

# FortiADC™

FortiADC 100F, 200D, 300D, 400D, 1000F, 2000F, 4000F and VM

The FortiADC Application Delivery Controllers (ADC) optimize the availability, user experience, performance and scalability of Enterprise Application Delivery. **The FortiADC family of physical appliances delivers fast, secure and intelligent acceleration and distribution of demanding applications in the enterprise.**



## Acceleration and Performance

Multi-core processor technology, combined with hardware-based SSL offloading to accelerate application performance.



## Application Availability

24x7 application availability through automatic failover, global server load balancing, and link load balancing to optimize WAN connectivity.



## Enhanced Protection

Web application firewall to defend against application vulnerabilities.



## Highlights

- Comprehensive server load balancing for 99.999% application uptime
- Server offloading for improved application acceleration, scale and TCO
- Intelligent traffic management for optimized application delivery and availability
- Hardware-based SSL Offloading, Forward Proxy, and Visibility
- Authentication Offloading
- Included Global Server Load Balancing
- Included Link Load Balancing
- Web Application Firewall with automatic updates
- Scripting for custom load balancing and content rewriting

## HIGHLIGHTS

### Hardware-Based SSL Offloading, SSL Inspection, and Visibility

FortiADC offloads server-intensive SSL processing with support for 4096-bit keys, TCP connection management, data compression and HTTP request processing from servers. This speeds up response times, reduces load on the backend servers, allowing them to serve more users.

SSL Forward Proxy utilizes FortiADC's high-capacity decryption and encryption to allow other devices, such as a FortiGate firewall, to easily inspect traffic for threats. An inline pair of FortiADCs at the front end and back end of a firewall remove all encryption so that the firewall isn't taxed with the additional load of SSL processing. FortiADC ensures seamless re-encryption with certificates intact with no user disruptions.

FortiADC's Transparent HTTP/S and TCP/S Mirroring Capabilities decrypt secure traffic for inspection and reporting. Copies of clear traffic can be sent for analysis by FortiGate or other third-party solutions for an indepth view of threats that may be hidden in encrypted traffic while FortiADC continues to perform its application delivery functions.

FortiADC integrates with Gemalto's SafeNet Enterprise Hardware Security Modules (HSMs) to use the advanced security certificates managed by the HSM for the encryption and decryption of secure application traffic. This lets organizations that use Gemalto's SafeNet HSMs deploy a high-performance ADC solution using a strong, centrally-managed set of certificates and encryption keys.

### Disaster Recovery with Global Server Load Balancing

FortiADC's included Global Server Load Balancing (GSLB) makes your network reliable and available by scaling applications across multiple data centers for disaster recovery or to improve application response times. Administrators can set up rules that direct traffic based on site availability, data center performance and network latency.

### Link Load Balancing

Built-in Link Load Balancing (LLB) gives you the option to connect your FortiADC to two or more WAN links to reduce the risk of outages or to add additional bandwidth to relieve traffic congestion. FortiADC supports inbound and outbound Link Load Balancing to manage traffic leaving or entering the device. Using policy routing, FortiADC can support complex NAT and routing requirements to address almost any network LLB architecture. With Tunnel Routing you get high-speed, reliable site-to-site connectivity without the

need to lease expensive WAN links. It aggregates multiple links to create a virtual tunnel to a remote data center that ensures availability especially for applications that are time sensitive and require large single-session bandwidth such as video conferencing.

### Optimize Performance with PageSpeed, Caching, and Compression

FortiADC provides multiple services that speed the delivery of applications to users. The PageSpeed suite of website performance enhancement tools can automatically optimize HTTP, CSS, Javascript and image delivery to application users. Caching on FortiADC dynamically stores popular application content such as images, videos, HTML files and other file types to alleviate server resources and accelerate overall application performance. HTTP Compression employs GZIP and DEFLATE to intelligently compress many content types used by today's latest web-based applications to reduce bandwidth needs and improve the user application experience.

### Web Application Firewall, Web Filtering, and IP Reputation for Enhanced Security

Web applications can be an easy target for hackers. FortiADC offers you multiple levels of protection to defend against attacks that target your applications. In addition to its stateful firewall feature, built in to every FortiADC is a Web Application Firewall that can detect known threats using FortiGuard WAF Security Services for layer 7 attack signatures (subscription required) and checks that requests haven't been tampered with using its HTTP RFC compliance constraints. FortiGuard Web Filtering works with FortiADC's SSL Forward Proxy feature to simplify the process of managing exceptions for secure traffic inspection. Instead of manually configuring single URLs, Web Filtering gives administrators the ability to choose websites by category type to enable or disable SSL traffic inspection as a group instead of on a site by site basis. FortiADC also supports our FortiGuard IP Reputation service (subscription required) that protects you from sources associated with DoS/ DDoS attacks, phishing schemes, spammers, malicious software and botnets.

### Scripting to Extend Built-in Features

FortiADC's Lua-based scripting language gives you the flexibility to create custom, event-driven rules using predefined commands, variables and operators. Using easy-to-create scripts, you get the flexibility you need to extend your FortiADC with specialized business rules that give you almost unlimited possibilities for server load balancing and content rewriting to meet the needs of your organization.

## HIGHLIGHTS

### Key Features and Benefits



Advanced Layer 7 Load Balancing	Intuitive L7 policy-based routing to dynamically rewrite content to support complex applications and server configurations.
SSL Offloading, Forward Proxy, and Visibility	Hardware and software-based SSL offloading reduces the performance impact on your server infrastructure. Also provides SSL visibility, decryption and re-encryption for FortiGate to easily inspect traffic for threats.
Application Optimization	Speed up web application delivery with Compression, Caching, HTTP 2.0, and HTTP Page Speed-UP for improved network and web server utilization.
Global Server Load Balancing	Included Global Server Load Balancing distributes traffic across multiple geographical locations for disaster recovery or to improve user response times.
Link Load Balancing	Link Load Balancing distributes traffic over multiple ISPs to increase resilience and reduce the need for costly bandwidth upgrades.
Web Application Firewall and IP Reputation	Advanced security features that protect applications with Web Application Attack Signatures, HTTP RFC compliance, and botnet/malicious source identification.

## FEATURES

### Application Availability

#### Easy to use and configure Layer 4/7 policy and group management

- Virtual service definition with inherited persistence, load balancing method and pool members
- Static, default and backup policies and groups
- Layer 4/7 application routing policy
- Layer 4/7 server persistence
- Application load balancing based on round robin, weighted round robin, least connections, shortest response
- Granular real server control including warm up rate limiting and maintenance mode with session ramp down
- Custom Scripting for SLB and Content Rewriting
- Application Templates for Microsoft Applications including SharePoint, Exchange and Windows Remote Desktop

#### Layer 4 Application Load Balancing

- TCP, UDP protocols supported
- Round robin, weighted round robin, least connections, shortest response
- L4 dynamic load balancing based on server parameters (CPU, Memory and disk)
- Persistent IP, has IP/port, hash header, persistent cookie, hash cookie, destination IP hash, URI hash, full URI hash, host hash, host domain hash

#### Layer 7 Application Load Balancing

- HTTP, HTTPS, HTTP 2.0 GW, FTP, SIP, RDP, RADIUS, MySQL, RTMP, RTSP supported
- L7 content switching
  - HTTP Host, HTTP Request URL, HTTP Referrer
  - Source IP Address
- URL Redirect, HTTP request/response rewrite (includes HTTP body)
- Layer 7 DNS load balancing, security, and caching
- 403 Forbidden Rewrite
- Content rewriting

#### Link Load Balancing

- Inbound and outbound LLB
- Support for Policy Route and SNAT
- Multiple health check target support
- Configurable intervals, retries and timeouts
- Tunnel Routing

#### Global Server Load Balancing (GSLB)

- Global data center DNS-based failover of web applications
- Delivers local and global load balancing between multi-site SSL VPN deployments
- DNSSEC
- DNS Access Control Lists

#### Deployment Modes

- One arm-mode (Proxy with X-forwarded for support)
- Router mode
- Transparent mode (switch)
- High Availability (AA/AP Failover)

## FEATURES

### Application Acceleration

#### SSL Offloading and Acceleration

- Offloads HTTPS and TCPS processing while securing sensitive data
- Full certificate management features
- SSL Forward Proxy for secure traffic inspection
- HTTP/S Mirroring for traffic analysis and reporting

#### HTTP and TCP Optimization

- 100x acceleration by off-loading TCP processing
- Connection pooling and multiplexing for HTTP and HTTPS
- HTTP Page Speed-UP for Web Server Optimization and Acceleration
- TCP buffering
- HTTP Compression and Decompression
- HTTP Caching (static and dynamic objects)
- Bandwidth allocation with Quality of Service (QoS)
- HTTP and Layer 4 Rate Limiting

#### Authentication Offloading

- Local
- LDAP
- RADIUS
- Kerberos
- SAML 2.0 (SP & IdP)

### Networking

- NAT for maximum flexibility and scalability
- VLAN and port trunking support
- BGP and OSPF Support
- IPv6 Support
- IPv6 routing
- IPv6 firewall rules

### Security

- GEO IP security and logs
- Stateful firewall
- Web Filtering (subscription required)
- IP Reputation (subscription required)
- IPv4 and 6 firewall rules
- Granular policy-based connection limiting
- Syn Cookie Protection
- Connection Limits

### Web Application Firewall

- Web Attack Signatures
- XML/JSON Validation
- SQLi/XSS Injection Detection
- Bot Detection
- URL/File Protection

### Management

- Single point of cluster management
- CLI Interface for configuration and monitoring
- Secure SSH remote network management
- Secure Web UI access
- RESTful API
- SNMP with private MIBs with threshold-based traps
- Real-time Data Analytics
- Syslog support
- Role-based administration
- In-build diagnostic utilities
- Real-time monitoring graphs
- Built-in reporting
- Getting Started wizard for first-time login
- Virtual Domains (VDOMs)

## SPECIFICATIONS

	FORTIADC 100F	FORTIADC 200D	FORTIADC 300D	FORTIADC 400D
Hardware Specifications				
L4 Throughput	1.5 Gbps	3 Gbps	6.0 Gbps	12.0 Gbps
L7 RPS	400,000	580,000	725,000	1 M
L7 Throughput	1.3 Gbps	2.5 Gbps	4.0 Gbps	8.0 Gbps
SSL CPS 2048 Key	500	900	1,500	7,000
Compression Throughput	1.0 Gbps	2.1 Gbps	2.6 Gbps	6.1 Gbps
SSL Acceleration Technology	Software	Software	Software	ASIC
Memory	4 GB	4 GB	8 GB	8 GB
Virtual Domains	10	10	10	20
Network Interfaces	6x GE RJ45	4x GE RJ45	4x GE RJ45, 4x GE SFP	2x 10 GE SFP+ slots, 4x GE SFP ports, 4x GE ports
10/100/1000 Management Interface	—	—	—	—
Storage	64 GB SSD	1 TB Hard Disk	128 GB SSD	128 GB SSD
Management	HTTPS, SSH CLI, Direct Console DB9 CLI, SNMP	HTTPS, SSH CLI, Direct Console DB9 CLI, SNMP	HTTPS, SSH CLI, Direct Console DB9 CLI, SNMP	HTTPS, SSH CLI, Direct Console DB9 CLI, SNMP
Power Supply	Single	Single	Single	Single (optional Dual)
Environment				
Form Factor	1U Appliance	1U Appliance	1U Appliance	1U Appliance
Input Voltage	100–240V AC, 50–60 Hz	90–264V AC, 47–63 Hz	100–240V AC, 50–60 Hz	100–240V AC, 50–60 Hz
Power Consumption (Average / Maximum)	40 W / 60 W	60 W / 72 W	96 W / 115 W	109 W / 130.8 W
Maximum Current	100V/1.5A, 240V/0.6A	115V/6A, 230V/3A	100V/4A, 240V/2A	100V/5A, 240V/3A
Heat Dissipation	132–163 BTU/h	205 BTU/h	392.4 BTU/h	446.3 BTU/h
Operating Temperature	32–104°F (0–40°C)	32–104°F (0–40°C)	32–104°F (0–40°C)	32–104°F (0–40°C)
Storage Temperature	-4–167°F (-20–75°C)	-13–158°F (-25–70°C)	-13–158°F (-25–70°C)	-13–158°F (-25–70°C)
Humidity	10–85% relative humidity, non-operating, non-condensing	5–95% non-condensing	5–95% non-condensing	5–95% non-condensing
Compliance				
Regulatory Compliance	FCC Part 15 Class A, C-Tick, VCCI Class A, CE, UL/c			
Safety	CSA, C/US, CE, UL			
Dimensions				
Height x Width x Length (inches)	1.75 x 17.3 x 10.55	1.75 x 17.05 x 13.86	1.73 x 17.24 x 16.38	1.73 x 17.24 x 16.38
Height x Width x Length (mm)	44 x 440 x 268	45 x 433 x 352	44 x 438 x 416	44 x 438 x 416
Weight	9.9 lbs (4.5 kg)	17.2 lbs (7.87 kg)	20 lbs (9.07 kg)	22 lbs (9.97 kg)



FortiADC 100F



FortiADC 200D



FortiADC 300D



FortiADC 400D

# SPECIFICATIONS

	FORTIADC 1000F	FORTIADC 2000F	FORTIADC 4000F
Hardware Specifications			
L4 Throughput	20.0 Gbps	40.0 Gbps	60.0 Gbps
L7 RPS	1.7 M	2.6 M	4.3 M
L7 Throughput	17.5 Gbps	24 Gbps	35 Gbps
SSL CPS 2048 Key	20,000	37,000	54,000
Compression Throughput	13.5 Gbps	18.0 Gbps	25.0 Gbps
SSL Acceleration Technology	ASIC	ASIC	ASIC
Memory	16 GB	32 GB	64 GB
Virtual Domains	45	60	90
Network Interfaces	4x 10 GE SFP+, 8x GE SFP, 8x GE RJ45	8x 10 GE SFP+, 8x GE SFP, 8x GE RJ45	8x GE SFP, 4x 10 GE SFP+, 2x 40 GE QSFP+
10/100/1000 Management Interface	1	1	1
Storage	128 GB SSD	240 GB SSD	480 GB SSD
Management	HTTPS, SSH CLI, Direct Console DB9 CLI, SNMP	HTTPS, SSH CLI, Direct Console DB9 CLI, SNMP	HTTPS, SSH CLI, Direct Console DB9 CLI, SNMP
Power Supply	Dual	Dual	Dual
Environment			
Form Factor	1U Appliance	1U Appliance	2U Appliance
Input Voltage	100–240V AC, 63–47 Hz	100–240V AC, 63–47 Hz	100–240V AC, 63–47 Hz
Power Consumption (Average / Maximum)	320 W / 267 W	340 W / 282 W	360 W / 300 W
Maximum Current	120V/7.1A, 240V/3.4A	120V/7.1A, 240V/3.4A	120V/8A, 240V/4A
Heat Dissipation	1092 BTU/h	1160 BTU/h	1228 BTU/h
Operating Temperature	32–104°F (0–40°C)	32–104°F (0–40°C)	32–104°F (0–40°C)
Storage Temperature	-4–158°F (-20–70°C)	-4–158°F (-20–70°C)	-4–158°F (-20–70°C)
Humidity	5–90% non-condensing	5–90% non-condensing	5–90% non-condensing
Compliance			
Regulatory Compliance	FCC Part 15 Class A, C-Tick, VCCI Class A, CE, UL/c		
Safety	CSA, C/US, CE, UL		
Dimensions			
Height x Width x Length (inches)	1.7 x 17.24 x 20.87	1.7 x 17.24 x 20.87	3.46 x 17.24 x 20.87
Height x Width x Length (mm)	44 x 438 x 530	44 x 438 x 530	88 x 438 x 530
Weight	22.6 lbs (10.3 kg)	22.6 lbs (10.3 kg)	27 lbs (12.25kg)

	FORTIADC-VM01	FORTIADC-VM02	FORTIADC-VM04	FORTIADC-VM08
<b>Hardware Specifications</b>				
Hypervisor Support	VMware ESX/ESXi, Citrix XenServer, Open Source Xen, Microsoft Hyper-V, KVM. Please see the FortiADC-VM Install Guide for the latest hypervisor versions supported.			
L4 Throughput*	1 Gbps	2 Gbps	4 Gbps	10 Gbps
Virtual Domains	0	0	5	10
vCPU Support (Maximum)	1	2	4	8
Memory Support (Maximum)	4 GB	4 GB	8 GB	16 GB
Network Interface Support (Maximum)	10	10	10	10
Storage Support (Minimum / Maximum)	50 MB / 1 TB	50 MB / 1 TB	50 MB / 1 TB	50 MB / 1 TB
Throughput	Hardware Dependent	Hardware Dependent	Hardware Dependent	Hardware Dependent
Management	HTTPS, SSH CLI, Direct Console DB9 CLI, SNMP			

\* Actual performance values may vary depending on the network traffic and system configuration. Performance results were observed using an appliance with an Intel CPU E5-1650 v2 @ 3.50 GHz running VMware ESXi 5.5.



FortiADC 1000F



FortiADC 2000F



FortiADC 4000F

## ORDER INFORMATION

Product	SKU	Description
FortiADC 100F	FAD-100F	FortiADC 100F, 6x GE ports, 1x 64 GB SSD onboard storage.
FortiADC 200D	FAD-200D	FortiADC 200D, 4x GE ports, 1x 1 TB storage.
FortiADC 300D	FAD-300D	FortiADC 300D, 8x GE ports, 1x 128 GB SSD onboard storage.
FortiADC 400D	FAD-400D	FortiADC 400D, 2x 10 GE SFP+ slots, 8x GE ports, 1x 128 GB SSD onboard storage, optional dual AC power supplies.
FortiADC 1000F	FAD-1000F	FortiADC 1000F, 4x 10 GE SFP+ ports, 8x GE SFP ports, 8x GE RJ45 ports, 1x GE RJ45 management port, 1x 240 G SSD, dual AC power supplies.
FortiADC 2000F	FAD-2000F	FortiADC 2000F, 8x 10 GE SFP+ ports, 8x GE SFP ports, 8x GE RJ45 ports, 1x GE RJ45 management port, 1x 240 G SSD, dual AC power supplies.
FortiADC 4000F	FAD-4000F	FortiADC 4000F, 2x 40 GE QSFP, 4x 10 GE SFP+ ports, 8x GE SFP ports, 1x GE RJ45 management port, 1x 480 G SSD, dual AC power supplies.
FortiADC-VM01	FAD-VM01	FortiADC-VM software virtual appliance designed for VMware ESX and ESXi platforms. 1x vCPU core, 2 GB.
FortiADC-VM02	FAD-VM02	FortiADC-VM software virtual appliance designed for VMware ESX and ESXi platforms. 2x vCPU core, 4 GB.
FortiADC-VM04	FAD-VM04	FortiADC-VM software virtual appliance designed for VMware ESX and ESXi platforms. 4x vCPU core, 8 GB.
FortiADC-VM08	FAD-VM08	FortiADC-VM software virtual appliance designed for VMware ESX and ESXi platforms. 8x vCPU core, 16 GB.



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