



# Make your App Faster, Smarter, Safer on Cisco ACI with F5

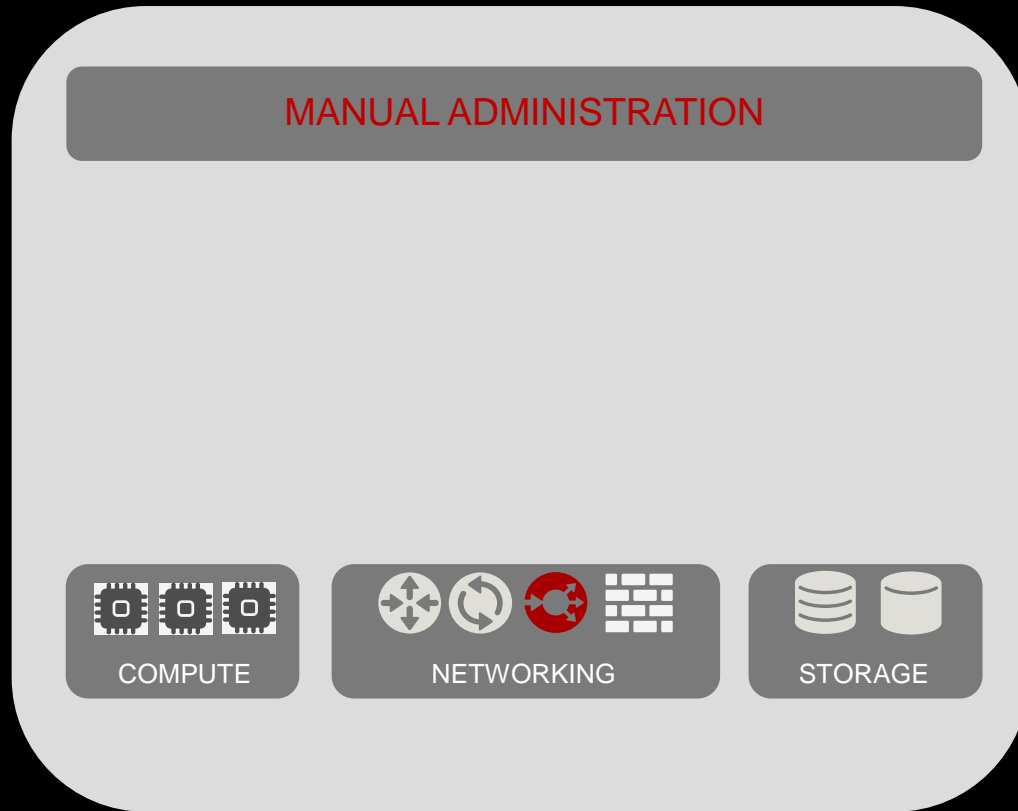
**PRESENTED BY:**

Wipawat Uppatumwichian

F5 Network Inc.

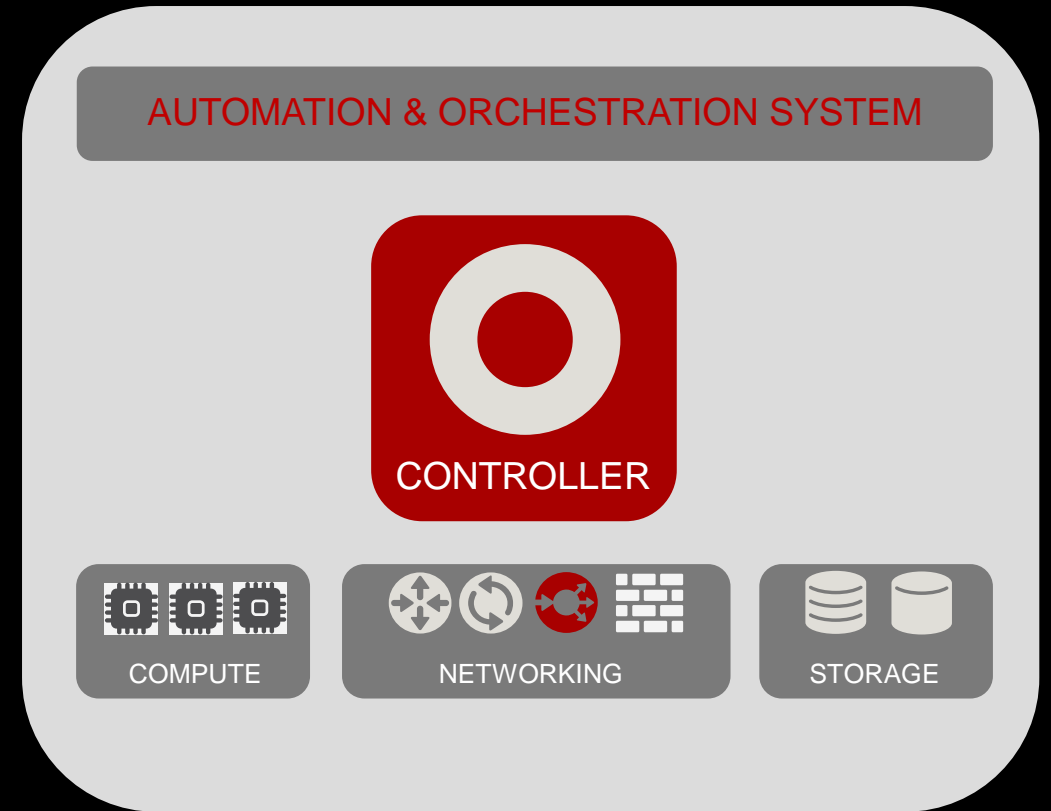


## TRADITIONAL DATA CENTER



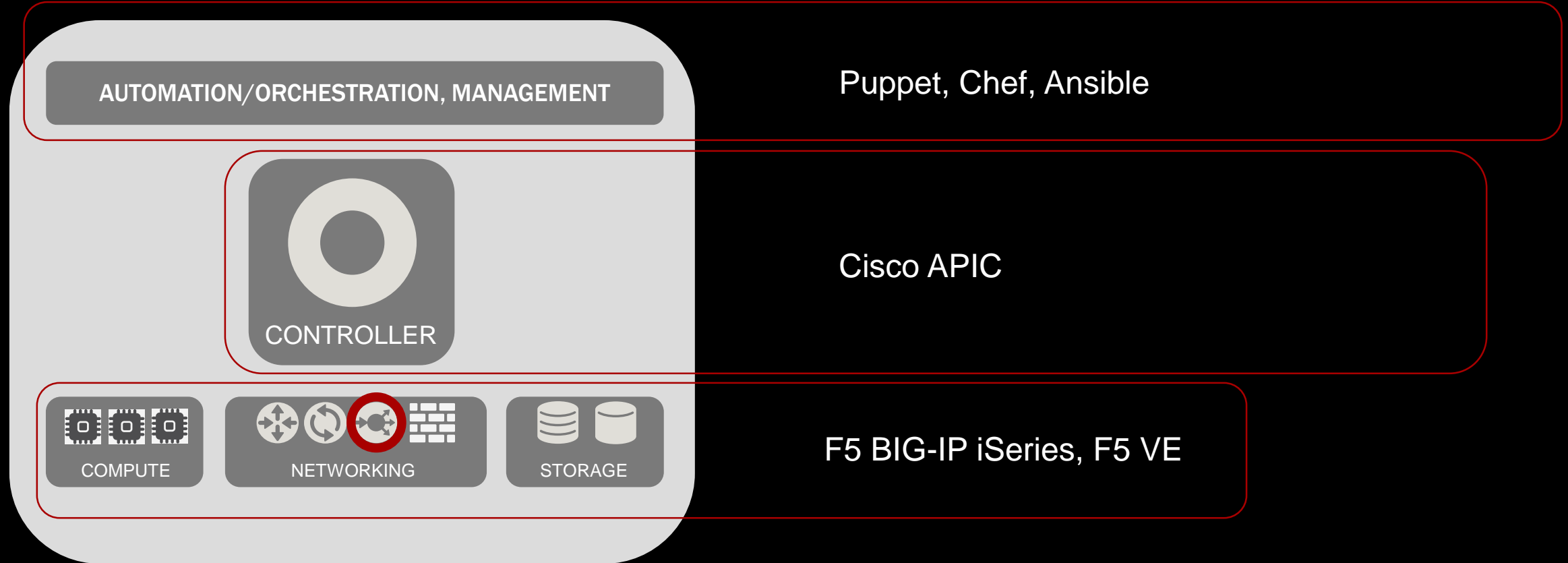
Manual administration of Compute, Networking and Storage

## PRIVATE CLOUD DATA CENTER



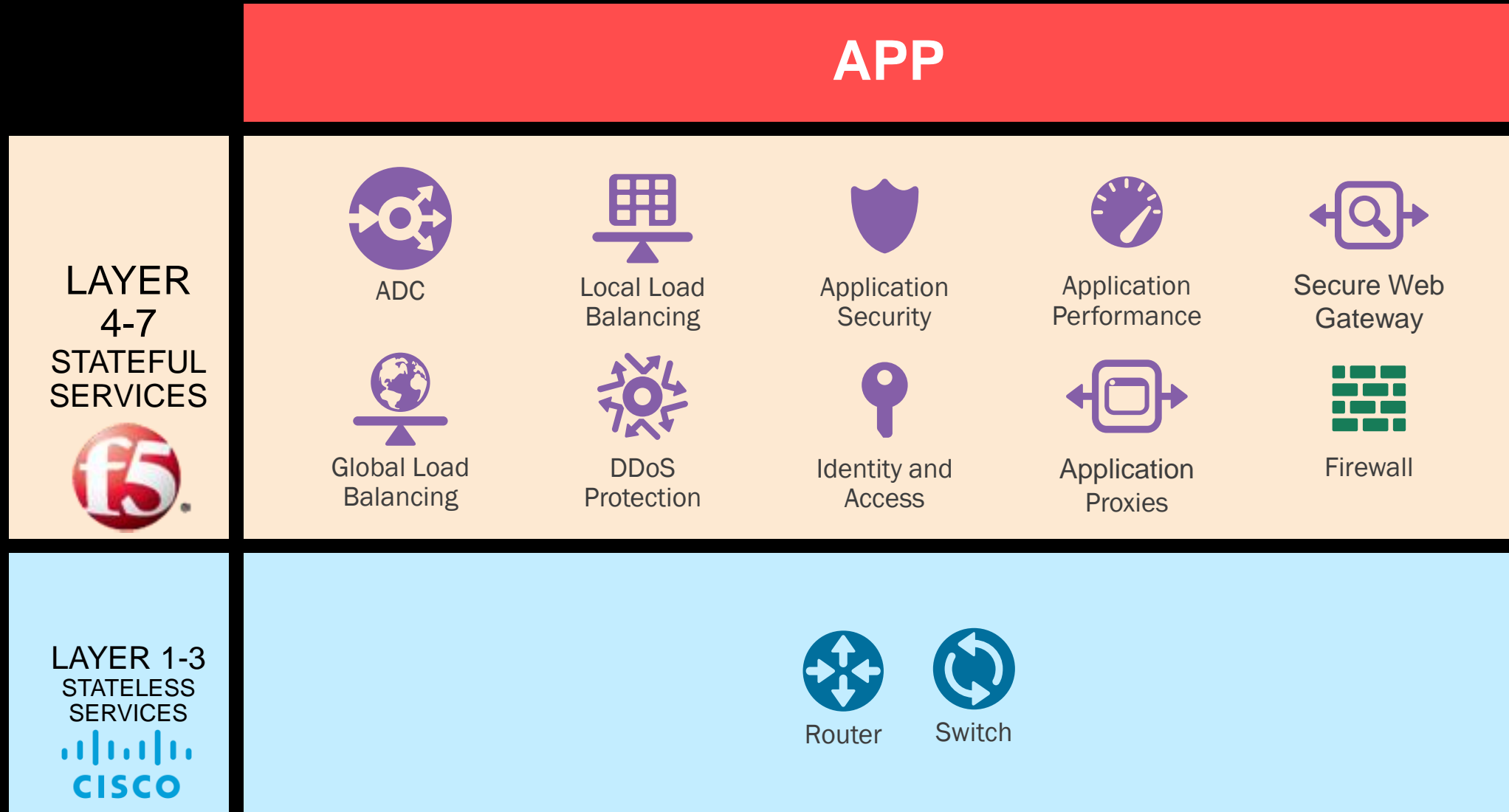
Automation and Orchestration systems driving Compute, Networking and Storage via Controllers

# DATA CENTER

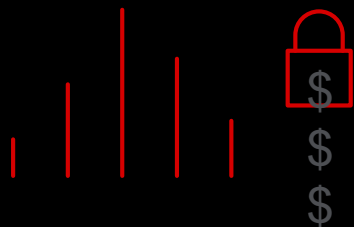


Automation and Orchestration systems driving Compute, Networking and Storage via Controllers

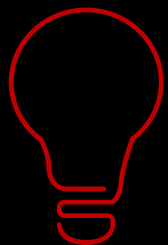
# App stacks



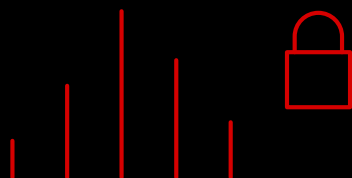
**Application/Digital  
Currency**



**OWASP TOP 10**

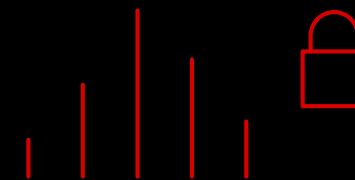


**Application Infrastructure  
Components**



# APPLICATION- CENTRIC THREATS

**Attacks Hidden In  
Encrypted Traffic**



**Multi-Layered  
Attack Strategies**



**The Rise of Botnets**





THE HUNT FOR IoT

# RISE OF THE THINGBOTS



**MILLIONS**  
OF ATTACKS

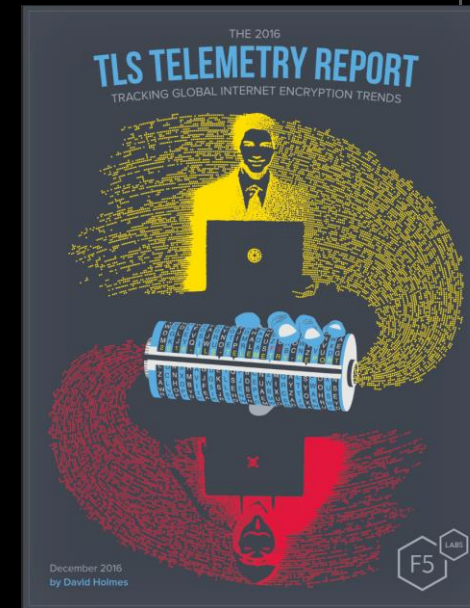
**BILLIONS**  
OF IoT DEVICES



PROTOCOL ADOPTION + POST QUANTUM COMPUTING

# ENCRYPTION TRENDS

- HTTPS requests over 51%
- TLS 1.2 preference high – SSL out
- Forward secrecy at 75%



# NEW ATTACK SURFACES

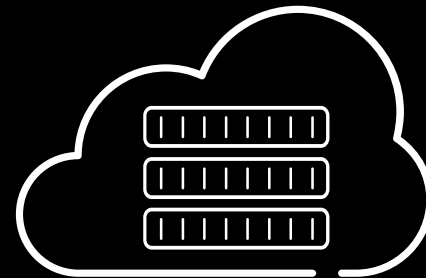
**PUBLIC  
CLOUDS**



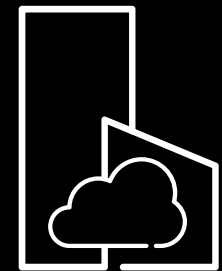
**CLOUD  
INTERCONNECT**



**CONTAINER  
ENVIRONMENTS**



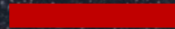
**PRIVATE  
CLOUDS**



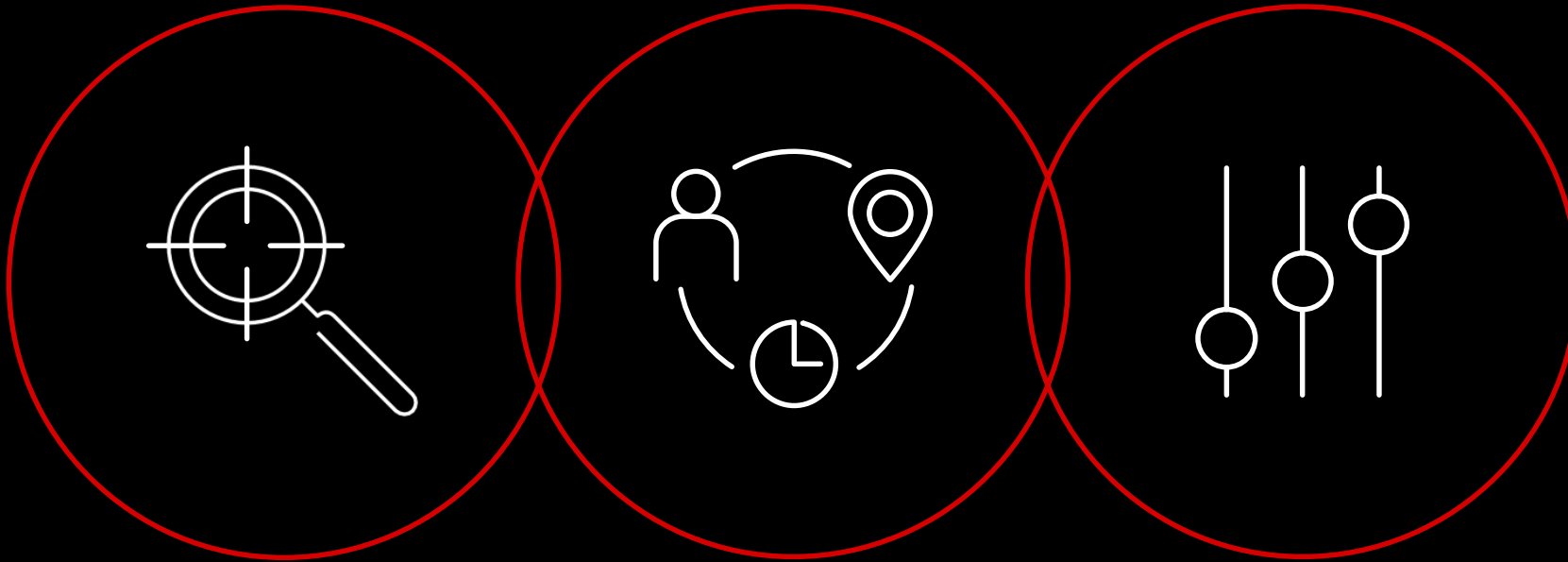
Our core belief:

# APPLICATIONS

ARE THE GATEWAY TO DATA



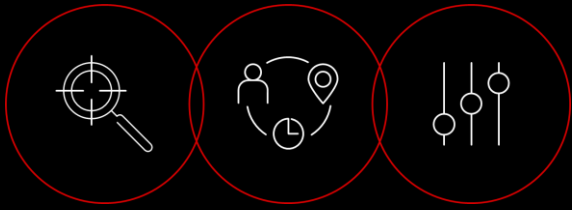
# The Foundation of App-Centric Protection



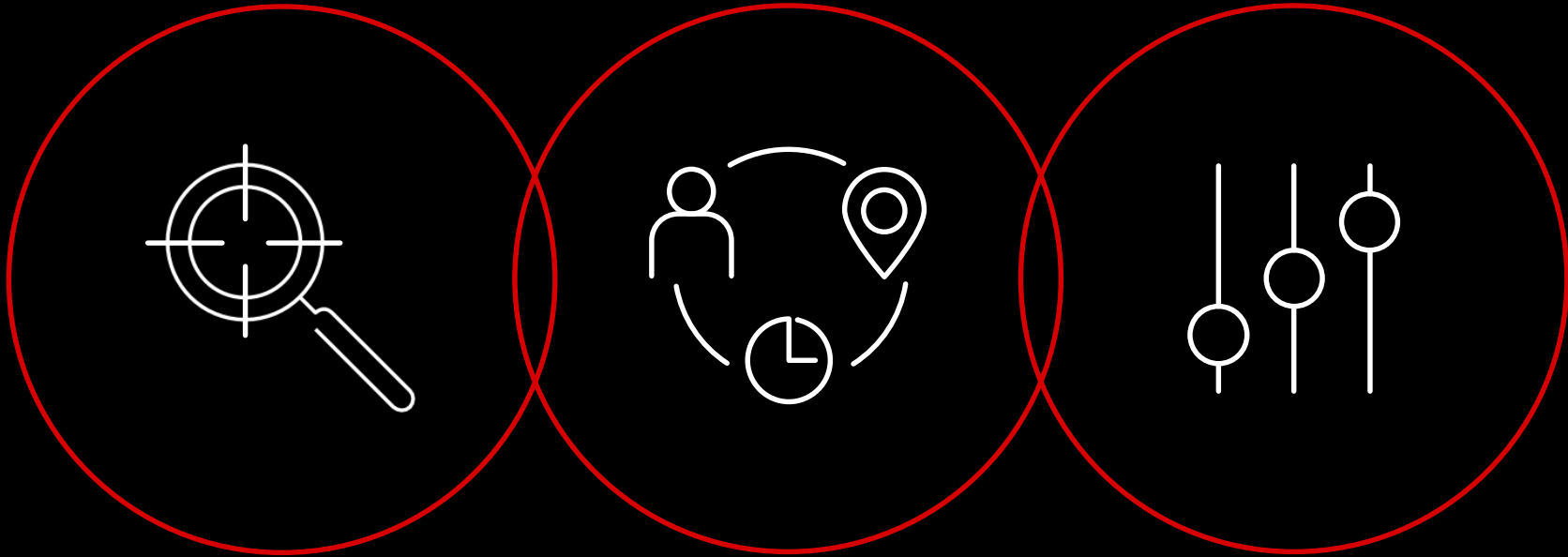
**VISIBILITY**

**CONTEXT &  
BEHAVIOR**

**CONTROL**



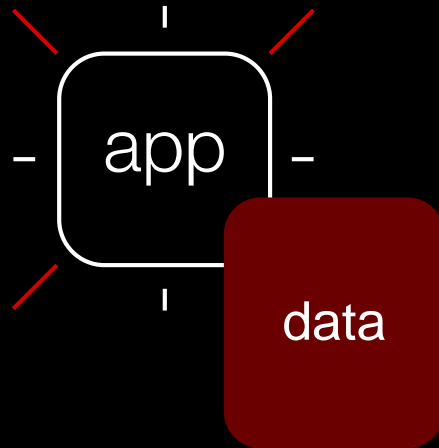
# VISIBILITY



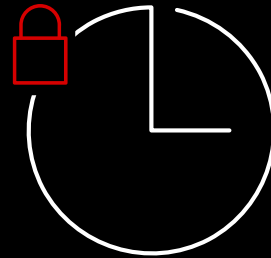


# VISIBILITY

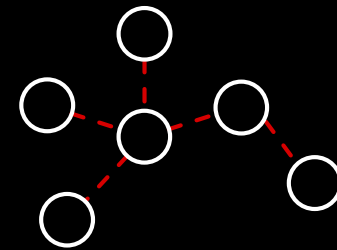
## APPLICATION AWARENESS

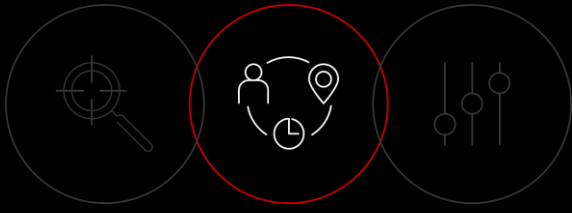


## REAL-TIME ENCRYPTION



## EXISTING SECURITY INVESTMENTS



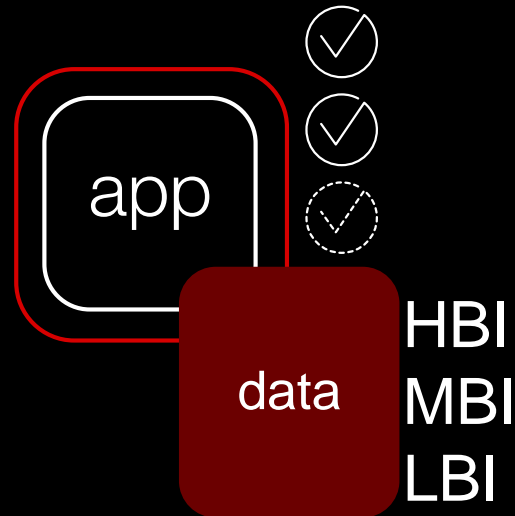


# CONTEXT & BEHAVIOR

## CONTEXT OF USER



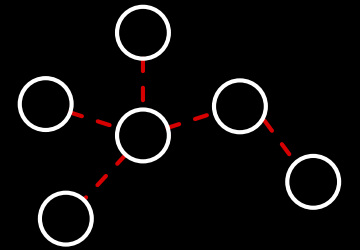
## CONTEXT OF APP

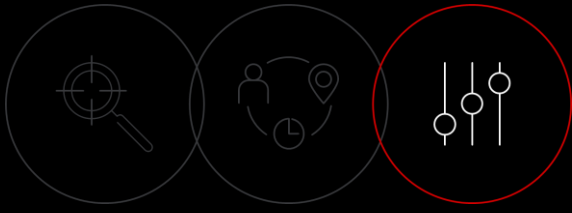


## CONTEXT OF ON-PREMISE /CLOUD



## CONTEXT OF THREATS/VULNERABILITIES





# CONTROL



**Anti-DDoS**



**Web Application Firewall**



**SSL/TLS Security**



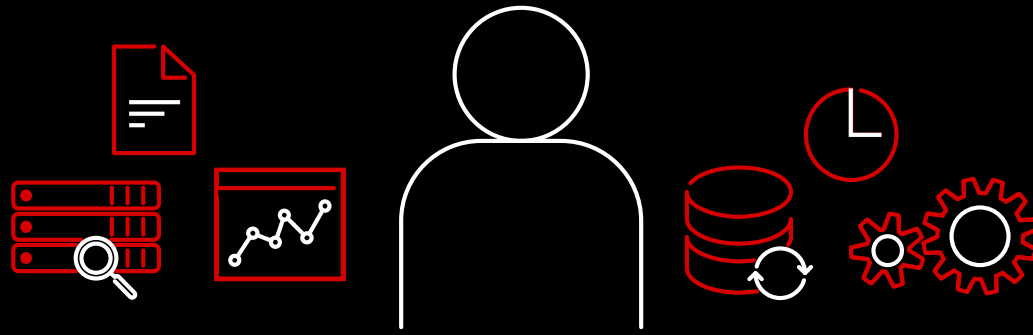
**Web Fraud Protections**

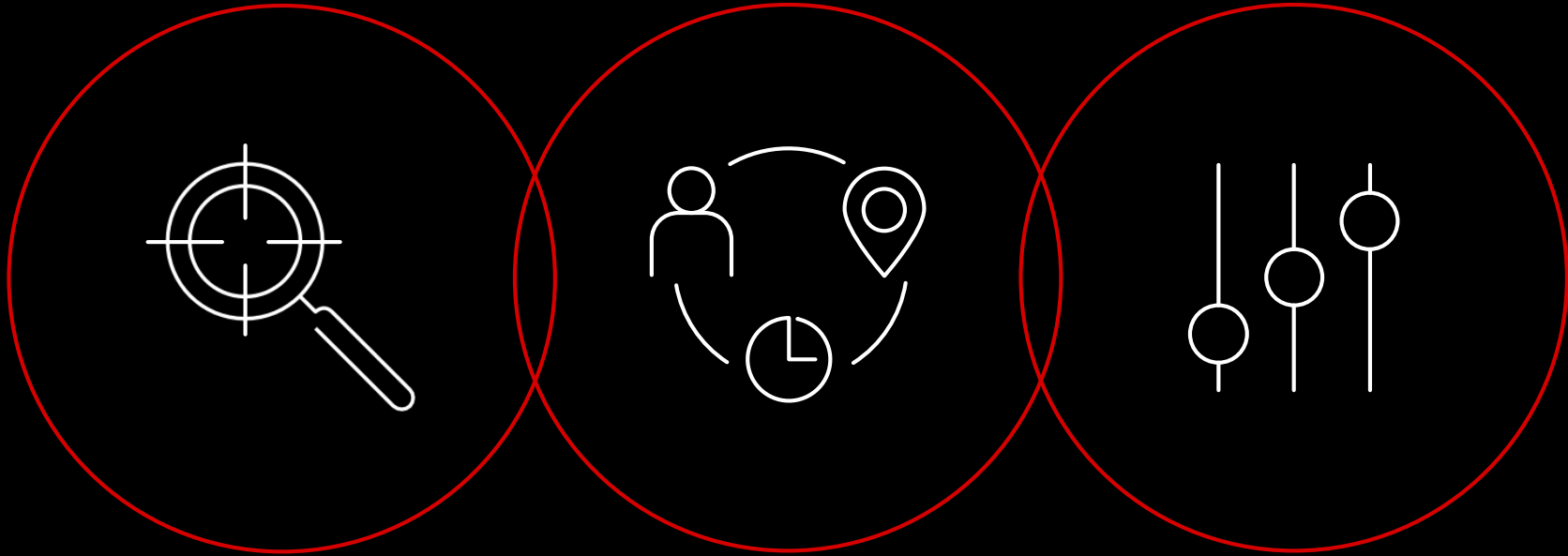
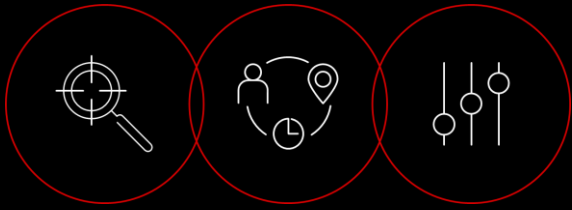


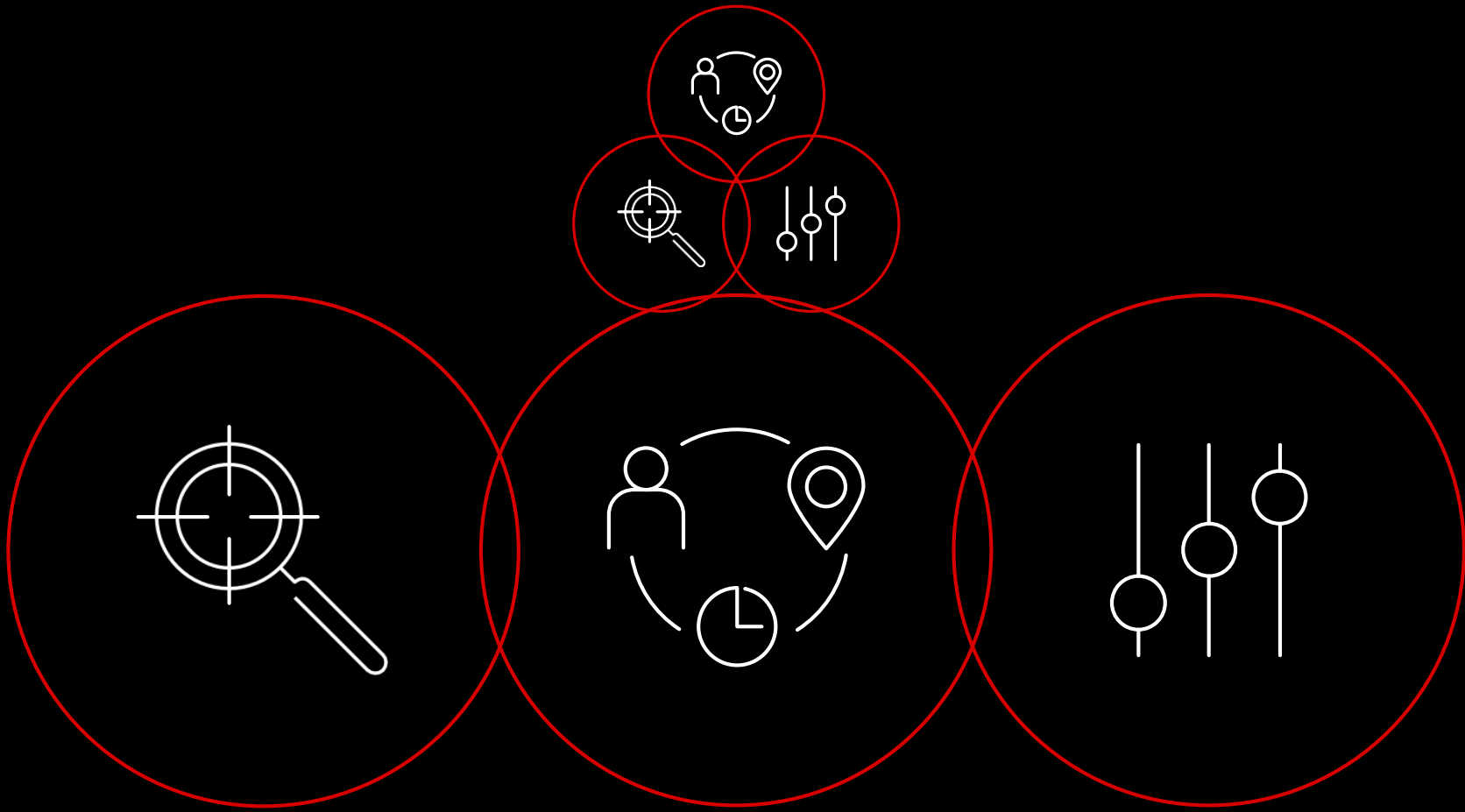
**DNS Security & Protection**

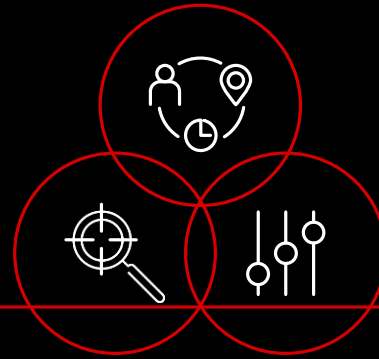


**Identity Federation & Access**



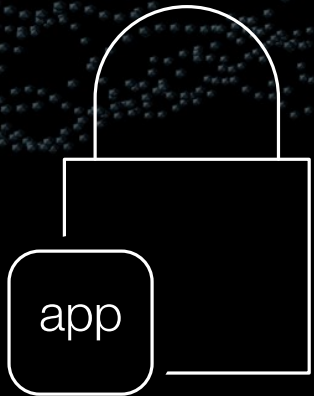






## APP PROTECTION

Anti-DDoS  
Application Firewall  
Bot and fraud protection



## CENTRALIZED SERVICES AND ANALYTICS

Full transparency  
Risk and behavioral analytics  
Centralized policies and management



## SUPPORT MULTI-CLOUD ARCHITECTURE

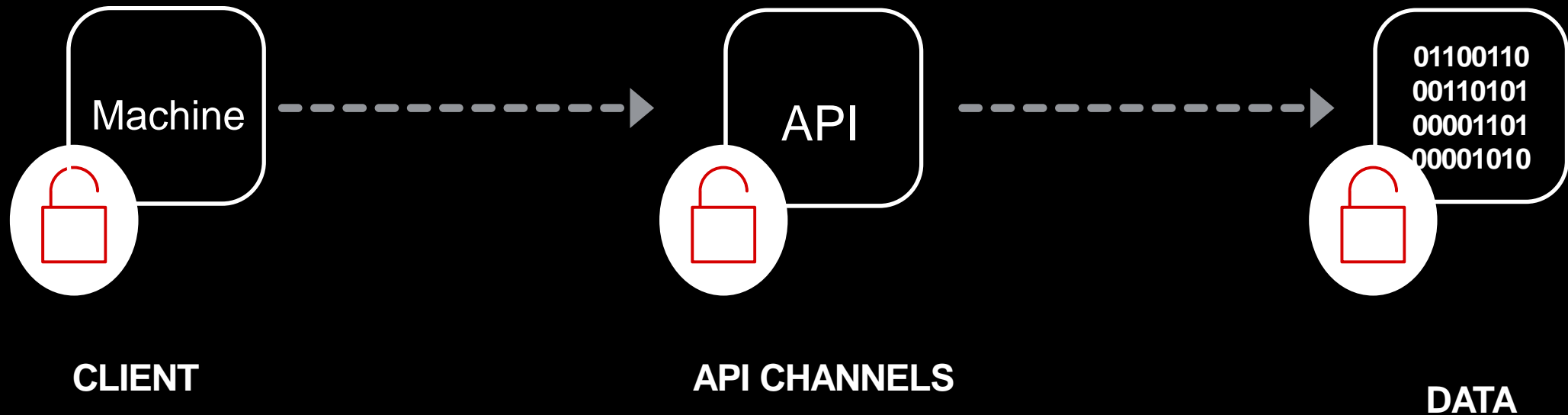
Independent from underlying technology  
Security policy synchronizations  
No cloud platform lock-in



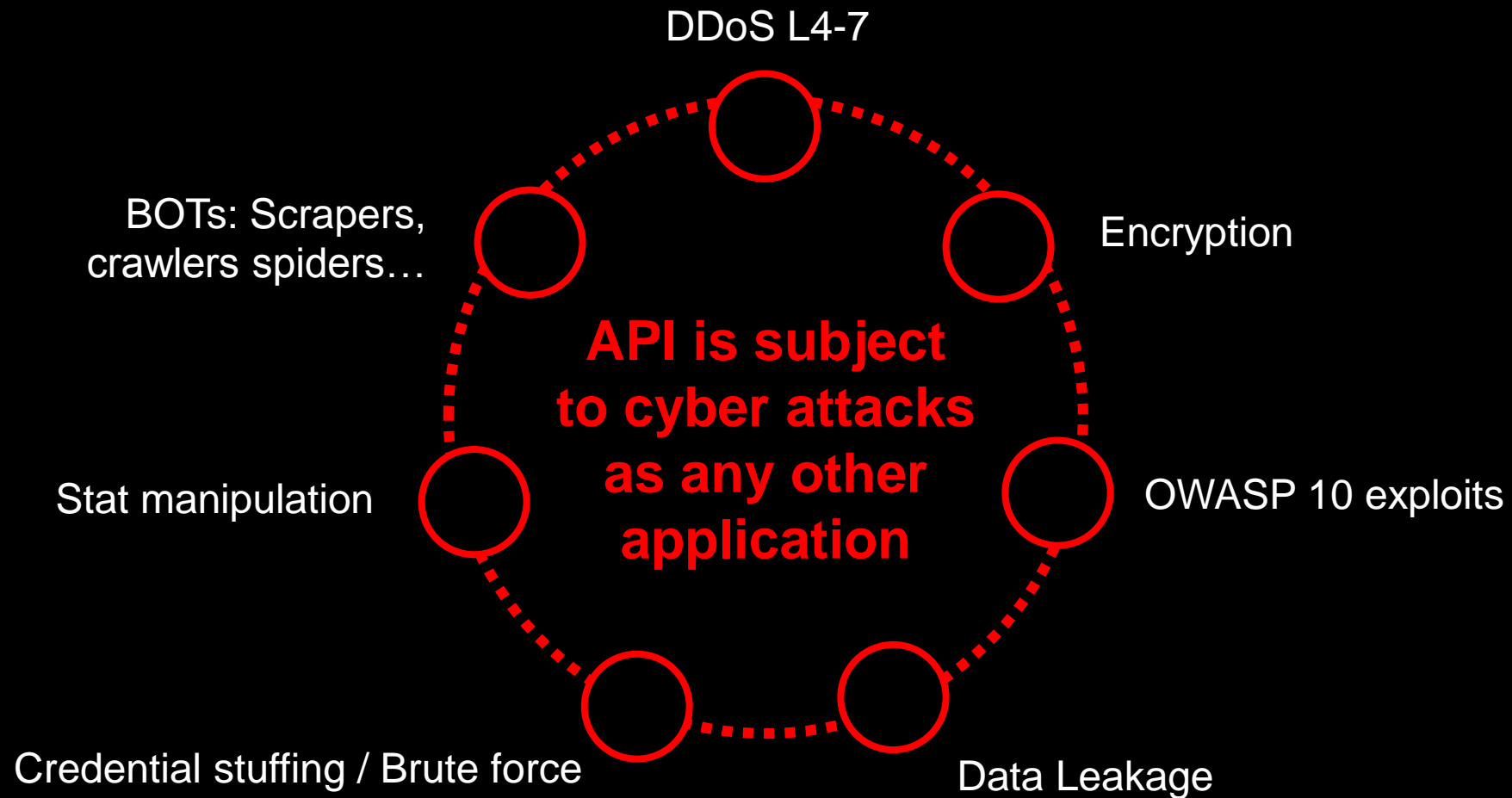
# API security

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# APIs Will Increase The Attack Surface



# API Security Challenges

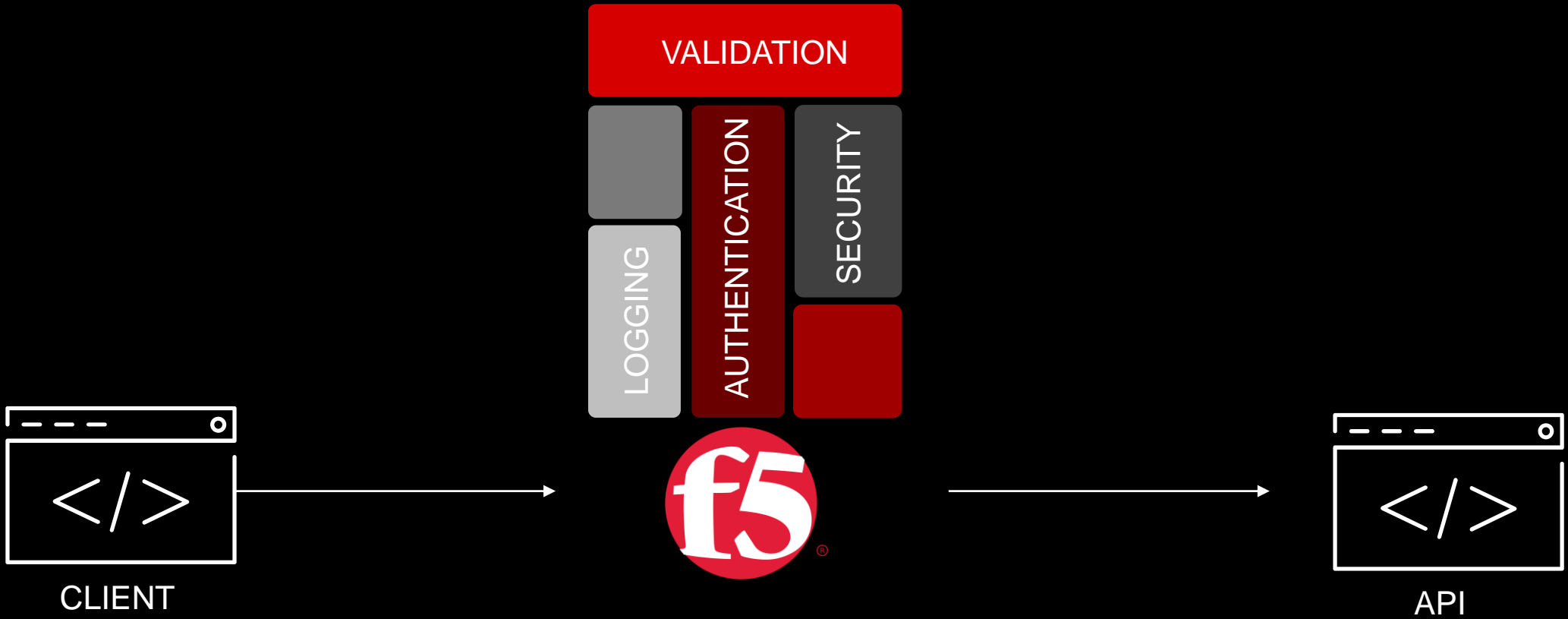


# WAAP – Web Application and API Protection

**Oct 2017 Gartner introduced new category for security solution**

The solution can be based on a cloud-native development, or the reuse of the vendor's existing WAF appliance solutions in the back end. The core feature of a WAAP is a traffic processing engine that includes:

WAF	Bot Mitigation	DDoS Protection	API Security
This is mainly focused on injection attacks (XSS and SQL injection) and applicationlevel denial of service (DoS).	This involves detection and mitigation, if necessary, of automated connections. (It also includes user credential abuse.)	This leverages multiple points of presence and large bandwidth provisioning. (Some vendors also offer dedicated scrubbing centers.)	This is often limited to XML, REST and JSON payload processing and API usage thresholds.



WE MAKE APPS



FASTER. SMARTER. SAFER.

