

# SIMPLICITY, VELOCITY, SCALE: READY-TO-INSTALL NFV PACKAGED SOLUTIONS

Deployment and management of individual virtualized network functions (VNFs) has proven to be a significant challenge for Service Providers. To solve this problem, F5 has developed a set of unique prepackaged, preconfigured Network Function Virtualization (NFV) solutions that simplify your virtualized network. These ready-to-install solutions are able to automatically unpack and self-configure, saving time and ensuring application performance out of the box. The F5 NFV solutions include the new F5 Virtualized Network Functions Manager (VNFM) which delivers fully automated, end-to-end lifecycle management from service instantiation to auto-scaling and decommissioning.



#### **ACHIEVE YOUR BUSINESS OUTCOMES**

F5 NFV packaged solutions deliver an automated NFV solution with full lifecycle management providing you with greater business agility and accelerated new service deployment. These packages help you simplify network planning, sizing, and deployments with a unique capacitybased consumption model, and our use-before-buy model simplifies purchasing and reduces costs.

### **CONSUMPTION-BASED PROVISIONING**

F5 offers five NFV solutions—the F5 Gi Firewall VNF Service, F5 Gi LAN VNF Service, F5 DNS VNF Service, F5 DNS Security VNF Service, and F5 CGNAT VNF Service. These are delivered ready-to-install in 5, 10, and 50 Gbps increments or in 250k, 500k, or 2m query-per-second (QPS) increments. Our consumption-based model greatly simplifies network planning, sizing, and purchasing, and allows you to provision based on outcomes rather than instance licenses. Our use-before-buy model helps you reduce overprovisioning, efficiently move capacity from one datacenter to another, and quickly spin up, spin down, or add new resources.

| FEATURE SET  | GI<br>Firewall<br>Solution | GI LAN<br>Solution | DNS<br>Solution | DNS<br>Security<br>Solution | CGNAT<br>Solution |
|--|----------------------------|--------------------|-----------------|-----------------------------|-------------------|
| Comprehensive Gi Firewall                                  | •                          | ٠                  |                 |                             |                   |
| High-Scale, Flexible Logging                               | ٠                          | ٠                  |                 |                             |                   |
| DDoS Attack Mitigation                                     | ٠                          | ٠                  |                 |                             |                   |
| Application Layer Gateways                                 | •                          | ٠                  |                 |                             |                   |
| Dynamic Allowlists/Denylists                               | ٠                          | ٠                  |                 |                             |                   |
| Application Visibility                                     | •                          | ٠                  |                 |                             |                   |
| Carrier-Grade NAT  | ٠                          | ۰                  |                 |                             | •                 |
| Subscriber Awareness                                       |                            | ٠                  |                 |                             |                   |
| Flexible Policy Provisioning                               |                            | ٠                  |                 |                             |                   |
| Intelligent Traffic Management                             |                            | ۰                  |                 |                             |                   |
| IP Traffic Optimization                                    |                            | ٠                  |                 |                             |                   |
| DNS Caching  |                            |                    | •               |                             |                   |
| DNS Resolver   |                            |                    | •               |                             |                   |
| Authoritative/Authoritative Slave                          |                            |                    | •               |                             |                   |
| Volumetric DNS DDoS Mitigation (L4)                        |                            |                    |                 | •                           |                   |
| Random Sub Domain Mitigation<br>(L4 and L7)                |                            |                    |                 | •                           |                   |
| Response Policy Zones (RPZ)<br>Domain Filtering (L4 or L7) |                            |                    |                 | ٠                           |                   |
| L7 DNS Abuse (DNS Tunneling<br>Mitigation) (L7)            |                            |                    |                 | ٠                           |                   |
| Host Name Filtering (L7)                                   |                            |                    |                 | ٠                           |                   |
| Server Load Balancing                                      |                            |                    |                 | ٠                           |                   |

# LOWER COSTS, OPTIMIZE PERFORMANCE, ENHANCE SECURITY, AND SPEED TIME TO MARKET

The F5 Gi Firewall VNF Service provides flexible and powerful protection from attack for your network and subscribers. The Gi LAN VNF Service lets you integrate key S/Gi network functions into one platform, helping you significantly reduce TCO by deploying far fewer devices and streamlining your network. Multi-layered security can handle the most demanding network attacks, and the policy enforcement and subscriber awareness capabilities help you generate new revenue streams.

The F5 DNS VNF Service provides faster web browsing and reduced latency with highperformance DNS caching and resolving. This improves subscribers' user experience and leads to reduced churn and increased revenues. The F5 DNS Security VNF Service provides a highperformance DNS DDoS mitigation solution with built-in protocol validation to automatically drop high-volume UDP, DNS query, NXDOMAIN floods, and malformed packets. It includes DNS firewall services to absorb attack traffic and block access to malicious IP traffic domains.

Using the virtual F5 CGNAT VNF Service, service providers can manage IPv4 address allocation and IPv6 migration, enable network scalability for expanded services (e.g. IoT) and new 5G use cases as well as ensure applications are addressable through ALGs for SIP, ICMP, H.323, and other protocols.

# F5 VNF MANAGER PROVIDES AUTOMATED, FULL LIFECYCLE MANAGEMENT

F5 VNF Manager (VNFM) controls the lifecycle of your VNFs by spinning them up or down as needed, or moving VNFs to different locations. It automates deployment, drives configuration, and manages autoscaling, updates, and upgrades. It is TOSCA-based, ONAP-aligned, and interfaces with northbound orchestration.

#### Learn more at f5.com/nfv.



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