Websocket Endpoint Analysis Report

Insecure WebSocket Implementations: Crawling Public Sites, Testing Endpoints for Vulnerabilities, and Reporting Impact Analysis

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WebSocket Security Scan Report

Executive Summary

Real-time apps increasingly rely on WebSocket connections, but insecure implementations—such as missing origin checks or weak authentication—can allow hijacking or sensitive data exposure.

To address this, we developed an automated scanner that crawls public web applications, detects vulnerable WebSocket endpoints, and analyzes their real-world impact.

- Crawl and detect active WebSocket endpoints from public websites.
- Apply origin-header enforcement and protocol fuzzing tests to assess security gaps.
- Generate structured PDF reports summarizing detected vulnerabilities and severity.

Scan Start Time:	2025-07-08 10:58:13
Scan End Time:	2025-07-08 12:04:17
Total Scan Duration:	304.55 seconds
Total URLs Scanned:	2
High Severity Vulnerabilities:	10
Medium Severity Vulnerabilities:	8
Low Severity Vulnerabilities:	5

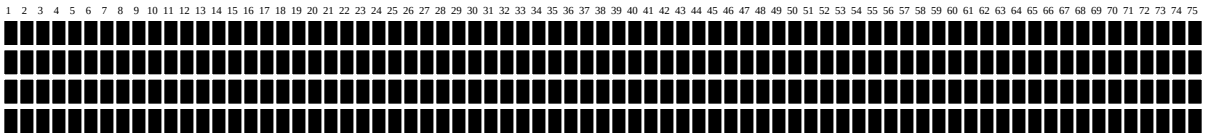
All Scanned Websites

This section lists all scanned websites and summarizes the overall vulnerability distribution by severity. The bar graph below visualizes the number of High, Medium, and Low severity vulnerabilities identified across all scanned sites.

#	Website
1	https://tradingview.com
2	https://cryptocompare.com

Vulnerability Heatmap by Website

WebSocket vs. Attack Heatmap



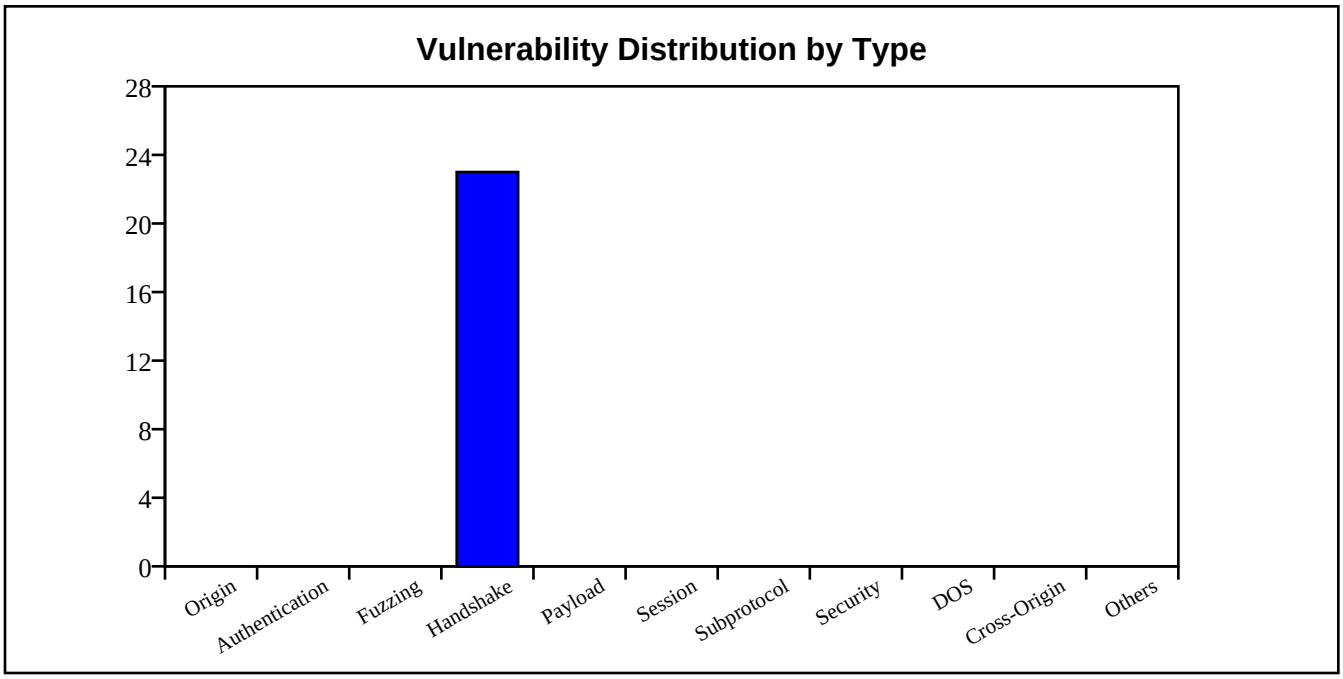
Vulnerability Summary by Type

This section summarizes key categories of vulnerabilities found during the scan. It groups issues like missing origin checks, weak authentication, insecure handshakes, and over 80 other attack for test to highlight common WebSocket flaws.

The bar chart below visualizes how many vulnerabilities were found in each category. This helps quickly identify the most common and critical problem areas across scanned applications.

Type	Count
Origin	0
Authentication	0
Fuzzing	0
Handshake	23
Payload	0
Session	0
Subprotocol	0
Security	0
DOS	0
Cross-Origin	0

Others	0


Vulnerability Distribution by Type
28
24
20
16
12
8
4
0
Origin
Authentication
Fuzzing
Handshake
Payload
Session
Subprotocol
Security
DOS
Cross-Origin
Others

Detailed Scan Results

This section provides an in-depth breakdown of each scanned target. For every URL, it lists the scan duration, number of URLs crawled during reconnaissance, and the WebSocket endpoints discovered. It helps identify how many potential communication channels were exposed for testing. Each target's vulnerability distribution is summarized by severity (High, Medium, Low) using a bar chart, followed by a detailed list of detected vulnerabilities. The section also documents the types of attacks performed and the exact WebSocket endpoints and internal URLs involved in the scan. This allows for a thorough understanding of the security posture and exposure of each target.

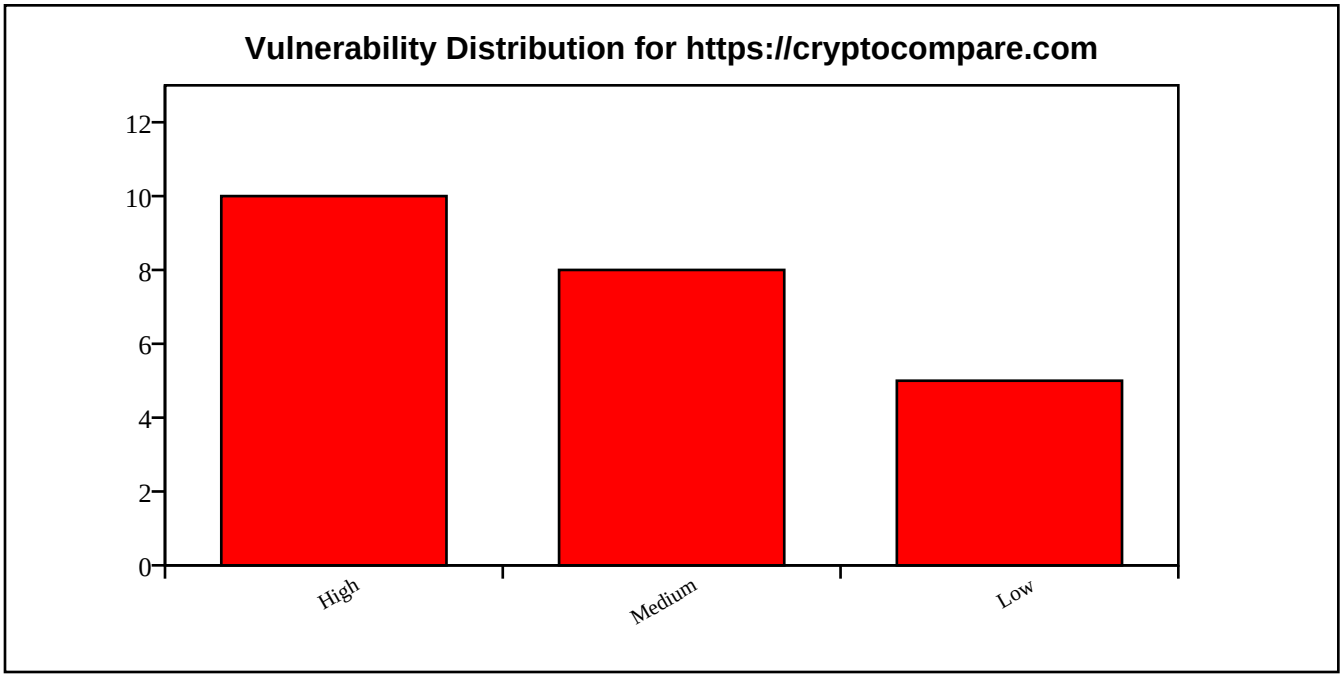
Target URL: https://cryptocompare.com

Scan Duration:	235.9 seconds
URLs Crawled:	1058
WebSocket Endpoints Found:	6
Attack Performed:	True
Attack Type:	WebSocket Tests
High Severity Findings:	10
Medium Severity Findings:	8
Low Severity Findings:	5

WebSocket Endpoints:

#	URL
1	wss://nexus-websocket-a.intercom.io/pubsub/5-OcpTPDI0waMeNi0b0HuQeB3iXgwKmunodzTjnN8w9Cy1Wvp28Rik51oQUYeob7PJlokYmRwt1w_NmLUC9nNiPHVsYlL8ToryBArK?X-Nexus-New-Client=true&X-Nexus-Version=0.14.0& ;user_role=visitor
2	wss://socketv4.bcgame32.com/socket.io/?Accept-Language=en&p=012919948ed995e90a197e884649e197e88462d9&t=efca0f92d 1056288197e884649e&EIO=3&transport=websocket
3	wss://data-streamer.cryptocompare.com/
4	wss://streamer.cryptocompare.com/v2?form at=streamer
5	wss://fews.stake.com.co/socket.io/?EIO=4 &transport=websocket

6	wss://rts-v2.dashly.app/websocket/app_on line_changed.9557/chat_bot_conversation_finished.9557.201196307502386496 4/conversation_notify.9557.201196307502386496 4/conversation_read.9557.201196307502386496 4/conversation_reply_changed.9557.201196 3075023864964/conversation_typing.9557.2 01196307502386496 4/ping/run_script.9557. 201196307502386496 4/users_removed.9557.2 01196307502386496 4/user_merge_finished.9 557.201196307502386496 4/conversation_par ts_batch.9557.201196307502386496 4/messag e_conversation_started.9557.201196307502 3864964?auth_token=user.2011963075023864 964.9557-1edd80536b15be5ac273998f2da.d64 56ec3d2f55201c075f6c32bae1d738d6a5ad9383 eae12&reconnect=false&external_chat=true&time=Tue%2C%2008%20Jul%2020 25%2005%3A31%3A27%20GMT&tag=



Detected Vulnerabilities:

This section lists all vulnerabilities identified during the scan of the target. Each entry includes the vulnerability name, its severity (High, Medium, or Low), a description of the issue, recommended solutions, and the affected WebSocket URL or host. This detailed information helps prioritize fixes and understand the exact flaws present in the WebSocket implementation of each target.

Affected WebSocket Endpoint: wss://streamer.cryptocompare.com/v2?format=streamer

Name:	Missing Connection Header
Risk Level:	High
Description:	Server at streamer.cryptocompare.com:443 accepted handshake without Connection header.
Solution:	Require Connection: Upgrade header for security.

Name:	Case-Sensitive Headers
Risk Level:	Low
Description:	Server at streamer.cryptocompare.com:443 accepted case-sensitive headers.
Solution:	Ensure case-insensitive header parsing as per RFC.

Name:	Oversized Headers
Risk Level:	Medium
Description:	Server at streamer.cryptocompare.com:443 accepted handshake with oversized headers.
Solution:	Set limits for header size to prevent resource exhaustion.

Name:	Fake Host Header
Risk Level:	High
Description:	Server at streamer.cryptocompare.com:443 accepted handshake with incorrect Host header.
Solution:	Validate Host header to match expected server domain.

Affected WebSocket Endpoint: wss://data-streamer.cryptocompare.com/

Name:	Missing Connection Header
Risk Level:	High
Description:	Server at data-streamer.cryptocompare.com:443 accepted handshake without Connection header.

Solution:	Require Connection: Upgrade header for security.

Name:	Case-Sensitive Headers
Risk Level:	Low
Description:	Server at data-streamer.cryptocompare.com:443 accepted case-sensitive headers.
Solution:	Ensure case-insensitive header parsing as per RFC.

Name:	Oversized Headers
Risk Level:	Medium
Description:	Server at data-streamer.cryptocompare.com:443 accepted handshake with oversized headers.
Solution:	Set limits for header size to prevent resource exhaustion.

Name:	Fake Host Header
Risk Level:	High
Description:	Server at data-streamer.cryptocompare.com:443 accepted handshake with incorrect Host header.

Solution:	Validate Host header to match expected server domain.

Name:	Long URL Path
Risk Level:	Low
Description:	Server at data-streamer.cryptocompare.com:443 accepted handshake with long URL path (2KB).
Solution:	Limit URL path length to prevent resource exhaustion.

Name:	Unicode URL
Risk Level:	Medium
Description:	Server at data-streamer.cryptocompare.com:443 accepted handshake with Unicode URL.
Solution:	Sanitize and validate URL paths to handle Unicode correctly.

Affected WebSocket Endpoint: wss://nexus-websocket-a.intercom.io/pubsub/5-OcpTPDl0waMeNi0b0HuQeB3iXgwKmunodzTjnN8w9Cy1Wvp28Rik51oQUYeob7PJlokYmRwt1w_NmLUC9nNiPHVsYlL8ToryBArK?X-Nexus-New-Client=true&X-Nexus-Version;=0.14.0&user;_role=visitor

Name:	Non-Base64 Sec-WebSocket-Key

Risk Level:	Medium
Description:	Server at nexus-websocket-a.intercom.io:443 accepted non-base64 Sec-WebSocket-Key.
Solution:	Validate Sec-WebSocket-Key as base64-encoded.

Name:	Oversized Sec-WebSocket-Key
Risk Level:	Medium
Description:	Server at nexus-websocket-a.intercom.io:443 accepted oversized Sec-WebSocket-Key (1KB).
Solution:	Limit Sec-WebSocket-Key size to prevent resource exhaustion.

Name:	Duplicate Sec-WebSocket-Key
Risk Level:	Medium
Description:	Server at nexus-websocket-a.intercom.io:443 accepted duplicate Sec-WebSocket-Key headers.
Solution:	Reject requests with multiple Sec-WebSocket-Key headers.

Name:	Missing Sec-WebSocket-Version

Risk Level:	High
Description:	Server at nexus-websocket-a.intercom.io:443 accepted handshake without Sec-WebSocket-Version.
Solution:	Require Sec-WebSocket-Version header for WebSocket handshake.

Name:	Conflicting Sec-WebSocket-Version
Risk Level:	High
Description:	Server at nexus-websocket-a.intercom.io:443 accepted conflicting Sec-WebSocket-Version headers.
Solution:	Reject requests with multiple Sec-WebSocket-Version headers.

Name:	Missing Connection Header
Risk Level:	High
Description:	Server at nexus-websocket-a.intercom.io:443 accepted handshake without Connection header.
Solution:	Require Connection: Upgrade header for security.

Name:	Case-Sensitive Headers

Risk Level:	Low
Description:	Server at nexus-websocket-a.intercom.io:443 accepted case-sensitive headers.
Solution:	Ensure case-insensitive header parsing as per RFC.

Name:	Oversized Headers
Risk Level:	Medium
Description:	Server at nexus-websocket-a.intercom.io:443 accepted handshake with oversized headers.
Solution:	Set limits for header size to prevent resource exhaustion.

Name:	Fake Host Header
Risk Level:	High
Description:	Server at nexus-websocket-a.intercom.io:443 accepted handshake with incorrect Host header.
Solution:	Validate Host header to match expected server domain.

Affected WebSocket Endpoint: wss://rts-v2.dashly.app/websocket/app_online_changed.9557/chat_bot_conversation_finished.9557.201196307502386496 4/conv

ersation_notify.9557.201196307502386496 4/conversation_read.9557.201196307 5023864964/conversation_reply_changed.9557.201196307502386496 4/conversation_typing.9557.201196307502386496 4/ping/run_script.9557.201196307502386496 4/users_removed.9557.201196307502386496 4/user_merge_finished.9557.201 196307502386496 4/conversation_parts_batch.9557.201196307502386496 4/message_conversation_started.9557.201196307502386496 4?auth_token=user.201196 3075023864964.9557-1edd80536b15be5ac273998f2da.d6456ec3d2f55201c075f6c 32bae1d738d6a5ad9383eae12&reconnect;=false&external;_chat=true&time;=Tu e%2C%2008%20Jul%202025%2005%3A31%3A27%20GMT&tag;=

Name:	Wrong Upgrade Header
Risk Level:	High
Description:	Server at rts-v2.dashly.app:443 accepted handshake with wrong Upgrade header.
Solution:	Enforce strict Upgrade header validation.

Name:	Missing Connection Header
Risk Level:	High
Description:	Server at rts-v2.dashly.app:443 accepted handshake without Connection header.
Solution:	Require Connection: Upgrade header for security.

Name:	Case-Sensitive Headers

Risk Level:	Low
Description:	Server at rts-v2.dashly.app:443 accepted case-sensitive headers.
Solution:	Ensure case-insensitive header parsing as per RFC.

Name:	Oversized Headers
Risk Level:	Medium
Description:	Server at rts-v2.dashly.app:443 accepted handshake with oversized headers.
Solution:	Set limits for header size to prevent resource exhaustion.

Target URL: https://tradingview.com

Scan Duration:	231.7 seconds
URLs Crawled:	2000
WebSocket Endpoints Found:	46
Attack Performed:	False
Attack Type:	None
High Severity Findings:	0
Medium Severity Findings:	0
Low Severity Findings:	0

WebSocket Endpoints:

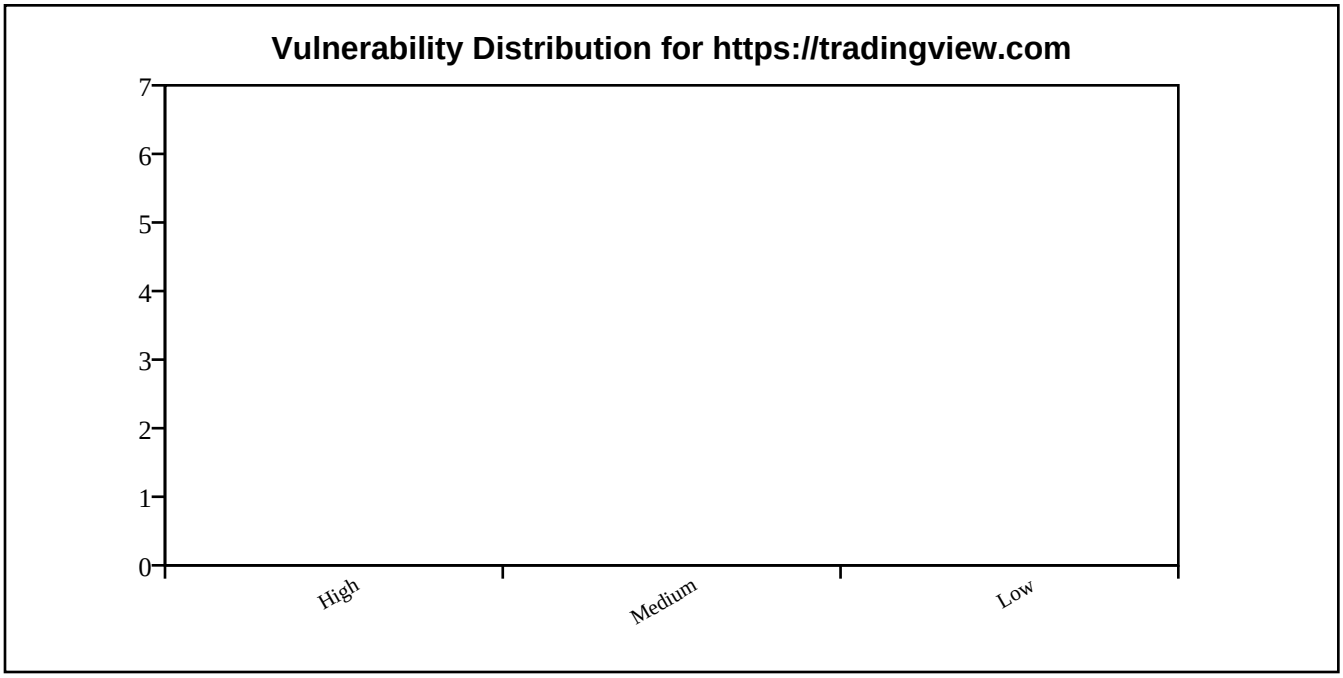
#	URL
1	wss://data.tradingview.com/socket.io/web socket?from=chart%2FET7%2FUavDjJie%2F&p;date=2025-07-07T16%3A52%3A00

2	wss://data.tradingview.com/socket.io/web socket?from=chart%2FRSEL%2FjODI9PHP%2F&a; mp;date=2025-07-07T16%3A52%3A00
3	wss://data.tradingview.com/socket.io/web socket?from=chart%2FEURNZD%2FOChtXyBb-EU RNZD-Steep-Channel-contin&date=2025- 07-07T16%3A52%3A00
4	wss://data.tradingview.com/socket.io/web socket?from=chart%2FUSDCHF%2FuDsSjlMz-US DCHF-A-Bullish-Reversal-H&date=2025- 07-07T16%3A52%3A00
5	wss://data.tradingview.com/socket.io/web socket?from=chart%2FBTCUSDT%2FJ0VGOjZe-B itcoin-Bull-Trap-Don-t-ge&date=2025- 07-07T16%3A52%3A00
6	wss://data.tradingview.com/socket.io/web socket?from=chart%2FNG1%21%2FWs8WcD5v%2F &date=2025-07-07T16%3A52%3A00
7	wss://data.tradingview.com/socket.io/web socket?from=chart%2FPLL%2F9voGLYa0%2F&am; p;date=2025-07-07T16%3A52%3A00
8	wss://data.tradingview.com/socket.io/web socket?from=chart%2FGOLD%2FZfKW2iO9%2F&a; mp;date=2025-07-07T16%3A52%3A00
9	wss://data.tradingview.com/socket.io/web socket?from=chart%2FBTCUSD%2FKT5c7vPg-Bi tcoin-The-ultimate-breakd&date=2025- 07-07T16%3A52%3A00

10	wss://data.tradingview.com/socket.io/web socket?from=chart%2FSPX%2FZY7koGAl%2F&am; p;date=2025-07-07T16%3A52%3A00
11	wss://data.tradingview.com/socket.io/web socket?from=chart%2FGOLD%2FoOfrIeMZ%2F&a; mp;date=2025-07-07T16%3A52%3A00
12	wss://data.tradingview.com/socket.io/web socket?from=chart%2FEURUSD%2Fq0aFuWP2-Wh at-s-EURUSD-Telling-Us-on&date=2025- 07-07T16%3A52%3A00
13	wss://data.tradingview.com/socket.io/web socket?from=chart%2FIBOV%2FlWStSjfL%2F&a; mp;date=2025-07-07T16%3A52%3A00
14	wss://data.tradingview.com/socket.io/web socket?from=chart%2FTSLA%2Fy90cSKMS-TSLA -short-as-short-can%2F&date=2025-07- 07T16%3A52%3A00
15	wss://data.tradingview.com/socket.io/web socket?from=chart%2FXAUUSD%2FputTAPKF-Wa tch-me-make-125-live%2F&date=2025-07 -07T16%3A52%3A00
16	wss://data.tradingview.com/socket.io/web socket?from=chart%2FBTCUSD%2FcTV4ZXek-Bi tcoin-can-rebound-from-re&date=2025- 07-07T16%3A52%3A00
17	wss://data.tradingview.com/socket.io/web socket?from=script%2F0z8WYrjM-MathConsta nts%2F&date=2025-07-07T16%3A52%3A00

18	wss://data.tradingview.com/socket.io/web socket?from=chart%2FUSDJPY%2FN6hzhWRQ-BU LLISH-H4-MOMENTUM-ACTIVAT&date=2025- 07-07T16%3A52%3A00
19	wss://data.tradingview.com/socket.io/web socket?from=chart%2FVOR%2FfWrMGiZp-1-to- 2-70-Swing-Pick-150-gain-&date=2025- 07-07T16%3A52%3A00
20	wss://data.tradingview.com/socket.io/web socket?from=chart%2FALTF%2FKPTfgpmR%2F&a; mp;date=2025-07-07T16%3A52%3A00
21	wss://data.tradingview.com/socket.io/web socket?from=chart%2FBTCUSD%2F0UZibdgQ-80 k-BTC-On-The-Move-WHAT-It&date=2025- 07-07T16%3A52%3A00
22	wss://data.tradingview.com/socket.io/web socket?from=chart%2FNKE%2FhjxfQInr-Nike- This-is-the-bottom%2F&date=2025-07-0 7T16%3A52%3A00
23	wss://data.tradingview.com/socket.io/web socket?from=chart%2FLEVE3%2FMlWzZoV6%2F& amp;date=2025-07-07T16%3A52%3A00
24	wss://data.tradingview.com/socket.io/web socket?from=script%2FlLG6gDb4-Open-Inter est-Footprint-IQ-Tradin&date=2025-07 -07T16%3A52%3A00
25	wss://data.tradingview.com/socket.io/web socket?from=chart%2FBTCUSD%2FupAamT0f%2F &date=2025-07-07T16%3A52%3A00

26	wss://data.tradingview.com/socket.io/web socket?from=chart%2FXAUUSD%2FWjQ7ah09-Li ngrid-GOLD-Weekly-Analysi&date=2025- 07-07T16%3A52%3A00
27	wss://data.tradingview.com/socket.io/web socket?from=chart%2FBTCUSDT%2FRh3hgdNB%2 F&date=2025-07-07T16%3A52%3A00
28	wss://data.tradingview.com/socket.io/web socket?from=chart%2FUSDJPY%2F7cZyXlUG%2F &date=2025-07-07T16%3A52%3A00
29	wss://pushstream.tradingview.com/message -pipe-ws/public
30	wss://data.tradingview.com/socket.io/web socket?from=script%2FcgbTZXz3-Zigzag-Can dles%2F&date=2025-07-07T16%3A52%3A00
31	wss://data.tradingview.com/socket.io/web socket?from=script%2FgaMszEIG-Logarithmi c-Moving-Average-LMA-Qu&date=2025-07 -07T16%3A52%3A00
32	wss://data.tradingview.com/socket.io/web socket?from=chart%2FEURUSD%2FjwBEOHLC%2F &date=2025-07-07T16%3A52%3A00
33	wss://data.tradingview.com/socket.io/web socket?from=chart%2FUSDJPY%2FTqT3Ox8k-US DJPY-Price-Accumulated-Ti&date=2025- 07-07T16%3A52%3A00
34	wss://data.tradingview.com/socket.io/web socket?from=script%2FYkinBU20-True-Close -Institutional-Trading-&date=2025-07 -07T16%3A52%3A00

35	wss://data.tradingview.com/socket.io/web socket?from=chart%2FUSDCHF%2FOSV1X1Hv%2F &date=2025-07-07T16%3A52%3A00
36	wss://data.tradingview.com/socket.io/web socket?from=chart%2FXAUUSD%2FSUvgHVt8-Go ld-on-the-Move-Major-Resi&date=2025- 07-07T16%3A52%3A00
37	wss://data.tradingview.com/socket.io/web socket?from=chart%2FEGIE3%2F4haU3mkG%2F& amp;date=2025-07-07T16%3A52%3A00
38	wss://data.tradingview.com/socket.io/web socket?from=chart%2FDXY%2FI1JDzhgS%2F&am; p;date=2025-07-07T16%3A52%3A00
39	wss://data.tradingview.com/socket.io/web socket?from=chart%2FXAUUSD%2FuakrNS17-TH E-KOG-REPORT%2F&date=2025-07-07T16%3 A52%3A00
40	wss://data.tradingview.com/socket.io/web socket?from=chart%2FGBPUSD%2F9dJCIdf1-GB P-USD-Bearish-Channel-07-&date=2025- 07-07T16%3A52%3A00
41	wss://data.tradingview.com/socket.io/web socket?from=chart%2FUSDJPY%2FyrCWGrJ7-US DJPY-h4-down%2F&date=2025-07-07T16%3 A52%3A00
42	wss://data.tradingview.com/socket.io/web socket?from=chart%2FGCT%2FCZr1gpbt%2F&am; p;date=2025-07-07T16%3A52%3A00

43	wss://data.tradingview.com/socket.io/web socket?from=chart%2FXAUUSD%2Fh2wt44xv-Go ld-Finds-Supports-Is-the-&date=2025- 07-07T16%3A52%3A00
44	wss://data.tradingview.com/socket.io/web socket?from=script%2FooqAiNMr-MathStatis ticsKernelFunctions%2F&date=2025-07-07T16%3A52%3A00
45	wss://data.tradingview.com/socket.io/web socket?from=script%2FF2OH2WQT-Volumatic-Support-Resistance-Leve&date=2025-07 -07T16%3A52%3A00
46	wss://data.tradingview.com/socket.io/web socket?from=&date=2025-07-07T16%3A52%3A00