



SANGFOR

Sangfor Correlated Policy Practice Guidance

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Intended Audience

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- Pre-sale
- FAE

Note Icons

English Icon	Description
 DANGER	Indicates an imminently hazardous situation which, if not avoided, will result in death or serious injury.
 WARNING	Indicates a potentially hazardous situation which, if not avoided, could result in death or serious injury.
 CAUTION	Indicates a hazardous situation, which if not avoided, could result in minor or moderate injury.
 NOTICE	Indicates a hazardous situation, which if not avoided, could result in settings failing to take effect, equipment damage, or data loss. NOTICE addresses practices not related to personal injury.
 NOTE	Calls attention to important information, best practices, and tips. NOTE addresses information not related to personal injury or equipment damage.

Change Log

Date	Change Description
2023-04-24	This is the first release of this document.

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1 Case

This document aims to carry out high-frequency correlated processing between different self-developed devices(ES/IAG/NGAF/CC) and integrate gateway, terminal, and platform products to achieve continuous threat detection and efficient security operations, bringing value to customers.

According to solutions based on marketing, we provide scenario-based playbook strategies for different customer environments.

No	Solution Type	Main Products Involved	Remark
1	Continuous Threat Detection	NGAF、CC	detection and response in time,improve operation efficiency

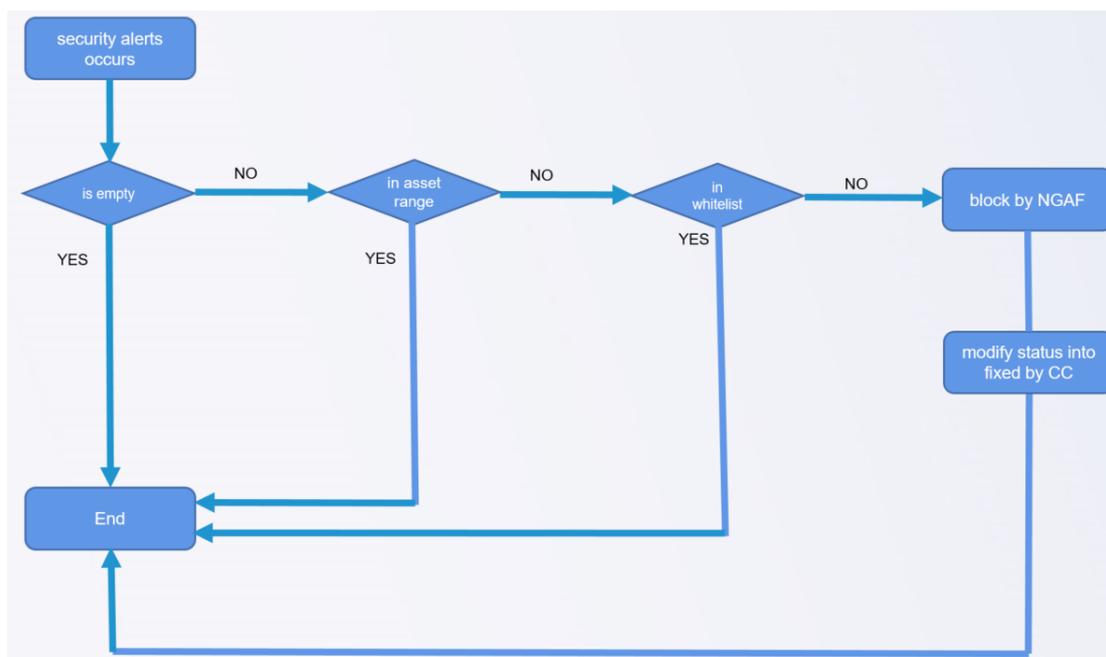
1.1 Scene

1.1.1 Customer Requirements

A branch of customer, as a defender, is participating external offensive and defensive drills. There are totally 4 NGAFs which need to be operated and managed in the customer network. Due to the shortage of security analysts, it is necessary to adopt the "black-and-white" mode for blocking attacks from Internet, that is to say, any global ip addresses not in whitelists issued by HQ should be blocked in time when those access to intranet.

1.1.2 Implementation Method Analysis

According to the requirement, firstly, we have the common concept that this policy should be oriented to security alerts and be automatic,and then define a constant including all ip addresses. The key action is blocking by NGAF, but we should consider some necessary check before it performs, for example, whether the attacker ip address exists, whether the attacker ip address belongs to whitelists and whether the attacker ip is an intranet asset. After we exclude such conditions it will be appropriate to perform block action in all NGAF devices and change the status of alerts automatically by following action.



- **Step 1:** Once alerts are triggered, they hit the predefined policy settings, initiating the first step in the process of assessing and addressing potential threats.
- **Step2:** If the attacker's IP does not exist, the policy will end directly. If it exists, the system will proceed to make a subsequent judgment regarding whether it is an intranet asset address.

No.	Last Detected	Threat	Threat Type	Attack Stage	Target IP	Attacker IP	Result	Status Code	URL	Status	Operation
1	2023-04-24 23:50:34	Access to malicious domain name...	Rootkit Virus	C&C	10.3.8.8	-	Compre...	-	updateconnection.com_sadictop...	Pending	-
2	2023-04-24 23:50:21	Access to malicious domain name...	Spets	C&C	192.168.148.156	-	Compre...	-	v1.3hahpku.v1.mppang.net...	Pending	-
3	2023-04-24 23:50:21	Access to malicious domain name...	Trojan	C&C	192.168.148.156	-	Compre...	-	update-c4b1hmon.ru_update83...	Pending	-
4	2023-04-24 23:50:21	Access to malicious domain name...	Trojan	C&C	192.168.148.156	-	Compre...	-	v1.3hahpku.v1.mppang.net...	Pending	-
5	2023-04-24 23:49:16	Access to malicious domain name...	Infostealer Virus	C&C	192.168.148.156	-	Compre...	-	ev3agrain.com_up-azazaty.pl	Pending	-
6	2023-04-24 23:54:29	Communication via DNS tunnel	DNS Tunneling	C&C	10.1.1.1	-	Compre...	-	-	Pending	-
7	2023-04-24 23:49:31	Access to malicious domain name...	Trojan	C&C	192.168.148.156	-	Compre...	-	nphghmonu.3ia	Pending	-
8	2023-04-24 23:49:45	Access to malicious domain name...	Other Hacking Tools	C&C	172.20.84.80	-	Compre...	-	@B7.dnlog.cn_www.dnlog.cn	Pending	-

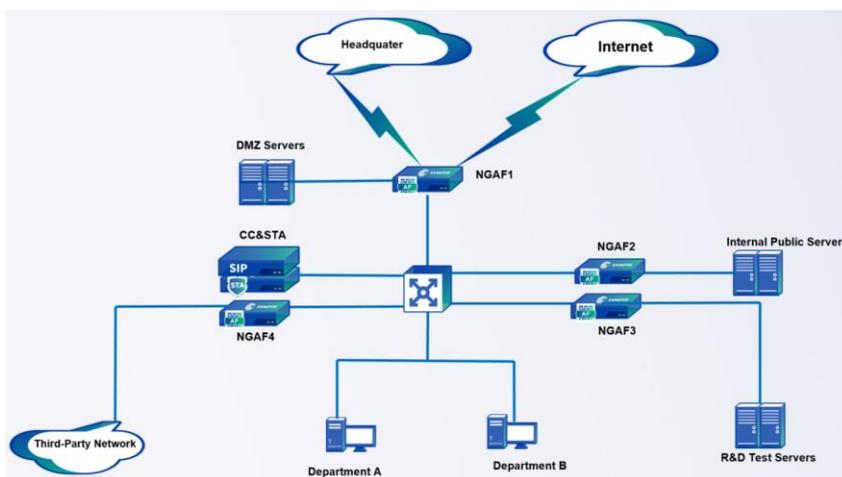
- **Step3:** If the attack's IP is belonged to intranet asset address, the policy will end directly. If not, the system will proceed to make a sub subsequent judgment regarding whether it is belonged whitelist address.
- **Step 4:** If the attacker's IP is belonged to whitelist, the policy will end directly. If not, the system will proceed to push down the block to NGAF.

No.	List Detected	Threat	Threat Type	Attack Stage	Target IP	Attacker IP	Result	Status Code	URL	Status	Operat
1	2023-04-18 22:51:19	WebShell communication	WebShell Access	CC/C	10.80.80.89	200.200.222.93(brual)	Success	-	10.80.86.8/(php/phpf/_221.php	Pending	
2	2023-04-19 09:39:06	WebShell communication	WebShell Access	CC/C	10.80.80.89	200.200.222.93(brual)	Success	-	10.80.86.8/(php/phpf/_221.php	Pending	
3	2023-04-18 09:39:06	XSS attack	XSS Attack	Exploitation	10.80.80.89	200.200.222.93(brual)	Attempt...	200	10.80.86.8/(php/phpf/_221.php/...	Pending	
4	2023-04-18 23:59:40	XSS attack	XSS Attack	Exploitation	10.80.80.89	200.200.222.93(brual)	Attempt...	200	10.80.86.8/(php/phpf/_221.php/...	Pending	
5	2023-04-18 23:59:28	General XSS Attack	XSS Attack	Exploitation	10.80.26.10	200.200.88.20(brual)	Failed	404	1.1.1.1/url	Pending	
6	2023-04-18 23:59:28	General XSS Attack	XSS Attack	Exploitation	10.80.26.10	200.200.88.20(brual)	Attempt...	-	1.1.1.1/url	Pending	
7	2023-04-19 09:37:38	General XSS Attack	XSS Attack	Exploitation	10.80.26.10	200.200.88.20(brual)	Attempt...	-	1.1.1.1/url	Pending	
8	2023-04-19 10:02:37	General XSS Attack	XSS Attack	Exploitation	10.80.26.10	200.200.88.20(brual)	Failed	404	1.1.1.1/url	Pending	
9	2023-04-18 19:33:53	Apache Dats Server Side Request ...	Open Source and C...	Propagition	192.168.192.228	192.200.41.24	Attempt...	800	192.168.192.228/0902/wely/Steek...	Pending	
10	2023-04-19 09:12:42	Apache Dats Server Side Request ...	Open Source and C...	Propagition	192.168.192.228	192.200.41.24	Attempt...	800	192.168.192.228/0902/wely/Steek...	Pending	
11	2023-04-18 23:42:19	Remote command execution via ...	WinRM Command E...	Propagition	192.168.221.148	192.168.221.1 against the host.	Success	200	192.168.221.148/8982/weman	Pending	
12	2023-04-19 09:40:34	Remote command execution via ...	WinRM Command E...	Propagition	192.168.221.148	192.168.221.1 against the host.	Success	200	192.168.221.148/8982/weman	Pending	
13	2023-04-19 03:15:23	ORACLE Server Broker Permit Exploit	Database Exploit	Propagition	192.168.201.1	192.168.201.10	Attempt...	-	-	Pending	

- **Step 5:** The NGAFs device will block the Internet attacker IP pushed down by CC, and then CC will modify the alerts status into fixed.

1.2 Network Toplogy

Based on the topology provided, the customer has implemented the Security Threat Analytics (STA), Cyber Command (CC), and 4 Next-Generation Application Firewalls (NGAF) for protecting different security zones.



1.3 Configuration Process

1.3.1 Policy Settings

Select security alert types, execute automatically, security alert, all attack types;

Policy Settings ×

Basic Info

* Policy Name:

Policy Description: 0/4096

* Policy Type:

Execution Method: Execute Automatically Execute Manually

Trigger Type: Security Incident Security Alert

Conditions for Execution

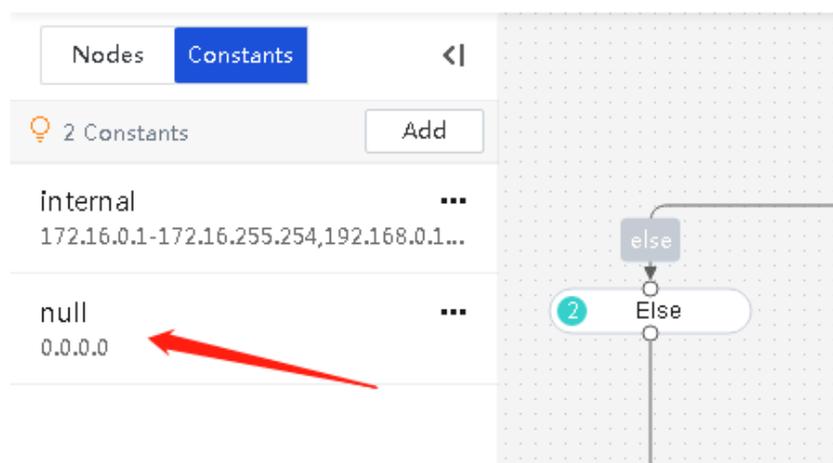
Condition 1: in

 A condition that contains multiple values is met when one of the values is matched. A playbook that contains multiple conditions is executed when all the conditions are met.

1.3.2 Creating playbook policy

(1)、Create a constant and fill in whitelist ip addresses, create another constant and fill in intranet assets address range.

Automatic Disposition Policy-0419



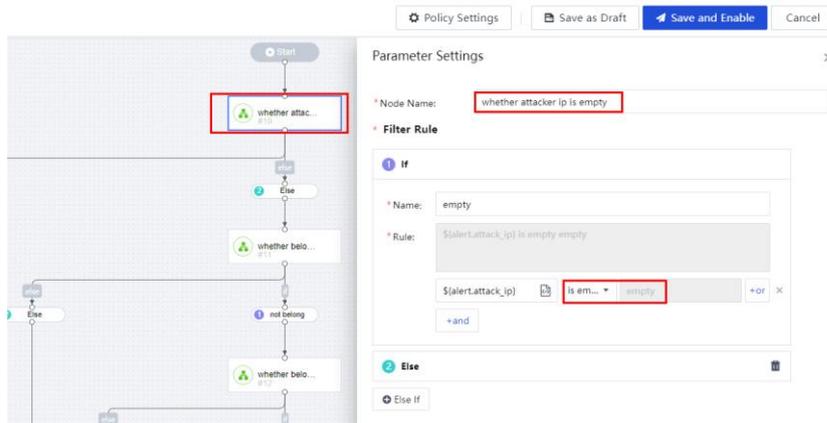
Nodes **Constants** <|

 2 Constants

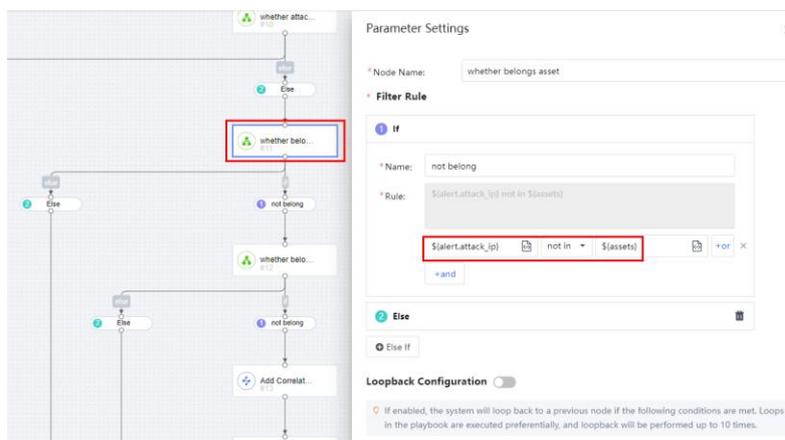
internal	...
172.16.0.1-172.16.255.254,192.168.0.1...	
null	...
0.0.0.0	

Flowchart: **else** node connected to **Else** node (with a green circle containing '2').

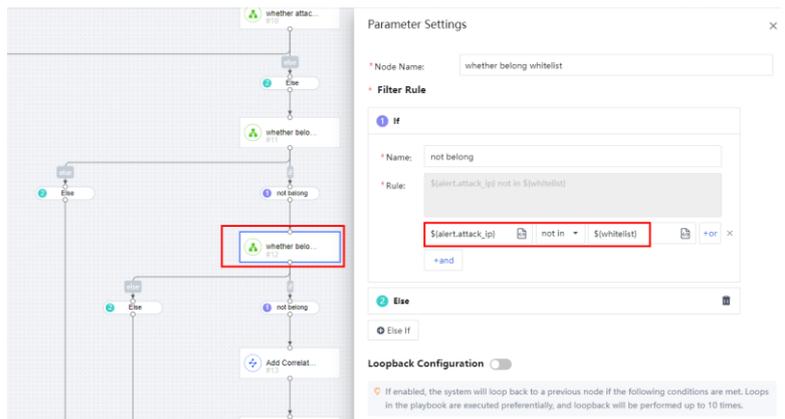
(2)、Decision, excludes the case where the attacker ip is empty.



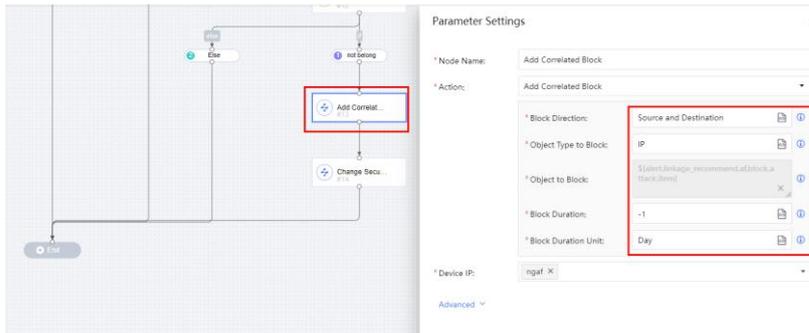
(3)、Define a decision, if the attacker is an intranet address in security alerts;



(4)、Decision, excludes the situation that the attacker ip is in the white list address in security alerts.



(5)、Initiate correlated block to NGAF



(6)、Action, modify the disposal status of corresponding security alert into fixing.



1.4 Test Validity

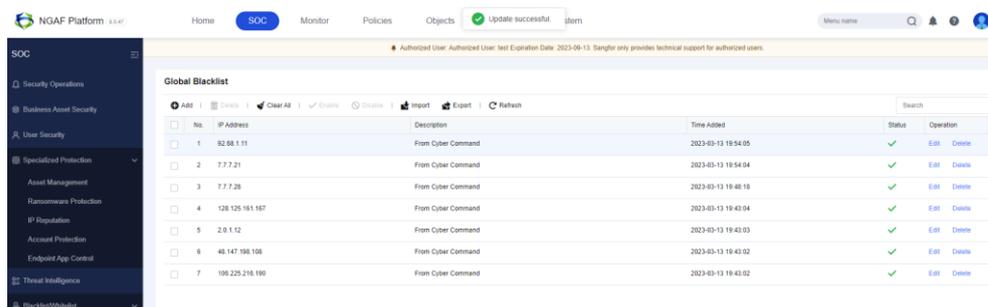
The security alerts flush persistently as usual, when the policy is enabled, new items will hit and executed automatically.

No.	Last Detected	Threat	Threat Type	Attack Stage	Target IP	Attacker IP	XFF	Result	Status Co.	URL	Status
1	2023-03-13 19:48:20	Cobalt Strike backdoor	CobaltStrike	Propagation	192.168.1.5	10.100.18.20	-	Compr...	403	26788.server.dnssec.sangfor...	Fixed
2	2023-03-12 23:59:25	Cobalt Strike backdoor	CobaltStrike	Propagation	192.168.1.5	10.100.18.20	-	Compr...	403	26788.server.dnssec.sangfor...	Fixed
3	2023-03-13 19:45:46	Weak SMTP password	SMTP	Weakness	7.7.21	7.7.28 against th...	-	Succeed	-	-	Fixing
4	2023-03-13 19:40:54	Weak Web password	WEB	Weakness	10.100.4.248	2.0.1.12/Fram...	-	Succeed	-	10.100.4.248/shopev/	Fixing
5	2023-03-13 19:48:04	WebShell file upload	WebShell Upload	Exploitation	192.168.100.200	128.128.161.1...	-	Attem...	-	http://10.100.12.6#008/	Fixing
6	2023-03-13 19:43:05	Fast brute force attack on S...	Brute Force Atta...	Reconnaissance...	10.0.16.8 against t...	106.225.216.1...	-	Attem...	-	-	Fixing
7	2023-03-13 19:44:44	Phishing email	Phishing Email	Exploitation	7.7.28	7.7.21	-	Attem...	-	-	Fixing
8	2023-03-13 19:40:54	Plaintext transmission of th...	Unencrypted W...	Weakness	10.100.4.248	2.0.1.12/Fram...	-	Attem...	200	10.100.4.248/shopev/?pass...	Fixing
9	2023-03-13 19:54:03	Exploit SQL Server attacks.	Database Exploit	Exploitation	10.100.17.237	48.147.198.10...	-	Attem...	-	-	Fixing
10	2023-03-13 19:53:48	SSH Server Brute Force Exp...	Web System Exp...	Exploitation	10.0.16.8	106.225.216.1...	-	Attem...	-	-	Fixing
11	2023-03-13 19:48:04	WebShell Web Trojan Detect...	WebShell Upload	Exploitation	192.168.100.200	128.128.161.1...	-	Attem...	400	10.100.12.6#008/	Fixing

It is available to view the overall coordinated actions in response history page.

No.	Coordinated Action	Asset IP	Action Parameter	Application	Resource	End Time	Executed By	Execution Result	Details
1	Change Security Alert...	192.168.1.10	Sangfor Cyber Command...	Sangfor Cyber Comma...	Cyber Command	2023-03-13 19:59:51	Trigger Policy system	Executed	View
2	Add Correlated Block	192.168.1.10	Sangfor NGAF i68.0.8 to v...	Sangfor NGAF i68.0.8 L...	ngaf	2023-03-13 19:59:50	Trigger Policy system	Executed	View Undo
3	Change Security Alert...	7.7.28,7.7.21	Sangfor Cyber Command...	Sangfor Cyber Comma...	Cyber Command	2023-03-13 19:59:50	Trigger Policy system	Executed	View
4	Add Correlated Block	7.7.28,7.7.21	Sangfor NGAF i68.0.8 to v...	Sangfor NGAF i68.0.8 L...	ngaf	2023-03-13 19:59:50	Trigger Policy system	Executed	View Undo
5	Change Security Alert...	10.100.4.248	Sangfor Cyber Command...	Sangfor Cyber Comma...	Cyber Command	2023-03-13 19:59:49	Trigger Policy system	Executed	View
6	Add Correlated Block	10.100.4.248	Sangfor NGAF i68.0.8 to v...	Sangfor NGAF i68.0.8 L...	ngaf	2023-03-13 19:59:49	Trigger Policy system	Executed	View Undo
7	Change Security Alert...	7.7.28,7.7.21	Sangfor Cyber Command...	Sangfor Cyber Comma...	Cyber Command	2023-03-13 19:58:48	Trigger Policy system	Executed	View

Login NGAF devices and blocking internet attacker IP addresses can be viewed.



1.5 Conclusion

From the above example, it is evident that playbook policies of CC can significantly block attacks from internet to intranet with NGAF. The capability can meet the requirement well in some scenarios, such as offensive and defensive, strict inbound access...etc.