Enabling Public Cloud Interconnect Services
F5 Application Connector

PRESENTED BY:
Crystal Bong, Product Manager
These common services are hard to replicate, control, and do not run cheaply inside on-demand clouds.

Creation of a “Cloud Interconnect” is a way to equally and equitably service SaaS and Public cloud with the same services common to the Enterprise Data Center.
F5 Cloud Vision

Freedom
To deploy any application, anywhere, with consistent application services and security

Private Cloud
Consistent Policies
Cloud Freedom
Fastest Time to Service
Visibility
Lowest TCO

Managed Hosting

Traditional Data Center

Interconnect
/Public Cloud

Interconnect
/Public Cloud

SaaS Apps

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F5 in the Public Cloud

2017—towards full solution integration

Presence

- Cloud Compatible
- Standalone BIG-IP
- Networking
- Licensing

Integrations

- Cloud Marketplace
- Security Integration
- Performance
- High Availability

Solutions

- Cloud Launcher
- Cloud Templates
- Security Services
- High Availability

- Cloud Templates
- Full Automation
- Cloud Migration
- Easy Button!

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Cloud Interconnect—Equinix Partnership

Over 97% of all IaaS Compute Capacity is available for direct connectivity through Equinix Cloud Exchange

- Equinix - Market Leader
- Scale and Choice
- Lowest latency
- Highest security
- Performance SLAs
- Verizon Asset Acquisition
F5 Application Connector
Cloud Interconnect for App Services Insertion

Only consistent services insertion across cloud providers

F5 Application Connector (AC)

- Automatically discover public cloud-hosted apps in AWS/Azure
- Securely integrate all public clouds to Interconnect or DC
- Simplify app delivery and security services deployments
- Have consistent policies and configs across public clouds
- Reduce footprint by obfuscation / key mgmt.

Key Benefits

- Migrate with confidence
- Preserves app services control
- Enables cloud freedom, avoiding lock-in
- Visibility across all apps
Interconnect Provider

Gain critical visibility and deeper intelligence to the traffic on your network and in the cloud that many traditional defenses leave exposed.

SSL

Mitigate risk by providing dynamic, centralized and adaptive access control and cloud federation for all applications anywhere.

Consistent App Services Across Clouds

Availability

Achieve reliable and optimized applications. Extensible and flexible application services with programmability to manage physical, virtual, and cloud.

SSL

Gain critical visibility and deeper intelligence to the traffic on your network and in the cloud that many traditional defenses leave exposed.

DDoS

Protect your networks with a high value, easy to deploy and manage DDoS solution that guards against aggressive and targeted attacks.

WAF

Protect your apps, and the data behind them, from evasive, targeted attacks with an industry-leading WAF offering the highest level of security.

Identity Federation

Mitigate risk by providing dynamic, centralized and adaptive access control and cloud federation for all applications anywhere.
Cloud Interconnect – Application Connector Features

Application Connector Service Center on BIG-IP:
• Delivered as iAppsLX package
• Application Service Management
• Real-time Logging and Statistics
• Multi-Path Workload Discovery
• Health Monitoring
• Active/Standby HA Support
• Touchless Recoverability
• Service API

Application Connector Proxy in the Cloud:
• Delivered as Docker container
• Secure TLS ECC Encryption
• AWS Workload Auto Discovery
• Manual Workload Definition and State Management
• Touchless Recoverability
• Service API
Let’s Meet In the Middle

• Independent of network configuration
  - Deals gracefully with overlapping IP space

• Allows sensitive encryption keys to be stored outside the cloud environment
  - Can leave “serverssl none” towards the node and traffic is protected until it gets into the environment

• Hides original environment entirely from clients
  - Does not require mapping to public IPs in the CSP
  - Significantly reduces potential attack surface

• Keeps BIG-IP configuration automatically notified of changes within the environment

Encryption Keys stored centrally (not in the cloud instances)

Workload nodes can be auto discovered in AWS by the proxy instance. Manual integration for all clouds.
F5 Application Connector: Four Use Case Examples

Protect Your Cloud Apps from Attack
Maximize Your Protection Investments
Lift and shift apps with confidence without sacrificing security configurations
Leverage app protection and extend to public cloud workloads
Lower your attack surface - no public IP addresses in the cloud

Control Cloud Access
Consolidate and Automate Access Control
Insert public cloud access control at cloud interconnect
Enable SSO with OAuth, and SAML insertion across clouds
All policies managed in one location for all apps

Improve Public Cloud Encryption
Simplify and Centralize SSL
Manage public cloud app encryption at cloud interconnect
Avoids cloud provider lock-in and preserves your control
Reduce footprint by obfuscation / key mgmt.

Auto-Discover Public Cloud Workloads
Reduce App Sprawl
Auto-search public clouds to reveal app deployments
Securely connect to BIG-IP and enable app services insertion
Deliver approved app services to multiple public clouds
**Challenge:** Security is the #1 concern when migrating to cloud.
  • Weak security leads to increased costs, or worse, app outages.

**Solution:** App Connector with ASM protects your data path by blocking attacks; only clean traffic is forwarded.

Lift and shift apps confidently without sacrificing best practice security configurations.
Auto-Discover Your Public Cloud App IPs

**Challenge:** App sprawl increases blind spots and unknown deployments.
- Added app footprints leads to increased IT workloads and higher risk exposure.

**Solution:** App Connector auto-discovers Cloud app IPs/nodes in AWS and Azure, and can help with app integration across all clouds.

Understand where all your apps are in AWS and Azure public cloud and provide consistent services.
Cloud Interconnect
• App delivery deployed within interconnect provider facilities

Lift and Shift
• Traditional data centers with app delivery services to workloads in cloud

Born in Cloud
• Virtual app delivery within a services VPC
Customer Story
Challenge:
- Govt agency migrating to AWS and Azure in an interconnection point
- Large F5 customer with app delivery and security services deployed

Benefits of Application Connector:
- Seen as a cloud interconnection bridge technology
- Focus on application migration without the stress of handling service deployment

“The advantage they see in App Connector is the reduction of the complexity of having to create the F5 services they’re used to, in the cloud environment.”

-F5 Account Manager
Ordering and Services
Simplified Ordering Across All Platforms

- No licensing required to run the F5 Application Connector Proxy in the Public Cloud or F5 Application Connector Services Center on BIG-IP
- Licensing is based per BIG-IP appliance/VE based on number of F5 Application Connector Proxy instances connected

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Global Services:
With you throughout the solution lifecycle

Optimize
Maximize performance, health, security
- Proactive Assessments and Integration
- iHealth / AskF5 / DevCentral

Architect
Design for best-practices deployments
- Solution Definition Workshops
- Design and Assessments

Maintain
Ensure continued availability
- Upgrades and Expert Services
- World-class Support
- Premium Plus and Enhanced Services

Implement
Deploy quickly and optimally
- Installations and Migrations
- Web and Onsite Training

Learn more about F5 Support: https://f5.com/support
Enable Interconnect App Services

- Automatically discover public cloud-hosted apps
- Securely integrates Cloud Interconnect and DC to public clouds
- Simplifies deploying Interconnect app services
- Consistent configurations on prem. and cloud
- Reduce footprint by obfuscation / key mgmt.

For more information, please contact us at f5.com
Thank You
WE MAKE APPS

FASTER. SMARTER. SAFER.