

# FortiOS™ 4.0 Software

FortiGate®  
Multi-Threat  
Security



Redefining Network Security

**FORTINET**®

## FortiOS 4.0—Redefining Network Security

FortiOS is a security-hardened, purpose-built operating system that is the software foundation of FortiGate multi-threat network security platforms. Leveraging the hardware acceleration provided by FortiASIC™ content and network processors, FortiOS enables high performance multi-threat security resulting in some of the highest levels of security and performance possible from a single device. When updated with the latest threat intelligence via FortiGuard™ security subscription services, FortiOS is prepared to stop the latest and evolving threats facing networks today.

With the release of FortiOS 4.0, Fortinet has redefined network security *again* by extending the scope of consolidated security and networking capabilities within FortiGate multi-threat network security platforms. While FortiOS 4.0 includes many new features, the most significant additions to the FortiGate platform include Data Loss Prevention (DLP), WAN Optimization, Application Control, and SSL-Encrypted Traffic Inspection. Organizations of all sizes can now benefit from an integrated solution which offers the most comprehensive suite of security and networking services within a single device—the new services in FortiOS 4.0 joining the already included enterprise-class firewall, IPSec VPN, SSL-VPN, Intrusion Prevention, Antivirus, Web Filtering, Antispam, and Layer 2/3 routing services. With over 40 new features, FortiOS 4.0 delivers on its mission to enable secure business communications while offering the best security, performance, and total cost of ownership possible.



### Enhanced Security

FortiOS 4.0 security services are designed from the ground up to be integrated, delivering overall security effectiveness that standalone products simply cannot match. The services work together as a system, acting in tandem to provide better visibility and stop threats as early as possible—resulting in less collateral damage.

### Improved Value

FortiOS 4.0 provides access to security services that were previously cost prohibitive or too complex to deploy individually. Moreover, the new features of FortiOS 4.0 are available at no additional cost for every eligible FortiGate device with an active maintenance contract.

### Simplified Management

FortiOS 4.0 consolidates security infrastructure and simplifies management. Using a unified policy at the device level, and an appliance-based centralized management platform for large deployments, complexity can be dramatically reduced over standalone offerings. Fortinet even offers a service-based management solution for smaller organizations to further simplify security management, fully integrated with FortiOS 4.0.

***“Changing business processes and threats are driving new requirements for network security. Increasing bandwidth and new application communication (such as Web 2.0) are changing how protocols are used and how data is presented. Software as a service is moving critical data off-site, and an increasing reliance on critical IT is pushing security in new directions.”***

Greg Young and John Pescatore, Gartner, Magic Quadrant for Enterprise Firewalls, November 2008.



## FortiOS 4.0—Over 40 New Features

With over 40 new features, Fortinet engineers have enhanced virtually every aspect of the operating system, including the addition of two distinct services, Data Loss Prevention and WAN Optimization, which have previously been available as standalone products only. Other features extend existing services, such as an identity-based policy feature, which allows the FortiGate's firewall policies to be defined by user or group. Multiple enhancements to the existing intrusion prevention service allow passive IDS support, and also make the intrusion prevention service IPv6 ready.

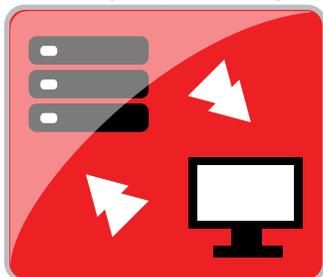
### DATA LOSS PREVENTION



#### Data Loss Prevention (DLP)

With increasingly sensitive, confidential, and proprietary data being communicated across networks, the ability to keep that information within defined network boundaries is imperative. Working across multiple applications (including those encrypting their communications), DLP uses a sophisticated pattern-matching and regular-expression engine to identify then prevent the communication of sensitive information outside of the network perimeter. In addition to protecting an organization's critical information, DLP also provides audit trails for data and files, which can aid in legislative compliance. With configurable DLP actions, organizations can log, block, and archive data as well as ban or quarantine users.

### WAN OPTIMIZATION



#### WAN Optimization

With WAN Optimization, customers can accelerate applications over wide area links and, at the same time, ensure multi-threat security enforcement. FortiOS 4.0 not only eliminates unnecessary and malicious traffic as one of its core capabilities, it also now optimizes legitimate traffic by reducing the amount of communication and data transmitted between applications and servers across the WAN. This results in a much faster user experience—increasing productivity—as well as helping to avoid additional higher-bandwidth provisioning requirements.

### APPLICATION CONTROL



#### Application Control

With Application Control, security policy can be defined and enforced for thousands of applications, regardless of the port or the protocol used for communication. With the explosion of new web-based applications bombarding networks today, most of which look like normal web traffic to traditional firewalls, application classification and control is essential. Fortinet's Application Control technology identifies application traffic and then applies security policies easily defined by the administrator. The end result: more flexible, more granular policy control and deeper visibility into network traffic.

### SSL INSPECTION



#### SSL-Encrypted Traffic Inspection

SSL-Encrypted Traffic Inspection protects clients and web and application servers from malicious SSL-encrypted traffic which security devices are often blind to. With SSL Inspection, encrypted traffic is intercepted and inspected for threats, prior to being allowed access to its final destination. SSL Inspection applies to both client-oriented SSL traffic, such as users connecting to an SSL-encrypted hosted CRM site; and inbound traffic destined an organization's own web and application servers. Inappropriate encrypted web content can now be filtered by appropriate use policies and servers can now be protected from encrypted intrusion attempts and attacks.

## FortiGate—Purpose-Built Hardware, Software, and Services

FortiGate platforms are based on an integrated hardware, software, and services architecture specifically designed for improved security and performance in perimeter, core, and data center environments. The FortiASIC™ Content Processor (CP) is a key component in FortiGate security platforms; providing a hardware scanning engine, hardware encryption, and real-time content analysis processing capabilities. The FortiASIC Network Processor (NP) series of processors provides acceleration for firewall, encryption/decryption, signature and heuristic packet scanning, and bandwidth shaping. FortiOS security applications can be selectively enabled to provide a full suite or a unique set security services all within a single platform. The FortiGuard™ network dynamically updates system software and security services such as antivirus, antispam, Web filtering, antispysware, and intrusion prevention to ensure the maximum level of protection is being provided.

### FortiOS Security Services

#### FIREWALL

ICSA Labs Certified (Enterprise Firewall)  
 NAT, PAT, Transparent (Bridge)  
 Routing Mode (RIP v1 & v2, OSPF, BGP, & Multicast)  
 Policy-Based NAT  
 Virtual Domains (NAT/Transparent mode)  
 VLAN Tagging (802.1Q)  
 User Group-Based Authentication  
 SIP/H.323 /SCCP NAT Traversal  
 WINS Support  
 Granular Per-Policy Protection Profiles  
 Explicit Proxy Support

#### VIRTUAL PRIVATE NETWORK (VPN)

ICSA Labs Certified (IPSec)  
 PPTP, IPSec, and SSL  
 Dedicated Tunnels  
 DES, 3DES, and AES Encryption Support  
 SHA-1/MD5 Authentication  
 PPTP, L2TP, VPN Client Pass Through  
 Hub and Spoke VPN Support  
 IKE Certificate Authentication  
 IPSec NAT Traversal  
 Dead Peer Detection  
 RSA SecurID Support

#### ANTIVIRUS

ICSA Labs Certified (Gateway Antivirus)  
 Includes AntiSpyware and Worm Prevention  
 HTTP/HTTPS SMTP/SMTPS  
 POP3/POP3S IMAP/IMAPS  
 FTP IM Protocols  
 Automatic "Push" Content Updates from FortiGuard Network  
 File Quarantine Support  
 Block by File Size or Type

#### WEB FILTERING

76 Unique Categories Provided by the FortiGuard Web  
 Filtering Service Categorizes over 2 Billion Web pages  
 HTTP/HTTPS Filtering  
 URL/Keyword/Phrase Block  
 URL Exempt List  
 Content Profiles  
 Blocks Java Applet, Cookies, Active X

#### APPLICATION CONTROL

Identification and control over 1000 applications  
 Control popular IM/P2P apps regardless of port/protocol:  
 AOL-IM Yahoo MSN KaZaa  
 ICQ Gnutella BitTorrent MySpace  
 WinNY Skype eDonkey Facebook

#### INTRUSION PREVENTION SYSTEM (IPS)

ICSA Labs Certified (NIPS)  
 Protection From Over 3000 Threats  
 Protocol Anomaly Support  
 Custom Signature Support  
 Automatic Attack Database Update

#### DATA LOSS PREVENTION (DLP)

Identification and control over sensitive data in motion  
 Built-in pattern database  
 RegEx based matching engine for customized patterns  
 Configurable actions (block/log)  
 Supports IM, HTTP/HTTPS, and more  
 Many popular file types supported

#### ANTISPAM

Support for SMTP/SMTPS, POP3/POP3S, IMAP/IMAPS  
 Real-Time Blacklist/Open Relay Database Server  
 MIME Header Check Keyword/Phrase Filtering  
 IP Address Blacklist/Exempt List  
 Automatic Real-Time Updates From FortiGuard Network

#### ENDPOINT COMPLIANCE AND CONTROL

Monitor & control hosts running FortiClient Endpoint Security

### FortiOS Networking Services

#### NETWORKING/ROUTING

Multiple WAN Link Support  
 PPPoE Support  
 DHCP Client/Server  
 Policy-Based Routing  
 Dynamic Routing (RIP v1 & v2, OSPF, BGP, & Multicast)  
 Multi-Zone Support  
 Route Between Zones  
 Route Between Virtual LANs (VDMOS)  
 Multi-Link Aggregation (802.3ad)  
 IPv6 Firewall and Management Support

#### TRAFFIC SHAPING

Policy-based Traffic Shaping  
 Differentiated Services (DiffServ) Support  
 Guarantee/Max/Priority Bandwidth

#### VIRTUAL DOMAINS (VDMOS)

Separate Firewall/ Routing domains  
 Separate Administrative domains  
 Separate VLAN interfaces  
 10 VDOM license standard, upgradable with additional license

#### DATA CENTER OPTIMIZATION

Web Server Caching TCP Multiplexing  
 HTTPS Offloading

#### HIGH AVAILABILITY (HA)

Active-Active, Active-Passive  
 Stateful Failover (FW and VPN)  
 Device Failure Detection and Notification  
 Link Status Monitor  
 Link failover  
 Server Load Balancing

#### WAN OPTIMIZATION

Bi-Directional / Gateway to Client/Gateway  
 Integrated Caching and Protocol Optimization  
 Accelerates CIFS/FTP/MAPI/HTTP/HTTPS/Generc TCP  
 Requires a FortiGate device with Hard Drive

### FortiOS Management Services

#### MANAGEMENT/ADMINISTRATION OPTIONS

Console Interface (RS-232)  
 WebUI (HTTP/HTTPS)  
 Telnet / Secure Command Shell (SSH)  
 Command Line Interface  
 Role-Based Administration  
 Multi-language Support  
 Multiple Administrators and User Levels  
 Upgrades and Changes Via TFTP and WebUI  
 System Software Rollback  
 Central Management via FortiZManager (optional)

#### LOGGING/MONITORING

Internal Logging  
 Log to Remote Syslog/WELF server  
 Graphical Real-Time and Historical Monitoring  
 SNMP  
 Email Notification of Viruses And Attacks  
 VPN Tunnel Monitor  
 Optional FortiAnalyzer Logging  
 Optional FortiGuard Analysis and Management Service

#### FIREWALL USER AUTHENTICATION OPTIONS

Local Database  
 Windows Active Directory (AD) Integration  
 External RADIUS/LDAP Integration  
 IP/MAC Address Binding  
 Xauth over RADIUS for IPSEC VPN  
 RSA SecurID Support



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