

FortiCache™ Series

ISP and Enterprise-Class Content Caching

The Internet is experiencing an ongoing dramatic change in usage as users shift from fixed to mobile access, and the volume of interactive and video content continues to increase. In addition, users not only expect, but demand instant access to content.



Carriers, Service Providers, large enterprises, and educational networks all face similar exponential growth in bandwidth demand that consumes capacity as quickly as it's added. With more and more organizations relying on hosted environments, the pressure of increased bandwidth usage can have negative impacts on users that rely on cloud-based applications outside of the internal network. Networks need to service these demands quickly and reliably without becoming prohibitively expensive.

Take Back Control of the Network

The FortiCache range of appliances provides a combination of content caching, WAN acceleration, and filtering controls to ensure the content you want is delivered promptly, bandwidth overheads are minimized, and controls are in place to ensure bandwidth misuse is mitigated.



FortiCache Features

- Content Caching
 - Static and dynamic content caching
 - Multiple Content Delivery Network (CDN) detection
 - Seek backward/forward in video
 - Advertisement detection
- Inspect and Control Content
 - Web content filtering
 - Antivirus scanning
 - Antimalware scanning
- WAN Optimization
 - Decrease network latency
 - Lower bandwidth overhead

Key Features and Benefits



Enterprise-Class Content Caching	Increases network performance, improves user satisfaction and reduces bandwidth costs.
Video Caching	Minimizes impact of viral video on network resource by caching common resource intensive web video formats including YouTube.
FortiGuard Antivirus and Web Content Filtering	Protects users from accessing unwanted content and secures network from malicious malware threats.
Real-Time Content Analysis	Detect and block adult content, even in "good" web sites.
WAN Optimization	Lower network transaction overheads, improving speed and decreasing network utilization.

Content caching enables organizations to reuse popular content rather than download it every time a user requests it. WAN acceleration techniques minimize the overhead on transactions, lowering the per-user bandwidth cost and speeding up connectivity. The integrated FortiGuard web filtering allows network administrators to selectively control or block access to content by type, (e.g. adult, or malicious content) to protect users and offer them differentiated services.

Bandwidth Reduction and Application Acceleration

The Internet is increasingly driven by short-term phenomena as news stories, sporting events, viral videos and games that drive spikes in bandwidth demand. Interest in such content can spread within minutes, proliferate quickly and generate huge traffic loads on the network. The result is congestion, latency and unplanned cost. By reducing the volume of bandwidth demand, service providers and enterprises can deliver a higher quality of service

HIGHLIGHTS

Content Caching Internet access is critical to the smooth functioning of any enterprise and latency or network congestion can disrupt business critical business apps. FortiCache acts as the enterprise's network "memory", remembering content and returning it locally rather than wasting precious internet bandwidth:

- Caches HTTP and HTTP/S objects while observing HTTP/1.0 and 1.1 standards
- Caches Microsoft, Apple and common AV signature updates
- Caches video formats and understands popular DDNs to maximize performance benefits
- Detects same video ID when content comes from different CDN hosts
- Seek forward/backward in video
- Video RTMP/RTMPT stream splitting

Threat Mitigation and Protection from Unwanted Content

Organizations of all types and sizes have a duty of care to protect users from unwanted content and to secure the network against malware threats. FortiCache provides advanced tools and services to help achieve these goals:

- FortiGuard Web filtering simplifies the management of controlling access to websites. It allows administrators to pick and choose content categories that users can access from the network instead of setting up websites individually. FortiCache also takes advantage of advanced features including safe search enforcement and keyword filtering.
- FortiGuard Antivirus Service provides award-winning virus and malware detection and mitigation.
- FortiCache includes content scanning technologies from Image Analyzer™, the industry leader in offensive image and video detection to prevent access to inappropriate content.

WAN Optimization

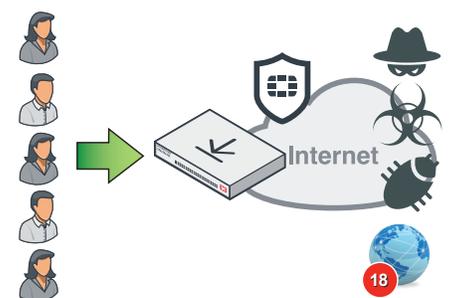
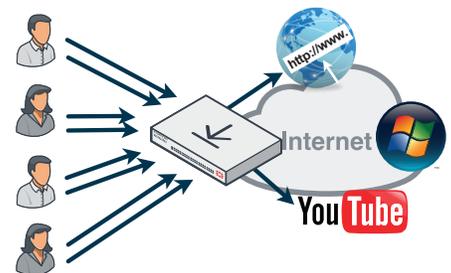
Remote or satellite offices often suffer from latency to the head office network which results in excessive file transfer, open and save times and critically, frustrated staff. FortiCache WAN Optimization alleviates this with object and byte caching to reduce traffic between offices and data centers and through optimization of "chatty" protocols. Such optimizations can generate significant improvement to network performance and improve staff satisfaction.

to their customers, improve customer satisfaction, retain a larger customer base, and ultimately increase profitability.

FortiCache Network Control

The modern network is being challenged continuously to provide service at an increasingly competitive cost. For some locations, it may be prohibitive to provide additional bandwidth. In these environments, FortiCache can enable your organization to mitigate the need for costly upgrades and extract a greater value from existing investments.

FortiCache enables the network administrator to optimize and accelerate the network by keeping as much traffic as possible within the network, thus lowering the pressure on valuable external connectivity. FortiCache understands the delivery format of Content Delivery Networks (CDNs), enabling caching of dynamic, distributed, and streaming video content. This can even be performed where advertisements are embedded in the video, or the file is served from different locations within the CDN.

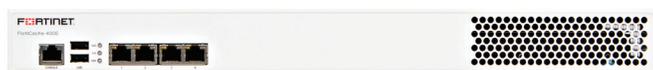


SPECIFICATIONS

	FORTICACHE 400E	FORTICACHE 1000D
Hardware		
10/100/1000 Interfaces (Copper, RJ45)	4	2
10/100/1000 with bypass Interfaces (Copper, RJ45)	0	4
SFP Gigabit Ethernet Interfaces	0	2
Local Storage	2x 2 TB Hard Disk	4x 2 TB Hard Disk Drive
Power Supply	Single (Dual optional)	Dual
System Performance		
Throughput	500 Mbps	1,200 Mbps
Deployment Modes	Transparent Inline Proxy, Routed Inline Proxy, Partial Inline Proxy (via policy routing), Explicit Proxy, SOCKSv5 Proxy, WCCP Target	
High Availability Configuration	Yes	Yes
Unlimited User License	Yes	Yes
Dimensions		
Height x Width x Length (inches)	1.73 x 17.24 x 16.38	3.54 x 17.24 x 14.49
Height x Width x Length (mm)	44 x 438 x 416	90 x 438 x 368
Weight	25 lbs (11.34 kg)	30.6 lbs (13.9 kg)
Environment		
Form Factor	Rack Mountable (1 RU)	Rack Mountable (2 RU)
Power Source	100–240V AC, 60–50 Hz	100–240V AC, 60–50 Hz
Current (Maximum)	4A / 110V, 2A / 220V	5A / 110V, 3A / 220V
Power Consumption (Average)	103 W	133 W
Heat Dissipation	482 BTU/h	546 BTU/h
Operating Temperature	32–104°F (0–40°C)	32–104°F (0–40°C)
Storage Temperature	-13–167°F (-25–75°C)	-40–149°F (-40–65°C)
Humidity	5–95% non-condensing	5–95% non-condensing
System		
Management	Management Direct Console DB9 CLI, SSH, TELNET, HTTP/S	Management Direct Console DB9 CLI, SSH, TELNET, HTTP/S
Compliance		
Safety	FCC Part 15 Class A, C-Tick, VCCI, CE, BSMI, UL/cUL, CB	FCC Part 15 Class A, C-Tick, VCCI, CE, BSMI, UL/cUL, CB

VIRTUAL APPLIANCES	FORTICACHE VM01	FORTICACHE VM02	FORTICACHE VM04	FORTICACHE VM08
Performance				
Transactions Per Second*	65	130	145	160
Throughput (Mbps)*	650	1250	1800	2000
Deployment Modes	Transparent Inline Proxy, Routed Inline Proxy, Partial Inline Proxy (via policy routing), Explicit Proxy, SOCKSv5 Proxy, WCCP Target			
High Availability Configuration			Yes	
Unlimited User License			Yes	
Virtual Machine				
Hypervisors Supported	VMware ESXi / ESX 4.0 / 4.1 / 5.0 / 5.1 / 5.5 / 6.0, KVM			
Virtual Machine Form Factor	Open Virtualization Format (OVF)			
Max Virtual CPUs Supported	1	2	4	8
Virtual NICs Required (Min/Max)	1 / 4	1 / 4	1 / 4	1 / 4
Virtual Machine Storage Required	60 GB / 2 TB	60 GB / 4 TB	60 GB / 6 TB	60 GB / 8 TB
Virtual Machine Memory Required (Min/Max)	1 GB / 4 GB	1 GB / 8 GB	1 GB / 12 GB	1 GB / 16 GB

* Actual performance values may vary depending on the network and system configuration. Performance metrics were observed using a Dell R430 Server (Intel® Xeon® CPU E5-2620 v3 2.4 Ghz, 2x 10 GE interfaces), running FortiCache v4.1.1 on KVM Hypervisor. Traffic Load based upon Size: 20% 64 KB, 20% 100 KB, 20% 512 KB, 20% 1000 KB, 20% 5000 KB.



FortiCache 400E



FortiCache 1000D

SPECIFICATIONS

	FORTICACHE 3000E	FORTICACHE 3900E
Hardware		
10/100/1000 Interfaces (Copper, RJ45)	4	2
10/100/1000 with bypass Interfaces (Copper, RJ45)	2	0
SFP Gigabit Ethernet Interfaces	2	0
10 GE SFP+ Interfaces	2	2
Local Storage	4x 2 TB SAS (Additional 8x 2 TB Optional)	15x 960 GB SSD
Power Supply	Dual	Dual
System Performance		
Throughput	2.5 Gbps*	4.0 Gbps
Deployment Modes	Transparent Inline Proxy, Routed Inline Proxy, Partial Inline Proxy (via policy routing), Explicit Proxy, SOCKSv5 Proxy, WCCP Target	
High Availability Configuration	Yes	Yes
Unlimited User License	Yes	Yes
Dimensions		
Height x Width x Length (inches)	3.50 x 17.20 x 26.90	3.50 x 17.20 x 26.90
Height x Width x Length (mm)	89 x 437 x 684	89 x 437 x 684
Weight	43 lbs (19.5 kg)	52 lbs (23.6 kg)
Environment		
Form Factor	Rack Mountable (2 RU)	Rack Mountable (2 RU)
Power Source	100–240V AC, 60–50 Hz	100–240V AC, 60–50 Hz
Current (Maximum)	12A / 110V, 6A / 220V	12A / 110V, 6A / 220V
Power Consumption (Average)	420 W	470 W
Heat Dissipation	1622 BTU/h	1637 BTU/h
Operating Temperature	50–95°F (10–35°C)	50–95°F (10–35°C)
Storage Temperature	-40–158°F (-40–70°C)	-40–140°F (-40–60°C)
Humidity	8–90% non-condensing	5–95% non-condensing
System		
Management	Management Direct Console DB9 CLI, SSH, TELNET, HTTP/S	Management Direct Console DB9 CLI, SSH, TELNET, HTTP/S
Compliance		
Safety	FCC Part 15 Class A, C-Tick, VCCI, CE, UL/cUL, CB	FCC Part 15 Class A, C-Tick, VCCI, CE, UL/cUL, CB

* Fully populated



FortiCache 3000E



FortiCache 3900E

ORDER INFORMATION

Product	SKU	Description
FortiCache 400E	FCH-400E	Web Cache appliance — 4x GE RJ45 ports, 4 TB storage.
FortiCache 1000D	FCH-1000D	Web Cache appliance — 2x GE RJ45 ports, 4x GE RJ45 bypass ports, 2x GE SFP ports, 8 TB storage.
FortiCache 3000E	FCH-3000E	Web Cache appliance — 4x GE RJ45 ports, 2x GE RJ45 bypass ports, 2x GE SFP ports, 2x 10 GE SFP+ ports, 4x 2 TB SAS (RAID) HDD storage.
FortiCache 3900E	FCH-3900E	Web Cache appliance — 2x GE RJ45 ports, 2x GE SFP+ ports, 15 TB SSD storage.
FortiCache-VM01	FCH-VM01	FortiCache-VM software virtual appliance designed for VMware ESX, ESXi and KVM platforms. 1x vCPU core, 4 GB RAM and 1 TB disk.
FortiCache-VM02	FCH-VM02	FortiCache-VM software virtual appliance designed for VMware ESX, ESXi and KVM platforms. 2x vCPU core, 8 GB RAM and 4 TB disk.
FortiCache-VM04	FCH-VM04	FortiCache-VM software virtual appliance designed for VMware ESX, ESXi and KVM platforms. 4x vCPU core, 12 GB RAM and 6 TB disk.
FortiCache-VM08	FCH-VM08	FortiCache-VM software virtual appliance designed for VMware ESX, ESXi and KVM platforms. 8x vCPU core, 16 GB RAM and 8 TB disk.
Accessories	SKU	Description
Power supply	SP-FAD700-PS	AC power supply for FCH-400E.
SSD drive with tray	SP-D960	960 GB 2.5" SSD drive with tray for FAZ/FMG-3900E.
Hard drive with tray	SP-D1TC	1 TB 3.5" SATA hard drive with tray for FCH-1000C, FCH-3000C.
Hard drive with tray	SP-D2TC	2 TB 3.5" SATA hard drive with tray for FCH-1000C (gen2), FCH-3000D.
Hard drive with tray	SP-D2000	2 TB 3.5" SATA hard drive with tray for FMG/FAZ/FML/FWB/FDB/FAC/FCH/FSA-1000D.
Hard drive with tray	SP-D2TE	2 TB 3.5" SAS hard drive with tray for FAC/FML-2000E, FAC/FCH/FML/FSA-3000E and FML-3200E.



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