F5 Distributed Cloud Edge Solutions

A cloud continuum—from centralized cloud to network and edge—that drives business and autonomous transformation

KEY HIGHLIGHTS

- SaaS-based service delivery across a fleet of distributed edge environments

- Application identity, access control, secrets and keys management for zero-trust security at the edge

- Global backbone for high performance connectivity across edge and cloud

- Consistent services across heterogeneous edge environments simplifies operations

Edge computing is providing the opportunity to transform multiple industries, offering localized data analysis, artificial intelligence, process automation, and other digital capabilities. This is in contrast to current cloud-based infrastructure offerings that rely on a centralized architecture. The drawback of centralized architectures is they cannot cost-effectively support the ultra-low latency and extreme throughput demanded by localized workloads at the edge.

Instead, cloud capabilities must be localized at the source of business data to form an edge cloud, which places computing, storage and networking resources where the data is—at the edge of the network. An edge cloud will be a fundamental asset for innovation, opening new market opportunities and transforming business processes. Organizations need to start preparing and implementing edge clouds now to dynamically address and grow new business opportunities.

F5® Distributed Cloud edge solutions provide a secure and distributed cloud environment to deploy, secure and operate applications across diverse edge environments. Key capabilities include application and infrastructure management as well as secure connectivity across edge sites and public clouds. F5 Distributed Cloud App Stack is a cloud-native software stack that integrates compute, storage, networking and security for customers to manage their distributed edge workloads. F5 Distributed Cloud Mesh is a secure connectivity service that seamlessly connects edge sites to each other and to public cloud providers with zero-trust and application-level security.
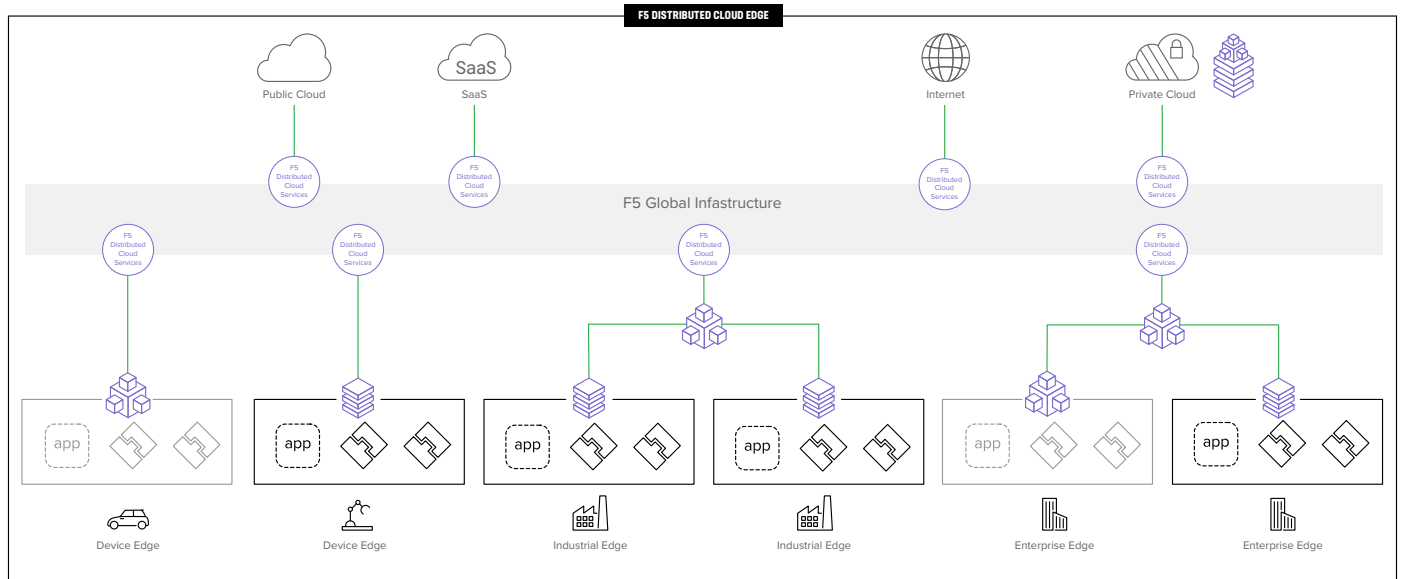

Figure 1: F5 Distributed Cloud Services provide a distributed app gateway for centrally managed network and security services.

Challenges Addressed

1. Complexity introduced by monitoring heterogeneous edge environments and operating a fleet of distributed applications and data.

2. Managing policies and security profiles of distributed infrastructure, apps, and data at the edge of the network.

3. Delivery of reliable and high-performing connectivity across edge and multi-cloud.

Benefits

Simplification of Edge Fleet Management and Operations
SaaS-based deployment and lifecycle management of hardware and infrastructure software allows customers to focus on application software development.

Integrated Security from Edge to Cloud
Protect the fleet of edge infrastructure and apps from Internet vulnerabilities and physical tampering, to reduce downtime. Secure connectivity across cloud and edge enables improved productivity for DevOps and SRE.

Performance Optimization and Cost Reduction
SaaS-based delivery of platform services, coupled with a high-performance global network, significantly reduces the cost of deployment, operations, and application downtime at the edge.

Use Cases

SECURE GATEWAY FOR DISTRIBUTED EDGE

Distributed Cloud Mesh at the edge consolidates network routing, application load balancing, API gateway, and security services with centralized policy, operations, and observability. F5's global network adds high-performance and secure connectivity across edge and cloud, reducing fleet complexity.
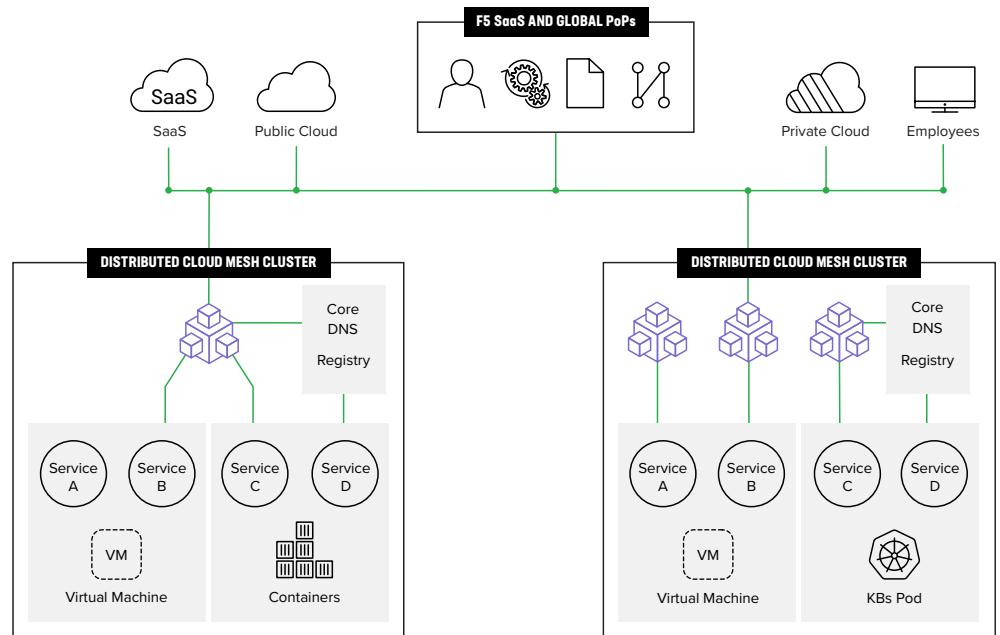

Figure 2: Distributed Cloud Mesh consolidates network services with centralized operations.

DISTRIBUTED APPLICATION AND FLEET MANAGEMENT

Distributed Cloud App Stack consolidates compute, storage, and network services with centralized operations of a fleet of distributed nodes. Kubernetes API automates application deployment, scaling, security, and operations across the fleet without the burden of operating multiple individual clusters.
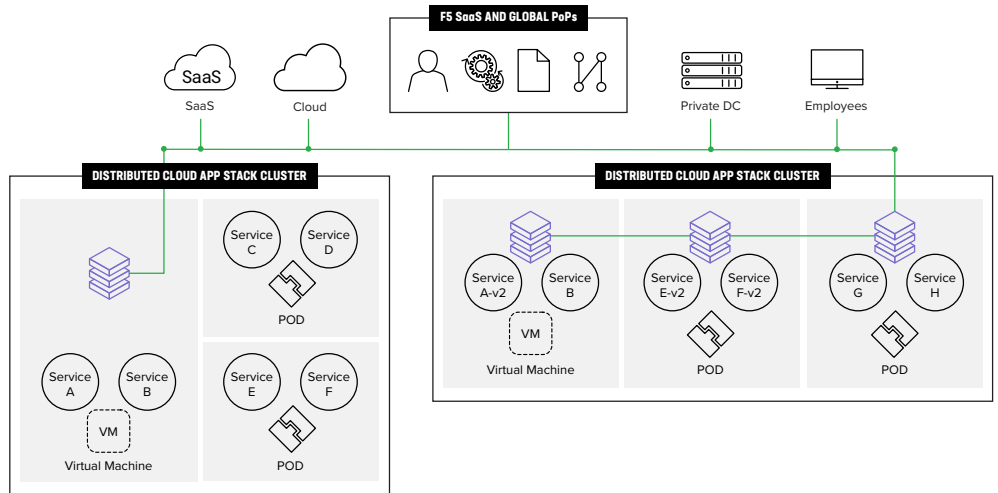

Figure 3: Distributed Cloud App Stack simplifies operations of distributed nodes.

About F5 Distributed Cloud Services

F5 Distributed Cloud Services are SaaS-based security, networking, and application management services that can be deployed across multi-cloud, on-premises, and edge locations.

Learn more about F5 Distributed Cloud edge solutions
Visit: f5.com
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