DATA SHEET





WHAT'S INSIDE

- 3 Centralize SSL/TLS decryption across multiple security tools
- 3 Inspect next-generation encryption protocols
- 3 Simplify change management through security stack orchestration
- 3 Improve scalability and availability of your existing security tools
- 4 Configure dynamic service chaining based on context
- 5 Deploy with flexible options that ease integration
- 5 Integrate F5 security solutions into your service chain
- 5 Partners
- 6 Features
- 16 More information

Keys to Encrypted Threat Protection: Visibility into and Orchestration of Encrypted Traffic

The ever-increasing volume of encrypted traffic is hampering the ability of IT and security operations (SecOps) teams to protect their applications, customer data, and intellectual property. Traditional security gateways, network firewalls—even next-generation firewalls (NGFWs)—and intrusion prevention systems (IPS) are increasingly running blind to SSL/TLS traffic. Attackers commonly hide threats within links to encrypted websites or encrypted payload attachments in phishing and spear phishing attacks, and they use encrypted channels to evade detection during data exfiltration and command-and-control (C2) communications.

They will select specific cipher primitives based on known security product gaps to force bypass of encrypted malicious traffic. The growth in SSL/TLS encryption is a challenge for enterprises, because without security tools able to inspect inbound and outbound SSL/TLS traffic efficiently at scale, encrypted attacks go undetected and expose your applications and data to breaches.

Visibility into and inspection of SSL/TLS traffic only scratches the security surface, though. Most organizations lack the ability to centrally control and implement decryption policies across the multiple existing and deployed security inspection devices commonly found in an organization's security stack. Many organizations resort to daisy-chaining devices or tedious, manual configurations to support inspection across the security stack—increasing latency, complexity, and risk.

F5[®] BIG-IP[®] SSL Orchestrator[®] is designed and purpose-built to enhance SSL/TLS infrastructure, provide security solutions with visibility into SSL/TLS encrypted traffic, and optimize and maximize your existing security investments. BIG-IP SSL Orchestrator delivers dynamic service chaining and policy-based traffic steering, applying context-based intelligence to encrypted traffic handling to allow you to intelligently manage the flow of encrypted traffic across your entire security stack, ensuring optimal availability.

Designed to easily integrate with existing architectures and to centrally manage the SSL/TLS decrypt/re-encrypt function, BIG-IP SSL Orchestrator delivers the latest SSL/ TLS encryption technologies across your entire security infrastructure. With BIG-IP SSL Orchestrator's high-performance encryption and decryption capabilities, your organization can quickly discover hidden threats and prevent attacks at multiple stages, leveraging your existing security solutions.

BIG-IP SSL Orchestrator ensures encrypted traffic can be decrypted, inspected by security controls, then re-encrypted—delivering enhanced visibility to mitigate threats traversing the network. As a result, you can maximize your security services investment for malware, data loss prevention (DLP), ransomware, and NGFWs, thereby preventing inbound and outbound threats, including exploitation, callback, and data exfiltration.

KEY BENEFITS

Enables visibility into SSL/TLS traffic with centralized decryption/encryption function for inspection across multiple security tools.

Provides high-performance decryption of inbound and outbound encrypted traffic, enabling security inspection to expose threats with greater efficiency and stop attacks such as phishing, spear phishing, and ransomware.

Dynamically chains security devices, independently monitors and scales them, and intelligently manages decryption across the entire security chain via a contextual classification engine, reducing administrative costs while utilizing security resources more efficiently. Delivers a single platform for unified inspection of next-generation encryption protocols, providing unparalleled flexibility, minimizing architectural changes, and preventing new security blind spots.

Shortens the typically cumbersome, timeconsuming and costly change management process by orchestrating the security stack, simplifying equipment changes, and mitigating their detrimental impact.

Flexibly integrates into even the most complex architectures, centralizing SSL/TLS decrypt/ encrypt functions and delivering the latest encryption technologies across the entire security infrastructure.

Scales security services with high availability, leveraging F5's best-in-class load balancing, health monitoring, and SSL/TLS offload capabilities.

Figure 1: BIG-IP SSL Orchestrator maximizes efficiency and performance for a wide range of inspection devices while maintaining optimal security.



CENTRALIZE SSL/TLS DECRYPTION ACROSS MULTIPLE SECURITY TOOLS

BIG-IP SSL Orchestrator provides decryption and re-encryption of user traffic bound to the internet and web-based applications, enhancing security inspection. The solution supports policy-based management and steering of traffic flows to third-party security devices such as firewalls, IPSs, anti-malware, DLPs, secure web gateways (HTTP proxy services), and forensics tools. Centralizing the SSL/TLS decrypt/encrypt function enables you to realize the full value of your security investments. Our multi-vendor ecosystem approach simplifies and strengthens the inspection of all inbound and outbound encrypted traffic malware and exfiltration.

INSPECT NEXT-GENERATION ENCRYPTION PROTOCOLS

Next-generation encryption protocols are evolving with industry best practices for increased security and privacy. New emerging standards encourage rapid adoption of SSL/TLS forward secrecy for improved network security. The transition to next-generation encryption breaks passive SSL/TLS devices, bypassing your security controls and putting you, your network, your apps, and your data at risk. The diverse cipher support of BIG-IP SSL Orchestrator prevents new blind spots by enabling greater flexibility without requiring architectural changes.

SIMPLIFY CHANGE MANAGEMENT THROUGH SECURITY STACK ORCHESTRATION

Making necessary equipment changes or swaps in daisy-chained security stacks are difficult and time-consuming. Changes or swaps increase operational and business costs, cause delays, and can create unintended encrypted traffic bypasses, expanding risks and the threat threshold for your applications and data. Security stack orchestration with BIG-IP SSL Orchestrator simplifies equipment changes, lessens change time, cost, and impact, and alleviates prospective traffic bypass and potential exploitation.

IMPROVE SCALABILITY AND AVAILABILITY OF YOUR EXISTING SECURITY TOOLS

Enterprises with substantial traffic loads will optimize security deployments by leveraging the health monitoring, load-balancing, and SSL/TLS offload capabilities of BIG-IP SSL Orchestrator. These capabilities enable your security investments to better scale and protect through multi-layered security, even in the most demanding environments. Scaling your existing, deployed security devices with failover protection achieves better utilization and service availability.

BIG-IP SSL Orchestrator's high-availability design addresses synchronization delays caused by heavy loads and memory constraints, resulting in a reliable and low-latency auto-failover configuration. Additionally, enterprises can configure high-availability devices to synchronize automatically and incrementally.

CONFIGURE DYNAMIC SERVICE CHAINING BASED ON CONTEXT

BIG-IP SSL Orchestrator dynamically chains security services, including anti-virus/antimalware products, intrusion detection systems (IDSs), IPSs, NGFWs, secure web gateways (HTTP proxy services), and DLPs. It leverages classification metrics such as domain name, content category, geolocation, IP reputation, and other policies that determine whether to decrypt traffic and which services traffic should be sent to. The policy-based traffic steering capabilities of BIG-IP SSL Orchestrator also increase administrative efficiency and reduce administrative cost by removing key and certificate management from your security infrastructure.



Figure 3: Leveraging its context-aware policy engine, BIG-IP SSL Orchestrator steers decrypted traffic to the appropriate security service chain and can perform an intelligent bypass on sensitive user traffic, such as financial or health-care related traffic.

DEPLOY WITH FLEXIBLE OPTIONS THAT EASE INTEGRATION

BIG-IP SSL Orchestrator supports multiple deployment modes, easily integrating into even the most complex of architectures. This centralizes SSL/TLS decrypt/re-encrypt services and delivers the latest encryption technologies across your entire security infrastructure. It eliminates your organization's need to re-architect the network to enable visibility into encrypted traffic, orchestrating and effectively routing traffic to the appropriate security services—in addition to dynamically chaining the appropriate security services. That helps to better utilize, preserve, and future-proof your security solution investments. In addition, BIG-IP SSL Orchestrator includes a step-by-step Guided Configuration to help your IT or SecOps teams logically walk through the deployment within your existing architecture and with your existing security solutions. The Guided Configuration simplifies deployment of BIG-IP SSL Orchestrator and enables you and your organization to be better protected, sooner, against the onslaught of encrypted threats.

INTEGRATE F5 SECURITY SOLUTIONS INTO YOUR SERVICE CHAIN

Use BIG-IP SSL Orchestrator with an F5[®] BIG-IP[®] Advanced WAF[®] license to maximize your infrastructure investments and optimize the performance of your security services. BIG-IP Advanced WAF provides a robust suite of sophisticated protections against common vulnerabilities (CVEs) and web exploits, targeted attacks, and advanced threats. You can easily deploy it as a security service inside your BIG-IP SSL Orchestrator dynamic service chain, enabling greater agility, control, and visibility of encrypted traffic while delivering comprehensive application protection for a full range of app and API security requirements.

You can also use your F5[®] Secure Web Gateway (SWG) Services subscription within your BIG-IP SSL Orchestrator dynamic service chain for traffic classification and URL-based content filtering for outbound traffic. With SWG Services, you can configure security policies to block or accept traffic based on over 150 granular URL categories intelligently classified by SWG Services. SWG Services processes traffic packets using powerful malware analytics tools, so you can detect patterns that indicate complex attack vectors and block the traffic from traversing your network.

PARTNERS

F5 has developed—and continues to develop—an ever-expanding security solution ecosystem for BIG-IP SSL Orchestrator. While BIG-IP SSL Orchestrator is vendor and product agnostic, F5 has optimized integration solutions for leading tools from partners such as Cisco, FireEye, Palo Alto Networks, and others. The following integration guides, with reference architectures, provide granular, prescriptive guidance for deployment:

- Cisco Firepower Threat Defense
- Cisco Web Security Appliance
- McAfee Web Gateway
- Menlo Security Remote Browser Isolation
- NETSCOUT
- OPSWAT MetaDefender ICAP Server
- Palo Alto Networks Next-Generation Firewall
- RSA NetWitness
- Symantec Data Loss Prevention
- Trellix Data Loss Prevention
- Trellix Network Security

FEATURES

BIG-IP SSL Orchestrator enables your security team to streamline security service deployment, delivering greater agility, control, and visibility into encrypted traffic.

SSL/TLS visibility

- High performance SSL/TLS
 decryption/re-encryption
- Inspection of inbound and outbound
 encrypted traffic

Dynamic service chaining

- Policy-based steering of decrypted traffic
- Decoupled from physical interface, port, or VLANs
- Simplified security service insertion

Contextual policy engine

- Source and destination IP and subnet port
- Protocol
- Domain
- IP geolocation

Granular control

• Header changes

Robust cipher and protocol support

- TLS 1, 1.1, 1.2, 1.3
- Forward secrecy/perfect forward secrecy encryption
- RSA/ECDSA/DHE/ECDHE

- Supports L3 (routed) and L2 (transparent) modes
- Forward and reverse proxy architecture
- SSL/TLS decryption independent
 of TCP port
- Service resiliency
- Service monitoring
- · Load balancing of multiple security devices
- IP reputation (subscription)
- URL categorization (subscription)
- Policy-based block, bypass, and forward for inspection actions
- Support for port translation
- AES-128, AES-256, CBC/GCM, Camellia128, Camellia256, SHA/SHA2 (SHA256/384), Chacha20-Poly1305
- Proxy-level control over ciphers and protocols

Deployment modes

- Outbound layer 3 explicit proxy
- Outbound layer 3 transparent proxy
- Inbound layer 3 reverse proxy

Supported service types

- HTTP proxy services
- Inline layer 3 services
- Inline layer 2 services
- ICAP/DLP services

Reporting and logging

• On-board analytics dashboard

Network hardware security module (HSM)

- Thales (Gemalto, SafeNet)
- Atos
- AWS CloudHSM

Add-ons

- IP Intelligence Services (subscription feed)
- URL filtering
- Network HSM
- BIG-IP Advanced WAF
- F5° BIG-IP° Access Policy Manager° (APM)

- Outbound layer 2
- Inbound layer 2
- High availability with TCP session resiliency
- TAP services
- BIG-IP Advanced WAF
- F5 Secure Web Gateway Services

• Equinix SmartKey (Fortanix)

• Entrust (nCipher)

- F5 Secure Web Gateway Services
- DTLS 2.0 mode for delivering and securing applications
- Support for dynamic split tunneling





| Specifications | R10900 | R5900 | |
|---|--|---|--|
| Processor: | 12 vCPU's Reserved for F5OS (36 vCPU's available for Tenancy) | 6 vCPU's Reserved for F5OS (26 vCPU's available for Tenancy) | |
| Memory: | 256 GB DDR | 128 GB DDR | |
| Hard Drive: | 2x 1TB U.2 Enterprise-class SSD (RAID 1 Mirrored) | 1x 1TB M.2 SSD | |
| Management Ports: | 1x 1000BASE-T, 1x USB 3.0, 1x serial console | 1x 1000BASE-T, 1x USB 3.0, 1x serial console | |
| 100/40 Gigabit Fiber Ports: | 4 x 100G/40G QSFP28/QSFP+ ports | 2 x 100G/40G QSFP28/QSFP+ ports | |
| 25/10 Gigabit Fiber Ports: | 16 x 25G/10G SFP28/SFP+ ports | 8 x 25G/10G SFP28/SFP+ ports | |
| BIG-IP SSL Orchestrator Throughput (Maximum): | | | |
| Receive only: | 31.0 Gbps | 21.8 Gbps | |
| L3 inline service: | 37.7 Gbps | 23.0 Gbps | |
| L3 inline + (1) L2 service: | 31.4 Gbps | 18.8 Gbps | |
| L3 inline + (2) L2 services: | 23.0 Gbps | 15.0 Gbps | |
| For each additional L2 service: | -6.0 Gbps | -3.0 Gbps | |
| BIG-IP SSL Orchestrator Transactions/Second (TPS): | | | |
| L3 Outbound Topology: | | | |
| Receive only: | 36.5 К | 26.7 K | |
| L3 inline service: | 37.3 K | 26.4 K | |
| L3 inline + (1) L2 service: | 32.7 К | 23.0 К | |
| L3 inline + (2) L2 services: | 29.3 К | 20.5 К | |
| For each additional L2 service: | -4.0 K | -3.0 K | |
| L3 Inbound Topology: | | | |
| Receive only: | 70.8 К | 55.0 K | |
| L3 inline service: | 67.5 K | 53.4 K | |
| L3 inline + (1) L2 service: | 59.2 К | 42.8 K | |
| L3 inline + (2) L2 services: | 511 K | 36.1 K | |
| For each additional L2 service: | -8.0 K | -8.0 K | |

For complete specifications on the F5® rSeries platforms, please refer to the F5 ADC System data sheet.

Notes: Cipher string used: ECDHE-RSA-AES128-GCM-SHA256. Only optics provided by F5 are supported. Please refer to the Platform Guide: r5000/r10000 Series for the latest power ratings for your specific configurations (number of PS, highline input voltage, DC, etc.).







| Specifications | R4800 | R2800 | |
|---|---|---|--|
| Processor: | 1 x 16-Core Intel® Atom® processor (16 CPUs available for Tenancy) | 8-Core Intel® Atom® processor (8 CPUs available for Tenancy) | |
| Memory: | 64 GB DDR | 32 GB DDR | |
| Hard Drive: | 480GB M.2 SSD | 480GB M.2 SSD | |
| Management Ports: | 1x 1000BASE-T, 1x USB 3.0, 1x serial console | 1x 1000BASE-T, 1x USB 3.0, 1x serial console | |
| 10G/1G Gigabit Copper Ports: | 4 x 10G/1G RJ45 ports | 4 x 10G/1G RJ45 ports | |
| 25/10/1G Gigabit Fiber Ports: | 4 x 25G/10G/1G SFP+/SFP28/SFP ports | 4 x 25G/10G/1G SFP+/SFP28/SFP ports | |
| BIG-IP SSL Orchestrator Throughput (Maximum): | | | |
| Receive only: | 12.0 Gbps | 5.0 Gbps | |
| L3 inline service: | 11.5 Gbps | 4.8 Gbps | |
| L3 inline + (1) L2 service: | 8.6 Gbps | 3.5 Gbps | |
| L3 inline + (2) L2 services: | 7.0 Gbps | 2.8 Gbps | |
| For each additional L2 service: | -1.6 Gbps | -1.3 Gbps | |
| BIG-IP SSL Orchestrator Transactions/Second (TPS): | | | |
| L3 Outbound Topology: | | | |
| Receive only: | 15.5 K | 6.7 K | |
| L3 inline service: | 15.2 K | 6.4 K | |
| L3 inline + (1) L2 service: | 13.3 K | 5.7 K | |
| L3 inline + (2) L2 services: | 11.8 K | 5.0 K | |
| For each additional L2 service: | -1.5 K | -0.7 K | |
| L3 Inbound Topology: | | | |
| Receive only: | 20.0 К | 11.0 К | |
| L3 inline service: | 21.0 К | 11.0 K | |
| L3 inline + (1) L2 service: | 20.0 К | 10.3 K | |
| L3 inline + (2) L2 services: | 19.0 K | 8.5 K | |
| For each additional L2 service: | -1.0 K | -1.0 K | |

Notes: Performance-related numbers are based on local traffic management services only and are subject to change. Only optics provided by F5 are supported.

Notes: Cipher string used: ECDHE-RSA-AES128-GCM-SHA256. Only optics provided by F5 are supported. Please refer to the Platform Guide: r2000/r4000 Series for the latest power ratings for your specific configurations (number of PS, highline input voltage, DC, etc.).



| Specifications | VELOS CX410 |
|--|-------------|
| BIG-IP SSL Orchestrator Throughput: * | |
| With 1 Blade: | |
| L3 inline service: | 18.7 Gbps |
| L3 inline + (1) L2 service: | 14.3 Gbps |
| L3 inline + (2) L2 services: | 11.0 Gbps |
| For each additional L2 service: | -4.0 Gbps |
| With 2 Blades: | |
| L3 inline service: | 38.1 Gbps |
| L3 inline + (1) L2 service: | 24.7 Gbps |
| L3 inline + (2) L2 services: | 19.1 Gbps |
| For each additional L2 service: | -7.0 Gbps |
| BIG-IP SSL Orchestrator Transactions/ Second (TPS): | |
| L3 Outbound Topology: | |
| With 1 Blade: | |
| L3 inline service: | 15.7 K |
| L3 inline + (1) L2 service: | 13.8 K |
| L3 inline + (2) L2 services: | 12.5 K |
| For each additional L2 service: | -1.3 K |
| With 2 Blades: | |
| L3 inline service: | 27.7 К |
| L3 inline + (1) L2 service: | 24.4 К |
| L3 inline + (2) L2 services: | 22.0 К |
| For each additional L2 service: | -3.0 K |
| L3 Inbound Topology: | |
| With 1 Blade: | |
| L3 inline service: | 32.1 K |
| L3 inline + (1) L2 service: | 26.6 К |
| L3 inline + (2) L2 services: | 22.2 К |
| For each additional L2 service | -4.5 K |
| With 2 Blades: | |
| L3 inline service: | 59.0 K |
| L3 inline + (1) L2 service: | 47.2 К |
| L3 inline + (2) L2 services: | 39.6 К |
| For each additional L2 service: | -8.0 K |

 $^{*}\mbox{Throughput}$ will increase at approximately 60% for each additional (non-vCMP) blade.

For complete specifications on the F5® VELOS® platforms, please refer to the VELOS data sheet.

Notes: L2 virtual wire mode and inline layer 2 services are not currently supported on VELOS.





| Processor:Trad Soft intel Xeon processors (and 36 hyperthreaded logical processor cores) (and 36 hyperthreaded logical processor cores) (and 36 hyperthreaded logical processor cores) (and 36 hyperthreaded logical processor cores)Memory:52 GB DDR4Hard Drive:Xi 16 TB Enterprise Class SSD (MA)256 GB DDR4Glgabit Enternet QP Drive:NAOptional SFPGlgabit Fiber Ports (SFP):NAOptional SFPGlgabit Fiber Ports (SFP):NASSRA/LR4 (cold separately); coltonal 100 corper direct attended cable assemblies available to convert to 100 ports)Glgabit Fiber Ports (SFP):SSRA/LR4 (cold separately) (OSFP+ optical breakout cable assemblies available to convert to 100 ports)Glgabit Fiber Ports (SFP):SSRA/LR4 (sold separately) (OSFP- optical breakout cable assemblies available to convert to 100 ports)Glgabit Fiber Ports (SFP):SSRA/LR4 (sold separately) (OSFP- optical breakout cable assemblies available to convert to 100 ports)Glgabit Fiber Ports (SFP):SSRA/LR4 (sold separately) (OSFP- optical breakout cable assemblies available to convert to 100 ports)Glgabit Fiber Ports (SFP):SSRA/LR4 (sold separately) (OSFP- optical breakout cable assemblies available to convert to 100 ports)Glgabit Fiber Ports (SFP):SSRA/LR4 (sold separately) (OSFP- optical breakout cable assemblies available to convert to 100 ports)Glgabit Fiber Ports (SFP):SSRA/LR4 (sold separately) (OSFP- optical breakout cable assemblies available to convert to 100 ports)Glgabit Fiber Ports (SFP):SSRA/LR4 (sold separately) (SSFP: optical breakout cable assemblies available to convert to 100 ports)Glgabit Fib | Specifications | i15800 i11800/i11800-DS* | | |
|---|---|---|---|--|
| InterestItelal 56 hyperthreaded logical processor cores)(total 36 hyperthreaded logical processor cores)Memory:512 GB D0R4256 GB D0R4256 GB D0R4Hard Drive:1x 16 TB Enterprise Class SSD1x 960 GB Enterprise Class SSD (11800-D5)Gigabit Ethernet CU PortsN/AOptional SFPGigabit Ethernet CU Ports (SFP):N/AOptional SFPGigabit Fiber Ports (SFP):N/AOptional SFP (SX or LX)40 Gigabit Fiber Ports (SFP):8 SR4.1R4 (sold separately) (OSFP+ optical breakout cable assemblies available to convert to 10G ports)6 SR4.1R4 (sold separately) (OSFP+ optical breakout cable assemblies available to convert to 10G ports)100 Gigabit Fiber Ports (GSFP28);22.7 Gbps18.9 Gbps (11800); 3.0 Gbps (11800-D5)113 inline service:22.9 Gbps19.1 Gbps (11800); 3.1 Gbps (11800-D5)123 inline + (1) L2 service:22.8 Gbps19.9 Gbps (11800); 3.1 Gbps (11800-D5)13 output (GSFP28);14.8 K24.7 K (11800); 3.1 Gbps (11800-D5)13 output (GSFP28);14.8 K24.7 K (11800); 3.1 Gbps (11800-D5)13 output (GSFP28);14.8 K24.7 K (11800); 3.1 Gbps (11800-D5)14 output (GSFP28);14.8 K24.7 K (11800); 3.1 Gbps (11800-D5)14 output (GSFP28);14.8 K24.7 K (11800); 3.1 Gbps (11800-D5)14 output (GSFP28);14.8 K24.7 K (11800); 3.1 Gbps (11800-D5)15 output (GSFP28);14.8 K24.7 K (11800); 3.1 Gbps (11800-D5)15 output (GSFP28);14.8 K24.7 K (11800); 3.1 Gbps (11800-D5)16 output (GSFP28);< | Processor: | Two 14-Core Intel Xeon processors One 18-Core Intel Xeon processor | | |
| Memory:512 GB DDR4256 GB DDR4Hard Drive:bx 16 TB Enterprise Class SSDbx 960 GB Enterprise Class SSD (IIB00) Dual SSD 2x 960 GB Enterprise Class SSD (IIB00-DS)Gigabit Enter PotsN/AOptional SFPGigabit Fiber Pots (SFP):N/AOptional SFP10 Gigabit Fiber Pots (SFP):N/ASR/LR (sold separately) colfional OG coper direct attach40 Gigabit Fiber Pots (GSFP):SR/LR (sold separately) (GSFP+ optical breakout cable assemblies available to convert to 10G ports)SR/LR (sold separately) (GSFP+ optical breakout cable assemblies available to convert to 10G ports)10 Gigabit Fiber Pots (GSFP2B):R K4/LR4 (sold separately) (GSFP- aptical breakout cable assemblies available to convert to 10G ports)SR/LR4 (sold separately) (GSFP- aptical breakout cable assemblies available to convert to 10G ports)10 Gigabit Fiber Ports (GSFP2B):R K4/LR4 (sold separately) (GSFP 2G)N/A11 Gigabit Fiber Ports (GSFP2B):R K4/LR4 (sold separately) (GSFP 2G)SR/LR4 (sold separately) (GSFP 2G)12 Intime + (I) L2 service:22.7 Gbps18 G-PS 2L19 Gbps (IIB00); 31.5 Gbps (IIB00-DS)13 Intime + (I) L2 service:22.8 Gbps19 Gbps (IIB00); 32.Gbps (IIB00-DS)13 Intime + (I) L2 service:21.8 Glaps19 Gbps (IIB00); 31.5 Gbps (IIB00-DS)13 Intime + (I) L2 service:41.8 K24.7 K (IIB00); 31.7 K (IIB00-DS)14 Intime + (I) L2 service:37.8 K24.7 K (IIB00); 31.7 K (IIB00-DS)15 Intime + (I) L2 service:37.8 K23.2 K (IIB00); 21.5 K (IIB00-DS)15 Intime + (I) L2 service:37.8 K23.2 K (IIB00); 2 | FIOCESSOI. | (total 56 hyperthreaded logical processor cores) | (total 36 hyperthreaded logical processor cores) | |
| Hard Drive:b: 16 TB Enterprise Class SSDb: 960 GB Enterprise Class SSD (HIB00-DS) Dual SSD 2x 960 GB Enterprise Class SSD (HIB00-DS)Gigabit Enternet CU Ports:N/AOptional SFPGigabit Fiber Ports (SFP):N/ASSRL (sold separately) coptional 10G copper direct attech10 Gigabit Fiber Ports (SFP):SSRL/LA4 (sold separately) (OSFP+ optical breakout cable assemblies available to convert to 10G ports)SSRL (sold separately) (OSFP+ optical breakout cable assemblies available to convert to 10G ports)10 Gigabit Fiber Ports (SFP):SSRL/LA4 (sold separately) OSFP23N/A10 Gigabit Fiber Ports (SFP):SSRL (sold separately) COSFP23N/A10 Gigabit Fiber Ports (SFP):SSRL (sold separately) COSFP23N/A11 Gine service:2.9 Gbps18.9 Gbps (HIB00); 3.15 Gbps (HIB00-DS)12 Jaline + (J) L Service:2.9 Gbps19.1 Gbps (HIB00); 3.15 Gbps (HIB00-DS)13 GbpsJashpaJashpaJashpa14 Jaline + (J) L Service:3.1 Gbps19.1 Gbps (HIB00); 3.17 K (HIB00-DS)15 Gued Additional L2 Service:Si A K2.4 K (HIB00); 3.17 K (HIB00-DS)14 Jaline + (J) L Service:3.3 K2.4 S K (HIB00); 3.17 K (HIB00-DS)15 Jaline + (J) L Service:3.3 K2.9 K (HIB00); 5.1 K (HIB00-DS)14 Jaline + (J) L Service:3.4 K3.2 K (HIB00); 5.5 K (HIB00-DS)15 | Memory: | 512 GB DDR4 256 GB DDR4 | | |
| Gigabit Ethernet CU PortsN/AOptional SFPGigabit Fiber Ports (SFP)N/AQBSR/LR (sold Separately) (QSFP+ optical breakout cable assemblies available to convert to 10G ports)Gigabit Fiber Ports (SFP)SR4/LR4 (sold separately) (QSFP+ optical breakout cable assemblies available to convert to 10G ports)GiGabit Fiber Ports (SFP)SR4/LR4 (sold separately) (QSFP+ optical breakout cable assemblies available to convert to 10G ports)GiGabit Fiber Ports (SFP2)SR4/LR4 (sold separately) QSFP2BIG-FY2N4 SR4/LR4 (sold separately) QSFP2Receive only22.7 OpsReceive only22.7 OpsI La Inline service:22.9 GbpsJ Separately19.9 Gbps (fit800); 31.5 Gbps (fit800-DS)I La Inline + (1) L2 services:22.9 GbpsI Separately19.9 Gbps (fit800); 31.5 Gbps (fit800-DS)I La Inline + (2) L2 services:22.9 GbpsI Separately19.9 Gbps (fit800); 31.5 Gbps (fit800-DS)I Separately3 GbpsI Separately3 GbpsI Separately19.9 Gbps (fit800); 51.5 Gbps (fit800-DS)I Separately19.9 Gbps (fit800); 51.5 Gbps (fit800-DS)I Separately19.9 Gbps (fit800); 51.5 Gbps (fit800-DS)I Separately19.8 GbpsI Separately19.8 Gbps< | Hard Drive: | 1x 1.6 TB Enterprise Class SSD | 1x 960 GB Enterprise Class SSD (i11800) Dual SSD 2x 960 GB Enterprise Class SSD (i11800-DS) | |
| Gigabit Fiber Ports (SFP):N/AOptional SFP: (X or LX)10 Gigabit Fiber Ports (SFP):N/ASR4/LR4 (sold separately) (OSFP+ optical breakout cable assemblies available to convert to 10G ports)SR4/LR4 (sold separately) (OSFP+ optical breakout cable assemblies available to convert to 10G ports)100 Gigabit Fiber Ports (OSFP2):& SR4/LR4 (sold separately) (OSFP+ optical breakout | Gigabit Ethernet CU Ports: | N/A | Optional SFP | |
| 10 Gigabit Fiber Ports (SFP+) N/A SRALRA (sold separately) (QSFP+ optical breakout cable assemblies available to convert to 10G ports) 40 Gigabit Fiber Ports (QSFP+) SRALRA (sold separately) (QSFP+ optical breakout cable assemblies available to convert to 10G ports) 100 Gigabit Fiber Ports (QSFP2) & SRALRA (sold separately) QSFP28 N/A BIG-IP SSL Orchestrator Throughput (Maximum): | Gigabit Fiber Ports (SFP): | N/A | Optional SFP+ (SX or LX) | |
| 40 Gigabit Fiber Ports (QSFP2): (CSFP2): (QS | 10 Gigabit Fiber Ports (SFP+): | N/A | 8 SR/LR (sold separately); optional 10G copper direct attach | |
| 100 Gjabit Fiber Ports (GSFP28):4 SR4/LR4 (sold separately) OSFP28NABIG-IP SSL Orchestrator Throughput (Maximum):BIG-IP SSL Orchestrator Throughput (Maximum):Receive only:22.7 Gbps18.9 Gbps (t11800); 30.5 Gbps (t11800-DS)L3 Inline service:22.9 Gbps19.1 Gbps (t11800); 31.5 Gbps (t11800-DS)L3 Inline + (1) L2 service:22.8 Gbps16.9 Gbps (t11800); 27.1 Gbps (t11800-DS)L3 Inline + (2) L2 service:22.8 Gbps16.9 Gbps (t11800); 13.2 Gbps (t11800-DS)BIG-IP SSL Orchestrator Tarnasctions/Second (TPS):L3 Outbound Topology:Receive only:41.8 K24.7 K (t1800); 30.9 K (t11800-DS)L3 Inline + (1) L2 service:37.3 K24.0 K (t1800); 30.9 K (t11800-DS)L3 Inline + (1) L2 service:37.3 K24.0 K (t1800); 27.2 K (t11800-DS)L3 Inline + (1) L2 service:34.3 K23.2 K (t1800); 27.2 K (t11800-DS)L3 Inline + (1) L2 service:34.3 K23.2 K (t1800); 27.5 K (t11800-DS)L3 Inline + (1) L2 service:34.3 K23.2 K (t1800); 27.5 K (t11800-DS)L3 Inline + (1) L2 service:34.3 K23.2 K (t1800); 57.5 K (t11800-DS)L3 Inline + (1) L2 service:56.4 K45.5 K (t1800); 57.5 K (t11800-DS)L3 Inline + (1) L2 service:57.8 K35.4 K (t1800); 57.4 K (t11800-DS)L3 Inline + (1) L2 service:57.8 K35.4 K (t1800); 57.4 K (t11800-DS) | 40 Gigabit Fiber Ports (QSFP+): | 8 SR4/LR4 (sold separately) (QSFP+ optical breakout cable assemblies available to convert to 10G ports) | 6 SR4/LR4 (sold separately) (QSFP+ optical breakout cable assemblies available to convert to 10G ports) | |
| BIG-IP SSL Orchestrator Throughput (Maximum): 22.7 Gbps 18.9 Gbps (11800); 30.5 Gbps (11800-DS) L3 inline service: 22.9 Gbps 91 Gbps (11800); 31.5 Gbps (11800-DS) L3 inline + (1) L2 service: 22.9 Gbps 77.9 Gbps (11800); 27.1 Gbps (11800-DS) L3 inline + (1) L2 service: 22.8 Gbps 16.9 Gbps (11800); 13.2 Gbps (11800-DS) L3 inline + (2) L2 service: 22.8 Gbps 16.9 Gbps (11800); 13.2 Gbps (11800-DS) For each additional L2 service: -1.3 Gbps -1.9 Gbps (11800); 5.1 Gbps (11800-DS) BIG-IP SSL Orchestrator Transactions/Second (TPS): -1.9 Gbps (11800); 5.1 Gbps (11800-DS) L3 Outbound Topology: - - Receive only: 41.8 K 24.7 K (11800); 31.7 K (11800-DS) L3 inline service: 37.3 K 24.0 K (11800); 31.7 K (11800-DS) L3 inline + (1) L2 service: 34.3 K 23.2 K (11800); 2.2 K (11800-DS) L3 inline + (1) L2 service: 34.3 K 23.2 K (11800); 2.5 K (11800-DS) L3 Inline + (1) L2 service: 76.7 K 45.8 K (11800); 57.5 K (11800-DS) L3 Inline service: 74.0 K 45.5 K (11800); 57.5 K (11800-DS) L3 Inline service: 74.0 K 45.5 K (11800); 57.5 K (11 | 100 Gigabit Fiber Ports (QSFP28): | 4 SR4/LR4 (sold separately) QSFP28 | N/A | |
| Receive only: 22.7 Gbps 18.9 Gbps (11800); 30.5 Gbps (11800-DS) L3 inline service: 22.9 Gbps 19.1 Gbps (11800); 31.5 Gbps (11800-DS) L3 inline + (1) L2 service: 22.9 Gbps 17.9 Gbps (11800); 27.1 Gbps (11800-DS) L3 inline + (2) L2 service: 22.8 Gbps 16.9 Gbps (11800); 12.2 Gbps (11800-DS) For each additional L2 service: -1.3 Gbps -1.9 Gbps (11800); -5.1 Gbps (11800-DS) BIG-IP SSL Orchestrator Transactions/Second (TPS): - - Faceive only: 41.8 K 24.7 K (11800); 31.7 K (11800-DS) L3 inline service: 41.2 K 25.0 K (11800); 27.2 K (11800-DS) L3 inline service: 41.8 K 24.7 K (11800); 3.17 K (11800-DS) L3 inline service: 41.8 K 25.0 K (11800); 27.2 K (11800-DS) L3 inline + (1) L2 service: 37.3 K 24.0 K (11800); 27.2 K (11800-DS) L3 inline + (1) L2 service: 34.3 K 23.2 K (11800); -2.5 K (11800-DS) L3 Inline + (1) L2 service: 74.0 K 45.8 K (11800); 57.5 K (11800-DS) L3 Inline + (1) L2 service: 74.0 K 45.2 K (11800); 57.5 K (11800-DS) L3 Inline + (1) L2 service: 57.8 K 45.2 K (11800); 47.4 K (11800-DS) <td>BIG-IP SSL Orchestrator Throughput (Maximum):</td> <td></td> <td></td> | BIG-IP SSL Orchestrator Throughput (Maximum): | | | |
| L3 inline service:22.9 Gbps191 Gbps (11800; 31.5 Gbps (11800-DS)L3 inline + (1) L2 service:22.9 Gbps17.9 Gbps (11800; 27.1 Gbps (11800-DS)L3 inline + (2) L2 service:22.8 Gbps16.9 Gbps (11800; 13.2 Gbps (11800-DS)For each additional L2 service:.1.3 Gbps.1.9 Gbps (11800); -5.1 Gbps (11800-DS)BIG-IP SSL Orchestrator Transactions/Second (TPS): | Receive only: | 22.7 Gbps | 18.9 Gbps (i11800); 30.5 Gbps (i11800-DS) | |
| L3 inline + (i) L2 service:22.9 Gbps17.9 Gbps (it1800); 27.1 Gbps (it1800-DS)L3 inline + (2) L2 service:22.8 Gbps16.9 Gbps (it1800); 13.2 Gbps (it1800-DS)For each additional L2 service:-1.3 Gbps-1.9 Gbps (it1800); -5.1 Gbps (it1800-DS)BIG-IP SSL Orchestrator Transactions/Second (TPS): | L3 inline service: | 22.9 Gbps (i11800); 31.5 Gbps (i11800-DS) | | |
| L3 inline + (2) L2 services:22.8 Gbps16.9 Gbps (11800); 13.2 Gbps (11800-DS)For each additional L2 service:-1.9 Gbps (11800); -5.1 Gbps (11800-DS)BIG-IP SSL Orchestrator Transactions/Second (TPS): | L3 inline + (1) L2 service: | 22.9 Gbps (i11800); 27.1 Gbps (i11800-DS) | | |
| For each additional L2 service:-1.3 Gbps-1.9 Gbps (i11800); -5.1 Gbps (i11800-DS)BIG-IP SSL Orchestrator Transactions/Second (TPS): | L3 inline + (2) L2 services: | 22.8 Gbps | 16.9 Gbps (i11800); 13.2 Gbps (i11800-DS) | |
| BIG-IP SSL Orchestrator Transactions/Second (TPS): Second (TPS): L3 Outbound Topology: 41.8 K Receive only: 41.8 K L3 inline service: 41.2 K L3 inline service: 37.3 K L3 inline + (1) L2 service: 37.3 K Ja inline + (2) L2 services: 34.3 K Service: 23.2 K (11800); 27.2 K (11800-DS) L3 inline + (2) L2 services: 34.3 K Service: 23.9 K L3 inbound Topology: -2.9 K (11800); -2.5 K (11800-DS) L3 Inbound Topology: -2.9 K (11800); -2.5 K (11800-DS) L3 inline + (1) L2 service: 76.7 K Service: 74.0 K L3 inline + (1) L2 service: 57.8 K Si Inline + (1) L2 service: 57.8 K | For each additional L2 service: | -1.3 Gbps (i11800); -5.1 Gbps (i11800-DS) | | |
| L3 Outbound Topology: Image: Constraint of the service only: 41.8 K 24.7 K (11800); 31.7 K (11800-DS) L3 inline service: 41.2 K 25.0 K (11800); 30.9 K (11800-DS) 25.0 K (11800); 27.2 K (11800-DS) L3 inline + (1) L2 service: 37.3 K 24.0 K (11800); 27.2 K (11800-DS) 23.2 K (11800); 24.5 K (11800-DS) L3 inline + (2) L2 service: 34.3 K 23.2 K (11800); 24.5 K (11800-DS) 23.2 K (11800); 24.5 K (11800-DS) L3 inbound Topology: -2.9 K -2.9 K (11800); 57.5 K (11800-DS) 23.2 K (11800); 57.5 K (11800-DS) Receive only: 76.7 K 45.8 K (11800); 56.4 K (11800-DS) 45.5 K (11800-DS) L3 inline service: 74.0 K 45.5 K (11800); 56.4 K (11800-DS) 45.2 K (11800); 47.4 K (11800-DS) L3 inline + (1) L2 service: 65.4 K 57.8 K 39.4 K (11800); 41.0 K (11800-DS) | BIG-IP SSL Orchestrator Transactions/Second (TPS): | | | |
| Receive only: 41.8 K 24.7 K (11800); 31.7 K (11800-DS) L3 inline service: 41.2 K 25.0 K (11800); 30.9 K (11800-DS) L3 inline + (1) L2 service: 37.3 K 24.0 K (11800); 27.2 K (11800-DS) L3 inline + (2) L2 service: 34.3 K 23.2 K (11800); 24.5 K (11800-DS) For each additional L2 service: 29.9 K 29.9 K (11800); 2.5 K (11800-DS) L3 Inbound Topology: - - -2.9 K (11800); 57.5 K (11800-DS) Receive only: 76.7 K 45.8 K (11800); 57.5 K (11800-DS) L3 inline service: 74.0 K 45.5 K (11800); 57.5 K (11800-DS) L3 inline + (1) L2 service: 65.4 K 45.2 K (11800); 47.4 K (11800-DS) L3 inline + (2) L2 service: 57.8 K 39.4 K (11800); 41.0 K (11800-DS) | L3 Outbound Topology: | | | |
| L3 inline service: 41.2 K 25.0 K (f11800); 30.9 K (f11800-DS) L3 inline + (1) L2 service: 37.3 K 24.0 K (f11800); 27.2 K (f11800-DS) L3 inline + (2) L2 services: 34.3 K 23.2 K (f11800); 24.5 K (f11800-DS) For each additional L2 service: 2.9 K -2.9 K (f11800); -2.5 K (f11800-DS) L3 inbound Topology: - - Receive only: 76.7 K 45.8 K (f11800); 57.5 K (f11800-DS) L3 inline service: 74.0 K 45.5 K (f11800); 57.5 K (f11800-DS) L3 inline + (1) L2 service: 65.4 K 45.2 K (f11800); 47.4 K (f11800-DS) L3 inline + (2) L2 service: 57.8 K 39.4 K (f11800); 41.0 K (f11800-DS) | Receive only: | 41.8 K | 24.7 K (i11800); 31.7 K (i11800-DS) | |
| L3 inline + (1) L2 service: 37.3 K 24.0 K (i11800); 27.2 K (i11800-DS) L3 inline + (2) L2 services: 34.3 K 23.2 K (i11800); 24.5 K (i11800-DS) For each additional L2 service: -2.9 K -2.9 K (i11800); -2.5 K (i11800-DS) L3 Inbound Topology: -2.9 K (i11800); -2.5 K (i11800-DS) Receive only: 76.7 K 45.8 K (i11800); 57.5 K (i11800-DS) L3 inline service: 74.0 K 45.5 K (i11800); 56.4 K (i11800-DS) L3 inline + (1) L2 service: 65.4 K 45.2 K (i11800); 47.4 K (i11800-DS) L3 inline + (2) L2 service: 57.8 K 39.4 K (i11800); 41.0 K (i11800-DS) | L3 inline service: | 41.2 K 25.0 K (i11800); 30.9 K (i11800-DS) | | |
| L3 inline + (2) L2 services: 34.3 K 23.2 K (i11800); 24.5 K (i11800-DS) For each additional L2 service: 2.9 K -2.9 K (i11800); -2.5 K (i11800-DS) L3 Inbound Topology: - - Receive only: 76.7 K 45.8 K (i11800); 57.5 K (i11800-DS) L3 inline service: 74.0 K 45.5 K (i11800); 57.5 K (i11800-DS) L3 inline + (1) L2 service: 65.4 K 45.2 K (i11800); 47.4 K (i11800-DS) L3 inline + (2) L2 services: 57.8 K 39.4 K (i11800); 41.0 K (i11800-DS) | L3 inline + (1) L2 service: | 37.3 K | 24.0 K (i11800); 27.2 K (i11800-DS) | |
| For each additional L2 service: -2.9 K (i11800); -2.5 K (i11800-DS) L3 Inbound Topology: - Receive only: 76.7 K ACC V 45.8 K (i11800); 57.5 K (i11800-DS) L3 inline service: 74.0 K L3 inline + (1) L2 service: 65.4 K L3 inline + (2) L2 service: 57.8 K | L3 inline + (2) L2 services: | 34.3 K | 23.2 K (i11800); 24.5 K (i11800-DS) | |
| L3 Inbound Topology: Feasibility | For each additional L2 service: | -2.9 K (i11800); -2.5 K (i11800-DS) | | |
| Receive only: 76.7 K 45.8 K (11800); 57.5 K (11800-DS) L3 inline service: 74.0 K 45.5 K (11800); 56.4 K (11800-DS) L3 inline + (1) L2 service: 65.4 K 45.2 K (11800); 47.4 K (11800-DS) L3 inline + (2) L2 services: 57.8 K 39.4 K (11800); 41.0 K (11800-DS) | L3 Inbound Topology: | | | |
| L3 inline service: 74.0 K 45.5 K (i11800); 56.4 K (i11800-DS) L3 inline + (1) L2 service: 65.4 K 45.2 K (i11800); 47.4 K (i11800-DS) L3 inline + (2) L2 services: 57.8 K 39.4 K (i11800); 41.0 K (i11800-DS) | Receive only: | 76.7 К | 45.8 K (i11800); 57.5 K (i11800-DS) | |
| L3 inline + (1) L2 service: 65.4 K 45.2 K (i11800); 47.4 K (i11800-DS) L3 inline + (2) L2 services: 57.8 K 39.4 K (i11800); 41.0 K (i11800-DS) | L3 inline service: | 74.0 К | 45.5 K (i11800); 56.4 K (i11800-DS) | |
| L3 inline + (2) L2 services: 57.8 K 39.4 K (i11800); 41.0 K (i11800-DS) | L3 inline + (1) L2 service: | 65.4 K | 45.2 K (i11800); 47.4 K (i11800-DS) | |
| | L3 inline + (2) L2 services: | 57.8 K | 39.4 K (i11800); 41.0 K (i11800-DS) | |
| For each additional L2 -7.0 K -3.6 K (i11800); -5.9 K (i11800-DS) | For each additional L2 service: | -7.0 K -3.6 K (i11800); -5.9 K (i11800-DS) | | |
| BIG-IP SSL Orchestrator | BIG-IP SSL Orchestrator | | | |
| L3 outbound: 5500 K (5 5 M) 3100 K (31 M) | 13 outbound: | | | |
| L3 inbound: 6200 K (6.2 M) 3400 K (3.4 M) | L3 inbound | 6200 K (6.2 M) | 3400 K (3 4 M) | |

*More information on additional dedicated cryptographic hardware on the DS Series is available in the BIG-IP System data sheet, which also provides complete specifications on all iSeries platforms.

 $\label{eq:For complete specifications on the F5^{\$} \, BIG\text{-}IP^{\$} \, iSeries^{\$} \, platforms, please refer to the BIG\text{-}IP \, System \, data \, sheet.$

Notes: Cipher string used: ECDHE-RSA-AES128-AES-GCM-SHA256. Only optics provided by F5 are supported. Please refer to the Platform Guide: i15000 Series or Platform Guide: i11000 Series for the latest power ratings for your specific configurations (number of PS, highline input voltage, DC, etc.).





| Specifications | i10800 i7800 | | |
|---|---|---|--|
| Processor: | One 8-core Intel Xeon processor One 6-core Intel Xeon processor | | |
| FIOCESSOI. | (total 16 hyperthreaded logical processor cores) (total 12 hyperthreaded logical processor cores) | | |
| Memory: | 128 GB DDR4 | 96 GB DDR4 | |
| Hard Drive: | 1x 480 GB Enterprise Class SSD | 1x 480 GB Enterprise Class SSD | |
| | Model with dual SSDs in RAID 1 also available | Model with Dual SSDs in RAID 1 also available | |
| Gigabit Ethernet CU Ports: | Optional SFP | Optional SFP | |
| Gigabit Fiber Ports (SFP): | Optional SFP+ (SX or LX) | Optional SFP+ (SX or LX) | |
| 10 Gigabit Fiber Ports (SFP+): | 8 SR/LR (sold separately); optional 10G copper direct attach | 8 SR/LR (sold separately); optional 10G copper direct attach | |
| 40 Gigabit Fiber Ports (QSFP+): | 6 SR4/LR4 (sold separately) (QSFP+ optical breakout cable assemblies available to convert to 10 GB ports) | 4 SR4/LR4 (sold separately) (QSFP+ optical breakout cable assemblies available to convert to 10G ports) | |
| BIG-IP SSL Orchestrator Throughput (Maximum): | | | |
| Receive only: | 18.2 Gbps | 10.9 Gbps | |
| L3 inline service: | 19.0 Gbps | 11.1 Gbps | |
| L3 inline + (1) L2 service: | 16.2 Gbps | 11.0 Gbps | |
| L3 inline + (2) L2 services: | 13.2 Gbps 9.1 Gbps | | |
| For each additional L2 service: | -2.2 Gbps -1.3 Gbps | | |
| BIG-IP SSL Orchestrator Transactions/Second (TPS): | | | |
| L3 Outbound Topology: | | | |
| Receive only: | 17.0 K 12.1 K | | |
| L3 inline service: | 16.7 K 13.0 K | | |
| L3 inline + (1) L2 service: | 15.0 K | 12.3 K | |
| L3 inline + (2) L2 services: | 13.6 K | 11.1 K | |
| For each additional L2 service: | -1.3 K -0.9 K | | |
| L3 Inbound Topology: | | | |
| Receive only: | 36.1 K | 23.0 K | |
| L3 inline service: | 35.2 K 23.0 K | | |
| L3 inline + (1) L2 service: | 28.5 K 22.6 K | | |
| L3 inline + (2) L2 services: | 24.3 K 19.7 K | | |
| For each additional L2 service: | -4.1 K -2.0 K | | |
| BIG-IP SSL Orchestrator | | | |
| Concurrent Sessions: | | | |
| L3 outbound: | 1400 K (1.4 M) 1000 K (1.0 M) | | |
| L3 inbound: | 1600 K (1.6 M) | 1200 K (1.2 M) | |

For complete specifications on the iSeries platforms, please refer to the BIG-IP System data sheet.

Notes: Cipher string used: ECDHE-RSA-AES128-AES-GCM-SHA256. Only optics provided by F5 are supported. SFP+ ports in 10800 are compatible with F5 SFP modules. Please refer to the Platform Guide: i5000/i7000/ 100000/i1000 Series for the latest power ratings for your specific configurations (number of PS, highline input voltage, DC, etc.).





| Specifications | i5800 i4800 | | |
|---|---|--|--|
| Processor | One 4-core Intel Xeon processor One 4-core Intel Xeon processor | | |
| FIOCESSOI. | (total 8 hyperthreaded logical processing cores) | (total 8 hyperthreaded logical processor cores) | |
| Memory: | 48 GB DDR4 | 32 GB DDR4 | |
| Hard Drive: | 1x 480 GB Enterprise Class SSD | 1x 500 GB Enterprise Class HDD | |
| Gigabit Ethernet CU Ports: | Optional SFP | Optional SFP | |
| Gigabit Fiber Ports (SFP): | Optional SFP+ (SX or LX) | 8 SX or LX (sold separately) | |
| 10 Gigabit Fiber Ports (SFP+): | 8 SR or LR (sold separately); optional 10G copper direct attach | 4 SR/LR (sold separately); optional 10G copper direct attach | |
| 40 Gigabit Fiber Ports (QSFP+): | 4 SR4/LR4 (sold separately) (QSFP+ optical breakout cable assemblies available to convert to 10G ports) | N/A | |
| BIG-IP SSL Orchestrator | | | |
| Receive only: | 10.1 Gbps | 6.2 Gbps | |
| L3 inline service: | 10.7 Gbps | 6.4 Gbps | |
| L3 inline + (1) L2 service: | 9.1 Gbps | 5.9 Gbps | |
| L3 inline + (2) L2 services: | 7.6 Gbps | 4.7 Gbps | |
| For each additional L2 service: | -1.3 Gbps | -0.8 Gbps | |
| BIG-IP SSL Orchestrator Transactions/Second (TPS): | | | |
| L3 Outbound Topology: | | | |
| Receive only: | 9.3 K | 5.8 K | |
| L3 inline service: | 9.2 K | 5.7 K | |
| L3 inline + (1) L2 service: | 8.2 K 4.7 K | | |
| L3 inline + (2) L2 services: | 7.5 K 4.6 K | | |
| For each additional L2 service: | -0.8 K -0.5 K | | |
| L3 Inbound Topology: | | | |
| Receive only: | 19.4 K | 12.3 K | |
| L3 inline service: | 18.9 K | 12.2 K | |
| L3 inline + (1) L2 service: | 15.4 К | 8.3 K | |
| L3 inline + (2) L2 services: | 13.1 K | 8.4 K | |
| For each additional L2 service: | -2.3 К -1.5 К | | |
| BIG-IP SSL Orchestrator Concurrent Sessions: | | | |
| L3 outbound: | 500 K 300 K | | |
| L3 inbound: | 610 K | 375 K | |

For complete specifications on the iSeries platforms, please refer to the BIG-IP System data sheet.

Notes: Cipher string used: ECDHE-RSA-AES128-AES-GCM-SHA256. Only optics provided by F5 are supported. Please refer to the Platform Guide: i5000/i7000/i10000



| Specifications | i2800* |
|---|---|
| Processor: | One 2-core Intel Xeon processor (total 4 hyperthreaded logical processor cores) |
| Memory: | 16 GB DDR4 |
| Hard Drive: | 1x 500 GB Enterprise Class HDD |
| Gigabit Ethernet CU Ports: | Optional SFP |
| Gigabit Fiber Ports (SFP): | 4 SX or LX (sold separately) |
| 10 Gigabit Fiber Ports (SFP+): | 2 SR or LR (sold separately); Optional 10G copper direct attach |
| 40 Gigabit Fiber Ports (QSFP+): | N/A |
| BIG-IP SSL Orchestrator Throughput: | 2.8 Gbps |
| BIG-IP SSL Orchestrator Transactions/Second (TPS): | 3800 |
| BIG-IP SSL Orchestrator Concurrent Sessions: | 150 K |

*Supports a maximum of one additional service.

For complete specifications on the iSeries platforms, please refer to the BIG-IP System data sheet.

Notes: Cipher string used: ECDHE-RSA-AES128-AES-GCM-SHA256. Only optics provided by F5 are supported. Please refer to the Platform Guide: i2000/i4000 for the latest power ratings for your specific configurations (number of PS, highline input voltage, DC, etc.).





| Specifications | VIPRION 4450 Blade on VPR-4800 Chassis | VIPRION 2250 Blade on VPR-2400 Chassis | |
|---------------------------------|--|--|--|
| BIG-IP SSL Orchestrator | | | |
| Throughput: * | | | |
| With 1 Blade: | | | |
| L3 inline service: | 44.5 Gbps | 15.6 Gbps | |
| L3 inline + (1) L2 service: | 41 Gbps | 13.3 Gbps | |
| L3 inline + (2) L2 service: | 33.5 Gbps | 10.7 Gbps | |
| For each additional L2 service: | - 5.1 Gbps | -1.9 Gbps | |
| With 2 Blades: | | | |
| L3 inline service: | 74.5 Gbps | 32 Gbps | |
| L3 inline + (1) L2 service: | 71.5 Gbps | 24.5 Gbps | |
| L3 inline + (2) L2 services: | 59.5 Gbps | 20 Gbps | |
| For each additional L2 service: | -9.3 Gbps -4.6 Gbps | | |
| BIG-IP SSL Orchestrator | | | |
| Transactions/ Second (TPS): | | | |
| L3 Outbound Topology: | | | |
| With 1 Blade: | | | |
| L3 inline service: | 33.5 K | 10 K | |
| L3 inline + (1) L2 service: | 30.1 K | 9.2 K | |

| Specifications | VIPRION 4450 Blade on VPR-4800 Chassis VIPRION 2250 Blade on VPR-2400 Ch | | |
|---------------------------------|--|--------|--|
| L3 inline + (2) L2 services: | 27.6 К | 8.5 K | |
| For each additional L2 service: | -2.4 K | -0.7 K | |
| With 2 Blades: | | | |
| L3 inline service: | 51.2 K | 18.3 K | |
| L3 inline + (1) L2 service: | 47.5 K | 16.6 K | |
| L3 inline + (2) L2 services: | 44.6 K | 15.5 K | |
| For each additional L2 service: | -2.9 K | -1.2 K | |
| L3 Inbound Topology: | | | |
| With 1 Blade: | | | |
| L3 inline service: | 64.6 K | 20.1 K | |
| L3 inline + (1) L2 service: | 54.6 K | 17.3 K | |
| L3 inline + (2) L2 services: | 47.5 K | 15 K | |
| For each additional L2 service: | -6.8 K | -2.0 K | |
| With 2 Blades: | | | |
| L3 inline service: | 79 K | 36.6 K | |
| L3 inline + (1) L2 service: | 73.1 K | 30.7 K | |
| L3 inline + (2) L2 services: | 66.6 K | 27 К | |
| For each additional L2 service: | -5.9 K | -3.8 K | |

*Throughput will increase at approximately 60% for each additional (non-vCMP) blade.

For complete specifications on all the F5 $^{\circ}$ VIPRION $^{\circ}$ platforms, please refer to the VIPRION data sheet.

Notes: L2 virtual wire mode is only supported on the VIPRION 2250 and VIPRION 4450 blades. L2 virtual wire mode is not supported in any vCMP configuration. Inline layer 2 services are not supported in the following vCMP conditions: VIPRION 2250 blade on VIPRION 2400 chassis, VIPRION 4300 blade on VIPRION 4450 blade on VIPRION 44

HIGH PERFORMANCE VIRTUAL EDITION (VE)

| Specifications | 8vCPU/16 GB RAM | 8vCPU/24 GB RAM | 12vCPU/24 GB RAM | 16vCPU/32 GB RAM | 16vCPU/49 GB RAM |
|---|--------------------|--------------------|---------------------|---------------------|---------------------|
| BIG-IP SSL Orchestrator | 87 Chos | 18 Chos | 10.7 Chos | 12 / Chos | 11 5 Chos |
| Throughput: * | 8.7 Obps | 4.0 0005 | 10.7 Obps | 12.4 Obps | 11.5 Obps |
| BIG-IP SSL Transactions/ Second (TPS): * | 4,800 | 6,400 | 6,500 | 8,200 | 15,200 |
| BIG-IP SSL Orchestrator Concurrent Sessions: * | 95,000 | 14,000 | 145,000 | 215,000 | 293,000 |

* Performance numbers for one inline L3 service. Expected drop in throughput per additional service added is -1.5 Gbps, based on the average throughput difference between 1 and 2 services for the 8vCPU VE and the 16vCPU VE.

High Performance VE tests were run on a single dedicated host with SR-IOV enabled.

HIGH PERFORMANCE VE (CONT.)

| Specifications | 20vCPU/40 GB RAM | 24vCPU/49 GB RAM | 26vCPU/94 GB RAM | 36vCPU/130 GB RAM |
|--|------------------|------------------|------------------|-------------------|
| BIG-IP SSL Orchestra-tor Throughput: * | 13.6 Gbps | 17 Gbps | 23.0 Gbps | 37.7 Gbps |
| BIG-IP SSL Transactions/ Second (TPS): * | 9,100 | 12,700 | 26,400 | 37,300 |
| BIG-IP SSL Orchestra-tor Concurrent Sessions: * | 290,000 | 380,000 | 950,000 | 1,300,000 |

* Performance numbers for one inline L3 service. Expected drop in throughput per additional service added is -1.5 Gbps, based on the average throughput difference between 1 and 2 services for the 8vCPU VE and the 16vCPU VE.

High Performance VE tests were run on a single dedicated host with SR-IOV enabled.

MORE INFORMATION

To learn more about BIG-IP SSL Orchestrator or other F5 resources, visit f5.com.

Web page

BIG-IP SSL Orchestrator

Solution overview

BIG-IP SSL Orchestrator

Integration guides

Cisco Firepower Threat Defense Cisco Web Security Appliance McAfee Web Gateway Menlo Security Remote Browser Isolation NETSCOUT OPSWAT MetaDefender ICAP Server Palo Alto Networks Next-Generation Firewall RSA NetWitness Symantec Data Loss Prevention Trellix Data Loss Prevention Trellix Network Security



©2023 F5, Inc. All rights reserved. F5, and the F5 logo are trademarks of F5, Inc. in the U.S. and in certain other countries. Other F5 trademarks are identified at f5.com. Any other products, services, or company names referenced herein may be trademarks of their respective owners with no endorsement or affiliation, expressed or implied, claimed by F5, Inc. DC1023 | DS-GTM-1223186653