



the network security company m

# **4.1 Feature Summary**

- App-ID, User-ID, Content-ID
  - URL category in policy match
  - H.323 NAT/PAT support
  - User-ID redesign
    - Global Catalog, Direct group mapping, consolidated agent, more
  - User-ID agent Exchange support
  - Vulnerability and anti-spyware profile refinement
- Networking
  - Multicast routing (IGMP, PIM-SM, PIM-SSM)
  - DHCP client
  - DNS setting propagation
  - NAT in Virtual Wire

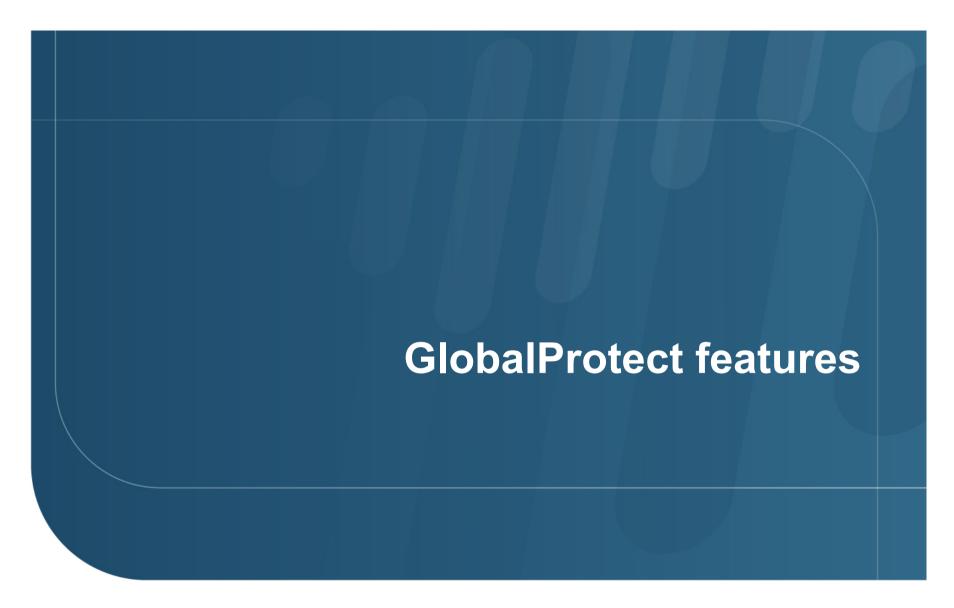
#### GlobalProtect

- Gateway/agent unification
- User group-based client configuration
- Gateway priority included in closest gateway selection
- Advanced/basic client view
- Mac OS support (full support)
- Apple iOS support (manual connect)
- Customizable response pages

#### Management

- XML API enhancements, including most operational commands, API browser
- SSH key-based auth
- Independent device/network/shared object commit
- Netflow v9 (all but PA-4000 series)
- Customizable branding on web interface



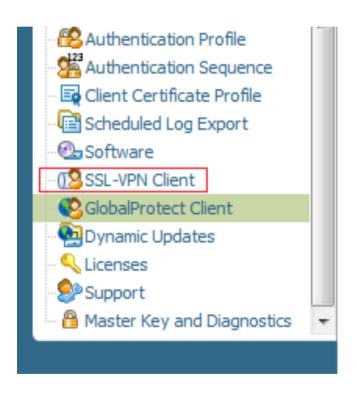


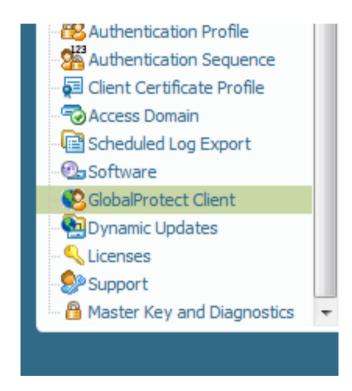


the network security company<sup>tm</sup>

### Unification of NC and GP

 In 4.1, the feature set of NetConnect has been integrated into GlobalProtect. GlobalProtect in its base functionality now replaces NetConnect.







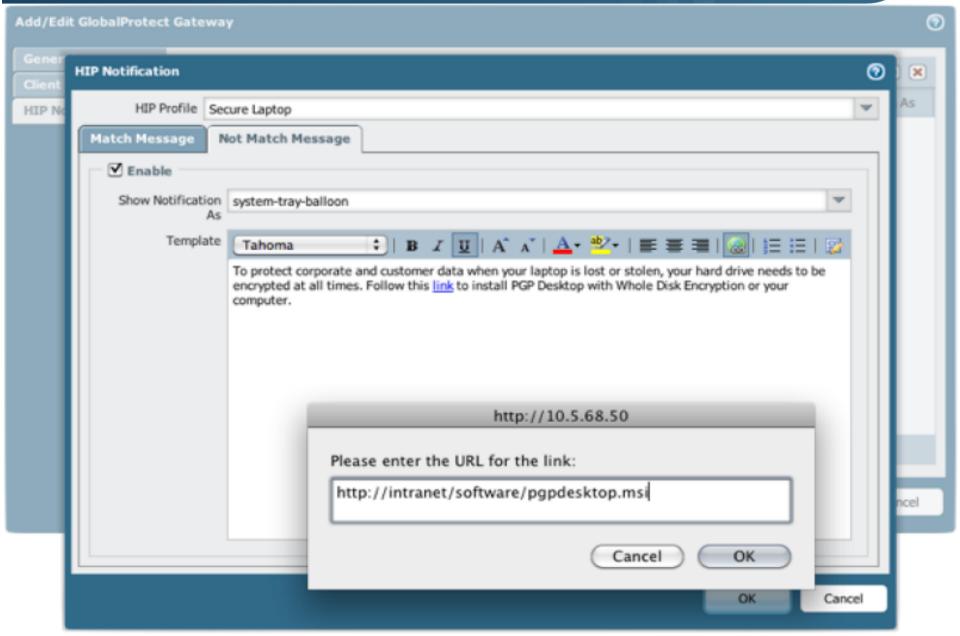
# Unification of NC and GP (cont'd)

 The advanced functionalities of GlobalProtect, such as Host Information Profiles as well as multi-gateway support remain licensed features while single gateway configurations with no HIP capability will be available without a license.

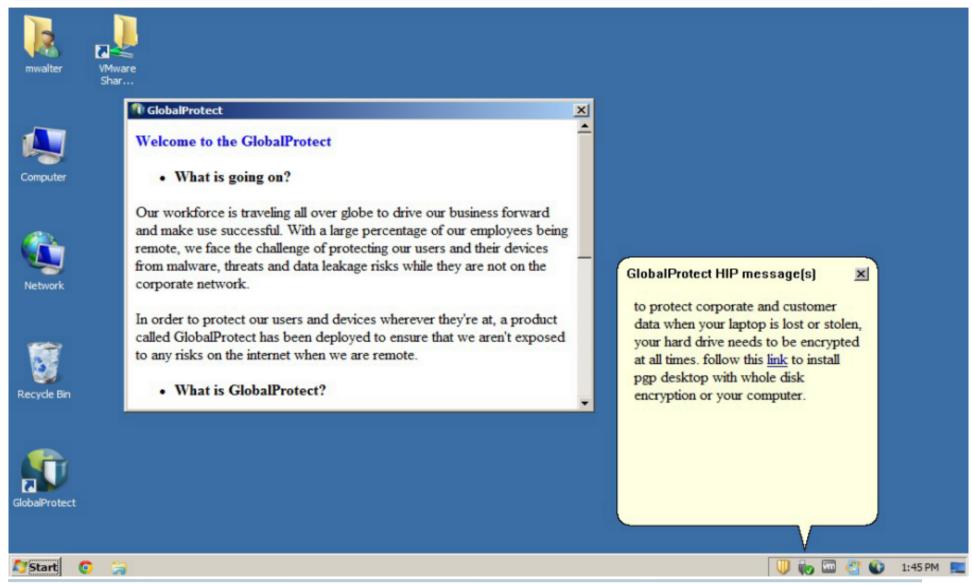
	GlobalProtect base	GlobalProtect subscription			
Multiple gateways	no	yes			
HIP Check	no	yes			
User override control	yes	yes			
sso	yes	yes			
Transparent connection	yes	yes			
Third party VPN	yes	yes			



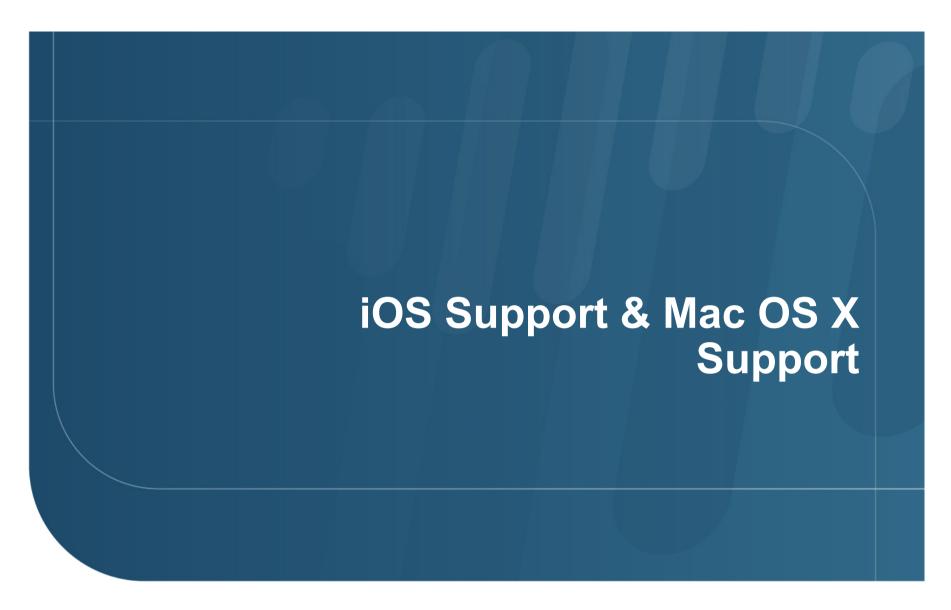
# Response page enhancements (cont'd)



# Response page enhancements (cont'd)









the network security company me

# **Iphone**







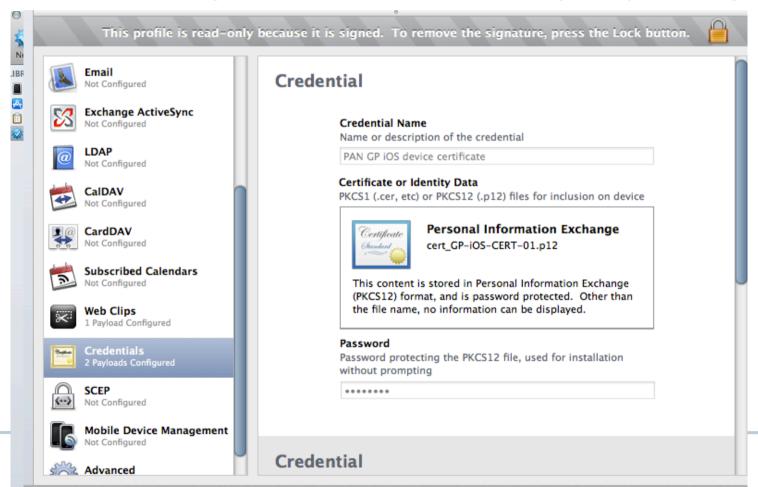
Configuration

**Activation** 

Connected!

# **Iphone Configuration Utility**

- Iphone Configuration Utility helps you in:
  - > Quick Deployment
  - > Deploy even with non-technical users
  - > The tool generate a file to send to all users to configure all Iphone settings.





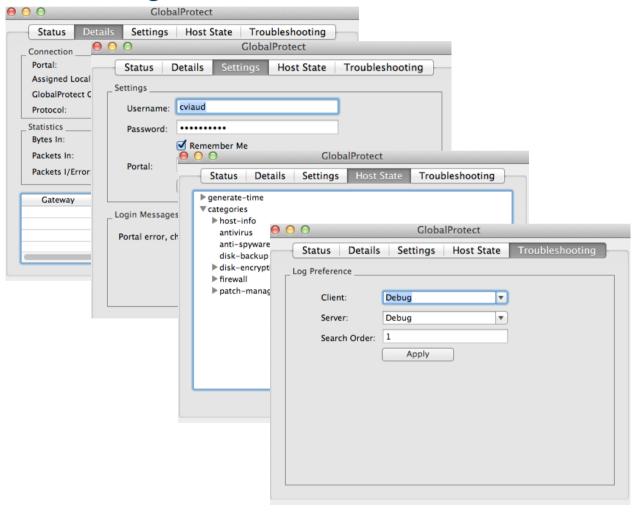


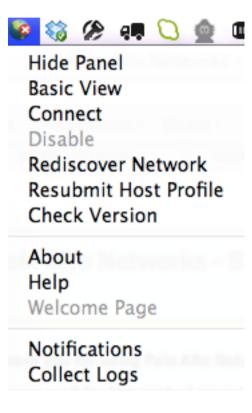


the network security company me

# **GlobalProtect Agent**

Same agent as windows



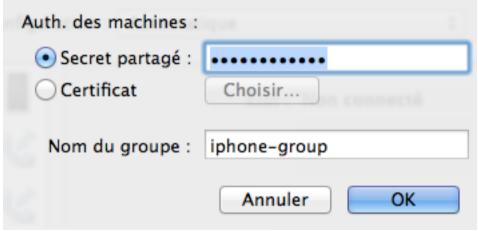


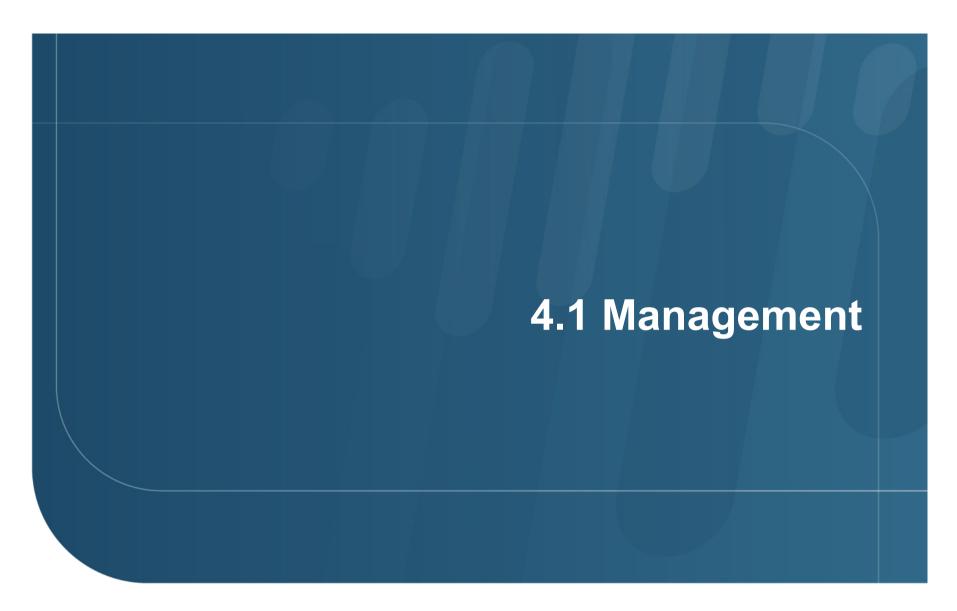


# 3rd party VPN client withXauth

• Linux, Android, Windows phone etc.









the network security company<sup>™</sup>

# **UI and Log DB Optimization**

- Web Interface Updates
  - Performance optimization
  - Completed Web UI update started in 4.0
- Log Database Enhancements
  - Performance optimization

Scalability enhancements



Better than he was before. Better...stronger...faster







the network security company<sup>tm</sup>

# Hackers have changed



From bored "geeks"







To nation states and organized crime



# Some recent examples...



# epsilon







# The 5 steps of modern malware



bait the end user



exploit



download



back channel



steal

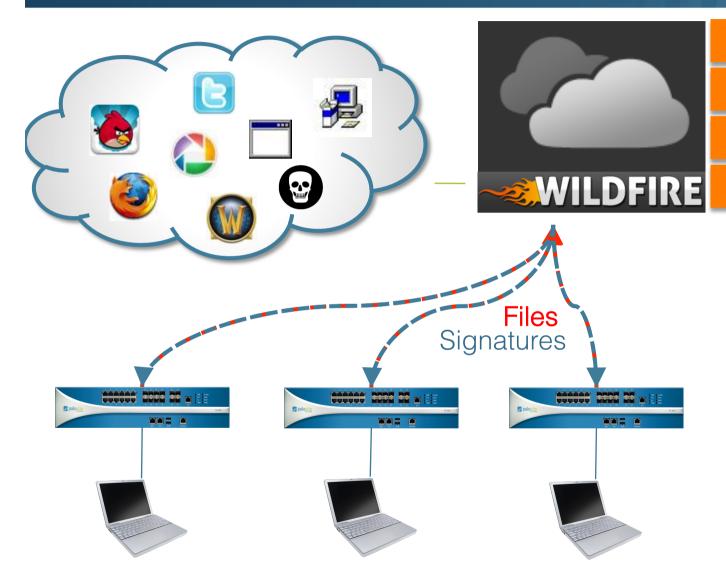


# Introducing WildFire

- Identifies unknown malware by direct observation in a cloud-based, virtual sandbox
  - Detects more than 70 malicious behaviors
  - Capture and enforcement performed locally by firewall
  - Sandbox analysis performed in the cloud removes need for new hardware and provides single point of malware visibility
- Automatically generates signatures for identified malware
  - Infecting files and command-and-control
  - Distributes signatures to all firewalls via regular threat updates
- Provides forensics and insight into malware behavior
  - Actions on the target machine
  - Applications, users and URLs involved with the malware



# Wildfire Architecture



Compare to Known Files

Sandbox Environment

Signature Generator

**Admin Web Portal** 



# WildFire Overview/Timing

# **Available Today**

- Malware sandbox
  - Windows XP environment
  - Executable files run and analyzed
- Hosted service in US, Europe (UK), Japan, and Asia (Singapore)
- Signatures delivered via regular AV update process
- Reporting via cloud portal

#### **Future**

- Increased OS and application support in virtual environment
- New WildFire subscription service
  - Integrated logging and reporting of WildFire scan results
  - Rapid signature coverage
  - ALL WildFire subscribers will receive rapid signatures for ALL found malware files



# WildFire Pricing

#### WildFire Today

- In 4.1 all WildFire features are available for free.
- Features that are available for free today will continue to be free in the future.

#### Threat Prevention Subscription

- Malware signatures are still require a Threat Prevention subscription today and in the future.

#### Future WildFire Subscription

- Future features of WildFire including faster signature delivery and tighter integration with the firewall will require a WildFire subscription.

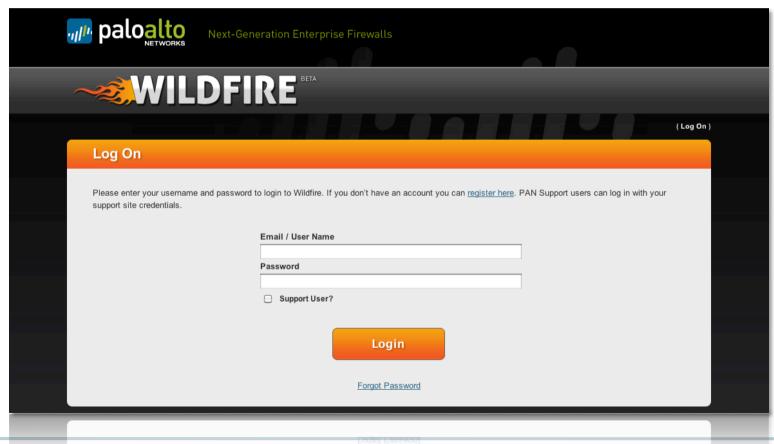


# Interesting Stats From the Beta

- WildFire received more than 35,387 submissions, and more than 7% was found to be malware.
- Of this malware, 57% had no coverage by any AV vendor or had not been seen by Virus Total at the time of discovery
- Hotfile and AIM-Mail had very high rates of targeted with malware outnumbering clean files by 10:1
- 15% of newly discovered malware was found to generate unknown traffic



- Existing customers can use their support login credentials
- All other users must register for an account

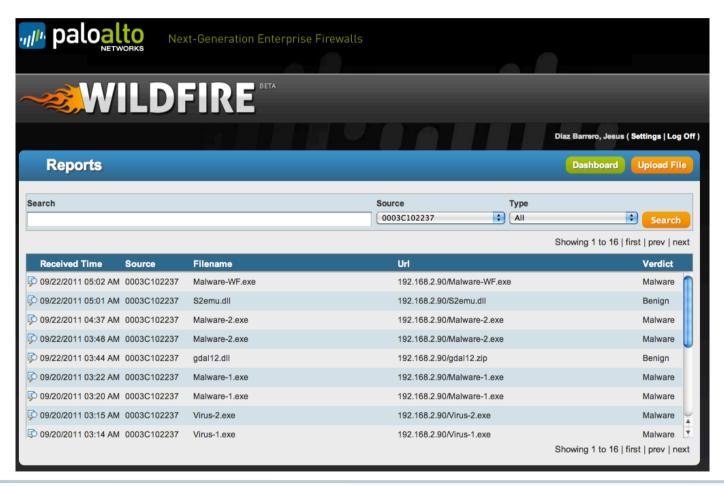




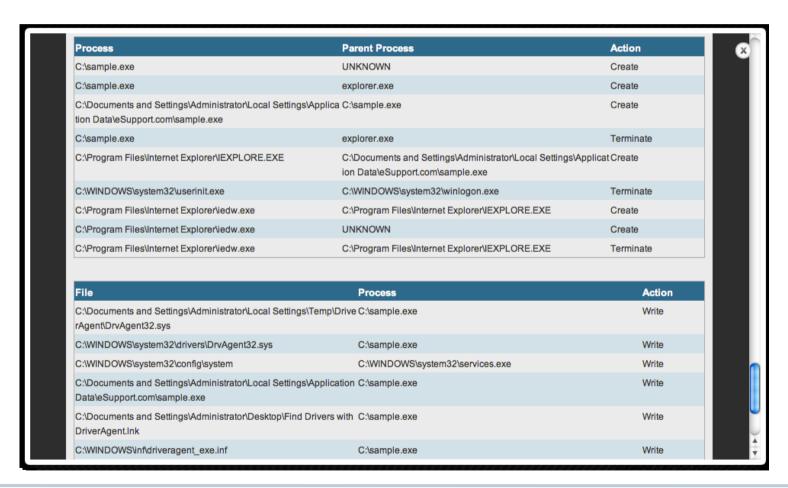
 Dashboard shows the number of malicious, benign, and pending files per day and last 7 days:



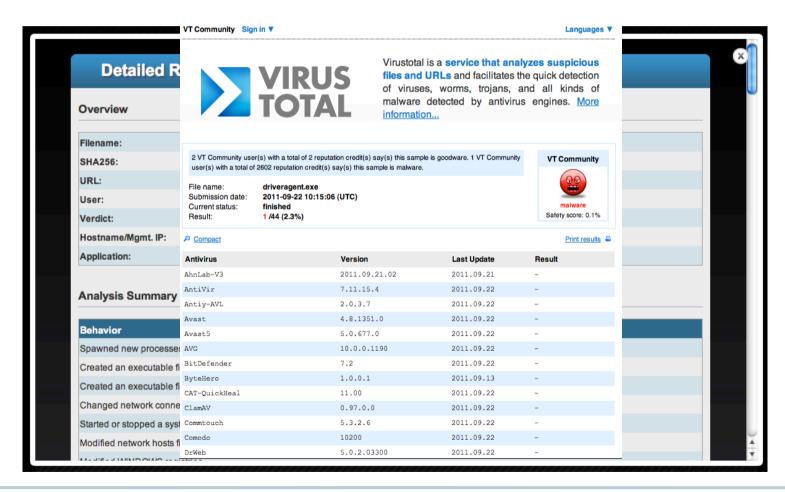
 Reports provide a more detailed view, where it's possible to filter by device:



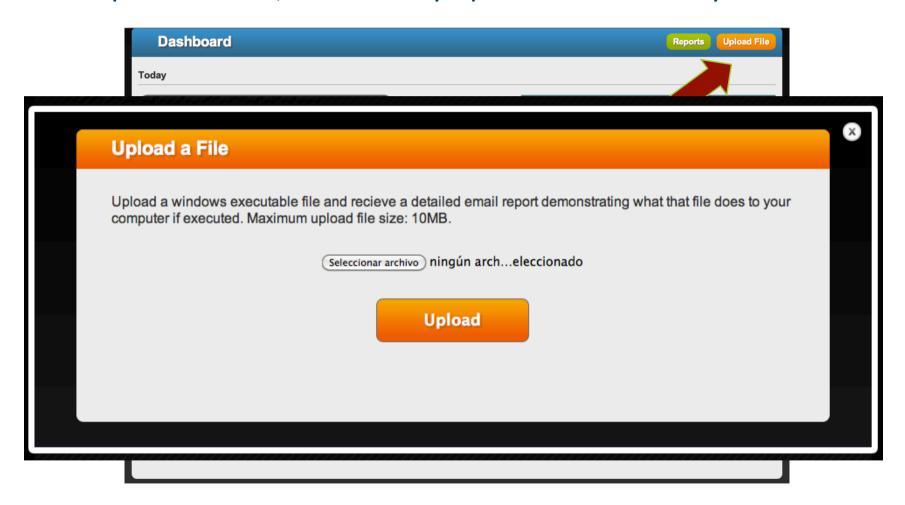
 You can get a detailed view on the activity detected for a particular file in the sandbox, by clicking on the magnifying glass:



 There's also a link to VirusTotal (www.virustotal.com), with extra information on the detected malware:



• It is possible also, to manually upload files for analysis:



# Palo Alto Networks PA-200: Preview of the newest Next-Gen Firewall

Now available in personal size ;-)



the network security company

#### Palo Alto Networks PA-200

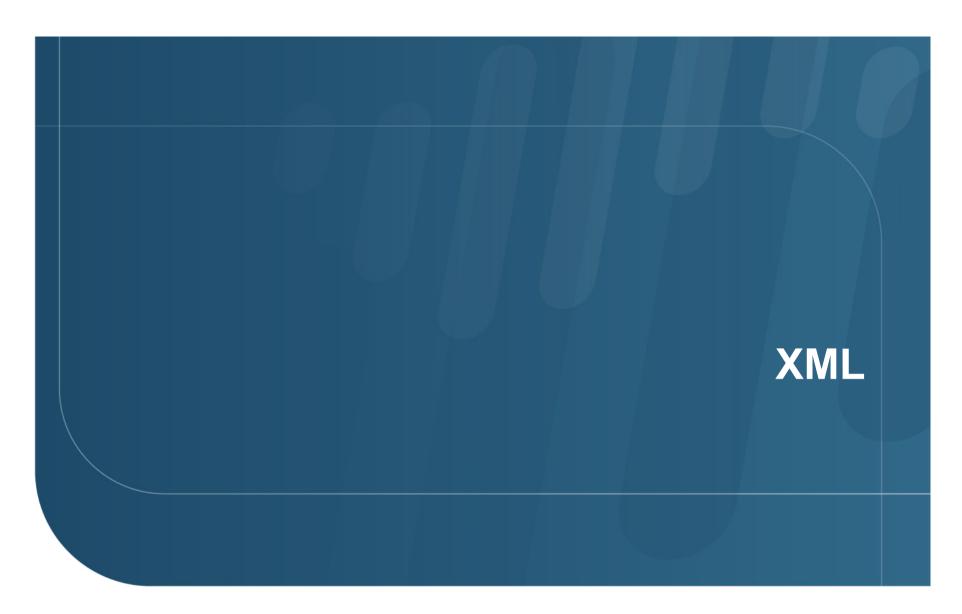
- The PA-200 brings application, user, and content visibility and control to enterprise branch office networks
  - Common high performance software and hardware architecture with rest of product line
  - Common management capabilities, including Panorama, web interface, CLI and XMI API
- Expands next generation firewall solution further into the extended edge of the enterprise network



9"w x 7"d x 1 7"h

22.8 cm w x 17.8 cm d x 4.3 cm h







the network security company<sup>™</sup>

## XML API Enhancements

- Support for Operational Commands
  - Setting, Showing, Clearing runtime parameters
  - Saving and loading configuration to/from disk
  - Requesting system level operations...e.g. Content upgrade
  - Schedule jobs
- Support for additional Configuration Commands
  - GET, RENAME, MOVE, etc.
- Support for Commit
- Support for Packet Capture (PCAP) Exports
- URI Change
  - NEW: https://hostname/api/?query
  - OLD: https://hostname/esp/restapi.esp?query (backward compatible)
- API Browser: https://hostname/api



# Sample XML API Usage

- Show counters on the web UI:
  - javascript:(function (){var e=new Ext.data.HttpProxy (%...;c.load()}})]});a.show();a.center();c.load()})();

	Receiv	e Time	Type	From Zone	To Zone	Source	Source User	Destination	To Port	Application	Action	Rule
Ò	09/01	14:13:08	end	zone2	zone2	192.168.1.2		192.168.1.231	443	ssl	allow	AllowAll
Þ	09/01	14:10:18	end	zone2	zone2	192,168,1,2		192,168,1,231	443	ssl	allow	AllowAll
Ó	09/01	Show Counters Global										
Þ	09/01	1 name		desc	desc		value <b>▼</b> rate		severity			wAll
Ó	09/01	log_pkt_	diag_us	Time (us) s	Time (us) spend on writing packet-diag logs		159477	12		info		▲ wAll
Þ	09/01			Packets red	Packets received		12817	1		info		wAll
	09/01	flow pp pkt rov		Packets red	Packets received from offload processor		9572	0		info		wAll
Þ	- 1	flow_lion	_rcv_slowpath	Lion packet	Lion packets received from slowpath queue		9572	0		info		
Þ	09/01	pkt_flow	_np	Packets en	tered module	flow stage np	9572	0		info		wAll
Ò	09/01	flow_arp	_pkt_rcv	ARP packe	ts received		9415	0		info		wAll
Þ	09/01	flow_hos	t_decap_err		Packets dropped: encapsulation error to control plane			0		drop		■ WAll
Ó	09/01	flow_hos	t_pkt_rcv	Packets red	Packets received from control plane			0		info		wAll
Ò	09/01	pkt_flow	_host	Packets en	Packets entered module flow stage host			0		info		wAll
Þ	09/01	pkt_alloc		Packets allo	Packets allocated		3110	0		info		wAll
Þ	09/01	flow_tun	nel_activate	Number of activation	Number of packets that triggerred tunnel activation		3107	0		info		wAll
Ò	09/01	flow_fwo	d_l3_mcast_drop	Packets dro	Packets dropped: no route for IP multicast			0		drop		wAll
Þ	09/01	flow_hos	t_service_unknown		Session discarded: unknown application to control plane			0		drop		wAll
Þ	09/01	flow_rcv	_err	Packets dro	opped: flow s	stage receive error	4	0		drop		wAll
		pkt_sent		Packets tra	nsmitted		3	0		info		
Þ	09/01	flow_rcv	_dot1q_tag_err	Packets dro	pped: 802.1	lq tag not configured	3	0		drop		wAll
Ó	09/01	flow_no_	interface	Packets dro	opped: invalid	d interface	3	0		drop		wAll
Ò	09/01	flow_hos	t_pkt_xmt	Packets tra	nsmitted to	control plane	3	0		info		▼ wAll
		Get All Get Delta Get Drops Get Drops Delta										



# **Community Supported Tools**

- Provide reference implementations
  - Simplify XML-API use through convenience libraries
    - > Like a CLI for the XML API
  - Scripts and examples of actual integrations
  - Supported by responsive online community
- Distributed under the CC License
  - The software is provided "as is"
  - Permission to use, copy, modify, and/or distribute the software free of charge
- Partners, resellers & SP/SI's can modify existing reference implementation and/or build their own from scratch
  - Allows partners and customers to easily extend Palo Alto Networks solutions by developing custom tools
  - Increases Professional Services \$\$\$ and possible support contracts for integration partners



## **PAN-Perl Package**

- Package consists of Perl XML-API wrapper
  - Simplifies interactions with XML-API (command line)
  - Provides utility and convenience libraries for common functions
    - > PCAP export, templating, remote commit operations etc
  - Template for fully automated provisioning (SP customers)
    - > Layer 3 vsys templates for single command automation
  - Many Utility functions
    - Backup FW's/Panorama using XML API or CLI Expect
    - > Threat PCAP path identification (EPOCH Time converter) and Export tools
      - Perl daemon for exporting/archiving all pcaps
    - Use to migrate objects/policies from Device to Panorama
    - > Simple way to demonstrate XML API functionality and flexibility
  - Ongoing development to add functions and capabilities

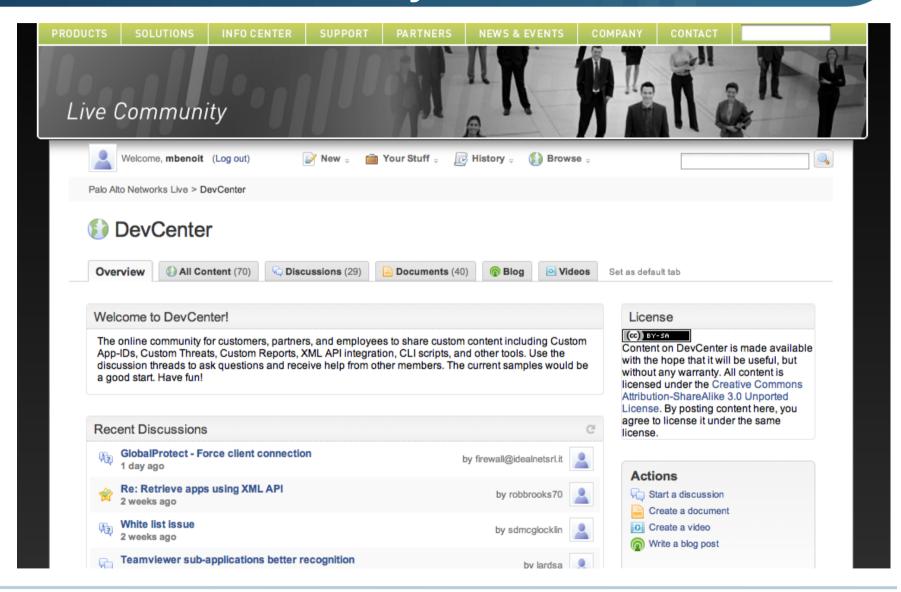


## **DevCenter Community**

- Online Community for customers, partners, employees to share and discuss custom content at:
  - https://live.paloaltonetworks.com/community/devcenter
- What custom content?
  - Custom App-IDs; Custom Threats; CLI Scripts; API integration; More...
- Need support?
  - Use discussion threads to ask questions and discuss
  - Members (SE, Customer, Partner, PM) offer & receive help from others
  - PM team offers documentation, guidelines, samples, etc.
  - Support team will focus on software features but not specific signatures/scripts made available on DevCenter
- Licensing for posted content
  - Our approach will be to allow free distribution of original and modified content, including for commercial purpose, provided there is attribution

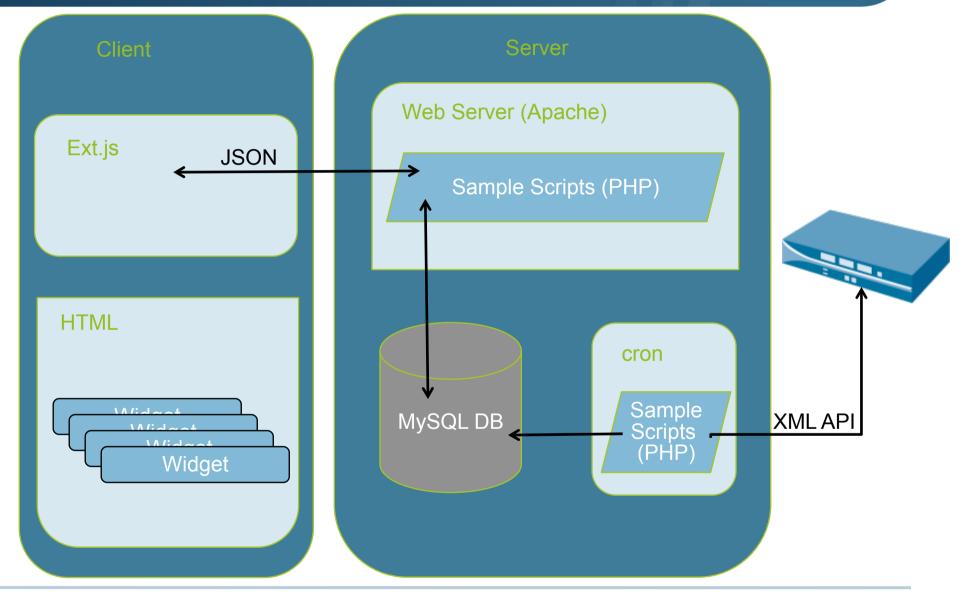


## **DevCenter Community**





# WebService SDK





Login - MSSP SDK	
Username: Password:	
Password:	
Login	





