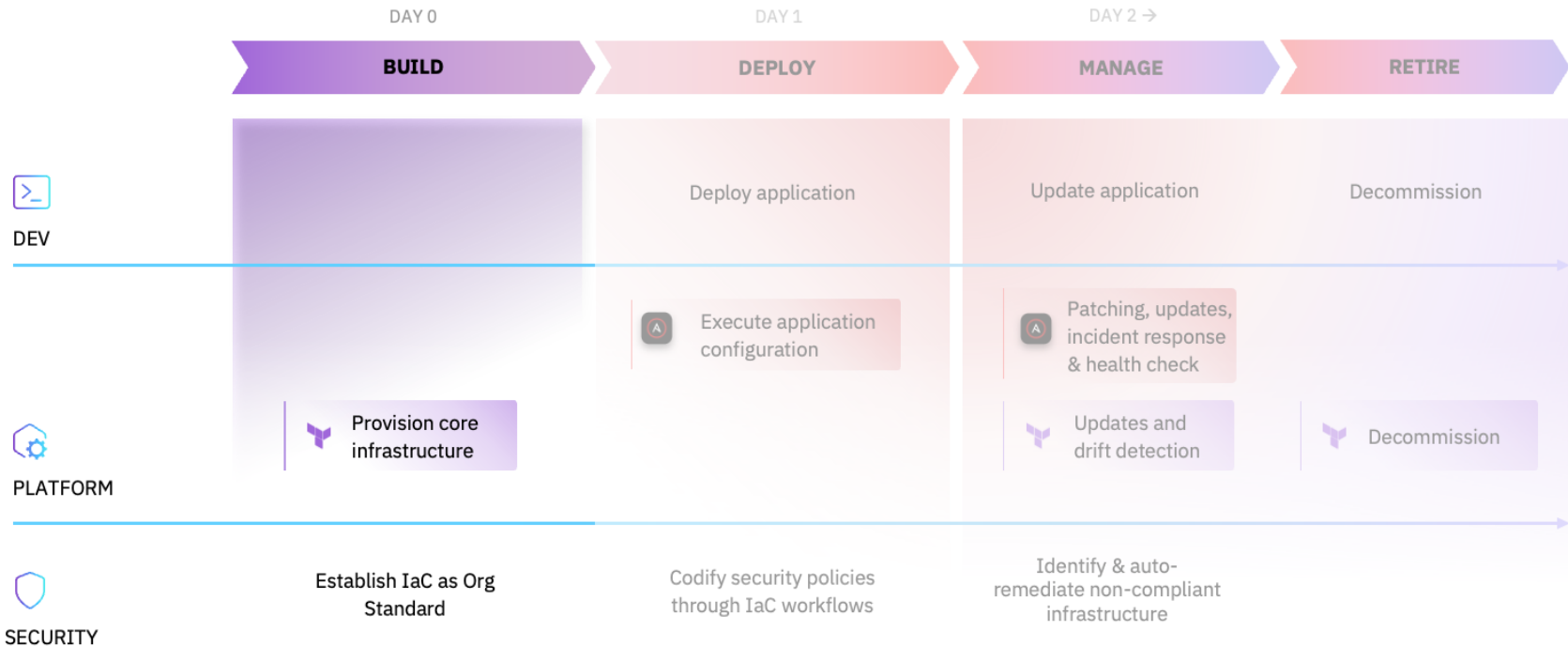


Holistic orchestration and automation across the infrastructure lifecycle



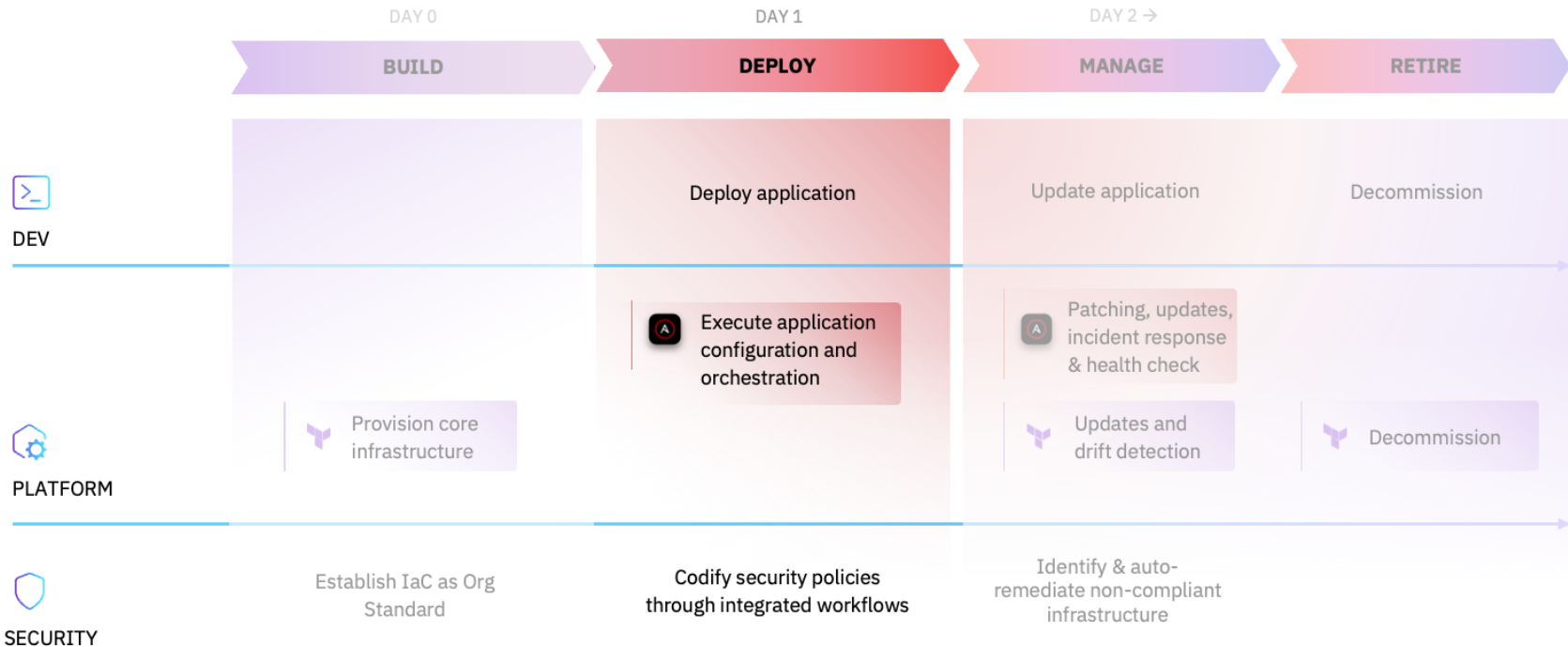
Infrastructure Lifecycle Management – Build Day 0

Terraform with Infrastructure as code, secures and optimizes infrastructure workflows to maximize investments



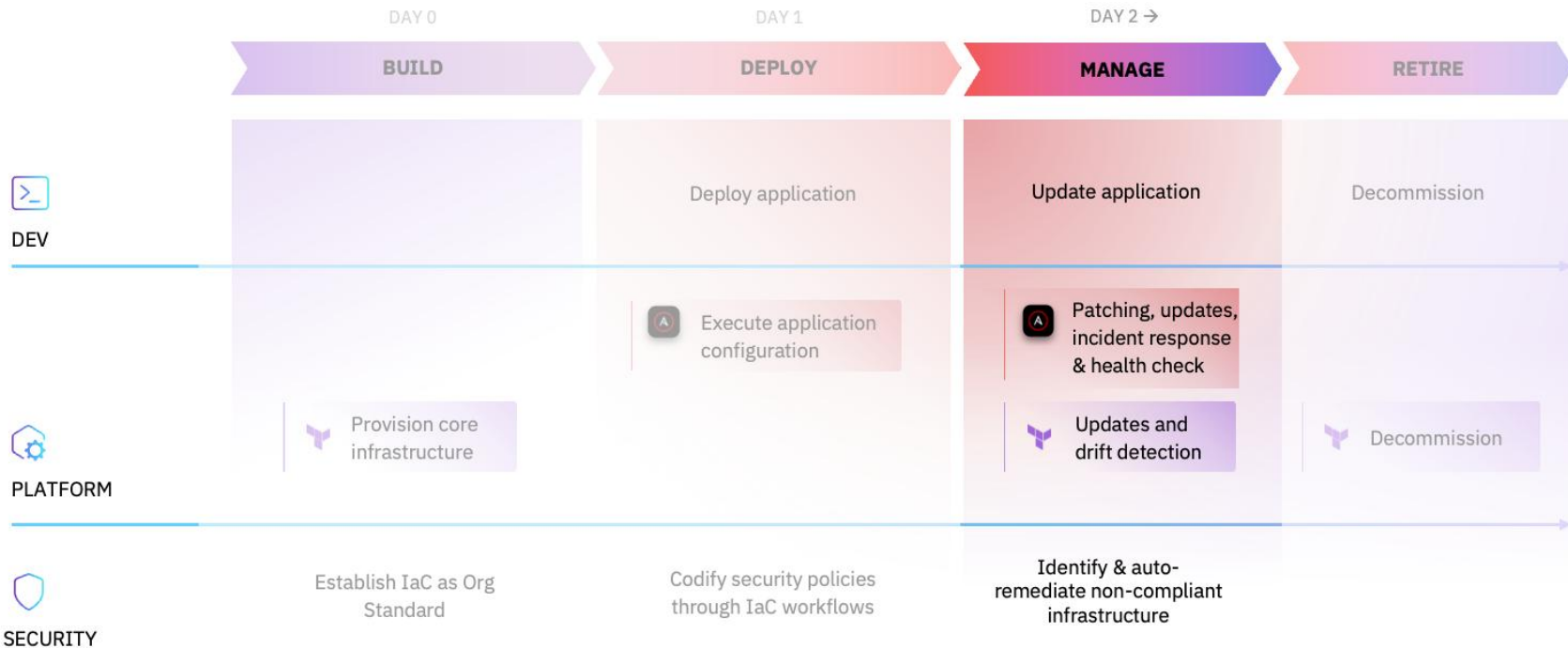
Infrastructure Lifecycle Management – Deploy Day 1

Ansible ensures that applications are deployed in a consistent, reliable, and scalable way



Infrastructure Lifecycle Management – Manage Day 2

Ansible and Terraform together enforcing compliance and governance



Roadmap: IBM Terraform & Red Hat Ansible



Product teams on both sides will be focused on **improving native integration between Red Hat Ansible and Terraform Enterprise**, with a particular focus on developing more jointly supported Collections and Providers to help customers accelerate adoption with a larger library of curated, opinionated content out of the box.



Automation workflows initiated in Ansible Automation Platform

- Documented and tested migration path from Terraform Community edition to TFE
- Co-developed and co-supported Terraform Enterprise Collection



Automation workflows initiated in Terraform Enterprise

- Co-developed and co-supported enhancements to existing AAP provider
- Enhanced integration leveraging Terraform



SECRETS MANAGEMENT MIT **VAULT**

**CHANGED THE
SERVICE ACCOUNT PASSWORD**

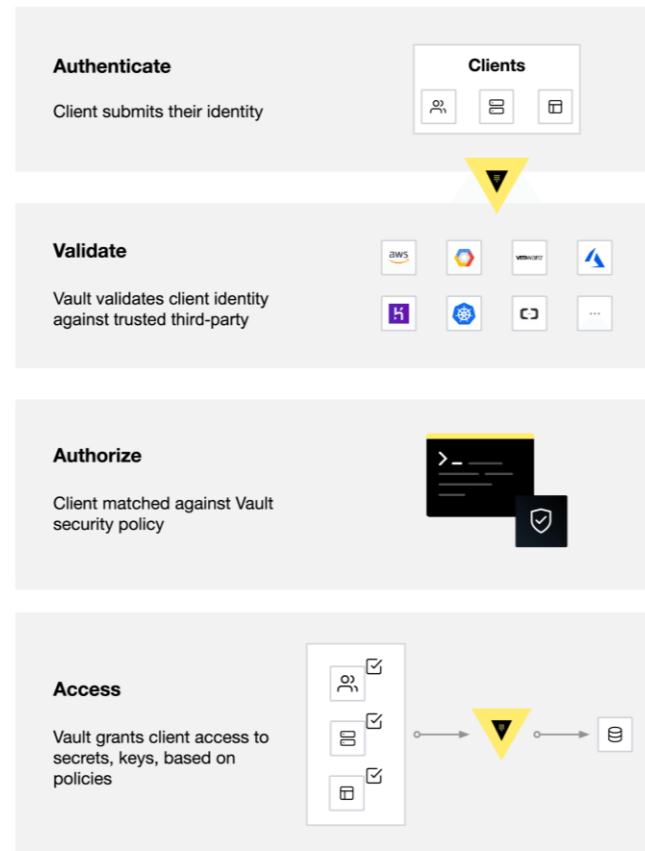


MANUALLY

imgflip.com

ÜBERSICHT

- Zentrales Secrets Management für
 - Statisch
 - Dynamisch
 - Verschlüsselung
 - Widerruf
 - → deckt den gesamten Lifecycle ab
- Verwaltung mittels
 - API
 - CLI
 - GUI
- Identitätsbasierend
 - Mensch vs Maschine

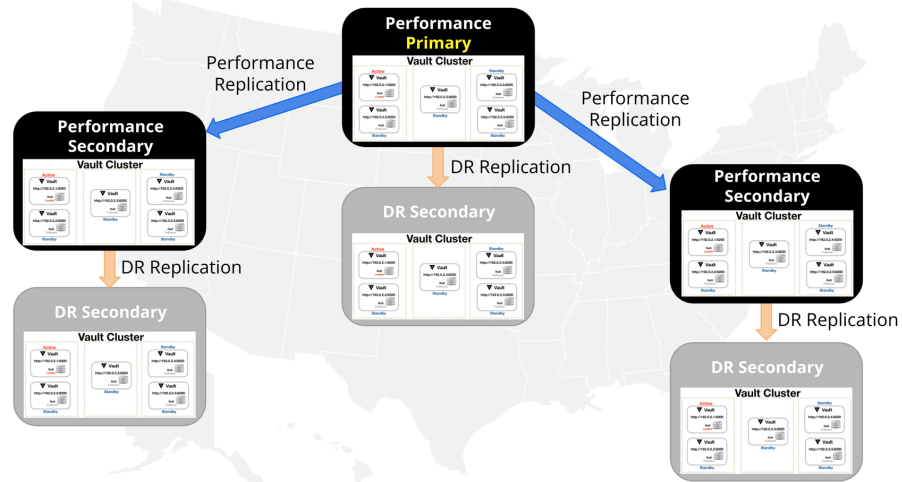


ENTERPRISE – EINIGE FEATURES

- Long Term Support (LTS) Versionen
- Namespaces
 - Tenants = mehrere virtuelle Vaults
- Zusätzliche Secret Engines
 - KMIP
 - Key Management
 - Transform
- Secret Sync
 - One-Way Synchronisierung für KVv2 Secrets (statische Secrets) nach
 - Azure Key Vault
 - AWS Secret Manager
 - GCP Secret Manager
 - GitHub

ENTERPRISE – EINIGE FEATURES

- Erweitertes RBAC Modell
 - Control Groups
 - Sentinel Policies
- Performance Standby Nodes
- Performance Replication und Disaster Recovery



WAS GIBT ES NEUES SEIT VERSION \geq 1.18?

- Automated Root Rotation
 - Für dynamic Secrets zB LDAP oder Datenbanken
 - mit Schedule oder TTL
- Protected secrets in Kubernetes with Vault Secrets Operator CSI driver
 - Secrets werden nicht in ETCD gespeichert
 - Ephemeral Volumes werden gemounted
- SPIFFE authentication
 - Authentifizierung mittels JWT oder x.509/Zertifikate
 - Versucht das “Secret Zero Problem” zu lösen
- Granular secret recovery
 - Individuelle Secrets und Konfigurationen können wiederhergestellt werden → kein vollständiger Snapshot Restore erforderlich

WAS GIBT ES NEUES SEIT VERSION ≥ 1.18 ?

- Isolate PKI workloads with constrained Certificate Authorities
 - zusätzliche Möglichkeiten für Limitierung einer CA
 - Use Cases zB erweiterte Einschränkung für Domains, Private Keys Speicherung auf einem HSM
- PKI SCEP Server
 - Standard SCEP Clients können Zertifikate anfordern
 - keine Kenntnisse der Vault-API erforderlich
- Experimental Post-quantum cryptography (PQC) support in Transit
 - PQC signatures mit ML-DSA
 - PQC signatures mit SLH-DSA



APPLICATION SECURITY

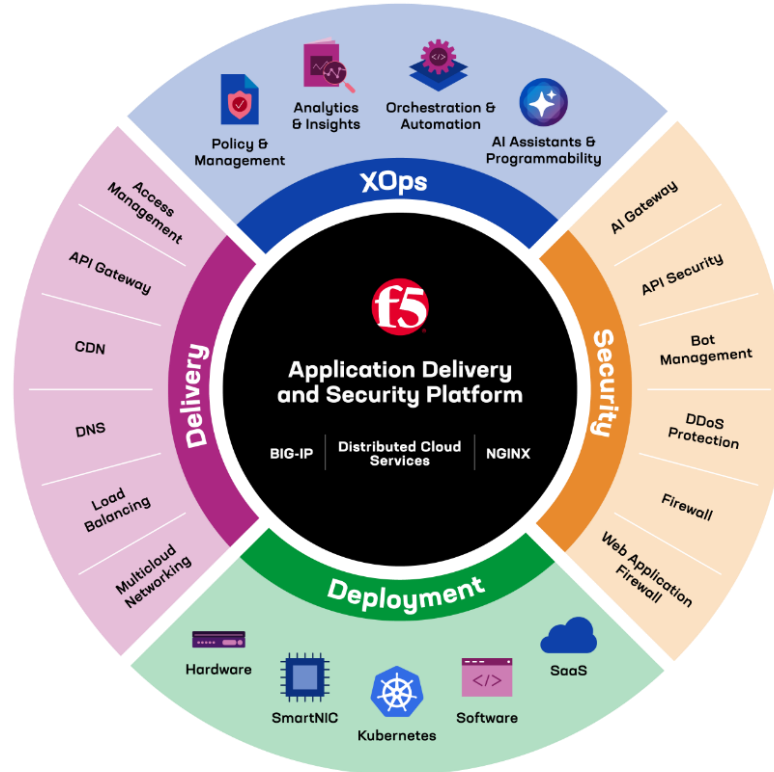
Christoph Langer



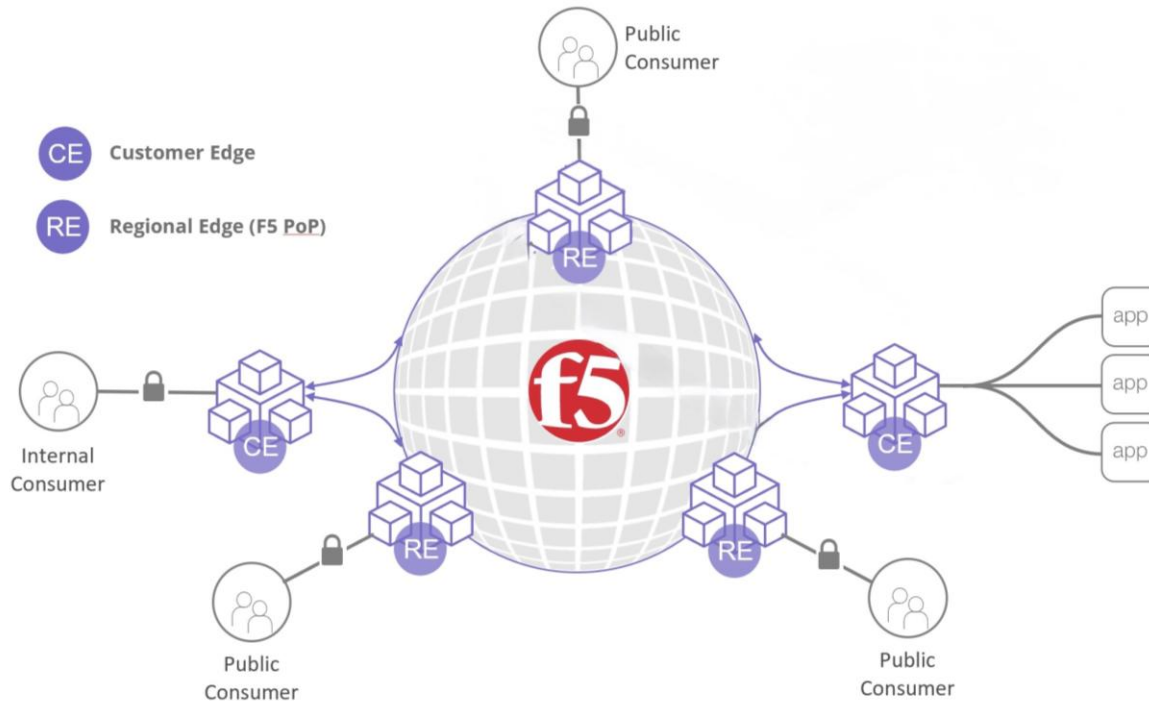
F5

APPLICATION DELIVERY AND SECURITY PLATFORM

F5 ADSP OVERVIEW

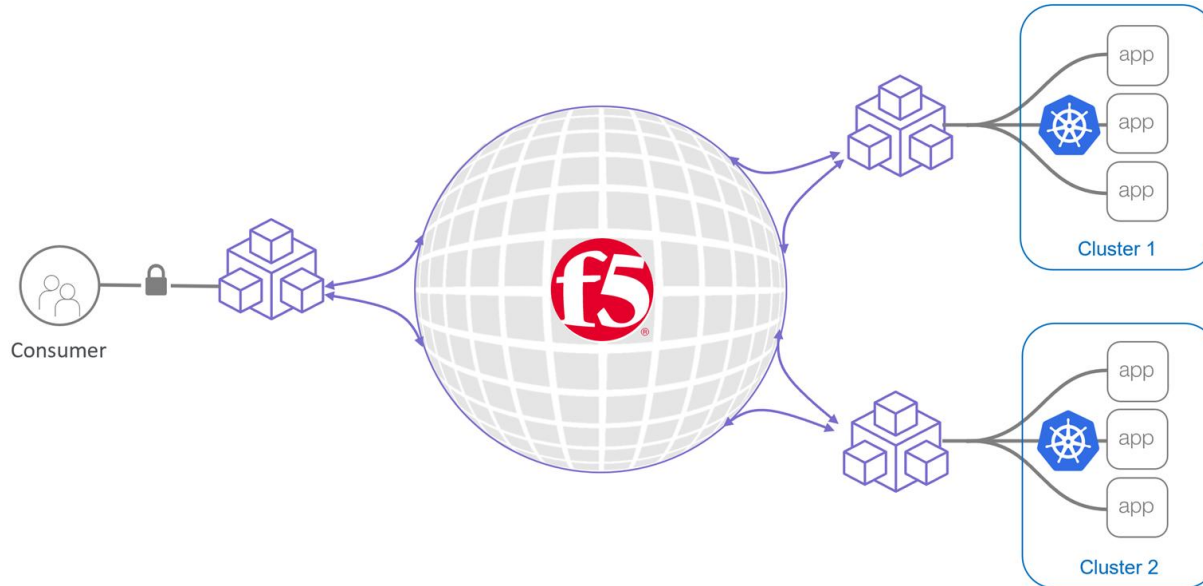


F5 DISTRIBUTED CLOUD (XC) OVERVIEW



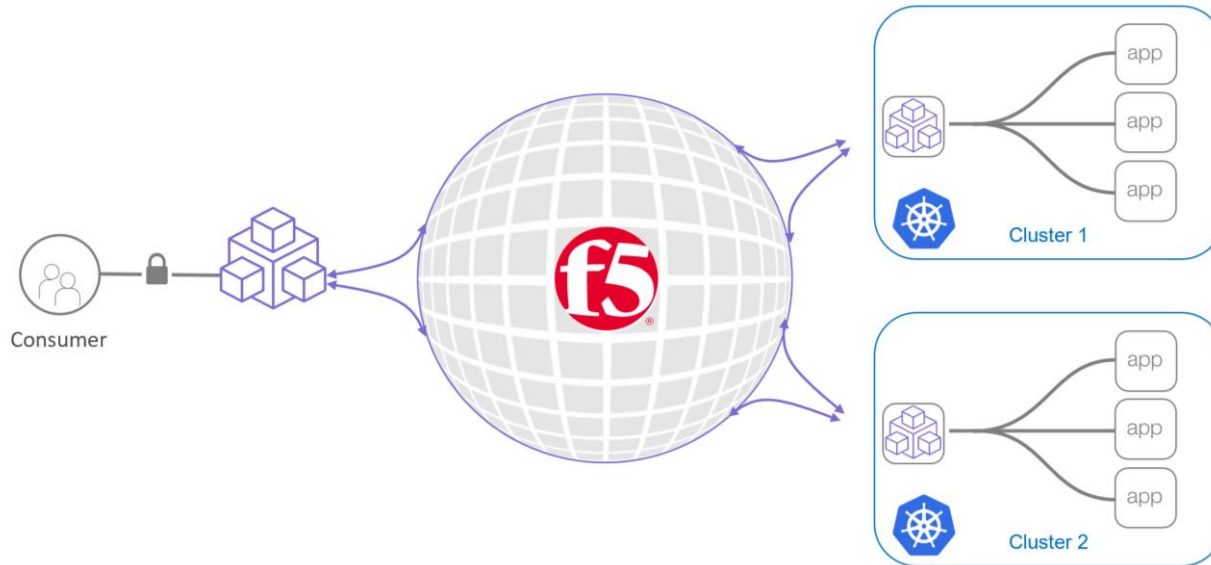
F5 DISTRIBUTED CLOUD (XC) K8S ARCHITECTURE 1

External Load Balancer (Secure K8s Gateway)



F5 DISTRIBUTED CLOUD (XC) K8S ARCHITECTURE 2

Run a site within a K8s cluster (K8s site type)





MEHR WISSEN? MEHR INSIGHTS!

NTS DATA DAY

WHERE DATA MEETS FUTURE

12. März 2026

ab 08:30

NTS Office Wien

7. Stock

Trabrennstraße 2b

1020 Wien

JETZT ANMELDEN:





FRAGEN?



**RELAX,
WE CARE**