

Competitive Analysis: Sangfor NGAF VS WatchGuard



www.sangfor.com



WatchGuard Introduction

WatchGuard is a network security vendor with headquarters in Seattle, Washington. Its firewalls have a large SMB client base. The vendor focuses on simplified firewall administration and management and offers mature malware detection features, compared to other SMB-focused vendors.

According to Gartner, “WatchGuard’s firewall product line (Firebox) includes physical and virtual appliances. Firewall models are also available on AWS and Microsoft Azure. Its management suite includes three components: the recently released WatchGuard Cloud, WatchGuard Dimension and WatchGuard System Manager (WSM). WatchGuard Dimension and WatchGuard Cloud are primarily focused on monitoring and reporting. WatchGuard Dimension is available as a virtual instance on-premises or deployed as IaaS, whereas WatchGuard Cloud is delivered as a service. WSM is centralized management software for Firebox appliances and is available only installed on a Windows server. WatchGuard’s portfolio also includes wireless access points with integrated security features such as DNS protection and MFA.

WatchGuard offers a range of appliances, from a low-end Firebox T15 model (400 Mbps maximum throughput) up to the Firebox M5600 model (60 Gbps maximum throughput).

In 2019, in addition to WatchGuard Cloud, WatchGuard launched a zero-touch SD-WAN offering and DNSWatch, a recursive DNS service aimed at adding additional web protection to its product lines. The vendor launched IntelligentAV, which adds Cylance as AI-based antivirus protection to supplement the existing Bitdefender antivirus engine. The vendor also released the 12.4 version of its Fireware firmware, adding native TLS 1.3 decryption support.”

WatchGuard Disadvantages

Marketing Execution: WatchGuard is not frequently cited on customer evaluation shortlists compared to competitors, and has become much less visible in Gartner client inquiries. WatchGuard is not visible on Asia/Pacific region’s client firewall shortlists.

Market Segmentation: WatchGuard has a full line of appliances supporting very small to medium-high throughput needs, as well as support for virtual and IaaS environments. The vendor has a major presence among SMBs, but lacks a presence in enterprise and data center firewall and public IaaS deployment use cases.

Product: At present, the WatchGuard cloud-based manager only offers reporting and visibility features. It also has a second management interface, the WatchGuard Dimension, with similar limited functionality. WSM, which is available on-premises only, offers mature management capabilities. Customers surveyed for this research expressed concerns about having multiple management consoles.

WatchGuard provides some lightweight DLP capabilities, but does not support ICAP for integration with enterprise DLP solutions. The product also lacks support for some key features desired by enterprise-grade customers, like open API and integration with NAC and SDN support.

Features: The WatchGuard firewall IDPS offering uses a single OEM partner for a signature set with no in-house team focused on writing signatures. In addition, it has no ability to add or customize signatures, does not include the ability to fail open, and lacks behavior analysis.

Offering: WatchGuard does not have a FWaaS offering for extending branch and mobile worker protections, and only offers a partnership with a single CASB vendor, instead of owning or integrating with additional third-party CASB vendors.

Watchguard Missing Critical Capabilities:

- Activity monitoring
- Purpose-built hardware
- Advanced malware capabilities

Performance Rating: The device is rated by NSS at 1,589 Mbps, which is lower than the vendor claimed performance. WatchGuard claims this device runs at 2,400 Mbps.
Low security effectiveness, at 89.1% according to NSS Labs

Sangfor NGAF VS WatchGuard

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Sangfor Strengths

1. change to powerful ransomware killing - Effective Ransomware Protection

Ransomware-exposed surface inspection through business asset open port. Ransomware commonly uses vulnerabilities and weak password inspection, leading to surfaces being exposed to ransomware, and requiring specific optimization suggestions.

2. Powerful Ransomware Killing Engine - Sangfor Engine Zero Performance:

IPS

Equipment	Policy	Vulnerability Attack	Vulnerability Blocked	Block Rate
NGAF	Default	34	29	85%
Watchguard	Default	34	27	79%

WAF

Equipment	Policy	Vulnerability Attack	Vulnerability Blocked	Block Rate
NGAF	Default	379	379	100%
Watchguard	Default	379	245	65%

Known Malware

Equipment	Policy	Malware Sample	Malware Blocked	Block Rate
NGAF	Default	300	299	99.67%
Watchguard	Default	300	190	63%

Unknown Malware

Equipment	Policy	Malware Sample	Malware Blocked	Block Rate
NGAF	Default	43	43	100.00%
Watchguard	Default	43	25	58%

3. Sangfor RDP/SMB/SSH slow and distributed brute force protection

4. Ransomware C2 process evidence display

5. Data Center Security:

Least privileged access provides better visibility of production traffic, and reduces the attack surface of critical assets.

6. Strategy Optimization Module:

Policy clean-up, asset discovery and network mapping and policy tracking

7. Cloud-based management:

Platform-X supports device monitoring, unified upgrade, remote password-free login, cloud policy template editing, unified policy issuance, intelligent alarms, report analysis, and serial number unified viewing.

8. Centralized management:

CENTRAL MANAGER

9. Zero-touch deployment & centralized monitoring and management

10. Advanced threat detection relying on cloud, behavior and AI technologies

- Advanced Threat Intelligence
- C&C identification with DGA
- Engine Zero: Advanced malware inspection engine
- Cloud-based sandboxing

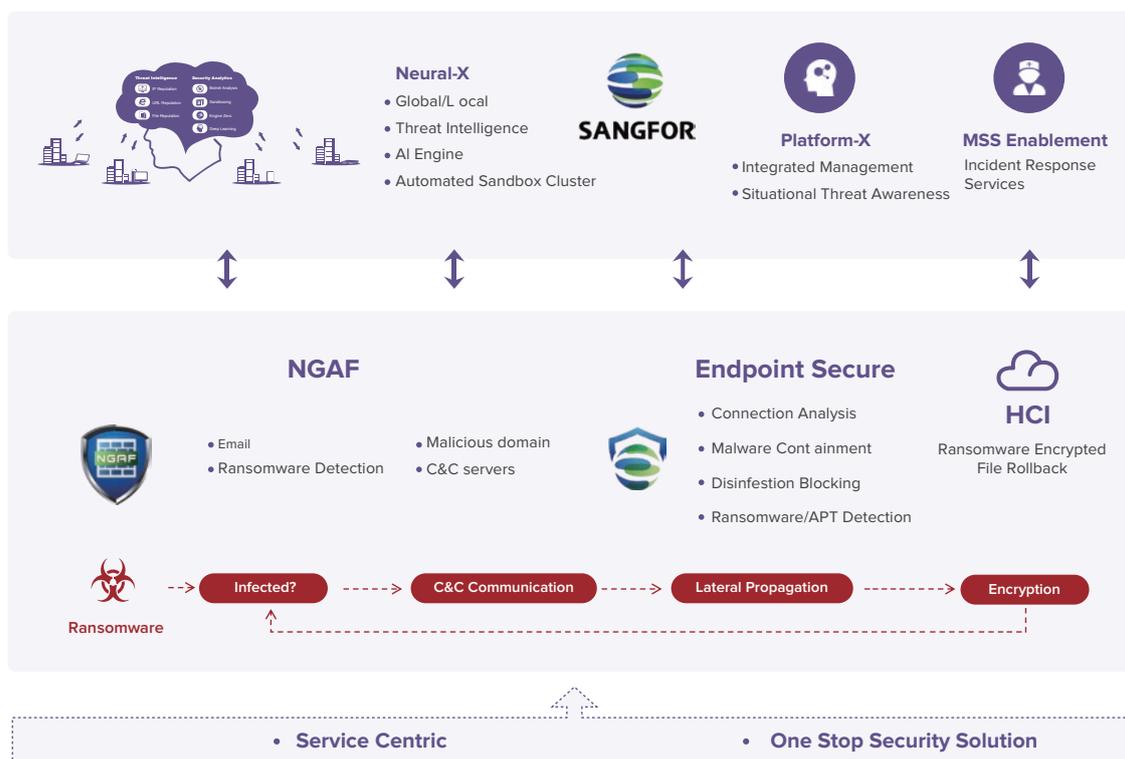
11. Real-time threat detection provides an easy to understand risk score and visibility for enterprises, significantly improving the time to detect and respond.

12. Sangfor NGAF cluster analysis of threat events based on asset perspective

13. Full integration ability covering cloud, network and endpoint

14. For scenarios with multiple zones and firewalls, Sangfor NGAF provides global threat management and visualization through Cyber Command

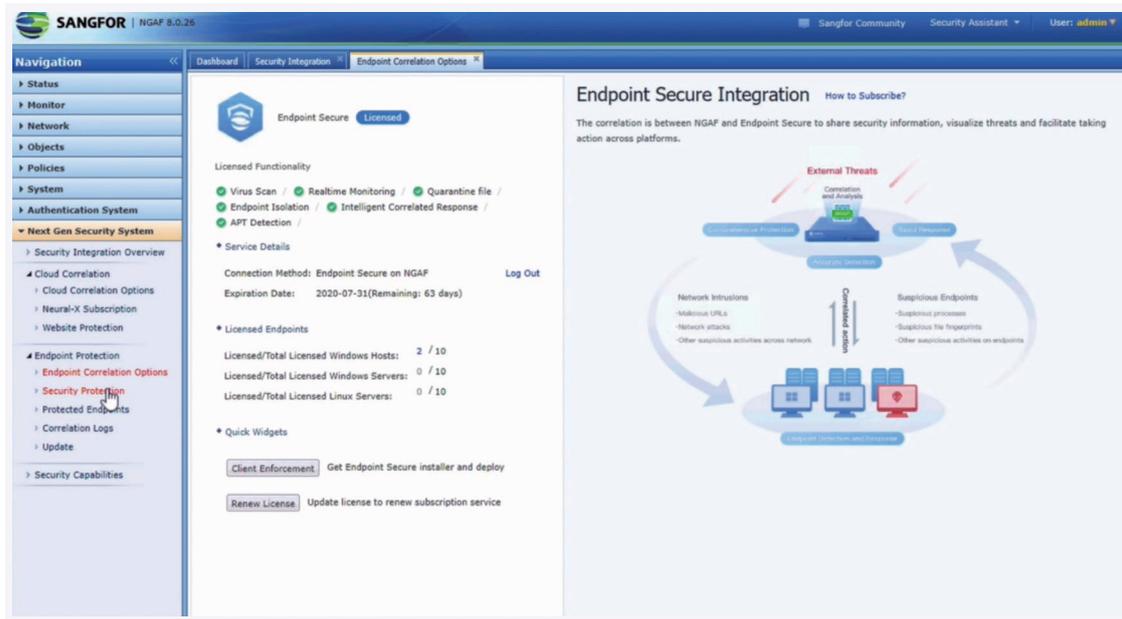
15. Multi-product integration solution



16. Automation between NGAF and ES/Cyber Command

17. Centralized threat correlation between NGAF and ES

Sangfor is the only vendor with comprehensive integrated EDR with firewall, extremely suited to the mid-market, while large enterprises deploy EDR hosted on Platform-X.



Competitive Comparison

● Strong ● Weak

Features	Sangfor	WatchGuard	Sangfor advantages
Security Visibility	●	●	Integrated Security Reporter providing a holistic, end-to-end security overview, from business system to endpoint users and their correlation, detailed visibility.
Total Business System Protection	●	●	Support Application Firewall which includes: Top 10 OWASP Certified, Support web application threat signatures, HTTP Anomalies Detection, Application Hiding, Integrated Web Scanner & Vulnerability Scanner and Integrated Security Reporter
Real Time Detection & Rapid Response	●	●	Automatic protection for pre-attack, mid-attack and post-attack.

● Strong ● Weak

Features	Sangfor	WatchGuard	Sangfor advantages
Known & Unknown Threat Protection	●	●	<p>Sangfor Engine Zero:</p> <ol style="list-style-type: none"> 1. Supports Machine Learning method to recognize new variants of malware, viruses and ransomware 2. Supports behavior detection methods for new file-based threat 3. Uploads suspicious files to cloud to detect, not including files with private information <p>Sangfor Neural-X:</p> <ol style="list-style-type: none"> 1. Supports the use of cloud threat intelligence to do Unknown Threat Discovery and Advanced Threat Analytics 2. Suspicious URL/DNS will be detected by Neural-X 3. Professional support 4. Updates Calendar to show upgrade capabilities and trends 5. Shows hot events
Traditional FW	●	●	<p>Sangfor NGAF is compatible with all traditional firewall features, including switching/routing, access control, AA/AS dual-system hot backup, software and hardware bypass, system management, log reporting, session management, anti-DDoS attacks, application proxy, DHCP/ DNS, etc.</p>
IPS	●	●	<ol style="list-style-type: none"> 1. Sangfor supports vulnerability attack protection for server and client, protecting clients from worms, Trojans, spyware, scanning, DoS, DDoS, vulnerability exploits, buffer overflow attacks, abnormal protocol and attacks with evasive tactic employed. 2. Sangfor supports brute-force attack for FTP, IMAP Auth, IMAP Login, IMAP Standard, IMAP Tls, MS Sql2000, MS Sql2008, Mysql, Ntlm, Oracle, POP3 Apop, POP3 Tls, POP3 User, RDP Win8, RDP Winxp, Rlogin, SMB, SMB2, SMTP Auth, SSH, Telnet, VNC Encrypt, VNC Unencrypt, Weblogic; 3. Sangfor supports automatically blocking, logging and upload of gray threat to the "cloud" 4. Detects more than 4000+ signatures 5. The policy can be configured based on src/dst zone, src/dst IP group 6. Sangfor supports TCP evasion detection
Application Control	●	●	<p>Sangfor supports ACL based on source IP/zone, users/groups, dst IP/zone, application, protocol, src/dst port, and schedule;</p> <p>Supports more than 1000 applications, more than 2500 application rules and custom rules</p> <p>It is not recommended to enable log record and persistent connection</p> <p>Supports up to 4096 entries</p>
URL Filter	●	●	<p>Sangfor supports URL filter based on source IP/zone, users/groups, dst IP/zone, URL category and schedule.</p> <p>Support HTTP(get), HTTP(post), HTTPS filter</p> <p>Supports HTTP(S) upload/download file type filter</p> <p>URL and file types can be customized</p>

● Strong ● Weak

Features	Sangfor	WatchGuard	Sangfor advantages
E-mail Security	●	●	<p>Sangfor mail protection supports detection of mail attachments with viruses, malicious links, XSS attacks, file filters, and collision attacks.</p> <p>Mail whitelist can be added with IP address and email address, with a sender and receiver.</p> <p>Mail protection default detects port 25,110,143, it can support other ports using custom settings.</p>
Anti-ransomware	●	●	<p>Sangfor Ransomware Protection: Pre-attack: Sangfor provides vulnerability assessment</p> <p>Mid-Attack: Sangfor provides AI-based malware inspection and RDP password brute force inspection</p> <p>Post-Attack - Sangfor provides quick response</p>
Centralized management	●	●	<p>Sangfor supports joining NGAF device to Central Management platform Sangfor BBC2.5.3 (Central Manager) and being managed through the platform.</p> <p>(a) Push down configurations from Sangfor CENTRAL MANAGER to NGAF devices and management of those configurations on Sangfor CENTRAL MANAGER.</p> <p>(b) NGAF devices can be upgraded via Sangfor CENTRAL MANAGER by importing upgrade package manually or by obtaining upgrade package online.</p> <p>(c) 12 databases on NGAF device can be updated via Sangfor CENTRAL MANAGER, including Sangfor Engine Zero file verification model database, URL database, IPS vulnerability signature database, software update, application signature database, WAF signature database, sensitive keyword database, vulnerability database for RT analytics, IP address database, threat intelligence database, hot threat database and security events database.</p> <p>(d) Support pushing down predefined and custom signature database from Sangfor CENTRAL MANAGER.</p> <p>(e) Security overview, business system and user/group security information can be reported to and displayed on Sangfor CENTRAL MANAGER.</p> <p>(f) Support configuring alarm settings centrally on Sangfor CENTRAL MANAGER platform and reporting alarm configuration from branch devices.</p> <p>(g) Support connecting NGAF device deployed in high availability or cluster environment to Sangfor CENTRAL MANAGER platform for central management.</p> <p>(h) Support 15 predefined zones in Network > Interfaces > Zone.</p>

● Strong ● Weak

Features	Sangfor	WatchGuard	Sangfor advantages
Neural-X (Cloud based TI)	●	●	Neural-X is a security center with threat intelligence and unknown threat detection capabilities. The threat intelligence center, also a security capability center, gathers masses of intelligence data, including that from Sangfor's on-line security devices, third-party security vendor (such as Virustotal purchase and Google open inquiry) and security communities. The center carries out user granularity analysis for accumulated security intelligence data through big data and cloud computing technology by utilizing various data analysis and artificial intelligence algorithms, and sends real-time intelligence to security devices (such as NGAF, Cyber Command, IAM, ES, and WAF, that have access to Neural-X) by subscription. Security devices load intelligence as required, and carry out detection, analysis and disposition based on intelligence according to their own functions.
Wifi integration protection	●	●	Sangfor does not support this function at the moment
Product integration	●	●	Sangfor provides many product integration solutions for different customers. For instance, Firewall + Sangfor Endpoint Secure + Central Manager + Cyber Command + Neural-X, Firewall + Platform-X + Sangfor Endpoint Secure.
Web Application	●	●	<p>Sangfor Web Application function:</p> <ol style="list-style-type: none"> 1. Use next generation WAF engine, including traditional SNORT based engine and Semantic engine, defends against the 10 major web-based attacks identified by the Open Web Application Security Project (OWASP), including SQL injection, XSS and CSRF. 2. Supports restricting suspicious file uploading with asp, asa, exe, jsp, php, aspx, php3, php4, phtml, and vbs file types. 3. Supports application hiding of HTTP error page replacement, HTTP (S) response headers hidden, and FTP server and software version information hidden, etc. 4. Supports CC attack prevention 5. Supports FTP Weak Password Protection, web-access weak password, web-access cleartext request inspection and defense against brute-force attacks 6. Supports performing inspection of content at the perimeter for incoming traffic. Only allow input parameters that conform to the application functionalities required of the web application and no malicious input parameters; 7. Supports HTTP protocol abnormal detection and sHTTP request method filter 8. Supports protect for HTTP attack based on session and cookies 9. Supports more than 3000+ signatures 10. Supports machine learning to learn the business model and reduce false positive for webshell, SQL injection, etc.

● Strong ● Weak

Features	Sangfor	WatchGuard	Sangfor advantages
Reporting & analytics	●	●	WatchGuard requires additional reporting tools.
Simplified Security Operation	●	●	User friendly interface minimizes the challenge of misconfiguration of security policies. Intuitive reporting which provides detailed information for management, incident response, as well as daily operations.

Model Comparison

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NGAF	Threat Prevention Throughput	WatchGuard	Threat Prevention Throughput
M4500	1Gbps	Firebox T35R	325Mbps
M5100	1.2Gbps	Firebox T40	623Mbps
M5200	1.75Gbps	Firebox T80	1.15Gbps
M5300	3.5Gbps	Firebox M370	3.0Gbps
M5400	4.2Gbps	Firebox M470	3.5Gbps
M5500	8.4Gbps	Firebox M570	5.6Gbps
M5500	8.4Gbps	Firebox M670	6.2Gbps
M5600	16.8Gbps	Firebox M4600	9Gbps
M5600	16.8Gbps	Firebox M5600	12Gbps

Sangfor Defeats WatchGuard - Sangfor NGAF Selling Points

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1. Independent Anti-Ransomware Module

The screenshot displays the Sangfor NGAF 8.0.26 Security Operations dashboard. The main focus is the 'Ransomware Protection' module, which shows a 'Vulnerable Business System(s)' count of 191. The dashboard is divided into several sections:

- Security Operations:** Shows 'Pending Issues' with a 'Fix Now' button. It lists three items: '18.18.218.218 correlated to Endpoint Secure and...', '192.168.254.5 has 1 webpage being uploaded We...', and '192.168.254.25 has 1 webpage being uploaded W...'.
- System Status:** Displays CPU (25%), Mem (44%), and Hard Disk (14%) usage. It also shows 'System Interface' (Running 6 days...), 'System Time' (2020-05-19 18:05...), 'HA Status' (OFF), and 'Version' (AFB.0.26.271 EN B Bull...).
- Ransomware Protection:**
 - Anti-ransomware for Business System:** Shows 191 vulnerable systems.
 - Weaknesses:**
 - Open Port: 186 Business System(s)
 - Common Vulnerability: 159 Business System(s)
 - Weak Password: 158 Business System(s)
 - Ransomware Threats:** Shows 3 threats:
 - Business systems attacked by rans...: 3 Business System(s)
 - 17.17.217.217: It is attacked by hacker (18.18.2... 2020-05-16 21:00:13)
 - 18.18.218.201: It is attacked by hacker (202.0.7... 2020-05-14 16:30:57)
 - 18.18.218.218: It is attacked by hacker (202.0.1... 2020-05-14 16:30:56)

2. SDN is a function which WatchGuard doesn't have. As of today, Sangfor doesn't support VMware NSX. Instead, Sangfor has strong SDN support through Sangfor HCI, and our NGAF has a native integration.
3. Sangfor WAF is a pay-as-you-go licensing model which is much more cost effective than WatchGuard
4. WatchGuard integration is not real integration, with no automation disposition
5. WatchGuard has been accused of providing a less detailed view of data
6. WatchGuard only has a cloud sandbox and no local sandbox, and is not suitable for enterprises that do not want data to leave the local area
7. Sangfor can provide incident response service, which many vendors cannot provide.

Certifications & Achievements

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Gartner



Sangfor Technologies has been listed in the Gartner Magic Quadrant for Network Firewalls since 2014.

ICSA Labs



NSS LABS Private Test Result

Sangfor NGFW 10 Private Engagement Scorecard (2019.11.7)
(Model: NGAF M5300-F-I)

Test ID	Description	Result	Rated Throughput
3	Security Effectiveness		
3.3.1	False Positive Testing	PASS	4,629
3.3.2	Exploit Block Rate	/	
3.3.2.1	Exploit Library Block Rate	975%	
3.3.2.2	Live Exploit Block Rate	Full From CAWS	
3.3.3	Coverage by Attack Vector	/	
3.3.3.1	Attacker Initiated	97.0%	
3.3.3.2	Target Initiated	98.2%	
3.3.3	Combined Total	97.5%	

SSL/TLS Private Test Engagement (2020.3.17)
TLS Scorecard Sangfor Complete Vendor (Model: MS300-F-I)

Test ID	Description	Rated Throughput		Result
		Sangfor	NGAF	
2	SSL/TLS Functionality Testing			
2.1	Decryption Validation			PASS
2.3.1	Top 30 Cipher Suites			24 out of 24
2.3.2	Emergent Ciphers			2 out of 2
	x25519 elliptical curve specification			FAIL
2.3.3	Prevention of weak ciphers			PASS
2.4	Decryption bypass policy based on layer 3 information			PASS
	Decryption bypass policy based on layer 4 information			PASS
	Decryption bypass policy based on Server Name Indication (SNI)			FAIL
	TLS extension information			
	Decryption bypass policy based on Common Name (CN) and/or Subject Alternative Name (SAN)			FAIL
2.5	Certificate validation			FAIL
2.6	Support for Session ID re-use method			PASS
	Support for Session Ticket re-use method			PASS

Performance Comparison

Model	Throughput (Mbps)
NGAF M5300-F-I	~10000
NGAF M5300-F-I (2019)	~5000
NGAF M5300-F-I (2018)	~4000
NGAF M5300-F-I (2017)	~3500

EAL4+ (In Progress)

intertek ewa canada

Electronic Warfare Associates-Canada, Limited is pleased to confirm that we are under contract for evaluation of NGAF 8.6.6 in accordance with the Common Criteria for Information Technology Security Evaluation (ISO/IEC 15408) standard at Evaluation Assurance Level (EAL)4+.

This evaluation will be carried out in accordance with the requirements of the Certification Body of the Swedish Evaluation and Certification Scheme (SCCS) and the Common Criteria Mutual Recognition Agreement (CCRA). EWA-Canada has partnered with Combitech Common Criteria Lab, a licensed evaluation facility for Common Criteria under the SCCS, to carry out this evaluation.

The labs have begun their evaluation of the initial evidence. It is anticipated that the evaluation will be registered with the scheme within two months' time.

Yours truly,
ELECTRONIC WARFARE ASSOCIATES - CANADA LTD.

Kim Braun
Kim Braun
Director

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