

MARKET ANALYSIS

Worldwide Threat Management Security Appliances 2005–2009 Forecast and 2004 Vendor Shares: Security Appliances Remain a Well-Oiled Machine

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IDC OPINION

All three of the threat management security appliance markets continued to grow in 2004. Combined firewall/virtual private networking (VPN), unified threat management (UTM), and network intrusion detection and prevention (ID&P) grew more than 36%, which is rather amazing for a market that is well past \$2 billion in vendor revenue. The strongest growth came from the emerging unified threat management security appliance submarket. This product category, which was first identified by IDC in 2004, represents the unification of firewall, VPN, intrusion detection and prevention, and gateway antivirus into a single platform. The overall threat management security appliance market continues to satisfy customer needs for security, functionality, and ease of deployment. Firewall/VPN continues to be the largest segment, with 2004 revenue in excess of \$1.6 billion. UTM emerged as a substantial market with over \$330 million in vendor revenue in 2004. IDC believes that over the next five years the revenue generated by the sale of UTM security appliances will exceed that of standard firewall/VPNs. Overall, IDC forecasts that the threat management security appliance market will increase at a compound annual growth rate (CAGR) of almost 15% between 2005 and 2009. This growth translates into a total market greater than \$5 billion. Highlights are as follows:

- ☒ Appliances remain popular by being a simple means of delivering security software, so much so that appliance products can be found that cover many different security applications. By 2007, 80% of all network security solutions will be delivered via a dedicated appliance.
- ☒ IDC believes that the market for threat management appliances remained strong because of the wide coverage of the products. IDC tracks these products in price bands ranging from a few hundred dollars to a few hundred thousand dollars. The appliances solve many enterprise security problems.
- ☒ IDC believes that there will continue to be new players in this market because there are low barriers to entry and strong demand for different types of appliances, especially regionally.
- ☒ Threat management appliances, especially UTMs, continue to be popular with small and medium-sized enterprises. This segment continues to be targeted by all of the appliance vendors because of the large number of potential customers.

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IN THIS STUDY

This IDC study examines the threat management security appliance market for the period 2004–2009, with vendor revenue trends and market growth forecasts. Worldwide market sizes are provided for 2004 with trends from 2004, and a five-year growth forecast for this market is shown for 2005–2009. A vendor competitive analysis, with vendor revenue and market shares of the leading vendors, is provided for 2004. This study also identifies the characteristics that vendors will need to be successful in the future.

Methodology

IDC's industry analysts have been measuring and forecasting IT markets for more than 30 years. The market forecast and analysis methodology used in this study incorporates information from four different but interrelated sources, as follows:

- ☒ **Reported and observed trends and financial activity.** This study incorporates reported and observed trends and financial activity in 2003 and 2004 as of the end of March 2005, including reported revenue data for public companies trading on North American stock exchanges (CY 1Q04–4Q04 in nearly all cases).
- ☒ **Product briefings, press releases, and other publicly available information.** IDC's analysts around the world meet with hundreds of vendors each year. These briefings provide an opportunity to review current and future business and product strategies, revenue, shipments, customer bases, target markets, and other key product and competitive information.
- ☒ **Vendor financial statements and related filings.** Although many vendors are privately held and choose to limit financial disclosures, information from public companies provides a significant benchmark for assessing informal market estimates from private companies. IDC also builds detailed information related to private companies through in-depth analyst relationships and maintains an extensive library of financial and corporate information.
- ☒ **IDC demand-side research.** This includes thousands of interviews with business users of software solutions annually and provides a powerful fourth perspective for assessing competitive performance and market dynamics. IDC's user strategy databases offer a compelling and consistent time-series view of industry trends and developments. Direct conversations with technology buyers provide an invaluable complement to the broader survey-based results.

Ultimately, the data presented in this study represents IDC's best estimates based on the above data sources as well as reported and observed activity by vendors and further modeling of data that we believe to be true to fill in any information gaps.

Note: All numbers in this document may not be exact due to rounding.

Threat Management Security Appliances Market Definition

Threat management security appliances are defined as a combination of hardware, software, and networking technologies whose primary function is to perform specific or multiple security functions. Threat management security appliances consist of hardware with a hardened operating system (OS), a limited applications set, and no user software installation. Threat management security appliances may also include other features, such as security management, policy management, quality of service, load balancing, high availability, and bandwidth management. However, these features are designed only to support the primary security workload.

Firewall/VPN Security Appliance Products

Firewall/VPN security appliance products have as their primary function general-purpose filtering of networking traffic using one or more of packet filtering, stateful inspection, or proxy. Virtual private networking capabilities are a feature within these products that may or may not be contained in all products in this category. Firewall/VPN security appliances may also host other security features, such as intrusion detection, Web filtering, and security information services.

Unified Threat Management Security Appliance Products

UTM security appliance products include multiple security features integrated into one device. To be included in this category, as opposed to other segments, the appliance *must* contain the ability to perform network firewalling, network intrusion detection and prevention, and gateway antivirus (AV). All of the capabilities need not be utilized, but the functions must exist inherently in the appliance. In addition to the mandatory applications, UTM appliances may also host other security or networking features.

Network Intrusion Detection and Prevention Security Appliance Products

ID&P security appliance products have as their primary function the ability to provide continuous monitoring of networks and to report or react to malicious activity. ID&P products will compare current activity with a list of signatures known to represent malicious activity, or they will use other detection methods such as protocol analysis, anomaly, behavioral, or heuristics to discover unauthorized network activity. ID&P appliances generally have strong denial-of-service defensive capabilities and antiworm capabilities.

SITUATION OVERVIEW

Why Threat Management Security Appliances?

Why are people buying threat management security appliances when so many excellent software-based security applications are already on the market? Simply put, convenience, ease of installation, and centralized management are the key advantages of threat management security appliances. The following list outlines the

factors that have encouraged the growth of the threat management security appliance:

- ☒ **Reduced complexity.** The all-in-one approach simplifies product selection, product integration, and ongoing support.
- ☒ **Avoidance of software installation and proliferating servers.** Customers or, more often, VARs, VADs, or MSPs can easily install and maintain the products. Increasingly, this process is handled remotely.
- ☒ **Ability to install and forget.** The appliances are generally plug and play, with very little installation required. User configuration errors and changes are minimized.
- ☒ **Synergy with high-end software solutions.** Appliances are used in remote sites where an enterprise does not have security professionals on the ground. A plug-and-play appliance can be installed and then managed remotely. This management is synergistic with large, centralized software-based firewalls.
- ☒ **Performance.** With an appliance, application performance is standardized.
- ☒ **Troubleshooting ease.** When a box fails, it is easier to swap it out than to troubleshoot. This process gets the node back online quicker, and it can also be done by a nontechnical person. This feature is especially important for remote offices without a dedicated technical staff onsite.
- ☒ **Centralized management.** Management of appliance operation and performance and application functionality can all be done using a centralized management console.

The Threat Management Security Appliances Market in 2004

The market for threat management security appliances continued to see a shift in customer product selection. Previously this market was completely dominated by firewall/VPN products, but now customers are accepting other types of security appliances. The unified threat management and network intrusion detection and prevention categories saw considerable success. Combined, UTM and ID&P account for nearly a third of the total threat management security appliances market; in 2003 they accounted for a fifth of that market. Both categories are well into multiple hundreds of millions of dollars in revenue. IDC believes they will continue to see considerable growth so that, by 2009, the UTM space will be the largest single market and the ID&P market will be nearly on par with the firewall/VPN market. Overall, the appliance markets continue to grow because more and more players are entering these markets.

No matter what the products were called, security appliances with strong firewalling capabilities did well in 2004. The market again experienced considerable growth. Total vendor revenue exceeded \$2.5 billion for the overall threat management market, a 36% growth rate when compared with 2003.

Performance of Leading Vendors in 2004

Firewall/VPN Security Appliances

Due to price pressures, the emergence of the UTM segment, and its being a \$1 billion market, the firewall/VPN security appliance market continued to be sluggish, experiencing a negative growth rate between 2003 to 2004. Total revenue for the market was \$1.68 billion in 2004. Table 1 provides the specific numbers, including vendor revenue, shipments, and average vendor revenue (AVR). AVR for the market was less than \$1,000, the result of cheaper consumer products and price pressures across the market.

TABLE 1

Worldwide Firewall/VPN Security Appliance Revenue, Shipments, and Average Vendor Revenue by Vendor, 2004

	Revenue (\$M)	Revenue Share (%)	Shipments	AVR (\$)
Cisco	600.9	35.6	300,382	2,001
Juniper	249.4	14.8	91,634	2,722
Nokia	215.2	12.8	31,870	6,752
SonicWALL	92.2	5.5	129,348	713
WatchGuard	64.2	3.8	82,410	779
CyberGuard	34.3	2.0	49,784	690
Check Point	26.2	1.6	32,149	815
Nortel Networks	22.4	1.3	1,222	18,352
TopSec	18.0	1.1	4,605	3,906
Lenovo	17.1	1.0	3,708	4,613
Fujitsu	15.7	0.9	2,180	7,182
Equinet	13.9	0.8	9,310	1,491
Shenyang Neusoft	13.2	0.8	3,822	3,459
Future Systems	13.1	0.8	8,914	1,467
Founder	10.4	0.6	1,929	5,411
Netasq	9.5	0.6	4,635	2,040
Global Technology	8.9	0.5	3,383	2,642

TABLE 1

Worldwide Firewall/VPN Security Appliance Revenue, Shipments, and Average Vendor Revenue by Vendor, 2004

	Revenue (\$M)	Revenue Share (%)	Shipments	AVR (\$)
Oullim Info-tech	6.3	0.4	3,256	1,937
Symantec	6.0	0.4	10,351	583
iS-One	5.9	0.3	1,078	5,439
NexG	5.8	0.3	3,480	1,666
Other	130.0	7.7	51,308	2,533
Subtotal	1,578.6	93.6	830,758	1,900
Consumer	107.6	6.4	878,879	122
Total	1,686.2	100.0	1,709,637	986

Source: IDC, 2005

The top 5 vendors in this market in terms of revenue commanded a 72.5% share in 2004. This range was 2% less than what was the norm over the three previous years. The list of vendors in this market has remained considerably stable. The same five vendors (Juniper is a new name, but it purchased NetScreen) continue to top the leaderboard. Cisco remains the worldwide leader, with a 35.6% share. Juniper is in the second position, with a 14.8% share. Nokia had 12.8% of the market. Small and medium-sized enterprise specialists SonicWALL (5.5% share) and WatchGuard (3.8% share) filled out the top 5. Other notables include CyberGuard, which slightly increased its share by complementing its line of high-assurance appliances with a line of affordable appliances. Check Point, which contributes the software used by a number of vendors, is also now offering its own line of appliances. Over the next few years, the vendor positions in this market should change considerably as many vendors begin offering UTM appliances. SonicWALL and WatchGuard already made the switch in late 2004.

The Check Point Factor

Check Point Software is the dominant enterprise firewall/VPN software vendor. It is also a driving force in the firewall/VPN security appliance market; however, because Check Point recognizes its software sales separately from its appliance partners, the value of the Check Point software license is not included in the revenue for appliance vendors that sell Check Point-based appliances. This accounting specifically affects Nokia's position because the value of the Check Point software, which makes up its firewall/VPN appliances, is not included.

IDC decided to show the impact on partners' revenue if the Check Point software license was included. Table 2 is a pro forma chart to illustrate where Nokia and other partners (such as Fujitsu and Nortel) would be positioned when combined with Check Point revenue. IDC estimates that in 2004, about 60% of Check Point's enterprise firewall/VPN software revenue was directly related to its appliance channel, with Nokia capturing about three-quarters of that revenue. Overall, IDC believes that when the Check Point appliances and partner appliances are combined with Check Point software, the total revenue is about \$541 million. This means that Check Point directly influences 28% of the market, even though the independent appliance vendors are in direct competition.

As shown in Table 2, the combined revenue for the Nokia/Check Point combination would be \$378 million, for a 20% share. This revised data would move Nokia/CheckPoint past Juniper into a very strong second position.

In the future, Check Point will continue to influence this market, both as a software vendor and as an appliance vendor. Check Point will continue to utilize the appliance vendors as the preferred channel for its firewall/VPN software sales. Check Point will also continue to concentrate on other value-added security areas, such as application security and security management, which will allow its firewall software to remain in demand by appliance manufacturers and customers.

TABLE 2

Pro Forma Worldwide Firewall/VPN Appliance Revenue, Shipments, and Average Vendor Revenue with the Inclusion of Check Point Software Data by Vendor, 2004

	Revenue (\$M)	Revenue Share (%)	Shipments	AVR (\$)
Cisco	600.9	31.3	300,382	2,001
Nokia/Check Point	377.9	19.7	31,870	11,858
Juniper	249.4	13.0	91,634	2,722
SonicWALL	92.2	4.8	129,348	713
WatchGuard	64.2	3.3	82,410	779
Nortel Networks/Check Point	43.2	2.3	1,222	35,352
CyberGuard	34.3	1.8	49,784	690
Fujitsu/Check Point	27.2	1.4	2,180	12,476
Check Point	26.2	1.4	32,149	815
TopSec	18.0	0.9	4,605	3,906
Lenovo	17.1	0.9	3,708	4,613

TABLE 2

Pro Forma Worldwide Firewall/VPN Appliance Revenue, Shipments, and Average Vendor Revenue with the Inclusion of Check Point Software Data by Vendor, 2004

	Revenue (\$M)	Revenue Share (%)	Shipments	AVR (\$)
Equinet	13.9	0.7	9,310	1,491
Shenyang Neusoft	13.2	0.7	3,822	3,459
Future Systems	13.1	0.7	8,914	1,467
Founder	10.4	0.5	1,929	5,411
Netasq	9.5	0.5	4,635	2,040
Global Technology	8.9	0.5	3,383	2,642
Oullim Info-tech	6.3	0.3	3,256	1,937
Symantec	6.0	0.3	10,351	583
iS-One	5.9	0.3	1,078	5,439
NexG	5.8	0.3	3,480	1,666
Other with Check Point	66.8	3.5	12,654	5,277
Other	99.0	5.2	38,654	2,561
Subtotal	1,809.5	94.4	830,758	2,178
Consumer	107.6	5.6	878,879	122
Total	1,917.1	100.0	1,709,637	1,121

Source: IDC, 2005

Firewall/VPN Security Appliances by Price Band

The firewall/VPN security appliance market contains a wide range of products and vendors. Given this fact, IDC has segmented the market into eight price bands. These bands are designed to highlight the divergent areas in which firewall/VPN security appliances are being used. Because IDC tracks vendor revenue, the price bands are based on average vendor revenue returned to the vendor for hardware, software, and maintenance associated with the sale of a given appliance model. The price bands do not necessarily correspond to retail list prices.

The difference between the consumer price band and the low price band is in the types of products included and, generally, the vendors. The low price band is designed for those products offered to enterprises primarily for security purposes. The

vendors covered in this band are primarily security vendors. The consumer price band primarily includes home and small office routers with some firewalling capability. The security in this case is normally a feature, not the primary application. Here, only IDC's estimate of the security share of the revenue on the sale of the larger router business is included. No vendor shares are provided for the consumer market. This said, the security capabilities offered by the consumer products continue to improve, and eventually vendors most associated with consumer products will offer fully functional security appliances. The easiest way to cross the gap between consumer and enterprise security is to utilize security software designed specifically for original equipment manufactures. Intoto has been seeing considerable traction in this area. It is already providing software to NETGEAR.

Table 3 provides the top 4 vendors in each price band. Cisco is the only vendor that covers the full spectrum, being represented in all price categories. Other vendors represented multiple times include Juniper (six times), Nokia (five times), Nortel Networks (two times), SonicWALL (two times), and WatchGuard (two times). Others with one mention are Check Point, CyberGuard, and Chinese vendors TopSec and Founder Electronics. Cisco leads in five categories, while Juniper and Nokia each top one price band.

TABLE 3

Worldwide Firewall/VPN Security Appliance Revenue, Shipments, and Average Vendor Revenue by Price Band and Leading Vendor, 2004

	Revenue (\$M)	Revenue Share (%)	Shipments	AVR (\$)
\$1-999				
Cisco	89.0	37.3	175,773	506
SonicWALL	46.3	19.4	101,762	455
Juniper	33.1	13.9	68,599	482
WatchGuard	20.8	8.7	53,823	387
Price band total	238.6	100.0	515,318	463
\$1,000-2,999				
Cisco	76.6	32.4	63,570	1,205
WatchGuard	35.8	15.1	26,399	1,357
SonicWALL	25.9	10.9	22,316	1,161
Check Point	16.5	7.0	13,524	1,220
Price band total	236.7	100.0	176,788	1,339

TABLE 3

Worldwide Firewall/VPN Security Appliance Revenue, Shipments, and Average Vendor Revenue by Price Band and Leading Vendor, 2004

	Revenue (\$M)	Revenue Share (%)	Shipments	AVR (\$)
\$3,000–5,999				
Cisco	147.4	47.3	45,998	3,204
Nokia	37.0	11.9	8,197	4,519
Juniper	30.2	9.7	9,348	3,230
TopSec	16.3	5.2	3,999	4,076
Price band total	311.6	100.0	90,295	3,451
\$6,000–9,999				
Nokia	51.2	34.3	6,368	8,039
Juniper	25.4	17.0	3,732	6,798
Cisco	14.4	9.7	1,753	8,222
Founder Electronics	7.4	5.0	1,164	6,386
Price band total	149.0	100.0	20,668	7,211
\$10,000–24,999				
Cisco	84.1	44.4	7,232	11,632
Nokia	39.2	20.7	3,220	12,177
Juniper	20.9	11.0	1,996	10,448
Nortel Networks	7.5	4.0	455	16,515
Price band total	189.5	100.0	15,581	12,161
\$25,000–49,999				
Cisco	157.3	52.2	5,382	29,229
Nokia	61.5	20.4	1,866	32,940
Juniper	46.2	15.3	1,606	28,766
CyberGuard	10.1	3.3	365	27,596
Price band total	301.5	100.0	10,051	29,993

TABLE 3

Worldwide Firewall/VPN Security Appliance Revenue, Shipments, and Average Vendor Revenue by Price Band and Leading Vendor, 2004

	Revenue (\$M)	Revenue Share (%)	Shipments	AVR (\$)
\$50,000+				
Juniper	85.8	56.5	958	89,514
Cisco	32.2	21.2	674	47,744
Nokia	15.7	10.3	236	66,359
Nortel Networks	3.1	2.0	49	62,779
Price band total	151.8	100.0	2,057	73,774

Source: IDC, 2005

Unified Threat Management Security Appliance Market

Last year IDC identified a new category of threat management security appliances, unified threat management. In 2004 the market exploded, growing over 200%. This growth is the result of the popularity of the concept of one appliance with multiple applications among small and medium-sized vendors, and among larger customers that have many branch and remote facilities. Additionally, the number of vendors that entered the market helped it to grow. In 2003 there were seven named vendors. In 2004 IDC identified 12 vendors, and by the end of 2005 it expects that 20 vendors could be identified in this market. As can be seen in Table 4, the UTM market exceeded \$330 million in revenue in 2004, making it extremely competitive. The 5 leading vendors in this market in terms of revenue are the following:

- ☒ **Fortinet.** Fortinet, with the only ASIC-based AV-accelerated UTM appliances, again led this market in 2004 with \$60.4 million in revenue and an 18.1% share of the worldwide market.
- ☒ **Symantec.** Symantec was a close second with a 17.8% market share and \$59.4 million in revenue in 2004.
- ☒ **Secure Computing.** Secure Computing, which transformed from a software vendor to a provider of appliances, was the third-place vendor on revenue of \$47.4 million for a market share of 14.2%.
- ☒ **Juniper.** On the strength of its NetScreen-5GT, Juniper accounted for a 9.6% share of the UTM security appliance market in 2004 with \$32.1 million in revenue.

☒ **Crossbeam.** Crossbeam, which has been very successful in selling best-of-breed UTM switches, generated \$23.7 million in revenue and a 7.1% share of the UTM security appliance market in 2004. With its high-end market appliance, the company is the leader in AVR.

As can also be seen from the table, SonicWALL, which entered the UTM market only in November 2004, was the fourth-largest vendor in terms of units shipped.

TABLE 4

Worldwide Unified Threat Management Security Appliance Revenue, Shipments, and Average Vendor Revenue by Vendor, 2004

	Revenue (\$M)	Revenue Share (%)	Shipments	AVR (\$)
Fortinet	60.4	18.1	42,436	1,423
Symantec	59.4	17.8	25,387	2,340
Secure Computing	47.4	14.2	8,743	5,417
Juniper	32.1	9.6	62,000	518
Crossbeam	23.7	7.1	313	75,623
ServGate	18.9	5.7	17,255	1,095
SonicWALL	17.0	5.1	23,077	738
Secui.com	16.2	4.8	3,689	4,382
Check Point	9.5	2.9	17,559	543
ISS	5.2	1.6	1,201	4,330
SecureSoft	3.3	1.0	529	6,275
McAfee Security	2.5	0.7	1,459	1,713
Other	38.0	11.4	21,456	1,771
Total	333.6	100.0	225,104	1,482

Source: IDC, 2005

Unified Threat Management Security Appliances by Price Band

The UTM security appliance market contains a wide range of products and vendors. Given this fact, IDC has segmented the market into seven price bands. These bands are designed to highlight the divergent areas in which UTM security appliances are being used. Because IDC tracks vendor revenue, the price bands are based on average vendor revenue returned to the vendor for hardware, software, and maintenance associated with the sale of a given appliance model. The price bands do not necessarily correspond to retail list prices.

Table 5 lists the top 4 vendors in each price band. Fortinet appears as a top vendor in all seven price bands. Symantec and Secure Computing are represented six times. Crossbeam, Juniper, ServGate, SonicWALL show up twice, and, as in the Firewall/VPN market, Asian vendors found their way onto the top 4 lists (Secui.com and SecureSoft).

As previously mentioned, the UTM market is extremely competitive, and the price band data illustrates that with five different vendors atop the price bands. Symantec led in three categories, while Crossbeam, Fortinet, Juniper, and Secure Computing each topped one price band.

TABLE 5

Worldwide Unified Threat Management Security Appliance Revenue, Shipments, and Average Vendor Revenue by Price Band and Leading Vendor, 2004

	Revenue (\$M)	Revenue Share (%)	Shipments	AVR (\$)
\$1-999				
Juniper	25.6	33.5	56,621	452
Fortinet	14.2	18.6	30,753	463
Symantec	9.5	12.4	19,025	499
SonicWALL	8.4	11.0	19,392	432
Price band total	76.5	100.0	163,979	466
\$1,000-2,999				
Fortinet	9.2	18.2	5,829	1,573
Juniper	6.5	13.0	5,379	1,212
ServGate	5.8	11.5	4,731	1,222
SonicWALL	5.2	10.3	3,102	1,678
Price band total	50.3	100.0	33,902	1,484

TABLE 5

Worldwide Unified Threat Management Security Appliance Revenue, Shipments, and Average Vendor Revenue by Price Band and Leading Vendor, 2004

	Revenue (\$M)	Revenue Share (%)	Shipments	AVR (\$)
\$3,000–5,999				
Symantec	12.6	24.5	2,584	4,871
Fortinet	8.5	16.6	2,570	3,326
Secure Computing	8.1	15.8	2,567	3,167
ServGate	6.2	12.2	1,590	3,929
Price band total	51.4	100.0	13,330	3,855
\$6,000–9,999				
Secure Computing	15.1	28.5	2,477	6,109
Symantec	13.9	26.1	2,114	6,562
Fortinet	13.1	24.7	2,141	6,125
SecureSoft	2.4	4.5	354	6,819
Price band total	53.2	100.0	8,336	6,379
\$10,000–24,999				
Symantec	14.4	26.5	1,107	13,006
Secure Computing	12.9	23.8	1,216	10,604
Fortinet	11.2	20.7	1,030	10,877
Secui.com	11.4	21.0	893	12,779
Price band total	54.2	100.0	4,609	11,766
\$25,000–49,999				
Symantec	6.4	32.6	195	32,895
Crossbeam	5.9	30.0	166	35,532
Secure Computing	3.5	17.8	126	27,703
Fortinet	2.3	11.7	81	28,319
Price band total	19.7	100.0	609	32,279

TABLE 5

Worldwide Unified Threat Management Security Appliance Revenue, Shipments, and Average Vendor Revenue by Price Band and Leading Vendor, 2004

	Revenue (\$M)	Revenue Share (%)	Shipments	AVR (\$)
\$50,000+				
Crossbeam	17.8	62.6	147	120,957
Secure Computing	5.3	18.6	103	51,159
Symantec	2.3	8.0	39	57,987
Fortinet	1.8	6.5	32	57,319
Price band total	28.4	100.0	339	83,753

Source: IDC, 2005

Network Intrusion Detection and Prevention Security Appliance Market

The network ID&P security appliance market changed considerably in 2004. New vendors jumped to the forefront of the market when they entered. On the strength of these and other new vendors and appliance products, including intrusion prevention appliances (which will be segmented in a future document), the worldwide revenue for the ID&P appliance market reached \$496.3 million in 2004. Although it is not included in Table 6, the market growth rate was 88.1% when compared with the 2003 revenue of \$263.8 million. The top 5 vendors in this market are:

- ☒ **Cisco.** Cisco led the ID&P appliance market in 2004 with \$124.6 million in revenue and a 25% share of the worldwide market.
- ☒ **Internet Security Systems (ISS).** With its Proventia line of appliances, ISS held the second position in the ID&P appliance market in 2004. The company recorded revenue of \$85.3 million for a market share of 17.2%. It is emerging as a leading vendor within the network intrusion prevention appliance segment.
- ☒ **McAfee.** McAfee, whose product is called IntruShield, was the third-largest vendor with 2004 revenue of \$52 million. All of McAfee's revenue is from intrusion prevention appliances.
- ☒ **TippingPoint (acquired by 3Com).** TippingPoint accounted for a 5.7% share of the ID&P appliance market in 2004 with \$28.3 million in revenue. TippingPoint's revenue, like McAfee's, comes exclusively from intrusion prevention appliances.
- ☒ **SourceFire.** SourceFire, the provider of SNORT appliances, accounted for a 5.3% share of the ID&P appliance market in 2004 with \$26.4 million in revenue.

TABLE 6

Worldwide Network Intrusion Detection and Prevention Security Appliance Revenue, Shipments, and Average Vendor Revenue by Vendor, 2004

	Revenue (\$M)	Revenue Share (%)	Shipments	AVR (\$)
Cisco	124.6	25.1	9,466	13,158
ISS	85.3	17.2	5,792	14,727
McAfee Security	52.0	10.5	1,928	26,987
TippingPoint (bought by 3Com)	28.3	5.7	2,430	11,646
SourceFire	26.4	5.3	2,269	11,623
Juniper	19.4	3.9	1,606	12,090
Check Point	17.9	3.6	1,439	12,441
Top Layer	11.0	2.2	241	45,643
iS-One	9.9	2.0	1,027	9,665
VenusTech	9.9	2.0	1,067	9,255
NSFocus	9.2	1.9	795	11,566
Lancope	9.0	1.8	302	29,801
Mazu Networks	8.0	1.6	238	33,613
Enterasys	7.4	1.5	826	9,007
Shanghai Kingnet	7.3	1.5	1,470	4,936
LG N-Sys	5.6	1.1	107	52,444
Intrusion Inc.	5.3	1.1	1,384	3,810
NFR	5.0	1.0	349	14,327
Radware	3.9	0.8	192	20,101
Symantec	3.8	0.8	329	11,634
Shenyang Neusoft	2.3	0.5	262	8,689
NitroSecurity	2.2	0.4	300	7,333
Yokogawa Electric	2.1	0.4	341	6,220
Other	40.6	8.2	2,758	14,721
Total	496.3	100.0	36,918	13,444

Source: IDC, 2005

FUTURE OUTLOOK

Forecast and Assumptions

Worldwide Threat Management Security Appliance Forecast, 2005–2009

Worldwide revenue for the threat management markets reached \$2.5 billion in 2004. IDC currently forecasts that the threat management security appliance market will increase at a 14.8% CAGR and reach \$5 billion in 2009, as shown in Table 7. The firewall/VPN segment, whose growth is being subsumed by the UTM market, will have negative growth throughout the forecast period. The UTM category will be the primary market by the end of the forecast period.

Please also note that IDC forecasts the market will have a "wave" growth pattern. Growth rates will increase in 2004 and 2005, then decline in 2006 and 2007, and start to increase again in 2008. This forecast takes into account the purchase and replace cycle that has previously been seen in the firewall appliance markets. Prior to the release of new models, the market grows more slowly; when vendors release new models, growth rates increase. IDC would expect to see this pattern during the current forecast period.

TABLE 7

Worldwide Threat Management Security Appliance Revenue by Segment, 2003–2009 (\$M)

	2003	2004	2005	2006	2007	2008	2009	2004–2009 CAGR (%)
Firewall/VPN	1,479.1	1,686.2	1,581.9	1,489.9	1,412.2	1,348.0	1,317.6	-4.8
Intrusion detection and prevention	263.8	496.3	691.7	879.3	1,059.8	1,225.9	1,342.9	22.0
Unified threat management	104.9	333.6	677.0	947.0	1,282.0	1,870.0	2,364.0	47.9
Total	1,847.8	2,516.1	2,950.6	3,316.2	3,754.0	4,443.9	5,024.5	14.8

Note: See Table 9 for key forecast assumptions.

Source: IDC, 2005

Worldwide Threat Management Security Appliance Forecast by Region, 2005–2009

IDC analysts around the globe supplied regional input and insight for the threat management security appliance market forecast. The worldwide forecast is the aggregation of this regional data, as reported in Table 8. It is interesting to note the considerable regional differences regarding each market. In one market a region may have the highest growth rate, and in another market that same region may have the lowest growth. Review Table 8 to note all of the interesting regional differences.

TABLE 8

Worldwide Threat Management Security Appliance Revenue by Segment and Region, 2004–2009 (\$M)

	2004	2005	2006	2007	2008	2009	2004–2009 CAGR (%)
Firewall/VPN							
North America	718.2	502.0	372.5	301.7	251.2	236.8	-19.9
Western Europe	472.6	551.6	569.3	544.7	507.4	470.8	-0.1
Asia/Pacific, including Japan	406.1	435.6	451.7	465.5	484.3	499.7	4.2
ROW	89.4	92.7	96.3	100.3	105.2	110.3	4.3
Subtotal	1,686.2	1,581.9	1,489.9	1,412.2	1,348.0	1,317.6	-4.8
Intrusion detection and prevention							
North America	206.8	304.8	403.5	507.4	610.8	674.9	26.7
Western Europe	118.7	160.6	200.4	234.9	265.2	293.8	19.9
Asia/Pacific, including Japan	147.0	198.2	241.2	276.6	301.1	316.8	16.6
ROW	23.8	28.2	34.2	40.9	48.8	57.5	19.3
Subtotal	496.3	691.7	879.3	1,059.8	1,225.9	1,342.9	22.0
Unified threat management							
North America	132.9	263.0	332.6	417.3	630.7	786.2	42.7
Western Europe	77.4	170.3	287.0	443.2	644.4	833.1	60.9
Asia/Pacific, including Japan	108.4	217.4	290.1	374.1	533.3	669.0	43.9
ROW	14.9	26.3	37.3	47.3	61.6	75.7	38.4
Subtotal	333.6	677.0	947.0	1,282.0	1,870.0	2,364.0	47.9

TABLE 8

Worldwide Threat Management Security Appliance Revenue by Segment and Region, 2004–2009 (\$M)

	2004	2005	2006	2007	2008	2009	2004–2009 CAGR (%)
Total							
North America	1,057.9	1,069.8	1,108.5	1,226.5	1,492.7	1,698.0	9.9
Western Europe	668.7	882.4	1,056.7	1,222.9	1,417.0	1,597.7	19.0
Asia/Pacific, including Japan	661.5	851.2	983.0	1,116.2	1,318.6	1,485.4	17.6
ROW	128.1	147.2	167.9	188.4	215.6	243.4	13.7
Total	2,516.1	2,950.6	3,316.2	3,754.0	4,443.9	5,024.5	14.8

Note: See Table 9 for key forecast assumptions.

Source: IDC, 2005

Key Forecast Assumptions

The above forecasts are based on the assumptions listed in Table 9.

TABLE 9

Key Forecast Assumptions for the Worldwide Threat Management Security Appliance Market, 2005–2009

Market Force	IDC Assumption	Impact	Accelerator/ Inhibitor/ Neutral	Certainty of Assumption
Macroeconomics				
Economy	Worldwide and regional economic growth has recovered to about where it will be, with the exception, perhaps, of Europe. In general, the economy is as "recovered" as it's going to get.	High. Although the economy is relatively strong now, it seems to have peaked, which is a negative influence.	↔	★★★★☆
Policy	Compliance, including Sarbanes-Oxley, Basel II, and HIPAA, is still driving some IT spending. We don't expect compliance spending to crowd out other IT initiatives; in fact, compliance record keeping could spur initiatives in other areas as companies clean up their acts.	High. Compliance initiatives could take budget away from threat management appliance purchases. However, regulations also require improved security, so the impact is probably limited.	↔	★★★★☆

TABLE 9

Key Forecast Assumptions for the Worldwide Threat Management Security Appliance Market, 2005–2009

Market Force	IDC Assumption	Impact	Accelerator/ Inhibitor/ Neutral	Certainty of Assumption
Profits	2005 profits will be less than 2004's 15%+ growth, but still positive. The Consensus Economics May 2005 poll calls for U.S. profit growth of 11. 5% in 2005, after 17% in 2003 and 2004. The forecast for 2006 is much lower (5.4%). Much of the early growth was from cost cutting, but more is now coming from revenue.	Moderate. IT spending is almost to full strength because company profits have been good for over a year. With high profits, organizations will increase IT spending. As profits fall, enterprises will be looking for cost savings, and UTM appliances could benefit from these initiatives.	↑	★★★★☆
Geopolitics	Terrorism alerts remain high, and terrorism acts outside the Middle East have diminished. Because of the war in Iraq, there seems to be more uncertainty over geopolitics than ever.	Low. Business decisions and project initiations will begin in line with a better economic outlook.	↓	★★★☆☆
Energy	Each quarter energy costs have gone up. (Oil was at nearly \$70 a barrel in September 2005.) There is more demand than capacity to supply. Newly emerging economies such as china and India are rapidly increasing their per capita consumption of energy. Any disruption in production, such as natural disasters (Hurricane Katrina), or political instability in countries such as Nigeria and Venezuela will create price jitters. This means that oil prices are likely to remain high indefinitely.	High. Oil prices above \$65 a barrel are record highs and are contributing to inflation. On a positive side for threat management security appliances, high gas prices will increase remote working. These remote and telecommuter employees will require improved security.	↑	★★★★☆

TABLE 9

Key Forecast Assumptions for the Worldwide Threat Management Security Appliance Market, 2005–2009

Market Force	IDC Assumption	Impact	Accelerator/ Inhibitor/ Neutral	Certainty of Assumption
Unemployment/ job creation	Unemployment worldwide will stay about the same as 2004 levels, with the U.S. rate staying above 5% in 2005. U.S. job creation is just keeping up with workforce growth; hence, unemployment has been over 5% in 2005. It is not clear where structural unemployment in the United States belongs, but it has historically been over 5%. In Western Europe, Germany, France, and Italy will flirt with double-digit unemployment (Germany's is 12%), but many other countries will look more like the United States. In Japan, where unemployment used to be in the 1–2% range, unemployment will be about 4–5%.	Moderate. More employment drives more need for IT infrastructure and is a lagging indicator of economic recovery; job creation should be accompanied by willingness to invest in other areas.	↔	★★★★☆
Exchange rates	In 2004 the dollar lost 8% against the euro and almost as much against the yen and the pound, after losing 16% in 2003 and 15% in 2002. Long term, there could be further declines tied to the U.S. trade imbalance and deficits, but for 2005 the dollar has risen 7% so far against the euro.	Moderate. A stabilizing dollar will make it easier for vendors to manage supply lines and will stabilize the prices of imports and exports. A rising dollar will lower revenue growth for U.S. multinationals.	↔	★★★★☆☆
Technology/ service developments				
Killer apps	No killer apps or new technologies will come to drive overall industry growth in the same way Windows and office suites did in the 1980s or the Internet did in the late 1990s.	Moderate. With no killer app, enterprises will work to improve the security of their existing infrastructures.	↑	★★★★★★

TABLE 9

Key Forecast Assumptions for the Worldwide Threat Management Security Appliance Market, 2005–2009

Market Force	IDC Assumption	Impact	Accelerator/ Inhibitor/ Neutral	Certainty of Assumption
Convergence	Technology convergence and the maturing of the consumer PC and related markets are spurring the creation of new consumer products, such as camera phones, PC-media centers, mp3 players, and so on. Most PC companies serving consumers will likely become purveyors of consumer electronics.	Low. The extension of IT product lines into consumer electronics adds to the overall market opportunity for IT vendors and expands the definition of the market. A number of security appliances start-ups hope to tap the consumer market.	↑	★★★★☆
Innovation	Vendors will continue security software, hardware, and services innovation at the same rate as in the past.	Low. The security market will not face bottlenecks from lack of new product development.	↔	★★★★☆
On-demand/utility computing/ dynamic it	IDC has identified the next style of computing — dynamic it for dynamic enterprises — as one that dramatically increases the effectiveness of IT. Dynamic IT will support both business strategy and IT operational efficiency through 12 key hinge technologies. For more information, see <i>Hinge Technologies for the Dynamic Enterprise</i> (IDC #31371, May 2004).	Low. Dynamic IT, by adding coherence to the enterprise usage of IT, will spur IT markets but have less of an initial impact on security.	↔	★★★★☆
Labor supply				
Personnel	IT security personnel will be in short supply.	Moderate. With a limited supply of trained security personnel, easier solutions are required. This will drive the purchases of security appliances that are easy to use, reduce, the need for trained security personnel, and add value to other IT solutions.	↑	★★★★★

TABLE 9

Key Forecast Assumptions for the Worldwide Threat Management Security Appliance Market, 2005–2009

Market Force	IDC Assumption	Impact	Accelerator/ Inhibitor/ Neutral	Certainty of Assumption
Capitalization				
Venture	Venture funding, now at 1998 levels, seems to have leveled off. VCs now talk about a venture "overhang" — money that was raised prior to the crash that is still looking for investment. This may lead to an "echo" of the 2001 boom-bust.	Low. There doesn't seem to be a funding limitation to IT innovation that would alter IT forecasts.	↔	★★★★☆
Stocks	For 2005, the stock market remained essentially flat. Most of the economic recovery has already been factored in by the market, and now the political situation and the prospect of rising interest rates are affecting investor enthusiasm. We expect stocks will not be a factor in 2005 when it comes to IT forecasts.	Low. Increased business confidence and market liquidity accompany a rising stock market.	↔	★★☆☆☆
Market characteristics				
Security	The market will remain populated by many, many vendors selling myriad products with many different marketing messages. There will be a lot of options in the market.	Moderate. The large number of vendors leads to innovation and market education, thus creating more demand, especially for advanced solutions such as UTM and intrusion prevention.	↑	★★★★☆
Hardware	Security appliances will continue to grow in popularity as an easy way to distribute software security solutions to customers. They also have a limited life due to performance requirements and need to be periodically updated.	High. Appliances will continue to be popular with customers and distributors. There will be a replacement cycle associated with this market.	↑	★★★★☆

TABLE 9

Key Forecast Assumptions for the Worldwide Threat Management Security Appliance Market, 2005–2009

Market Force	IDC Assumption	Impact	Accelerator/ Inhibitor/ Neutral	Certainty of Assumption
The Internet	Internet adoption is still going strong, especially in emerging economies. In the next three years, 300 million new users will come on line and commerce will grow threefold. By the end of 2005, 40% of Internet households will be broadband.	Moderate. Analysts and pundits may underestimate the impact of the Internet because the "buzz" is gone. IT will be an enabler for both new markets and new business models. These emerging economies provide considerable opportunity for security appliances.	↑	★★★★☆
Consolidation	Smaller pure-play vendors will be open to mergers and acquisitions that enable them to reach wider audiences, while larger firms with broader product portfolios will look for technology and product acquisitions to fill gaps to be able to offer end-to-end solutions from a single source.	Low. Market consolidation, or lack thereof, will have a limited impact on the overall threat management appliance markets.	↔	★★★★☆
Consumption				
Saturation	PC and Internet markets will continue to saturate, but emerging geographies will invest and new applications will drive users to multiplatform usage. Many of these applications will be on smaller and cheaper platforms, cannibalizing sales of older types.	Low. This has already been factored into the forecast.	↔	★★★★☆

TABLE 9

Key Forecast Assumptions for the Worldwide Threat Management Security Appliance Market, 2005–2009

Market Force	IDC Assumption	Impact	Accelerator/ Inhibitor/ Neutral	Certainty of Assumption
Buying sentiment	IT buyers have switched from neutral to optimistic, as evidenced by IDC's 2005 <i>Barometer Survey</i> , which has a weighted global expectation of 9% spending growth (versus IDC's <i>Worldwide Black Book</i> expectation of 6%). Yet this is a wildly mixed bag, with positive expectations for the United States and negative expectations for Europe. In the May 2005 IDC FutureScan, the combined expectation was 7.3% growth in IT spending in the next 12 months.	Moderate. If buyer sentiment remains high, then spending could beat forecasts. Planned spending on security initiatives remains high.	↑	★★★★☆

Legend: ★☆☆☆☆ very low, ★★☆☆☆ low, ★★★☆☆ moderate, ★★★★☆ high, ★★★★★ very high
 Source: IDC, 2005

Market Trends

The security appliance market has had strong growth, but with the challenges posed by infrastructures and technologies, the market will need to adapt to maintain stable growth. Developments that will shape this market in the future include the following:

- ☒ **Continuing expansion of the UTM security appliance.** Two trends are appearing in the UTM space. The first is the growing number of vendors that are offering products in this space (addressed later in this section). The second is the increasing number of applications that are being added to UTM security appliances. A number of vendors are adding VoIP security and SSL-VPN to their appliances. By offering additional security features, UTM appliances provide the potential customer with more options upon which to build its security infrastructure. UTM security appliances continue to provide customers with considerable deployment flexibility while at the same time offering a standard management platform. All of the functions of a UTM appliance can be utilized, or the product can be used for a specialized purpose. When it uses the UTM appliance as a point product, the enterprise does get the advantage of consolidated management, and it can still turn on any feature it requires without needing to deploy new appliances.

- ☒ **Security event correlation married to UTM management.** Because UTM security appliances are performing many different applications, it is possible to use the single management console to correlate the security events created by the different applications. Many UTM vendors are working with event correlation vendors, such as OEM specialist EIQ Networks, to add even more value to their offerings.

- ☒ **Opportunities in small and medium-sized enterprises.** The number of small and medium-sized companies is huge. There are millions of employer businesses with fewer than 500 employees, as reported by the U.S. Small Business Administration. This potential market is huge because it has a low penetration rate for IT security. Many companies have done well targeting this market; SonicWALL and WatchGuard have created successful channels and have products that talk directly to the needs of this vertical segment. However, the other vendors that have historically been geared toward the large enterprise are now developing product offerings geared to the small to medium-sized enterprise. Cisco, Juniper, Symantec, and Check Point are attacking this segment. UTM appliance vendors such as Fortinet and ServGate are also finding success in this market segment. Start-up vendors such as Metavize are entering the market. Other vendors, such as ELI, are even targeting the consumer and home office market. ID&P vendors are also beginning to look at providing solutions for this untapped market. Given the size of the potential market, the push into the vertical should only create more opportunities for all vendors over the next 18 months.

- ☒ **Addressing new applications such as voice, Web services, and storage networks.** Security appliance vendors continue to improve the technology to address new and emerging information technologies and protocols, such as VoIP, XML, application protection, and storage. This capability is required because as these infrastructure components grow in popularity, they will soon become targets of attacks. IDC would expect to first see special-purpose appliances dealing with these technologies, and eventually all of the different types of threat management security appliances will address these technologies.

- ☒ **Wireless (WLAN) security.** As enterprises deal with wireless networking, they are facing increasing security worries. To mitigate the risks of deploying WLANs, enterprises are deploying more robust security solutions tied to the wireless network. SonicWALL, WatchGuard, Fortinet, Check Point, Symantec, and Zyxel all have security appliances with built-in wireless access points. This technology will go a long way to alleviate the pain associated with WLAN deployment and should be a growth area for all security appliances.

- ☒ **Change in form factor.** Security appliance form factors will continue to change. The standalone black box is beginning to be replaced by appliance blades or cards. Cisco and Crossbeam have had success with blades that support high-performance switches. Other vendors are going in the other direction by creating server security appliance cards that provide a full appliance on a PCI card for embedding into servers. The cards will support best-of-breed security software such as that available from Check Point. CyberGuard's SnapGear line has a number of PCI-based firewalls. More products with unique form factors should be coming in the future.

- ☒ **Firewall routers — boon or bane?** The increasing incorporation of firewall technology into routers by networking vendors such as Cisco, Enterasys, and Juniper can be a blessing or a curse for the threat management markets. If customers accept these products and use them to supplant standalone security products, the market will suffer; however, if they use these products in concert with dedicated security appliances, all vendors in the space will see increased opportunities. IDC believes that improved security in routers is a great development for overall enterprise security but that these products will not supplant dedicated security solutions, especially the UTM platforms.

- ☒ **More new players and no consolidation.** The number of companies offering threat management security appliances will increase over the next 18 months. Cisco announced its Adaptive Security Appliances. Many electronics vendors in Asia have expanded to include security in their product lines. Fueling some of this interest are appliance vendors such as Celestix, Network Engines, and SteelCloud, which are working with software vendors to design and manufacture appliances. Microsoft and Computer Associates are moving in this direction. Other vendors, such as Intoto and SafeNet, have launched OEM programs that will provide software and hardware to allow equipment vendors to quickly create strong security appliances. Intoto has assisted NetGear to produce enterprise-level security appliances from small and medium-sized customers. Intoto has other customers that have not been identified. Lastly, there has not been consolidation among the threat management appliance vendors. It appears that most vendors plan to expand their product lines with internal research or through partnering and not via acquisition.

ESSENTIAL GUIDANCE

IDC believes that the keys to success in the threat management security appliance market will be product differentiation through improved performance and features. With the proliferation of so many appliances, customer confusion can occur. For vendors to win in such a competitive environment, they need to stand out in the marketplace. This can be done in a number of ways: price, performance, the mix of security functions incorporated in the device, improved manageability, security knowledge services, or security certification.

Of course, one problem is finding the right differentiation strategy while at the same time maintaining touch with competitors. A case in point is certification. As more and more products get certified in the same way, it is no longer a nice feature but a requirement. This has been the case with firewall/VPN and is becoming true with both UTM and network ID&P security appliances.

IDC also believes that security appliance vendors should partner with managed security service providers, especially when targeting small and medium-sized enterprises. That market segment is increasingly turning to outsourced services for firewall management, and intrusion detection is growing. Application vendors are in a great position to offer their wares through a service provider. In this way, the customer does not purchase the hardware but instead "leases" it as part of the service.

IDC believes the threat management security appliance market remains a dynamic and competitive market. However, it is not one that is to be pursued in a vacuum. Software and hardware security solutions must continue to be part of a coherent enterprise security program. The vendors providing products must continue to partner to meet customer needs. This is especially true for the placement of software solutions such as SCM and vulnerability assessment software on different types of security appliances. All vendors must also keep up with the ever-changing security landscape. This means that wireless, Web services, remote access, internal security, and storage area networks must be addressed by the security appliance vendors.

LEARN MORE

Related Research

- ☒ *Worldwide SSL-VPN Appliance 2005–2009 Forecast and 2004 Vendor Shares: Delivering Secure Application Access* (IDC #33142, March 2005)
- ☒ *Digital Security Spectrum, 4Q04* (IDC #33094, March 2005)
- ☒ *Worldwide Secure Content Management 2005–2009 Forecast: The Emergence of Outbound Content Compliance* (IDC #33076, March 2005)
- ☒ *IDC's Enterprise Security Survey, 2004* (IDC #32593, December 2004)
- ☒ *Worldwide IT Security Software, Hardware, and Services 2004–2008 Forecast: The Big Picture* (IDC #32557, December 2004)
- ☒ *Quantum Cryptography: Where It Stands* (IDC #32517, December 2004)

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