WebSocket Security Scan Report

Executive Summary

Scan Start Time:	2025-06-12 12:21:32
Scan End Time:	2025-06-12 12:22:03
Total Scan Duration:	30.91 seconds
Total URLs Scanned:	1
High Severity Vulnerabilities:	10
Medium Severity Vulnerabilities:	24
Low Severity Vulnerabilities:	2

Vulnerability Distribution by Severity
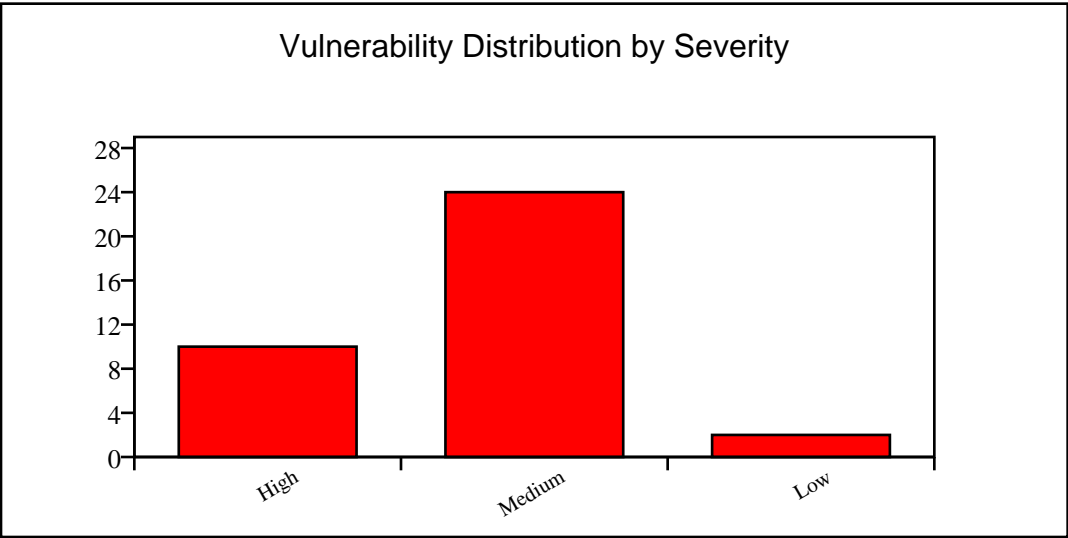
Detailed Scan Results

Target URL: http://192.168.110.1:8080/

Scan Duration:	30.9 seconds
URLs Crawled:	1
WebSocket Endpoints Found:	2
Attack Performed:	True
Attack Type:	WebSocket Tests
High Severity Findings:	10
Medium Severity Findings:	24
Low Severity Findings:	2

WebSocket Endpoints:

#	URL
1	ws://localhost:8081/
2	ws://localhost:8081

Crawled URLs:

#	URL
1	ParseResult(scheme='http', netloc='192.168.110.1:8080', path='/', params='', query='', fragment='')

Vulnerability Distribution for http://192.168.110.1:8080/
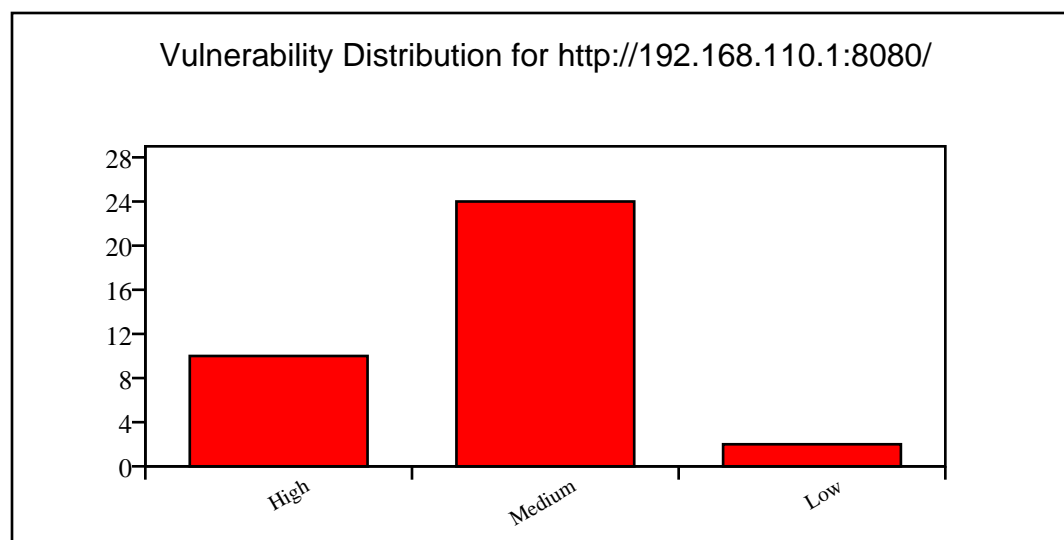
Detected Vulnerabilities:

Name:	Undefined Opcode
Risk Level:	Medium
Description:	WebSocket at ws://localhost:8081/ accepted frame with undefined opcode 0x3.
Solution:	Reject frames with undefined opcodes.
Affected URL:	ws://localhost:8081/

Name:	Reserved Opcode
Risk Level:	Medium
Description:	WebSocket at ws://localhost:8081/ accepted frame with reserved opcode 0xB.
Solution:	Reject frames with reserved opcodes (0x3-0x7, 0xB-0xF).
Affected URL:	ws://localhost:8081/

Name:	Zero-Length Fragment
Risk Level:	Medium
Description:	WebSocket at ws://localhost:8081/ accepted zero- length fragment.
Solution:	Reject zero-length fragments to prevent parsing issues.
Affected URL:	ws://localhost:8081/

Name:	Invalid Payload Length
Risk Level:	High
Description:	WebSocket at ws://localhost:8081/ accepted frame with invalid payload length.
Solution:	Validate payload length matches actual data.
Affected URL:	ws://localhost:8081/

Name:	Negative Payload Length
Risk Level:	High
Description:	WebSocket at ws://localhost:8081/ accepted frame with invalid (large) payload length.
Solution:	Reject frames with invalid or negative payload lengths.
Affected URL:	ws://localhost:8081/

Name:	Mismatched Payload
Risk Level:	High
Description:	WebSocket at ws://localhost:8081/ accepted frame with mismatched payload length.
Solution:	Ensure payload length matches actual data received.
Affected URL:	ws://localhost:8081/

Name:	Invalid Masking Key
Risk Level:	Medium
Description:	WebSocket at ws://localhost:8081/ accepted frame with invalid masking key.
Solution:	Validate masking key application for client frames.
Affected URL:	ws://localhost:8081/

Name:	Unmasked Client Frame
Risk Level:	High
Description:	WebSocket at ws://localhost:8081/ accepted unmasked client frame.
Solution:	Require masking for all client-to-server frames per RFC 6455.
Affected URL:	ws://localhost:8081/

Name:	Invalid RSV Bits
Risk Level:	Medium
Description:	WebSocket at ws://localhost:8081/ accepted frame with invalid RSV bits.
Solution:	Reject frames with non-zero RSV bits unless negotiated.
Affected URL:	ws://localhost:8081/

Name:	Oversized Control Frame
Risk Level:	High
Description:	WebSocket at ws://localhost:8081/ accepted oversized control frame (126 bytes).
Solution:	Enforce 125-byte limit for control frames per RFC 6455.
Affected URL:	ws://localhost:8081/

Name:	Non-UTF-8 Text
Risk Level:	Medium
Description:	WebSocket at ws://localhost:8081/ accepted non- UTF-8 Hztext frame.
Solution:	Validate text frames for UTF-8 encoding.
Affected URL:	ws://localhost:8081/

Name:	Null Bytes in Text
Risk Level:	Medium
Description:	WebSocket at ws://localhost:8081/ accepted text frame with null bytes.
Solution:	Reject text frames containing null bytes.
Affected URL:	ws://localhost:8081/

Name:	Binary as Text
Risk Level:	Medium
Description:	WebSocket at ws://localhost:8081/ accepted binary data in text frame.
Solution:	Validate text frames for valid UTF-8 content.
Affected URL:	ws://localhost:8081/

Name:	Text as Binary

Risk Level:	Low
Description:	WebSocket at ws://localhost:8081/ accepted text data in binary frame.
Solution:	Ensure binary frames are processed correctly.
Affected URL:	ws://localhost:8081/

Name:	Invalid Close Code
Risk Level:	Medium
Description:	WebSocket at ws://localhost:8081/ accepted close frame with invalid code 999.
Solution:	Validate close codes per RFC 6455 (1000-4999).
Affected URL:	ws://localhost:8081/

Name:	Early Close Frame
Risk Level:	Medium
Description:	WebSocket at ws://localhost:8081/ accepted early close frame.
Solution:	Handle early close frames gracefully.
Affected URL:	ws://localhost:8081/

Name:	No Close Frame
Risk Level:	Medium

Description:	WebSocket at ws://localhost:8081/ handled abrupt closure without issues.
Solution:	Ensure server handles abrupt closures gracefully.
Affected URL:	ws://localhost:8081/

Name:	Long Close Reason
Risk Level:	Medium
Description:	WebSocket at ws://localhost:8081/ accepted close frame with long reason (123 bytes).
Solution:	Limit close reason length to prevent resource exhaustion.
Affected URL:	ws://localhost:8081/

Name:	Undefined Opcode
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Description:	WebSocket at ws://localhost:8081 accepted frame with undefined opcode 0x3.
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Vulnerability Summary by Type

Type	Count
Origin Check	0
Authentication	0
Fuzzing	0
Handshake	0
Payload Handling	26
Session Management	0
Subprotocol	0
Security	0
DoS	2
Cross-Origin	0
Other	8

Vulnerability Distribution by Type