

MARKET ANALYSIS

Worldwide Threat Management Security Appliances 2004–2008 Forecast and 2003 Vendor Shares: The Rise of the Unified Threat Management Security Appliance

Charles J. Kolodgy

IDC OPINION

The firewall/VPN appliance market maintained strong growth in 2003 while beginning the transition to a threat management security appliance market. To signify this change from standard firewall/VPN appliances, IDC has renamed the overall market and created a new submarket, unified threat management security appliance, that represents the unification of firewall and gateway antivirus into a single platform. The threat management security appliance market presently consists of two distinct submarkets: firewall/VPN and unified threat management (UTM). In the future, the intrusion detection and prevention appliance market may be integrated into the threat management security appliance market. The overall threat management security appliance market continues to satisfy customer needs for security, functionality, and ease of deployment. The firewall/VPN segment, from which the UTM has emerged, continues to be the largest segment, with 2003 revenue of nearly \$1.5 billion. The UTM market is an emerging market with only \$105 million in vendor revenue in 2003. However, IDC believes that, over the next five years, the revenue generated by the sale of UTM appliances will exceed that of standard firewall/VPNs. Overall, IDC forecasts that the threat management security appliance market will grow at a combined annual growth rate of 17% between 2003 and 2008. This translates into a total market of \$3.45 billion. Highlights are as follows:

- ☒ Appliances have become 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 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 the firewall/VPN 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.
- ☒ 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.

TABLE OF CONTENTS

	P
In This Study	1
Methodology	1
Threat Management Security Appliances Market Definition	1
Situation Overview	2
Why Threat Management Security Appliances?	2
The Threat Management Security Appliances Market in 2003	3
Performance of Leading Vendors in 2003	3
Future Outlook	11
Forecast and Assumptions	11
Market Trends	17
Essential Guidance	21
Learn More	21
Related Research	21
Methodology	22

LIST OF TABLES

	P
1 Worldwide Firewall/VPN Security Appliances Revenue by Vendor, 2002 and 2003	4
2 Worldwide Firewall/VPN Security Appliances Shipments, Revenue, and Average Vendor Revenue by Vendor, 2003	5
3 Pro Forma Worldwide Firewall/VPN Appliances Revenue with the Inclusion of Check Point Software Revenue by Vendor, 2003	6
4 Worldwide Firewall/VPN Security Appliances Revenue, Shipments, and Average Vendor Revenue by Leading Vendor, 2003.....	8
5 Worldwide Unified Threat Management Appliances Revenue, Shipments, and Average Vendor Revenue by Vendor, 2003	11
6 Worldwide Threat Management Security Appliances Revenue by Segment, 2003–2008.....	12
7 Worldwide Threat Management Security Appliances Revenue by Price Band, 2003–2008	13
8 Key Forecast Assumptions for the Worldwide Threat Management Security Appliances Market, 2004–2008	14
9 Selection of Unified Threat Management Appliances.....	19

IN THIS STUDY

This IDC study examines the threat management security appliance market for the period 2003–2008, with vendor revenue trends and market growth forecasts. Worldwide market sizes are provided for 2003 with trends from 2003. A five-year growth forecast for this market is shown for 2004–2008. Vendor competitive analysis, with vendor revenue and market shares of the leading vendors, is provided for 2003. This study also identifies the characteristics that vendors will need to be successful in the future.

Methodology

See the Learn More section for a description of the data collection and analysis methodology employed in this study.

In addition, please note the following:

- The information contained in this study was derived from the IDC Software Market Forecaster database as of July 1, 2004.
- All numbers in this document may not be exact due to rounding.
- For more information on IDC's software definitions and methodology, see *IDC's Software Taxonomy, 2004* (IDC #30838, February 2004).

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 (QoS), 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 (VPN) capabilities are a feature within these products and 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 (UTM) Security Appliance Products

UTM security appliance products include multiple security features integrated into one box. 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 in the appliance need not be utilized, but the functions must exist inherently in the appliance. In these products, the individual components cannot be separated.

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 and ease of installation are the key advantages of threat management security appliances. The following outline 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.
- ☒ **Install and forget.** The appliances are generally plug and play, with very little installation required.
- ☒ **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.
- ☒ **Less operator interaction.** Users have a tendency to play with things, and the black-box approach limits the "damage" users can do. This reduces trouble calls and improves security.
- ☒ **Troubleshooting ease.** When a box fails, it is easier to swap it out than 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 dedicated technical staff onsite.

The Threat Management Security Appliances Market in 2003

The market for security appliances changed considerably over the course of the year. A new category of firewall/VPN appliances emerged in 2003 that IDC is dubbing unified threat management security appliances. To represent the influence that IDC believes this market will have on the overall market, IDC is calling what was formerly the firewall/VPN market the threat management security appliance market. This renamed market will have submarkets in the existing firewall/VPN security appliance market and the new UTM market. Helping to create the UTM market were a number of vendors that came to the forefront of this market, including Fortinet and Servgate, and some well known vendors, including Symantec, Secure Computing, and NetScreen. In the future, there will be considerable action as more companies introduce UTM offerings.

No matter what the products were called, security appliances with strong firewalling capabilities did well in 2003. The market again experienced considerable growth. Total vendor revenue exceeded \$1.5 billion for the overall threat management market, which had a 9.3% growth rate over 2002.

Performance of Leading Vendors in 2003

Firewall/VPN Security Appliances

The firewall/VPN security appliance market continued to grow, but due to price pressures, the emergence of the UTM segment, and its being a billion-dollar market, growth only reached 6.3%. Total revenue for the market was \$1.48 billion in 2003. Table 1 provides the specific numbers for this market. The top 5 vendors in this market commanded 77.2% of the market in 2003. This range was also the same as recorded in 2001 and 2002. However, the market shares of individual companies changed considerably, with NetScreen (which was acquired in early 2004 by Juniper Networks) gaining share at the expense of the other four. Cisco remains the worldwide leader with a 34.2% share. Nokia and NetScreen are in a statistical tie for second place with shares of 16.4% and 16.1% respectively. Small and medium-sized enterprise specialists SonicWALL (6.1%) and WatchGuard (4.2%) filled out the top 5. Other notables are CyberGuard, which strengthened its overall position with its purchase of SnapGear (whose affordable appliances complement CyberGuard's existing line of high-assurance appliances). Check Point's partners, Nortel and Siemens-Fujitsu, were also successful selling enterprise firewalls to telecommunications companies and large enterprises that are deploying new features such as voice over IP (VoIP). Symantec's appliances are now placed in the UTM market, which is explained below.

TABLE 1

Worldwide Firewall/VPN Security Appliances Revenue by Vendor, 2002 and 2003
(\$M)

	2002	2003	2003 Share (%)	2002–2003 Growth (%)
Cisco	511.7	506.3	34.2	-1.1
Nokia	241.0	243.1	16.4	0.8
NetScreen (acquired by Juniper Networks)	144.1	237.6	16.1	64.9
SonicWALL	93.3	89.7	6.1	-3.8
WatchGuard	65.1	62.6	4.2	-3.7
CyberGuard	24.0	27.2	1.8	13.3
Siemens-Fujitsu	17.7	19.0	1.3	7.2
Nortel	10.0	18.4	1.2	83.9
Netasq	8.1	11.9	0.8	46.5
Global Technology Associates	6.9	7.5	0.5	9.8
Celestix	2.3	3.4	0.2	47.8
Subtotal	1,124.2	1,226.7	82.9	9.1
Other firewall appliances	190.4	157.4	10.6	-17.3
Consumer	76.4	95.0	6.4	24.3
Total	1,390.9	1,479.1	100.0	6.3

Source: IDC, 2004

Table 2 shows total unit shipments for appliances. Shipments of nonconsumer firewall/VPN appliances exceeded half a million in 2003. This was primarily due to the growth in low-end appliances, which generate high unit volumes without the same increase in revenue. Price pressure across the whole market also contributed to the growth in unit shipments. Cisco was the leading vendor, with SonicWALL and NetScreen being the other vendors to exceed 100,000 units shipped. WatchGuard, and Nokia again are in the top 5. European vendor Netasq and Global Technology Associates were the next two vendors; these two are relatively new to the appliance market and demonstrate how new players can gain traction in this market.

TABLE 2

Worldwide Firewall/VPN Security Appliances Shipments, Revenue, and Average Vendor Revenue by Vendor, 2003

	Shipments	Revenue (\$M)	AVR (\$)
Cisco	195,625	506.3	2,588
SonicWALL	131,379	89.7	683
NetScreen (acquired by Juniper Networks)	121,737	237.6	1,952
WatchGuard	68,198	62.6	918
Nokia	36,904	243.1	6,587
Netasq	3,605	11.9	3,305
Global Technology Associates	3,522	7.5	2,143
Siemens-Fujitsu	3,160	19.0	6,019
Celestix	2,759	3.4	1,232
CyberGuard	1,634	27.2	16,639
Nortel	807	18.4	22,782
Zyxel	–	–	–
Subtotal	569,330	1,226.7	2,155
Other firewall appliances	64,979	157.4	2,422
Consumer	612,578	95.0	155
Total hardware	1,246,887	1,479.1	1,186

Source: IDC, 2004

The Check Point Factor

Check Point 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 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 Check Point's software license was included. Table 3 is a *pro forma* chart to illustrate where Nokia and other partners (such as Siemens-Fujitsu and Nortel) would be positioned when combined with Check Point revenue. IDC estimates that in 2003, over 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 all of the Check Point appliance partners and Check Point software are combined, the total revenue is about \$570.7 million. This means that Check Point directly influences 33% of the market, even though the independent appliance vendors are in direct competition.

TABLE 3

Pro Forma Worldwide Firewall/VPN Appliances Revenue with the Inclusion of Check Point Software Revenue by Vendor, 2003

Vendor	Revenue (\$M)	Share (%)
Cisco	506.3	29.1
Nokia/Check Point	435.3	25.0
NetScreen (acquired by Juniper Networks)	237.6	13.7
SonicWALL	89.7	5.2
WatchGuard	62.6	3.6
Nortel/Check Point	42.8	2.5
Siemens-Fujitsu/Check Point	39.8	2.3
CyberGuard	27.2	1.6
Netasq	11.9	0.7
Global Technology Associates	7.5	0.4
Celestix/Check Point	6.0	0.3
Other firewall appliances with Check Point	46.7	2.7
Other firewall appliances	130.4	7.5
Consumer	95.0	5.5
Total	1,738.9	100.0

Source: IDC, 2004

As shown in Table 3, the combined revenue for the Nokia/Check Point combination would be \$435 million, for a 25% share. This would move Nokia/Check Point farther ahead of NetScreen and put it closely behind Cisco. However, although revenue is nearly on par with Cisco, the average vendor revenue (AVR) would go up considerably (refer back to Table 2). Since the number of units remained static, the AVR for the Nokia/Check Point solution exceeds \$11,000, which is only third to CyberGuard and the carrier-class Nortel appliances.

In the future, Check Point will directly be a part of the overall threat management security appliance market because it has introduced a number of Check Point appliances. However, Check Point will continue to utilize the appliance partner 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.

Firewall/VPN Security Appliance 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.

Firewall/VPN security appliance price bands are as follows:

- ☒ \$50,000+
- ☒ \$25,000–49,999
- ☒ \$10,000–24,999
- ☒ \$6,000–9,999
- ☒ \$3,000–5,999
- ☒ \$1,000–2,999
- ☒ <\$1,000
- ☒ Consumer

The difference between the consumer price band and the <\$1,000 price band is in the types of products included and, generally, the vendors. The <\$1,000 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 that include some firewalling capability. The security in this case is normally a feature, not the primary application. In this case, 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 continues to improve, and eventually some products now in that category may cross over into the enterprise security market.

Table 4 provides the top 4 vendors in each price band. Cisco and NetScreen are the only vendors that cover the full spectrum, being represented in all price categories. Other vendors represented multiple times include Nokia (five times), WatchGuard (three times), SonicWALL (two instances), and CyberGuard (two times). Others with one mention are Check Point partners Nortel and Siemens-Fujitsu. Cisco leads in four categories, while NetScreen, Nokia, and SonicWALL each top one price band.

TABLE 4

Worldwide Firewall/VPN Security Appliances Revenue, Shipments, and Average Vendor Revenue by Leading Vendor, 2003

	Revenue (\$M)	Revenue Share (%)	Shipments	AVR (\$)
<\$1,000				
SonicWALL	54.2	27.0	111,463	486
Cisco	53.9	26.9	87,633	615
NetScreen (acquired by Juniper Networks)	46.4	23.1	97,466	476
WatchGuard	17.7	8.8	50,639	350
Price band total	200.6	100.0	387,101	518
\$1,000–2,999				
Cisco	56.4	32.1	42,213	1,336
SonicWALL	28.8	16.4	18,225	1,580
WatchGuard	25.0	14.2	13,644	1,830
NetScreen (acquired by Juniper Networks)	11.2	6.3	6,566	1,698
Price band total	175.7	100.0	111,664	1,574
\$3,000–5,999				
Cisco	184.8	50.9	52,770	3,502
Nokia	61.7	17.0	11,225	5,493
NetScreen (acquired by Juniper Networks)	33.4	9.2	8,237	4,054
WatchGuard	13.9	3.8	3,261	4,266
Price band total	363.1	100.0	93,126	3,899

TABLE 4

Worldwide Firewall/VPN Security Appliances Revenue, Shipments, and Average Vendor Revenue by Leading Vendor, 2003

	Revenue (\$M)	Revenue Share (%)	Shipments	AVR (\$)
\$6,000–9,999				
Cisco	77.2	37.7	9,038	8,544
Nokia	48.2	23.5	5,153	9,352
NetScreen (acquired by Juniper Networks)	36.1	17.6	4,869	7,410
Siemens-Fujitsu	7.6	3.7	1,087	6,961
Price band total	205.0	100.0	25,228	8,128
\$10,000–24,999				
Nokia	56.1	35.5	3,922	14,314
NetScreen (acquired by Juniper Networks)	46.6	29.5	3,341	13,953
Cisco	23.3	14.7	1,728	13,471
CyberGuard	9.7	6.1	597	16,263
Price band total	158.2	100.0	11,116	14,233
\$25,000–49,999				
Cisco	75.3	42.5	1,625	46,294
Nokia	49.0	27.7	1,120	43,753
NetScreen (acquired by Juniper Networks)	21.8	12.3	696	31,365
Nortel	10.1	5.7	218	46,205
Price band total	177.2	100.0	4,429	40,009
\$50,000+				
NetScreen (acquired by Juniper Networks)	42.1	40.4	562	74,957
Cisco	35.4	34.0	618	57,282
Nokia	13.7	13.2	200	68,676
CyberGuard	3.0	2.8	36	81,944
Price band total	104.2	100.0	1,550	67,222

Source: IDC, 2004

Overall Unified Threat Management Market

IDC is creating a new category within the new threat management security appliances market. The unified threat management appliance, as the previous definition states, incorporates firewall, intrusion detection and prevention, and AV in one appliance. This market is being created by IDC because this area is quickly catching on with customers and vendors: In 2003, seven vendors could be identified; in 2004, that number is expected to double. As can be seen in Table 5, the market exceeded \$100 million in revenue in 2003. IDC estimates that 2002 revenue for the category was only \$40 million, thus the growth rate between 2002 and 2003 was over 160%. The leading 5 vendors in the UTM security appliance market were:

- ☒ **Fortinet.** Fortinet, with the only ASIC-based AV-accelerated UTM appliances, led the UTM market in 2003 with \$30.9 million in revenue and a 29.5% share of the worldwide market.
- ☒ **Symantec.** Symantec, the leading software security vendor, was the second-largest UTM security appliance vendor in 2003, with a 22.9% market share and \$24 million in revenue.
- ☒ **Secure Computing.** Secure Computing, which is transforming from software vendor into a provider of appliances, was the third-place vendor, with revenue of \$22.8 million and a market share of 21.7%
- ☒ **ServGate.** ServGate, which incorporates full context inspection, accounted for \$10 million in revenue and a 9.5% share of the UTM security appliance market in 2003.
- ☒ **NetScreen (acquired by Juniper Networks).** NetScreen, on the strength of NetScreen 5GT, accounted for a 5% share of the UTM security appliance market in 2003 and \$5.2 million in revenue.

TABLE 5

Worldwide Unified Threat Management Appliances Revenue, Shipments, and Average Vendor Revenue by Vendor, 2003

	Revenue (\$M)	Revenue Share (%)	Shipments	AVR (\$)
Fortinet	30.9	29.5	21,496	1,437
Symantec	24.0	22.9	13,790	1,740
Secure Computing	22.8	21.7	5,050	4,515
ServGate	10.0	9.5	10,743	931
NetScreen (acquired by Juniper Networks)	5.2	5.0	6,601	788
eSoft	4.0	3.8	3,162	1,265
Pyramid Computer	1.3	1.2	509	2,554
Other	6.7	6.4	4,180	1,603
Total	104.9	100.0	65,531	1,601

Source: IDC, 2004

FUTURE OUTLOOK

Forecast and Assumptions

Worldwide Threat Management Security Appliance Forecast, 2004–2008

Worldwide revenue for the threat management markets reached \$1.58 billion in 2003. IDC currently forecasts that the threat management security appliance market will increase at a 16.8% compound annual growth rate (CAGR) and reach \$3.45 billion in 2008 (see Table 6). The firewall/VPN segment, whose growth is being subsumed by the UTM market, will grow until 2006 and then decline, so that over the course of the forecast period, it will ultimately have flat growth. The UTM category will be the primary market by the end of the forecast period.

Please also note that IDC forecasts that 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 less slowly; when vendors release new models, growth rates increase. IDC would expect to see this pattern during the present forecast period.

TABLE 6

Worldwide Threat Management Security Appliances Revenue by Segment, 2003–2008 (\$M)

	2003	2004	2005	2006	2007	2008	2003 Share (%)	2003–2008 CAGR (%)	2008 Share (%)
Firewall/VPN	1,479.1	1,667.7	1,791.6	1,804.4	1,623.5	1,462.3	93.4	-0.2	42.4
UTM security appliance	104.9	225.0	517.5	828.0	1,324.8	1,987.2	6.6	80.1	57.6
Total	1,584.0	1,892.7	2,309.1	2,632.4	2,948.3	3,449.5	100.0	16.8	100.0

Note: See Table 8 for key forecast assumptions.

Source: IDC, 2004

Worldwide Threat Management Security Appliance Forecast by Price Band, 2004–2008

The threat management security appliance forecast is segmented by price band. For continuity, the firewall/VPN and UTM have been combined. As seen in Table 7, the faster-growing price bands are expected to be the highest (\$50,000+) and lowest (\$6,000–9,999); this demonstrates the way enterprises are purchasing high-end gateway appliances and low-end devices for branch and remote sites. The low end also benefits from dropping prices and an emphasis on small and medium-sized enterprises. One note is that high-end growth also benefits from the fact that it has the smallest base.

TABLE 7

Worldwide Threat Management Security Appliances Revenue by Price Band,
2003–2008 (\$M)

	2003	2004	2005	2006	2007	2008	2003 Share (%)	2003– 2008 CAGR (%)	2008 Share (%)
Consumer	95.0	107.8	118.5	128.1	137.3	144.3	6.0	8.7	4.2
<\$1,000	225.3	322.2	434.6	528.4	631.7	783.3	14.2	28.3	22.7
\$1,000–2,999	203.8	270.7	339.3	361.3	380.7	453.1	12.9	17.3	13.1
\$3,000–5,999	379.4	416.4	498.5	549.7	594.2	671.4	24.0	12.1	19.5
\$6,000–9,999	219.6	187.8	170.9	167.5	164.1	172.4	13.9	-4.7	5.0
\$10,000–24,999	175.8	202.1	240.4	278.6	312.0	358.8	11.1	15.3	10.4
\$25,000–49,999	180.9	216.9	253.7	284.6	318.7	366.5	11.4	15.2	10.6
\$50,000+	104.2	168.8	253.2	334.2	409.5	499.7	6.6	36.8	14.5
Total	1,584.0	1,892.7	2,309.1	2,632.4	2,948.3	3,449.5	100.0	16.8	100.0

Note: See Table 8 for key forecast assumptions.

Source: IDC, 2004

Key Forecast Assumptions

The above forecasts are based on the assumptions in Table 8.

TABLE 8

Key Forecast Assumptions for the Worldwide Threat Management Security Appliances Market, 2004–2008

Market Force	IDC Assumption	Impact	Accelerator/ Inhibitor/ Neutral	Certainty of Assumption
Macroeconomics				
Economy	North America and other regional economies worldwide will remain weak through early 2003, showing slow improvement starting in mid-2003; if history holds, North America will rebound sooner than other geographies (just as the downturn in the economy started first in North America).	High. 2002 was a challenging year for all IT vendors in general; if a modest recovery does not begin in mid-2003, many innovative start-ups may not be able to stay in business. A reduction in innovation usually slows market development.	↔	★★★★☆
Geopolitics	For the purposes of this forecast, IDC assumes that the current level of tension from the Middle East conflict, the threat of terrorism at home, and other potential armed political conflicts will become increasingly unstable. We expect the number of terrorism incidents worldwide to rise.	High. The steep increase in the general level of tension since September 11, 2001, is permanent; however, it will have a mixed impact on security investments. Slower economic growth will be an inhibitor, but concern about security and business continuity will be an accelerator. While the effect on security software will only slowly become apparent, the integration of IT security with physical security will rise sharply.	↔	★★★★☆
Budget constraints	Cost containment will remain a dominant trend during the early to middle part of the forecast period.	Moderate. On one hand, IT budget constraints will limit the scale of investments available for IT initiatives. On the other hand, recent IDC surveys indicate that security is the only IT budget increasing in 2003.	↔	★★★★☆

TABLE 8

Key Forecast Assumptions for the Worldwide Threat Management Security Appliances Market, 2004–2008

Market Force	IDC Assumption	Impact	Accelerator/ Inhibitor/ Neutral	Certainty of Assumption
Regulations	Security and privacy regulations will become tighter in North America.	Moderate. Enterprises will (eventually) see the advantage of developing comprehensive security and privacy strategies, and IT vendors will have to adjust. Product development will have to increase the security component, as will tech support.	↑	★★★★☆
Technology/service developments				
Technology	Vendors will continue security software, hardware, and services innovation at the same rate as in the past.	Moderate. The security market will not face bottlenecks from lack of new product development.	↔	★★★★☆
Growth in security appliances	Security appliances will continue to grow in popularity as an easy way to distribute software security solutions to customers.	High. Firewall/VPN appliances that do not contribute to the firewall/VPN software market reduce the overall revenue for the software market. This is especially true in North America as more enterprises deploy appliances.	↑	★★★★★
Communication	There will be a doubling of the number of Internet users in five years, as well as a tenfold increase in Internet commerce. There will be rapid growth of wireless LANs, communicating handhelds, and IP telephony. Supply chain automation will remain a long-term growth area.	High. All of these factors will create demand for new security solutions.	↑	★★★★★

TABLE 8

Key Forecast Assumptions for the Worldwide Threat Management Security Appliances Market, 2004–2008

Market Force	IDC Assumption	Impact	Accelerator/ Inhibitor/ Neutral	Certainty of Assumption
Web services	The Web services software (WSS) market is slowly heating up, with a proliferation of standards-proposal announcements, intense vendor posturing, and early marketplace adoption. 2003 has been a year of Web services evangelism and education, both for users and vendors. In the future, there will be major market ecosystem plays and technology releases.	The. Web services paradigm impacts many different markets across the software spectrum, but with varied adoption rates and time lines. The technologies experiencing the earliest investments are in the development and data management arenas. Technologies that support the security, integration, and management of Web services are expected to gain additional traction.	↑	★★★★☆
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 noise in the market.	High. The lack of a unified market or handful of strong leaders will be an obstacle to growth.	↓	★★★★☆
Capitalization				
Venture	Funding for start-ups has intensified, but there are few new vendors entering the software firewall/VPN market.	Low. Although start-ups help create new products and solutions, this is not an issue affecting the software firewall/VPN market.	↔	★★★★★
Capital	Telecommunications capital expenditures (capex) will remain at depressed levels for 2003.	Moderate. New services will be delayed for lack of investment; IT sales to the telco markets will be depressed, and the rollout of new technologies demanding new security solutions will be depressed as a result.	↓	★★★★☆

TABLE 8

Key Forecast Assumptions for the Worldwide Threat Management Security Appliances Market, 2004–2008

Market Force	IDC Assumption	Impact	Accelerator/ Inhibitor/ Neutral	Certainty of Assumption
Labor supply				
Availability of highly trained IT security personnel	IT security personnel are in short supply.	Moderate. With a limited supply of trained security personnel, easier solutions are required. This will drive the purchase of security software that is easy to use, reduces the need for trained security personnel, and adds value to other IT solutions.	↑	★★★★☆☆
IT professionals	Although there will be demand for service technology specialists in IT shops, there will be no shortage of specialists between the IT shops and vendor communities.	Low. Aggregation of security expertise in vendor companies will help drive services spending.	↔	★★★★☆☆
Consumption				
Buying sentiment	IT security will remain a top-level concern for enterprises; as we move out of the recession, security will be seen as a factor in productivity improvements.	High. The market should see improvements as new investment in security infrastructure begins.	↑	★★★★☆☆

Legend: ★☆☆☆☆ very low, ★★☆☆☆ low, ★★★☆☆ moderate, ★★★★☆ high, ★★★★★ very high

Source: IDC, 2004

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:

- ☒ **Emergence of the UTM security appliance.** IDC has previously stated that the firewall market would move toward consolidated gateways with multiple applications. This prediction is finally becoming reality. There has constantly been an arms race between attackers and defenders. The attackers gained an advantage with blended threats. Defenders have responded: Protection from blended threats requires a comprehensive security solution that contains unified layers of defense and response mechanisms with centralized management.

Firewalls have been upgraded to include improved packet inspection, application awareness, intrusion detection and prevention, worm protection, and improved authentication mechanisms. These products are now being referred to by IDC as threat management products. Gateway AV is the latest application to be unified with the firewall. Those products with Gateway AV are referred to as unified threat management security appliances.

Many players have entered the UTM category (see Table 9). In addition, SonicWALL, WatchGuard, and CyberGuard all come close to the UTM definition. SonicWALL and WatchGuard both have the ability to check the status of AV clients before those clients can connect to the network. SonicWALL also supports McAfee's ASAP AV service. CyberGuard's offering is one step removed from a UTM appliance. Its offering forwards traffic to an F-Secure AV server for scanning prior to passing the traffic out of the firewall. WatchGuard has announced that it will be releasing a gateway AV solution later in 2004. IDC expects both SonicWALL and CyberGuard to also field products that will meet the UTM category definition.

By offering additional security features, UTM appliances provide the potential customer with more options on which to build its security infrastructure. UTM appliances provide customers with considerable deployment flexibility, while at the same time offering a standard management platform. All of the functions of a UTM can be utilized, or the product can be used for a specialized purpose — maybe for gateway AV or for internal intrusion detection. When used 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.

TABLE 9

Selection of Unified Threat Management Appliances

Appliance Vendor	Product or Product Family	Antivirus Provider
Barbedwire Technologies	DPI	Global Hauri
Check Point	Safe@Office	McAfee
eSoft	InstaGate	Sophos
Fortinet	FortiGate	Fortinet
Internet Security Systems	Proventia-M	Sophos
iPolicy Networks	Enforcer	McAfee
Juniper	NetScreen 5GT	Trend Micro
McAfee	Secure-1	McAfee
Pyramid Computer	Astero Firewall	Kaspersky Labs
Secure Computing	Sidewinder G2	McAfee
ServGate	EdgeForce	McAfee
Symantec	Gateway Security Appliance	Symantec

Note: Appliance vendors SonicWALL, WatchGuard, and CyberGuard should all have products in the category prior to the end of 2004, while antivirus provider F-Secure will also be represented.

Source: IDC, 2004

- ☒ **Opportunities in the small and medium-sized enterprise.** The number of small and medium-sized companies is huge. In 2002, there were 5.578 million employer businesses with fewer than 500 employees, as reported by the U.S. Small Business Administration. There are another 16 million self-employed Americans. This is a huge potential market because it has a low penetration rate for IT security. Many companies have done well targeting this market: SonicWALL and WatchGuard have created huge channels and have products that speak directly to the needs of this vertical segment. However, other vendors that have historically been geared toward the large enterprise are now developing product offerings geared to the small and medium-sized enterprise: Cisco, Juniper, Symantec, and Check Point are attacking this segment. UTM appliance vendors like Fortinet and ServGate are also being very successful in this market segment. ServGate recently entered into an arrangement with Dell Computer. Dell is marketing and selling the ServGate EdgeForce M30 to its small and medium-sized company customers. 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.

- ☒ **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 been having success with blades that support high-performance switches. 14South, an IBM spin-off, has a server security appliance card that provides a full appliance on a PCI card for imbedding into servers. The card will support best-of-breed security software, but the first offering is a powered-by-Check Point firewall. CyberGuard's SnapGear line has two PCI-based firewalls. SMC Networks even has a PCI card with an embedded personal firewall designed for the consumer market. More products with unique form factors should be coming in the future.

- ☒ **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, 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.

- ☒ **Firewall routers — boon or bane?** The incorporation of firewall technology into routers by networking vendors such as Cisco, Enterasys, and Juniper will have an impact on the threat management market; however, it is uncertain if this is a blessing or a curse. If customers accept these products and use them to supplant standalone security products, the market will suffer. However, if they are used in concert with dedicated security appliances, they could increase the opportunities for all vendors in the space. 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 grow over the next 18 months. Secure Computing has jumped into the market with a full line of UTM appliances, while Internet Security Systems has also entered the market with a UTM product. Even Check Point is delivering its own appliances. Fueling some of this interest in hardware 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 going this direction. Interestingly, there has not been consolidation among the threat management appliance vendors. The only major purchase was of NetScreen by networking vendor Juniper; however, that will not change the dynamics of the firewall market. Most vendors plan to expand their product lines with internal research or through partnering.

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. The same may become true of the UTM market.

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 that the threat management security appliance market remains a dynamic and competitive one. However, it is not a market 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 Security Software 2004–2008 Forecast Update and 2003 Vendor Shares* (forthcoming)
- ☒ *Worldwide Firewall/VPN Software 2004–2008 Forecast Update and 2003 Vendor Shares: Desktop Firewalls on the Move* (IDC #31839, September 2004)
- ☒ *Worldwide Intrusion Detection and Prevention 2004–2008 Forecast Update and 2003 Vendor Shares: Introducing the FireDoor* (forthcoming)
- ☒ *Worldwide Vulnerability Assessment and Management 2004–2008 Forecast Update and 2003 Vendor Shares: Assessing Risk and Compliance* (forthcoming)

- ☒ *Worldwide Secure Content Management 2004–2008 Forecast Update and 2003 Vendor Shares: A Holistic View of Antivirus, Web Filtering, and Messaging Security* (IDC #31598, August 2004)
- ☒ *Worldwide Hardware Authentication Token 2004–2008 Forecast and 2003 Vendor Shares: Two-Factor Authentication Remains Strong* (IDC #31432, June 2004)
- ☒ *IDC's Software Taxonomy, 2004* (IDC #30838, February 2004)
- ☒ *IDC's Enterprise Security Survey, 2003* (IDC #30653, December 2003)

Methodology

The IDC Software Research Group (SRG) market sizing and forecasts are presented in terms of "packaged software revenue." Packaged software is defined as programs or codesets of any type commercially available through sale, lease, or rental, or as a service. Packaged software revenue typically includes fees for initial and continued right-to-use packaged software licenses. These fees may include, as part of the license contract, access to product support and/or other services that are inseparable from the right-to-use license fee structure, or this support may be priced separately as software maintenance. Upgrades may be included in the continuing right of use or may be priced separately.

Packaged software revenue *excludes* service revenue derived from training, consulting, and system integration that is separate (or unbundled) from the right-to-use license but *includes* the implicit value of software included in a service that offers software functionality by a different pricing scheme (e.g., the implicit or stated value of software included in an application service provider's [ASP's] or other hosted software arrangement). It is the total packaged software revenue that is further allocated to markets, geographic areas, and operating environments.

IDC's industry analysts have been measuring and forecasting IT markets for more than 30 years. IDC's software industry analysts have been delivering analysis and prognostications for packaged software markets for more than 25 years.

The market forecast and analysis methodology incorporates information from five 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 as of the end of April 2004, including reported revenue data for public companies trading on North American stock exchanges (CY 1Q03–4Q03 in nearly all cases).
- ☒ **IDC's Software Census interviews.** IDC interviews all significant market participants to determine product revenue, revenue demographics, pricing, and other relevant information.

- ☒ **Product briefings, press releases, and other publicly available information.** IDC's software analysts around the world meet with hundreds of software 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 software vendors are privately held and choose to limit financial disclosures, information from publicly held 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 focused on the IT industry. We further maintain detailed revenue by product area models on more than 1,000 worldwide vendors.
- ☒ **IDC demand-side research.** This includes thousands of interviews with business users of software solutions annually and provides a powerful fifth 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.

Copyright Notice

This IDC research document was published as part of an IDC continuous intelligence service, providing written research, analyst interactions, telebriefings, and conferences. Visit www.idc.com to learn more about IDC subscription and consulting services. To view a list of IDC offices worldwide, visit www.idc.com/offices. Please contact the IDC Hotline at 800.343.4952, ext. 7988 (or +1.508.988.7988) or sales@idc.com for information on applying the price of this document toward the purchase of an IDC service or for information on additional copies or Web rights.

Copyright 2004 IDC. Reproduction is forbidden unless authorized. All rights reserved.

Published Under Services: Security Products; Firewalls and Security Appliances