

THE POWER IN NETWORK PROTECTION

校園資訊安全之威脅與因應

劉乙 Jim Liu Technical Director Fortinet.Taiwan 0912214906 jimliu@fortinet.com

Agenda

- Fortinet 簡介
- 資訊網路潛在威脅之探討分析
- ASIC Base防毒防駭即時防護系統

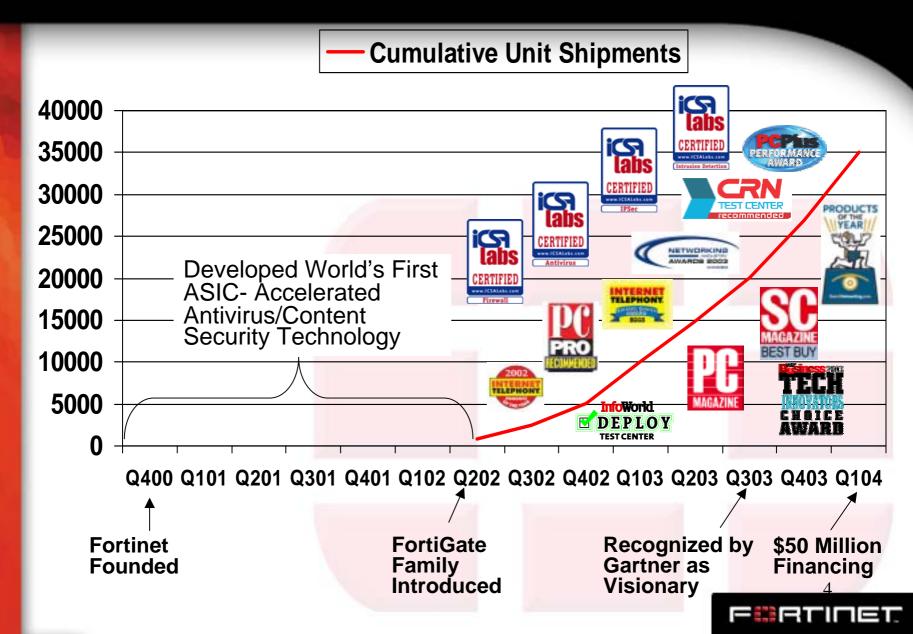
• 網路安全報表統計與分析工具



THE POWER IN NETWORK PROTECTION

Fortinet 簡介----Who is Fortinet?

A History of Rapid Growth and Achievement



Fortinet Company Overview

- Founded October, 2000 by Ken Xie
 - -Founder, former Pres. & CEO of NetScreen (NASDAQ: NSCN)
- Over 350 employees; HQ in Sunnyvale, CA
 - -Offices throughout Americas, Asia, and EMEA
 - Tokyo, Seoul, Beijing, Shanghai, Hong Kong, Taipei, Singapore, KL, Melbourne, etc.
 Belgium, France, Germany, Italy, Sweden, UK
- Creators of world's only ASIC-powered antivirus systems
 - -Addressing the need for real-time network protection
- Achieved >10x revenue growth in 2003 vs. 2002

-Over 50,000 units shipped in under 2 and half of years

- Completed \$50 million mezzanine financing Feb 2004
 - -Positioned for continued rapid growth

CONFIDENTIAL

Fortinet is Driving a Major Shift in the Evolving Security Market

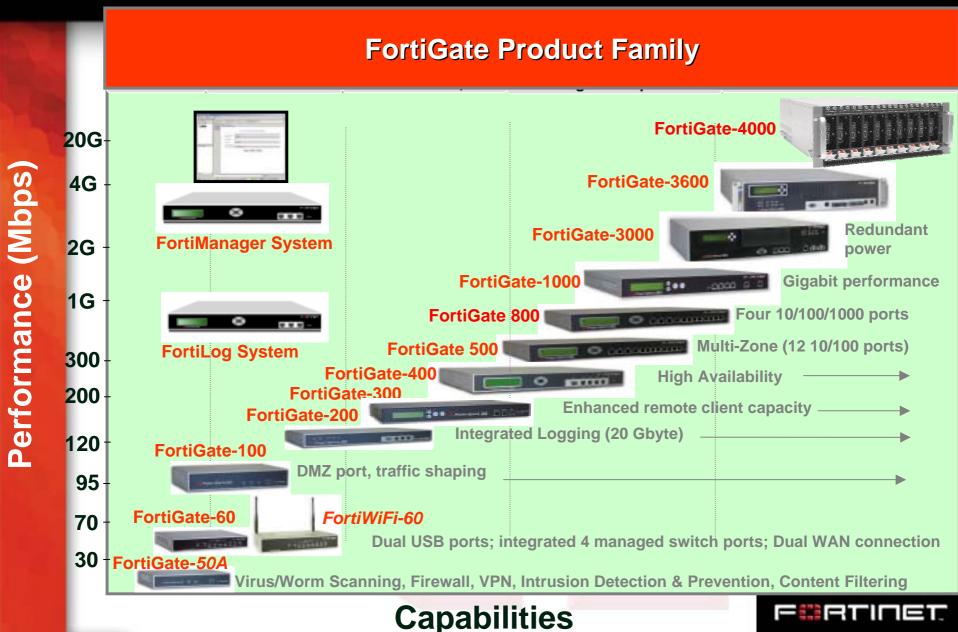


Gartner

"...Firewalls must provide a wider range of intrusion prevention capabilities, or face extinction..."

"Fortinet has demonstrated its investment in powerful network processing technology by filtering viruses in-line, which requires an unprecedented level of packet assembly and filtering."

The FortiGate Family Scales from SOHO to Service Provider





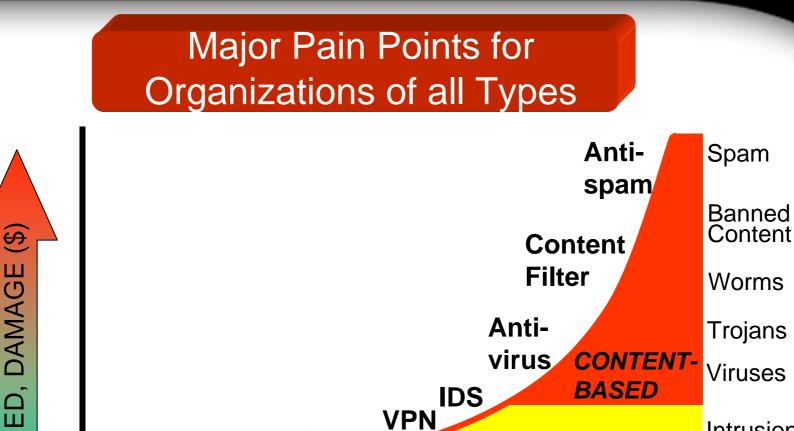
THE POWER IN NETWORK PROTECTION

資訊網路潛在威脅之探討分析

The Nature of Threats Has Evolved...

Ш

ഗ



CONNECTION-BASED

1990

2000

Firewall

1980

Lock & Key

1970

PHYSICAL

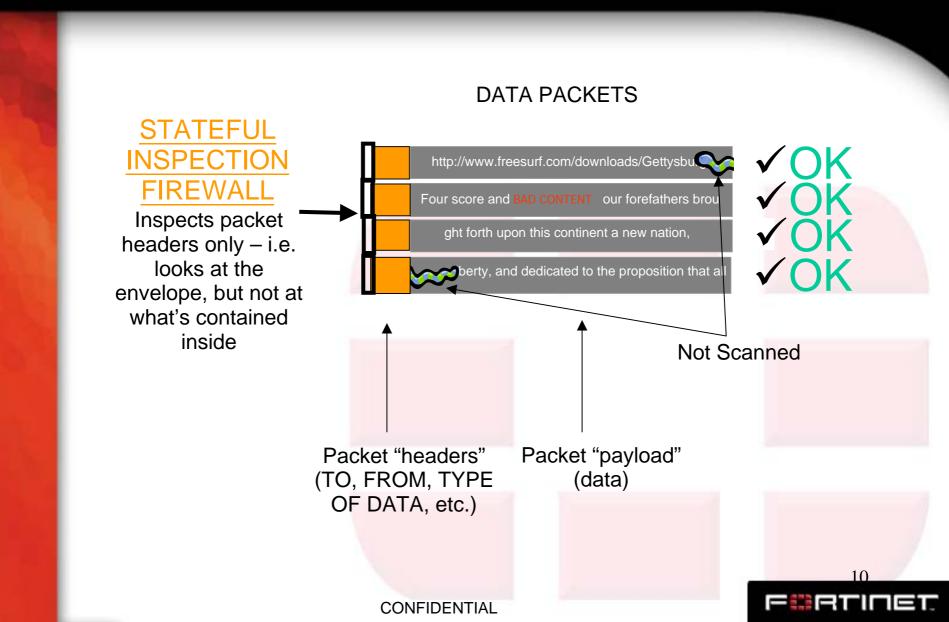
Firtinet

Intrusions

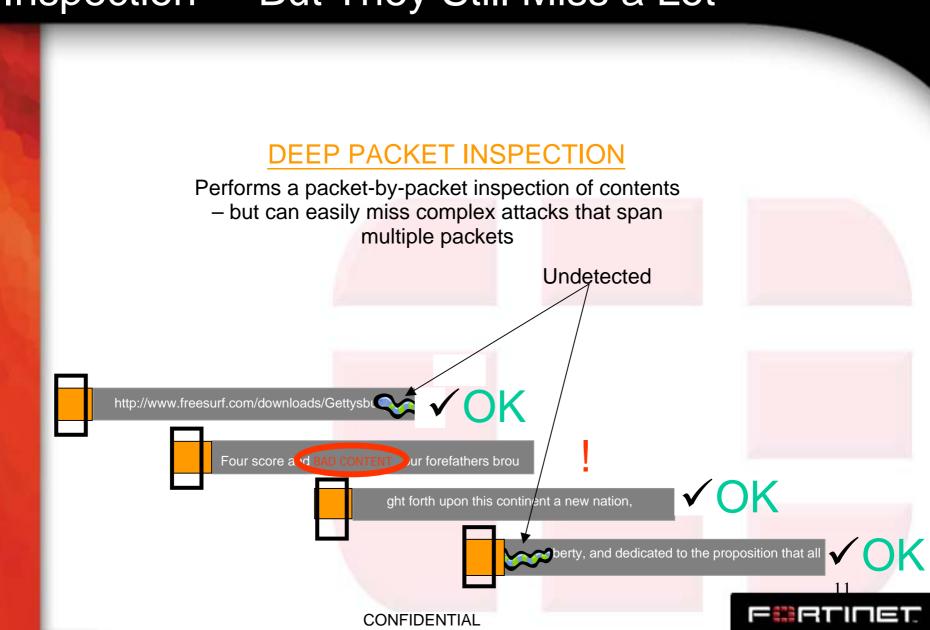
Hardware

Theft

Firewalls Don't Analyze Contents so they Miss Content Attacks



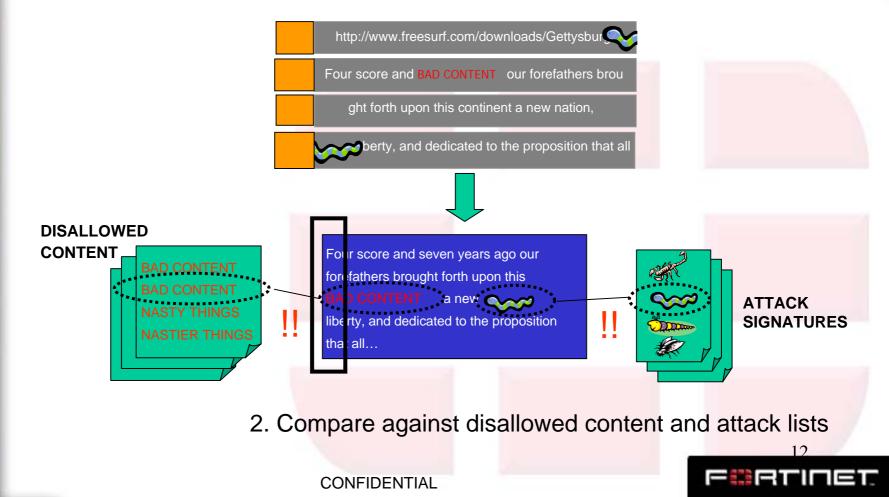
Some Firewalls Claim to do "Deep Packet Inspection" – But They Still Miss a Lot



To Stop Content-Based Threats Requires More than Deep Packet Inspection



1. Reassemble packets into content



使用網路銀行防毒、防駭缺一不可

記者歐陽宜珊 / 台北報導 2004-4-01 18:40



針對日前台灣出現網路銀行帳號被木馬程式竊取密碼而盜領的犯罪案例,雖然銀行立即向警方報案, 且清查之後發現只有少數幾位受害者。若消費者的電腦被植入後門或是因為中毒,必須自行負擔損失。 另外,若是習慣使用簡單密碼的用戶也要注意,駭客隨時可猜中密碼,而盜領銀行的錢。因此加強電腦 防毒、防駭及強化身份認證機制成了當前重要的一環。

此次出現的案例, 駭客是透過電子郵件或惡意網站等手法將木馬或後門程式植入受害者電腦, 當使用者 登入網路銀行時, 木馬程式就將受害者在鍵盤上輸入的帳號及密碼等資料予以記錄, 接著再將竊取到的 資料, 透過電子郵件或檔案傳送等手法傳至指定的網址, 歹徒再透過「非約定帳戶」轉帳功能, 盜領成 功。

如果加裝用戶端數位憑證,也不能杜絕所有木馬或後門問題。只能增加入侵的複雜度,駭客還是有可能 透過木馬竊走使用者密碼、數位憑證與私密金鑰。若使用IC卡或「一次密碼器」(Token),也無法完全避 免駭客利用木馬或後門進行盜領。駭客還是有可能在背景發出假交易或竄改交易內容,甚至可讓IC卡對 假冒的交易內容進行數位簽章,除了利用此方式取得帳號外,多數人常用懶人密碼設定,雖然連續三次 不對,帳號會被鎖定,不過若使用破解密碼的軟體,一次即可猜中。因此,如果要避免被駭客盜取密碼 帳號,消費者在設定時,必須英文、數字混合使用,且至少應包含2個大小寫英文字母或符號、密碼與代 號間不可相同。

網銀用戶須防堵木馬程式開後門竊密碼盜存款

Anti-Virus

IDS/IPS

(中央社記者韋樞台北四日電)

日前傳出數家網路銀行的客戶遭駭客盜領,事實上,此事件責任釐清後網路銀行並沒 有安全疏失,主要原因是個人的安全防護出現大缺口,資訊安全廠商已經掌握到肇禍的木 馬程式是Backdoor.Powerspider.B,駭客利用鍵盤側錄功能盜取存戶的密碼,將存戶的存 款提領一空。

Backdoor.Powerspider.B,這類程式會偽裝成IE的名稱 iexpore.exe,駭客透過電子郵件或網頁, 甚至是p2p程式等多種方式將此程式植入受害者電腦,利用鍵盤側錄的功能(keylogger)竊取機密 資訊,再透過電子郵件的方式傳回駭客的電腦裡,駭客登入網路銀行後,透過「非約定轉帳」 方式盜領存款。

至於駭客是如何植入後門及木馬程式,林育民分析,駭客利用病毒(Beagle、MyDoom、Bugbear 系統漏洞、電子郵件,或透過色情、軟體破解或其他惡意網站,偽裝成可吸引使用者執行或下 載的應用程式,或利用社交工程如MSN、Yahoo、Messenger、ICQ等途徑,植入或散布木馬程式。

網路銀行用戶要防杜被盜領,必須確認個人電腦的網路安全防護,除可偵測掃除木馬程式 、鍵盤側錄程式的防毒功能外,進階型的個人防火牆,入侵偵測機制則是整合防護的標準配備,缺一不可。

對習慣性使用網路銀行的消費者而言,務必要養成良好的使用習慣,不任意開啟不明的電子 郵件或附件,不隨意安裝或執行來路不明的軟體,不任意瀏覽色情或可能有惡意的網站,並關閉移除不必 要的服務與程式,唯有確實在電腦安全防護和個人使用習慣上強化安全性,才能一面享受網路銀行的便利, 一面照顧好自己的財物安全。930404



THE POWER IN NETWORK PROTECTION

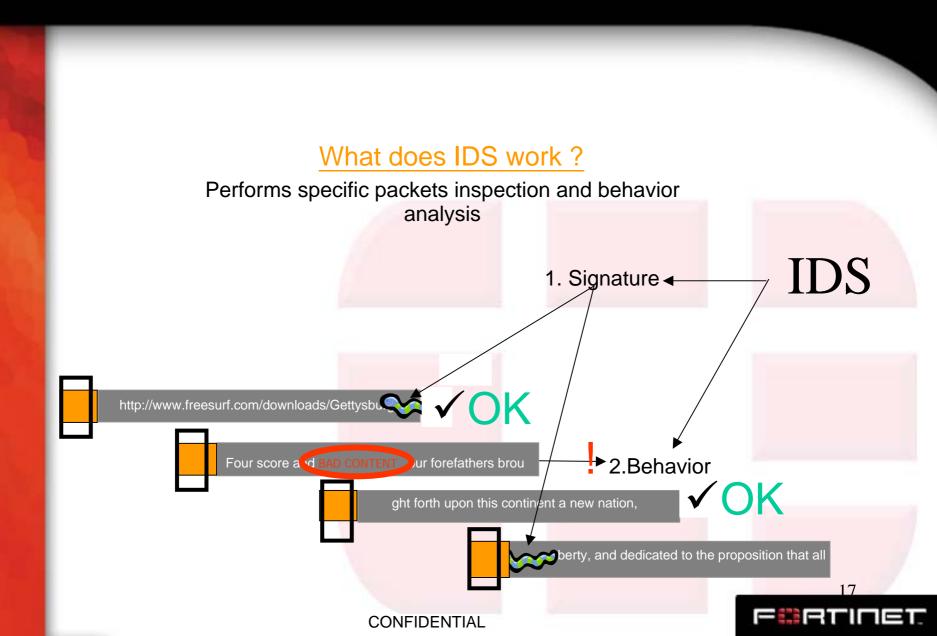
IPS can Protect everything ----Post-Sasser .

IPS Vendors Speak up ---- Post-Sasser

- Block worm & exploit viruses is trend
 - Antivirus is not important
 - Even NetSky can be blocked by IPS
- IPS is enough
 - Can block exploit worm, Trojans and Backdoor
- IF true, why focus on prc http,FTP,Er.

Symantec ...

What is IDS ?



The Fact is (1/2)

reeting from your friends	×
案(E) 編輯(E) 檢視(Y) 插入(L) 格式(Q) 工具(T) 郵件(M) 說明(H)	R
↓ 🔏 📄 🔂 🥩 🥵 🧚 🏮 🖡 - 📑 🗫	
收件者: jimliu@fortinet.com	_
副本:	_
Greeting from your friends	
n檔案: an Selfunzip Virus.EXE (169 KB)	
明體 🛛 🔽 🖳 🖪 🖌 🛛 🗛 🗄 🗄 🚝 🚝 🚍 🚍 🗕	•
	<u>^</u>
	~
Only one level compression	

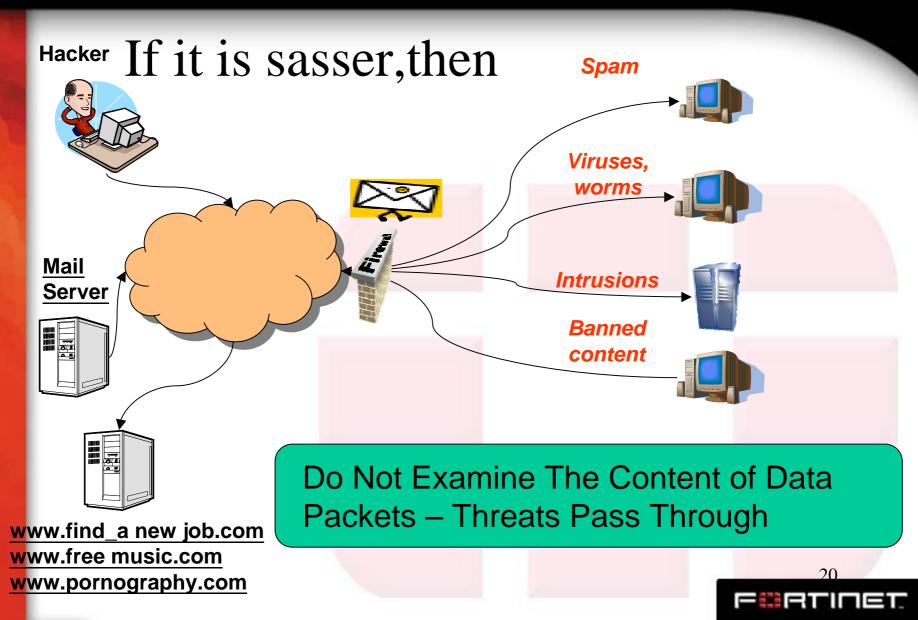


The Fact is (2/2)

〕 新郵件		
檔案(E) 編	輯(E) 檢視(U) 插入(I) 格式(Q) 工具(I) 郵件(M) 說明(H)	2
S & C) 🗋 🍤 💁 🥙 🕴 🕴 - 📑 📑 🏇	
國收件者:	jimliu@fortinet.com	
圖副本:		
主旨:		
附加檔案:	A email with Virus.eml	
新細明體	· 10 · E, B Z U Δ, 日日伊伊 目 2 日日 - 0, E	
Or a	ttached a email with Viruse	S

FERTINET

Conventional/Single Point Security Solution Do Not Solve these Problems



Protocol-based Antivirus Benefits

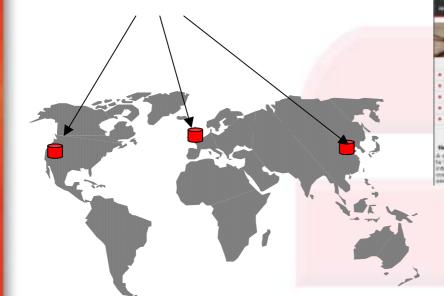
According to protocol

to adapt different kinds of file format or Characteristic of different application.
i.e. like compression file type , ZIP, RAR.... outlook, outlook express or Unix Mailbox



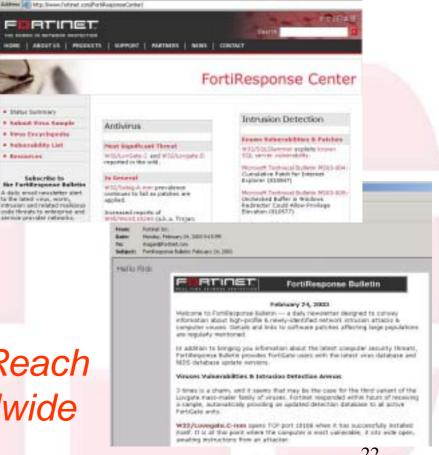
World-Wide based Real time Update Center Ensure Rapid Response to New Threats

Fortinet Threat Response Team and Update Distribution Servers



Automatic Updates Can Reach All FortiGate Units Worldwide in Under 5 Minutes

FortiProtection Center Web Portal & email Bulletins





Dynamic Real time Attack Response Combines the Best of AV, NIDS and IDP

- Multiple detection mechanisms
 - AV signatures (application layer, content scan)
 - Intrusion signatures (protocol layer, content & behavior)
- Reduction in false positives and the amount of data analysis
 Policy-based IPS applies scanning only where needed
- Multiple prevention mechanisms
 - Packet drop
 - Port closure
 - TCP reset
 - Traffic limit (e.g. P2P apps)
 - File delete/quarantine

All dynamically updatable via the FortiProtection Network

NIPS Signatures

🔛 FortiGi			*****	*****	6	SUPPORT () SETUP WIZARD 🔂 LOG	ουτ
WEB CONFIG	Predefined User-define	ed						
System			_	_	_	_	ONLINE HEL	P ?
Route							9	1
Firewall	Group Name		🔽 Enabl	e #	Total	#Enabled	Modify	
User	apache		V		2	2	2	
<u>.</u>	backdoor				32	32	2	
VPN	coldfs				15	15	2	
+ NIDS	ddos		V		30	30	2	
Signatures	dns	dns			10	10		
Anomaly	dos	doe		R 8		8		
14 D	E	Edit Predefined NIDS Signature						
Anti-Virus	Group Name: apache							
Veb Filter	aroup Name, apache							
On our Filter	Signature Name	Revison	🗹 Enable	🔽 Logging	Action	Details	2	
Spam Filter	Apache.DoS	10	v	~		view		
Log&Report					Pass 💌			
	Chunked-Encoding.worm	10			Pass 💌	view		
		ок	Ca	ancel			2	
							2	
	pop2				2	2	2	
	pop3		V		5	5	2	
Former		🔺 🔕 🕴	بري 😥 🖌	Jp O Days 17	Hours REA	L TIME N	ETWORK PROTECT	ION

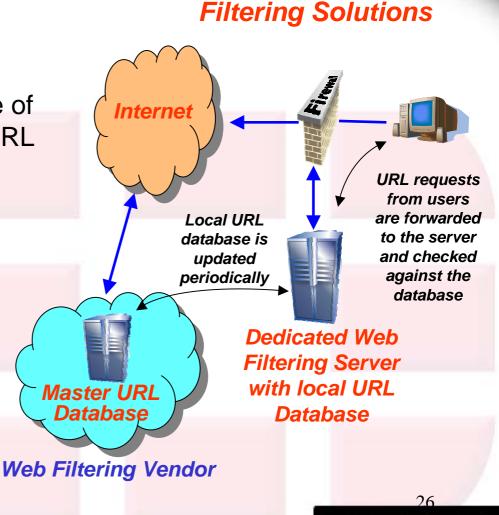


THE POWER IN NETWORK PROTECTION

A New Approach for Content filtering

Limitations of Conventional Software-Based Web Filtering Solutions

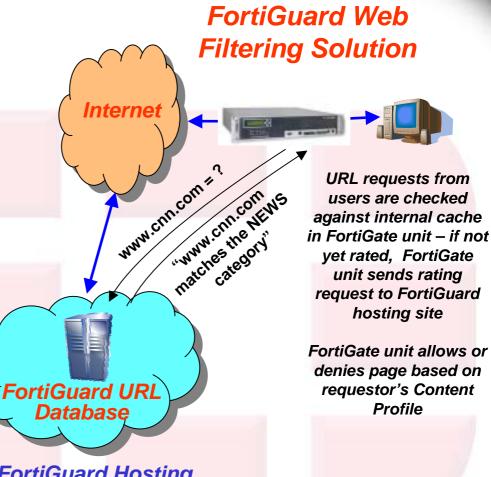
- Requires a dedicated server
- Requires periodic update of large (multi-megabyte) URL database
- Missed and incorrect ratings between updates
- High cost



Conventional Web

The Fortinet Solution: FortiGate Antivirus Firewalls + FortiGuard Service

- No additional hardware required
- No need to download large database to FortiGate units
- URL ratings are always up to date
- Local FortiGate caching of ratings greatly improves performance
- FortiGate solution also scans HTML content for keywords/phrases
- Lower cost
- Multi-language recognition
- Reduction in false positives
 - Policy-based IPS applies scanning only where needed



27

FortiGuard Hosting Sites (data mining) (Worldwide)

Web Profiles Support 80 Content Categories

Fortigate-60 - Web C	ionfig - Microsoft Internet Explorer es Tools Help			
System	Protection Profile	New Prote	ction Profile	
Router Firewall Policy	Profile Name: My Web Profile Anti-Virus	>		
Address Service Schedule	Web Filtering Web Category Filtering Enable category block (HTTP only)			
Virtual IP IP Pool P/Mac Binding	Block unrated websites (HTTP only)		Colores -	
Protection Profile User	Abortion Pro-Life	Action Allow Allow	Category Pro-Choice Adult Content	Action Allow Y
VPN PS	Lingerie and Swimsuit Sex	Allow ¥	Nudity Sex Education	Allow 🛩 Allow 🛩
Anti-Virus Web Filter	Advocacy Groups Financial Data and Services	Allow V Allow V	Business and Economy Abused Drugs Prescribed Medications	Allow V Allow V
Spam Filter	Marijuana Supplements and Unregulated Compounds Educational Institutions	Allow V Allow V	Cultural Institutions Educational Materials	Allow V Allow V
.og&Report	Reference Materials MP3	Allow ¥	Entertainment Gambling	Allow V
	Games Military	Allow V	Government Political Organizations	Allow V
	Health Information Technology	Allow Y	Illegal or Questionable Computer Security	Allow V
Former:	4crosoft 🖸 2 Microsoft 🔀 2 Microsoft	3 Internet	Up 27 Days 7 Hours REAL TIME	100% - C () 100%

Τ.

A Range of Logging and Reporting Options

- Logging
 - FortiGate unit logs the source IP, destination IP, requested URL, action (allowed/denied), and content category
- Built-in reporting
 - Graph in the FortiGate GUI shows web usage by category
- Additional reporting

Logs are compatible with 3rd party reporting tools, such as elQnetworks Firewall Analyzer / SecureExp





THE POWER IN NETWORK PROTECTION

A BASIC Anti-SPAM skill

Email Content Filtering (Antispam) Enhancements

- Check & Mark Messages with Signs of SPAM:
 - Keywords & phrases in message body and subject line
 - Blacklist of known bad spam senders
 - Invalid return email address (DNS check)
 - Spoofing (MIME header check)
- Block SMTP Messages based on:
 - IP address Black/White list
 - IP-based checks against the Real-time Blackhole list (RBL) and the Open Relay Database (ORDB)
 - Reverse DNS lookups

Anti-Spam

事件選項	? 🔀
郵件設定 重要性(P): □ 敏感度(V): 普通	 安全性 □ 加密郵件內容與附件(E) □ 外寄郵件加入數位簽名(S) □ 索取此郵件的安全性回條(T)
 追蹤選項 	
傳送選項 Ready Ready ○ 預設郵件回覆收件者(①):	
CM00e06f23fc0a.cpe.: by mail.forti for <apac su<="" th=""><th>is (CPE00045a890a8e- net.cable.rogers.com [65.49.226.94]) net.com (8.12.8/8.12.8) with SMTP id i2KJSLLo006427 upport@fortinet.com>; Sat, 20 Mar 2004 11:28:30 -0800 01928 i2KJSLLo006427@mail fortinet.com></th></apac>	is (CPE00045a890a8e- net.cable.rogers.com [65.49.226.94]) net.com (8.12.8/8.12.8) with SMTP id i2KJSLLo006427 upport@fortinet.com>; Sat, 20 Mar 2004 11:28:30 -0800 01928 i2KJSLLo006427@mail fortinet.com>
	國閉

Anti-Spam

C:\WINDOWS\System32\cmd.exe - nslookup

C:\Documents and Settings\Jim Liu>nslookup Default Server: dns.hinet.net Address: 168.95.1.1

> set type=MX > msn.com Server: dns.hinet.net Address: 168.95.1.1

msn.com MX preference = 5, mail exchanger = mx1.hotmail.com msn.com MX preference = 5, mail exchanger = mx2.hotmail.com msn.com MX preference = 5, mail exchanger = mx3.hotmail.com msn.com MX preference = 5, mail exchanger = mx4.hotmail.com mx1.hotmail.com internet address = 65.54.166.99 mx1.hotmail.com internet address = 64.4.50.50 mx1.hotmail.com internet address = 65.54.252.99 mx1.hotmail.com internet address = 64.4.50.99 mx2.hotmail.com internet address = 65.54.190.50 mx2.hotmail.com internet address = 65.54.252.230 mx2.hotmail.com internet address = 65.54.190.7 mx2.hotmail.com internet address = 65.54.166.230 mx3.hotmail.com internet address = 64.4.50.179 mx3.hotmail.com internet address = 65.54.253.99 mx3.hotmail.com internet address = 65.54.167.5 新注 半:

_ 🗆 🗙

*

33

FRAINET

Anti-Spam

郵件選項						2 🔼
郵件設定	安全性					
重要性(2): 直	പ്പ		3件内容與W			
▲ · · · · · · · · · · · · · · · · · · ·			3件加入數(取此郵件的]條(T)	
追蹤選項				1 22 22 1 22 22 22 22 22 22 22 22 22 22		
 ✓ 索取此郵件的傳送回條(Ⅱ) □ 索取此郵件的閱讀回條(Ⅱ) 						
傳送選項 Ready						
[[]] 預設郵件回覆收件者(I):						
▼ 截止於(区): 無		▼上午	12:00	-		
連絡人(C)						
類別(近)						
Internet 標題(H): by mail.fo for <apac. Message-Id: <20040 From: "Ready" <till Reply-To: "Ready" To: apac_support@f Subject: Re: Card De</till </apac. 	er@msn.com Tiller@msn.	>) with SMTI Sat, 20 Mar ?7@mail.for	?`id i2KJSL 2004 11:28 tinet.com>	Lo006427 30 -0800	
					[6]	4
						2.1
						34
						RTINE

RBL Server-List

- rbl.maps.vix.com
- dul.maps.vix.com
- relays.orbs.org
- bl.spamcop.net
- cbl.abuseat.org
- dnsbl.njabl.org
- dnsbl.sorbs.net





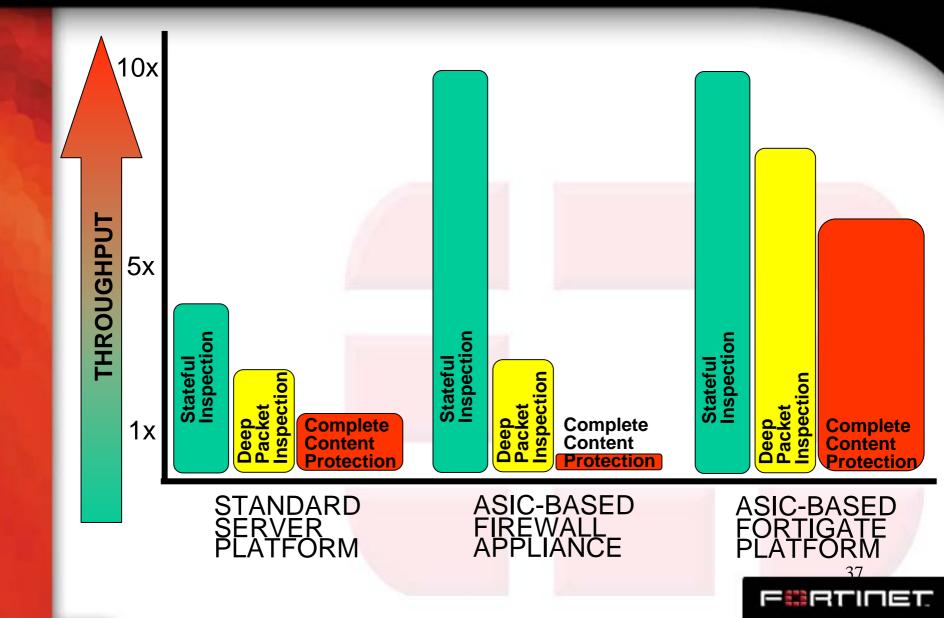




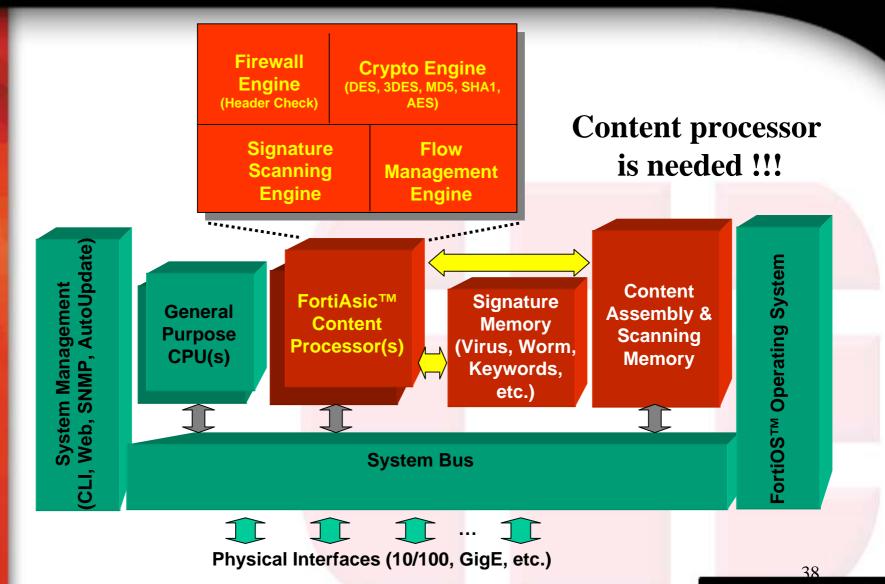
THE POWER IN NETWORK PROTECTION

Why everybody talk about ASIC?

The ASIC-Based FortiGate Platforms Provide Better Protection and Higher Performance

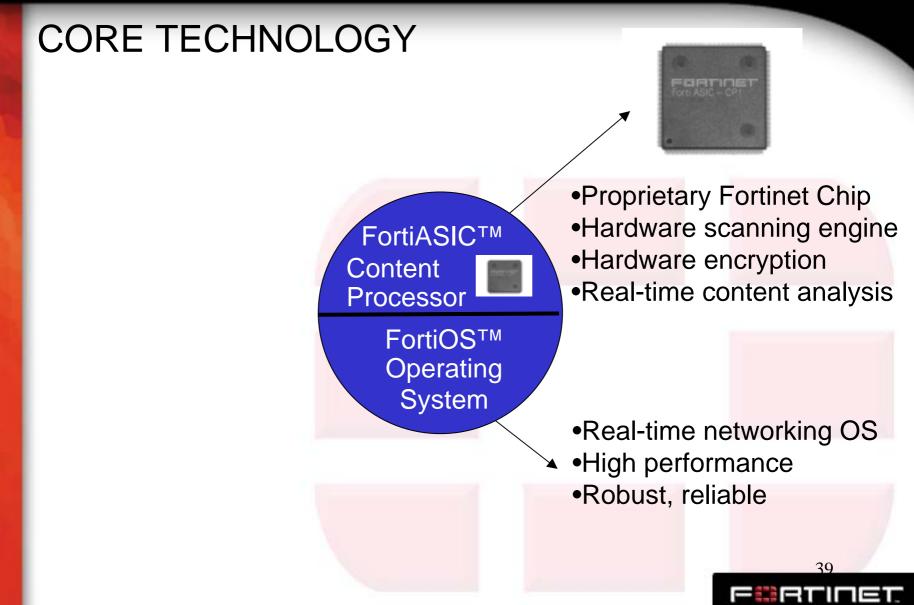


What's real hardware-based Seurity Box ?

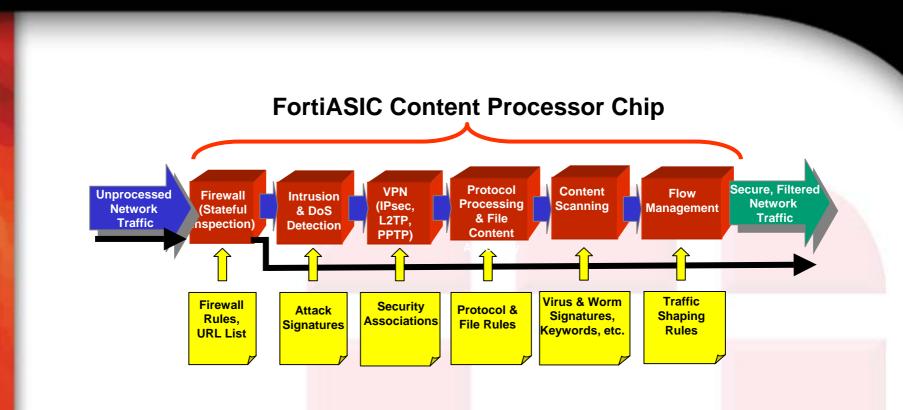


e#atinet

Fortinet Developed a Unique Architecture for Complete, Real-Time Network Protection



What is the weakest point for point solution? (Why policy based management is needed ?)



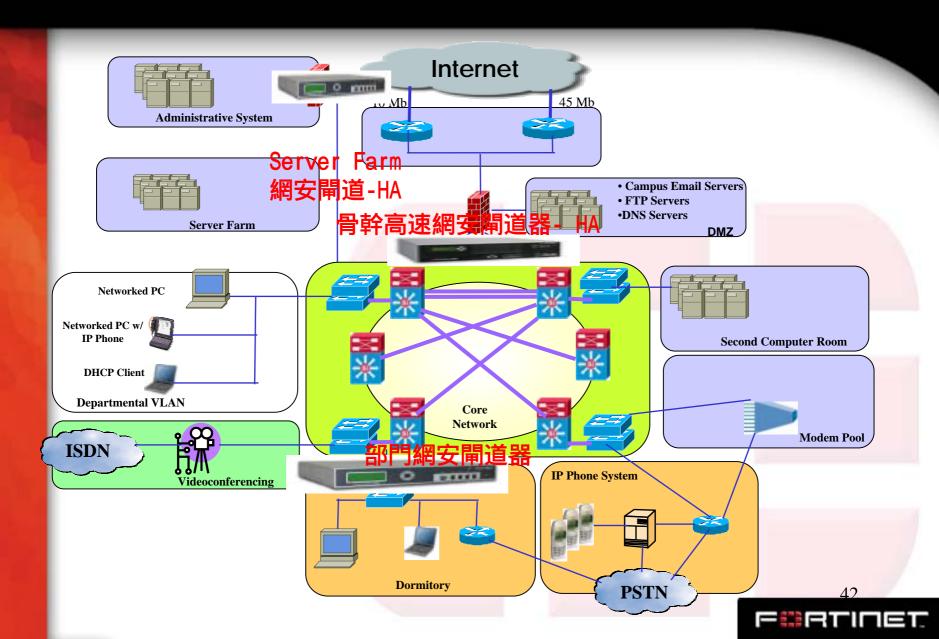
*Note: Blocks can be used in multiple combinations, e.g. firewall, AV, and other functions can be applied to decrypted VPN tunnels

40

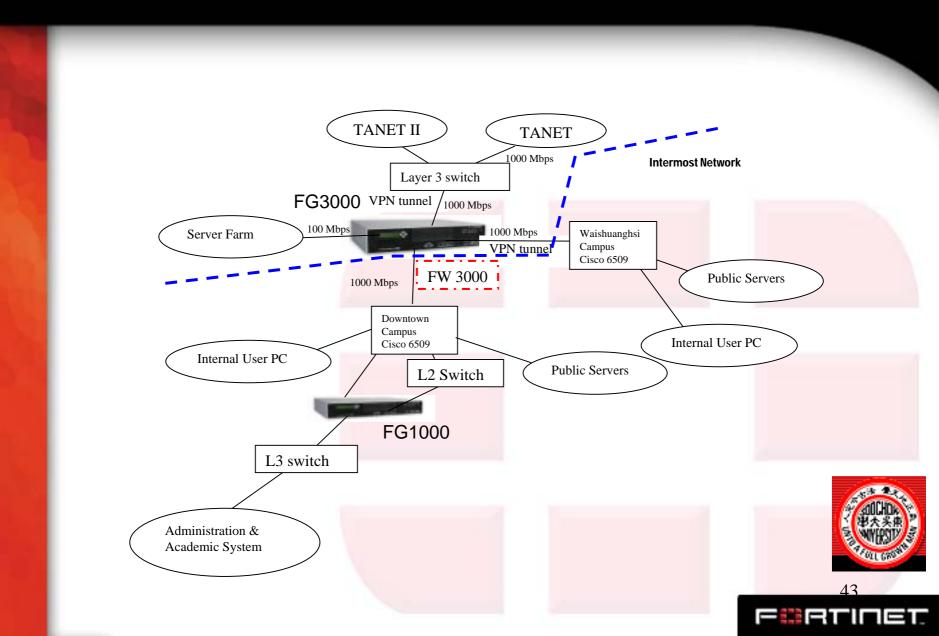


安全網路架構

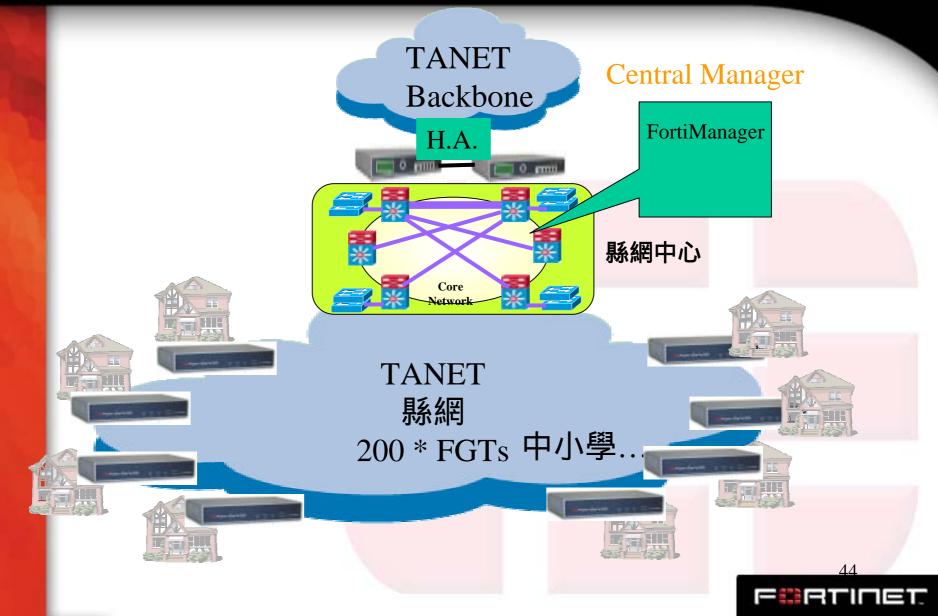
FORTINET 網路安全架構圖



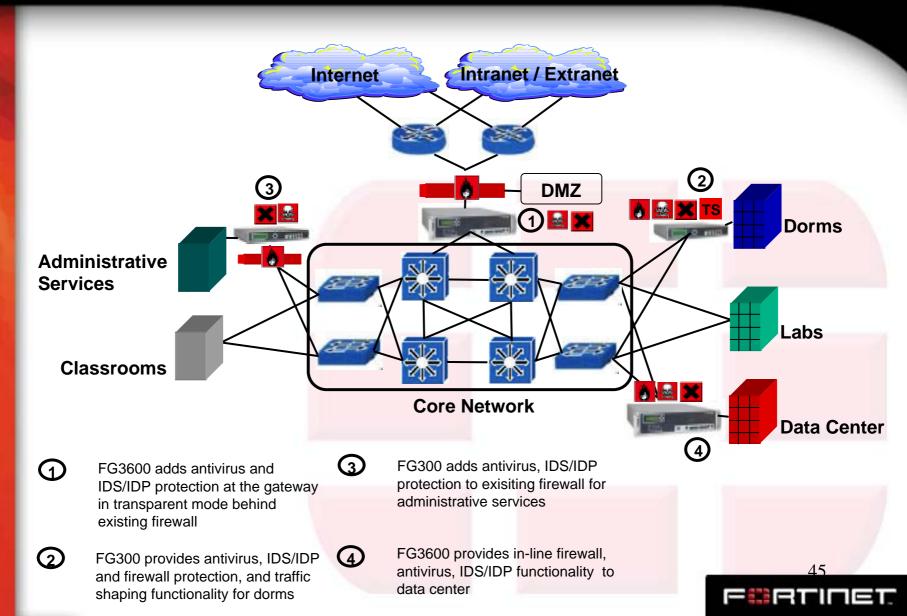
A Real Case for Education Network



Fortinet Provides a Complete Solution for the Educational Network (1/2)



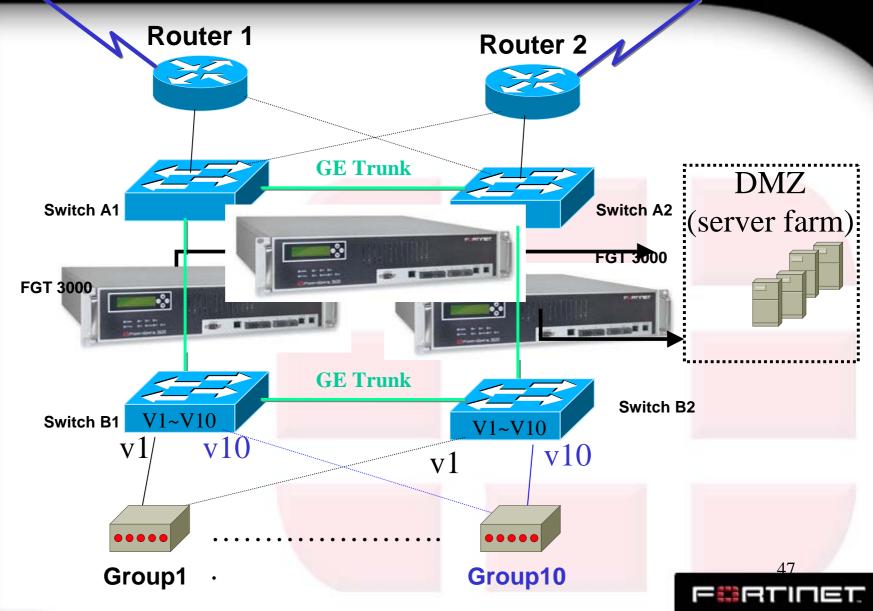
Fortinet Provides a Complete Solution for the Educational Network (2/2)



High Availability Feature Highlights

- Fortigate Clustering Protocol (Real Clustering) Active-Active (TP / Routing mode) Active-Passive (TP / Routing mode)
- HA in transparent mode
- Stateful failover for both firewall and VPN traffic within 3 seconds
- Link status monitoring and failover
- HA Alert
 - During failover, the FortiGate units in an HA group send an email and SNMP trap, and log the event.

FORTINET—高可靠網路安全建議架構圖 High Availability Network Archietecture





Enough ? Fortinet always think more for you



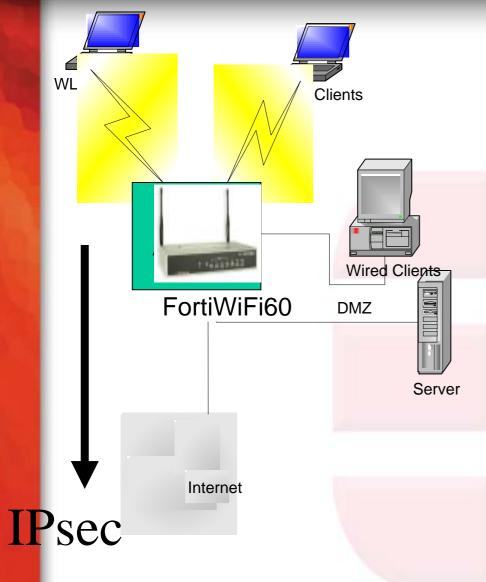
無線網路安全面面觀

What is users' requirement we care ?





Integrated SMB Wireless Solution



Security

- •Gateway and AP not vulnerable
- •AV scanning for all users at all times
- •WLAN clients protected from each other
- •Can enforce Security Policy at all points

•EVEN provide IPsec Tunnel directly to internet







Valuable Reporter is necessary

Without FirewallAnalyzer

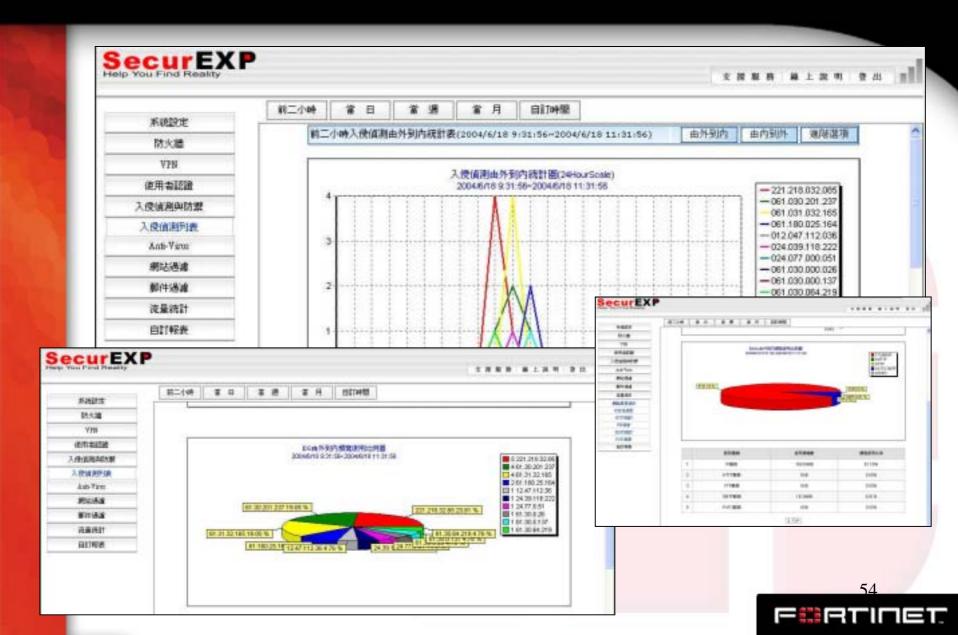
Good news is that Firewalls stream all activity in Syslog Messages. Syslog Servers capture this info into log files.

But finding valuable information in Firewall log files which contain huge amounts of cryptic information is not easy.

datetime=21Ju]2003 03:26:31	action=ct] fw_name=corp_fw dir=inbound sys_msgs=The E100B0 interface is not the state by the anti-
datetime=21Ju/2003 03:26:31	action=ctl fw_name=corp_fw dir=inbound sys_msgs=The E100B7 interface is not prevent the anti-
datetime=21Jul2003 03:26:31	action=ctl fw_name=corp_fw dir=inbound sys_msgs=The E100B1 interface is not the anti-
datetime=21Jul2003 03:26:31	action=ctl fw_name=corp_fw dir=inbound sys_msgs=The E100B7 interface is not prove the anti- action=ctl fw_name=corp_fw dir=inbound sys_msgs=The E100B1 interface is not prove the anti- action=ctl fw_name=corp_fw dir=inbound sys_msgs=The NDISWANIP interface is not prove the anti-
datetime=21Jul2003 03:26:31	action=ctl fw_name=corp_fw dir=inbound
	action=accept fw_name=corp_fw dir=inbound src=10.78.108.1 dst=10.73.107
datetime=21Jul2003 03:26:32	action=accept fw_name=corp_fw dir=inbound src=10.78.108.1 dst=10.73.1
	action=accept fw_name=corp_fw dir=inbound src=10.79.109.134 dst=10.7 rule=2 proto=udp/nbr
	action=accept fw_name=corp_fw dir=inbound src=10.74.104.1 dst=10.74
	action=ct] fw_name=corp_fw dir=inbound sys_msgs=The E100B0 interfation (tected by the anti-
	action=ctl fw_name=corp_fw dir=inbound sys_msgs=The E100B7 interformed by the anti-
	action=ctl fw_name=corp_fw dir=inbound sys_msgs=The E100B1 interf
	action=ctl fw_name=corp_fw dir=inbound sys_msgs=The NDISWANIP intress is not properly led by the ar
datetime=21Ju]2003 03:27:50	action=ctl fw_name=corp_fw dir=inbound
datetime=21Ju]2003 03:27:50	action=accept fw_name=corp_fw dir=inbound src=10.78.108.1 dst=10/0=03.1 rule=2/0=0to=tcp/FW1_lea action=accept fw_name=corp_fw dir=inbound src=10.78.108.1 dst=10/0=103.1 rule=2/0=0to=tcp/FW1_lea
datetime=21Ju]2003 03:27:50	action=accept fw_name=corp_fw dir=inbound src=10.78.108.1 st=10/18.103.1 rule/ proto=tcp/Fw1_lea
datetime=21Ju]2003 03:28:02	action=accept fw_name=corp_fw dir=inbound src=10.75.105.1 dst=1 5.105.755 r =2 proto=udp/nbdat action=accept fw_name=corp_fw dir=inbound src=10.79.109.134 ds 20.79.109.751 le=2 proto=udp/nbr
datetime=21Ju]2003 03:28:02	action=accept fw_name=corp_fw dir=inbound src=10.79.109.134 ds/r0.79.109.75 Pe=2 proto=udp/nbr
datetime=21Ju]2003 03:28:21	action=accept fw_name=corp_fw dir=inbound src=10.76.106.1 dst/0.76.106.755 /= =3 proto=udp/nbdat
datetime=21Ju]2003 03:28:21	action=accept fw_name=corp_fw dir=inbound src=10.75.105.1 de/ 0.75 105.755 r sproto=udp/nbnam
datetime=21Ju]2003 03:28:23	action=accept fw_name=corp_fw dir=inbound src=10.74.104.1 74.104.755 ru
datetime=21Ju]2003 03:28:23	action=accept fw_name=corp_fw dir=outbound src=10.1.3.1 (3.755 ule=2 pro-
datetime=21Ju]2003 03:28:36	action=accept fw_name=corp_fw dir=inbound src=10.1.3.103
datetime=21Ju12003 03:28:36	action=accept fw_name=corp_fw dir=inbound src=10.1.3.103 dst=_0.79.109.134 rule=2 proto=tcp/1543
datetime=21Ju12003 03:28:48	action=accept fw_name=corp_fw dir=inbound src=10.78.108.1 dst=10.78.108.755 rule=3 proto=udp/nbnam
datetime=21Ju12003 03:29:03	action=accept fw_name=corp_fw dir=inbound src=10.74.104.1 dst=10.74.104.755 rule=3 proto=udp/nbnam
datetime=21Ju12003 03:29:03	action=accept fw_name=corp_fw dir=inbound src=10.79.109.134 dst=10.79.109.755 rule=3 proto=udp/nbr
datetime=21Ju12003 03:29:36	action=accept fw_name=corp_fw dir=inbound src=10.71.101.1 dst=10.71.101.755 rule=3 proto=udp/nbnam



FirewallAnalyzer – Instant Reporting



FirewallAnalyzer – Drill Down

S

-

NOTION OF

違反政策事件 061.031.194.002 詳細資料 (2004/6/18 9:31:56~2004/6/18 11:31:56)

	MACHINE_NAM	5.) I	LOG_TI	ME	rule_desc	PROTOCOL	SRC_P	SRC_NAME	DST_IP	DST_NAME
1	172.16.9.49	2004/6/18	上午1	1:20:00	0	36642.0cp	061.031.194.002	2.194.31.61 isp.tfn.net.tw.	219.080.005.155	155.5.80.219 dynamic tith net.tw
2	172.16.9.49	2004/6/18	2004/6/18 上午 11:20:00		0	35663.0cp	061.031.194.002	2.194.31.61 isp.tfn.net.tw	219.080.005.155	155.5.80.219 dynamic tin net tw
3	172.16.9.49				0	36706.6cp 36793.6cp	051.031.194.002 051.031.194.002	2.194.31.61.isp.tfn.net.tw 2.194.31.61.isp.tfn.net.tw	219.080.005.155 219.080.005.155	155.5.80.219.dynamic tin net.tw 155.5.80.219.dynamic tin net.tw
4	172.16.9.49				0					
5	172.16.9.49	2004/6/18	上午1	1:30:00	0	36829Acp	061.031.194.002	2.194.31.61 isp.tm.net.tw	219.080.005.155	155.5.80.219.dynamic tin net.tw
6	172.16.9.49	2004/6/18	上午 11:30:00		0	36830Acp 36853Acp	061.031.194.002 061.031.194.002	2.194.31.61 isp.tfn.net.tw 2.194.31.61 isp.tfn.net.tw	219.060.005.155 219.080.005.155	155.5.80.219.dynamic tith net.tw 155.5.80.219.dynamic tith net.tw
7	172.16.9.49	6.9.49 2004/6/18 上午 11:30:00		1:30:00						
8	172.16.9.49	2004/6/18 上午 11:30:00			0	36854Acp	061.031.194.002	2.194.31.61 isp.tm.net.tw	219.080.005.155	155.5.80.219.dynamic tith net.tw
9	172.16.9.49	2004/6/18	2004/6/18 上午 11:30:00		0	36922Acp	061.031.194.002	2.194.31.61 isp.t/n.net.tw.	219.080.005.155	155.5.80.219.dynamic.th.net.tv
10	172.16.9.49	2004/6/18	2004/6/18 上午 11:30:00		0	36977.hcp	061.031.194.002	2.194.31.61 isp.tfn.net.tw	219.080.005.155	155.5.80.219 dynamic tith net tv
11	172.16.9.49	2004/6/18 上午 11:30:00		0	36979.6cp	061.031.194.002	2.194.31.61 isp.tm.net.tw	219.080.005.155	155.5.80.219.dynamic.th.net.tw	
12	172.16.9.49	2004/6/18 上午 11:30:00		0	36997.6cp	051.031.194.002	2.194.31.61 isp.tfn.net.tw	219.080.005.155	155.5.80.219.dynamic tin net.tv	
	17216949	2004/688	F# 1	1-30-00	0	00088608	061 031 194 002	2.194.31.61 isp.tm.net.tw	219.080.005.155	155.5.80.219.dynamic tin net.tv
CEXP								2.194.31.61 isp.tfn.net.tw	219.080.005.155	155.5.80.219.dynamic tin net.tv
_	10-14		* /5	0048			2.194.31.61.isp.tfn.net.tw	219.080.005.155	155.5.80.219.dynamic.thn.net.tv	
							A LANGE	2.194.31.61 isp.tm.net.tw	219.060.005.155	155.5.80.219.dynamic tith net.tv
	新二(中時以前後代時代時代時代(Socialized Anti-Socialized A							2.194.31.61 isp.tm.net.tw	219.080.005.155	155.5.80.219.dynamic.th net.tv
1	MARKEN AN SUSTED BARREN MARKEN FEITHER						2.194.31.61 isp.tfn.net.tw	219.080.005.155	155.5.80.219 dynamic tith net tv	
ur		T		-			PTP	2.194.31.61 isp.tm.net.tw	219.080.005.155	155.5.80.219.dynamic.ttn.net.tv
		N-200					6373 SM9- P091	2.194.31.61 isp.tfn.net.tw	219.080.005.155	155.5.80.219. dynamic tin net.tv
-	3	40,000 20,000						2 194.31.61 isp.tfn.net.tw	219.080.005.155	155.5.80.219 dynamic tin net.tv
21		80,080 80,080 80,080						2.194.31.61 isp.tfn.net.tw	219.080.005.155	155.5.80.219.dynamic tin net.tv
		8,380	HETE	IT IT	-	10		2.194.31.61.isp.tfn.net.tw	219.080.005.155	155.5.80.219.dynamic tin net.tv
		-	-		122	1 m		and the second sec	CONTRACTOR OF CITY	and a substantial statement of the second

FERTIDET