

Migrating to IPv6

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IT agility. Your way.

Agenda

- Introduction
 - Role of Application Delivery Controller
 - Basic Components of ADC
 - TMOS (BIG-IP) architecture
- F5 Support for IPv6
- Certification Effort



Introduction

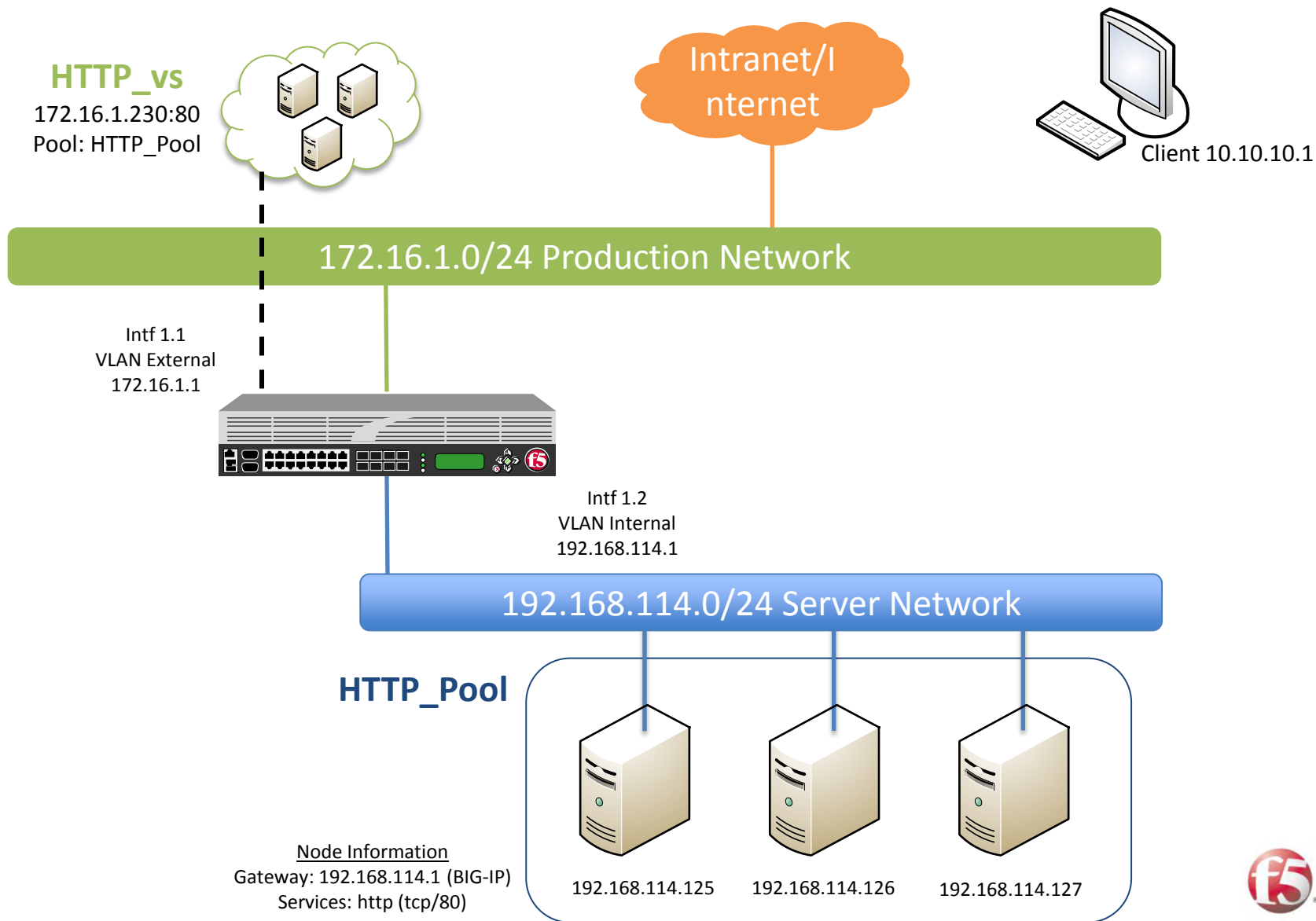


Role of Application Delivery Controller (ADC)

- Occupies strategic point of control within the network
- Evolved from simple load balancing
- Features beyond load balancing

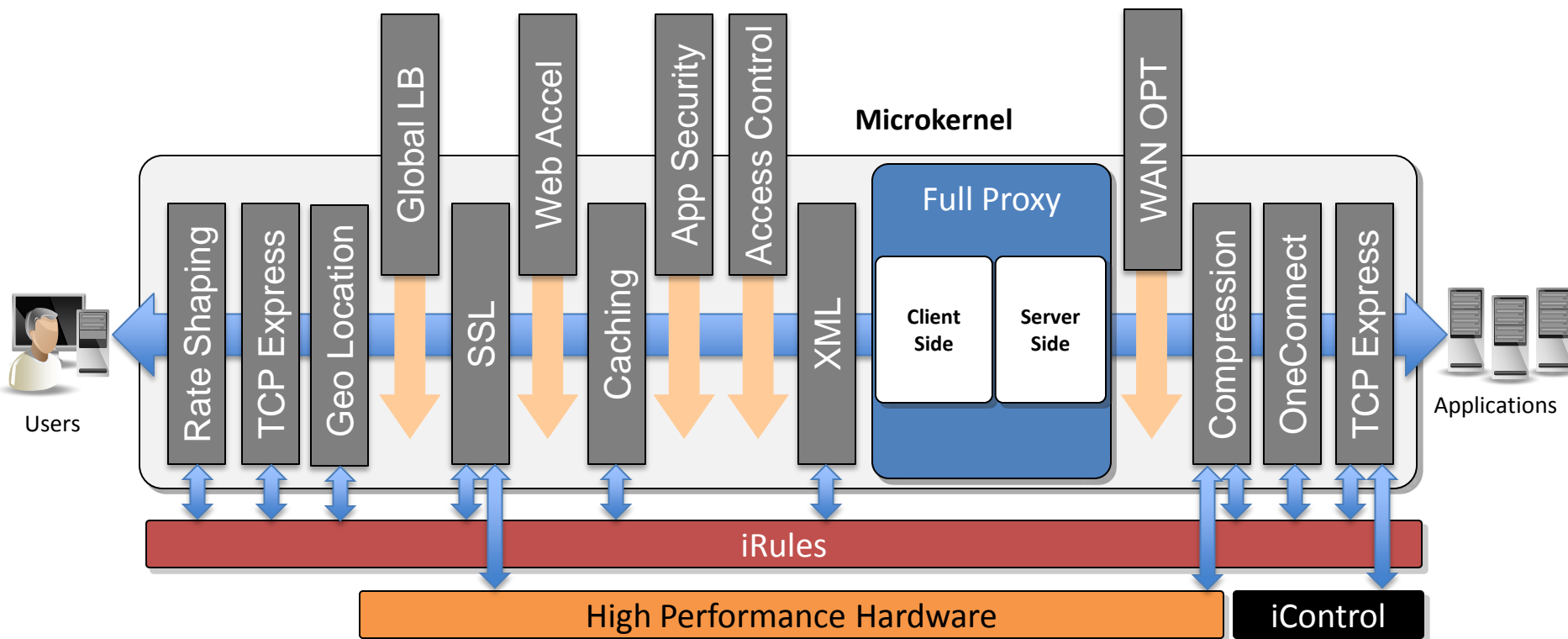


BIG-IP LTM Components



TMOS Architecture

A unified system for application delivery



F5 Support for IPv6



BIG-IP IPv6 Implementation

- First delivered in 2004.
- IPv6/IPv4 Dual-stack, and Proxy Translation
- IPv6 Addressable BIG-IP LTM Objects
 - Self IP's
 - Virtual Servers
 - Nodes
 - SNAT's
 - NAT
- BIG-IP GTM may contain both IPv6 and IPv4 virtual servers.
 - VIPs selected based on request type (A or AAAA/A6)

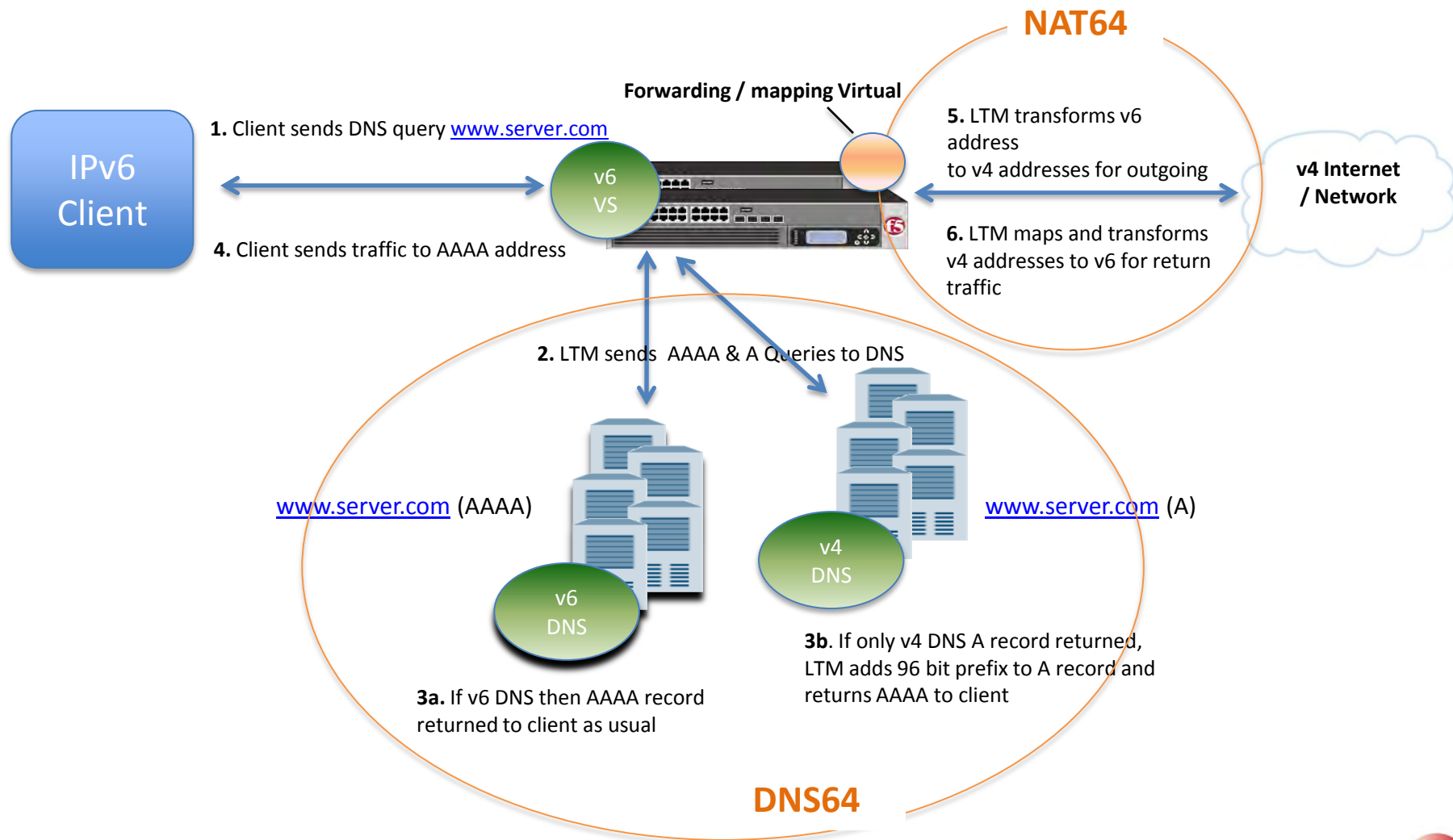


BIG-IP IPv6 Implementation

- BIG-IP NATs, SNATs, and Virtual Servers can automatically serve as gateways between IPv6 and IPv4 networks.
 - IPv6 VIP to IPv6 node
 - IPv6 VIP to IPv4 node
 - IPv4 VIP to IPv6 node
 - IPv4 VIP to IPv4 node
- Pool may contain both IPv6 and IPv4 nodes
- NAT/SNAT (PAT)
- IPv6 auto-configuration of down stream nodes
 - Neighbor Discovery Protocol for IPv6 (RFC 2461)
- Dynamic routing (ZebOS) supports IPv6



BIG-IP Providing NAT64 & DNS64 Gateway Function



IPv6 Notable Exceptions

- IPv6 IPsec is not currently supported
- Tunneling is not supported
- Mobile IPv6 is partially implemented, but lacks the “return routeability” feature set.
 - The return routeability capability requires a return routeability handshake between the mobile node and the correspondent node.
 - Unfortunately the messages involved in this handshake do not contain enough information for BIG-IP LTM to persist the two messages reliably to the same server



Certification Effort



Planned Certifications

- IPv6 Ready Certification
- USGv6 Certification
- JITC/TIC for UC-APL
- ICSA Enterprise Firewall
- FIPS 140-2 Level 2
- ICSA WAF
- ICSA SSL-TLS VPN
- NEBS
- EAL2+





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