

Practical Title: Wireshark Network Analysis of HTTP Request
Information Security
ICT414

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1. Overview and Methodology

This report details the analysis of network traffic captured using Wireshark to identify a simple HTTP GET request and its response made to the target website, www.rocktv.app. The capture lasted approximately one minute, and the data was filtered using the http display filter.

2. Analysis of the HTTP Transaction

The following details were extracted from the identified HTTP request and its corresponding response packets.

Detail Field	Request Packet Value	Response Packet Value
Client (Source) IP	192.168.114.249	192.168.114.249
Server (Destination) IP	178.71.137.67	178.71.137.67
URL Requested	http://rocktv.app/	N/A
HTTP Request Method	GET	N/A
HTTP Response Code	N/A	200 OK

This transaction shows a standard web request and response. The Client IP (192.168.114.249) initiated a GET request to the Server IP (178.71.137.67) for the website's main page. The server processed this request and replied with a packet containing the content, confirmed by the 200 OK response code.

3. Success Interpretation

Simple Note on Success: The request was successful.

Reasoning: The server responded with an HTTP Response Code of 200 (as seen in packet 380 or 751), which signifies "OK." This means the client's request was received, processed, and the server delivered the requested content (in this case, the main HTML page).

4. Observations

HTTP Request Method: The transaction used the GET method, which is the standard way to retrieve data from a specified resource (the website's home page, /).

Packet Size Comparison: The Response Packet (containing the requested web page content) had a length of approximately 396 bytes. This is a relatively small size, indicating that the initial page content loaded quickly or that the request resulted in a simple landing page or redirect.

5. Screenshot of Filtered HTTP Packets

The screenshot displays the Wireshark network protocol analyzer interface. The top menu bar includes File, Edit, View, Go, Capture, Analyze, Statistics, Telephony, Wireless, Tools, and Help. The toolbar contains various icons for packet capture and analysis. The main window is divided into three panes: Packet List, Packet Details, and Packet Bytes.

Packet List: The list shows several HTTP packets. The selected packet is packet 136, which is a GET request for /success.txt?ipv4 HTTP/1.1. The packet details pane shows the following information:

- Frame 136: 497 bytes on wire (3976 bits), 497 bytes captured (3976 bits) on interface wlan0, id 6
- Ethernet II, Src: ea:66:37:13:92:ce (ea:66:37:13:92:ce), Dst: Intel 6e:d3:13 (04:e8:b9:6e:d3:13)
- Internet Protocol Version 4, Src: 18.171.137.67, Dst: 192.168.114.249
- Transmission Control Protocol, Src Port: 80, Dst Port: 45578, Seq: 1, Ack: 331, Len: 431
- Hypertext Transfer Protocol
 - HTTP/1.1 302 Found
 - Date: Wed, 19 Nov 2025 18:51:56 GMT
 - Server: Apache
 - Location: https://rocktv.app/
 - Content-Length: 203
 - Keep-Alive: timeout=2, max=100
 - Connection: Keep-Alive
 - Content-Type: text/html; charset=iso-8859-1

The packet bytes pane shows the raw data of the packet, including the HTTP request and response headers and body.

AppsPlaces

Nov 19 9:18 PM

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FileEditViewGoCaptureAnalyzeStatisticsTelephonyWirelessToolsHelp

http

Interface phy0.monChannel 1-2.412 GHz20 MHz

No.	Time	Source	Destination	Protocol	Length	Info
596	2025-11-19 20:52:18.05872...	192.168.114.249	142.251.47.195	OCSP	493	Request
625	2025-11-19 20:52:18.10078...	192.168.114.249	142.251.47.195	OCSP	494	Request
737	2025-11-19 20:52:18.37069...	192.168.114.249	142.251.47.195	OCSP	493	Request
738	2025-11-19 20:52:18.37097...	192.168.114.249	142.251.47.195	OCSP	494	Request
739	2025-11-19 20:52:18.37120...	192.168.114.249	142.251.47.195	OCSP	494	Request
760	2025-11-19 20:52:18.53985...	192.168.114.249	142.251.47.195	OCSP	494	Request
805	2025-11-19 20:52:18.66227...	192.168.114.249	142.251.47.195	OCSP	494	Request
1233	2025-11-19 20:52:19.93104...	192.168.114.249	142.251.47.195	OCSP	494	Request
1491	2025-11-19 20:52:20.74627...	192.168.114.249	142.251.47.195	OCSP	493	Request
1778	2025-11-19 20:52:21.61788...	192.168.114.249	142.251.47.195	OCSP	494	Request
3834	2025-11-19 20:52:30.17500...	192.168.114.249	142.251.47.195	OCSP	493	Request
3847	2025-11-19 20:52:30.21001...	192.168.114.249	142.251.47.195	OCSP	493	Request
3875	2025-11-19 20:52:30.30765...	192.168.114.249	142.251.47.195	OCSP	493	Request
3886	2025-11-19 20:52:30.32967...	192.168.114.249	142.251.47.195	OCSP	493	Request
4179	2025-11-19 20:52:31.49175...	192.168.114.249	142.251.47.195	OCSP	493	Request
132	2025-11-19 20:51:56.37147...	192.168.114.249	18.171.137.67	HTTP	396	GET / HTTP/1.1
105	2025-11-19 20:51:47.46135...	34.107.221.82	192.168.114.249	HTTP	282	HTTP/1.1 200 OK (text/plain)
136	2025-11-19 20:51:56.78124...	18.171.137.67	192.168.114.249	HTTP	497	HTTP/1.1 302 Found (text/html)
751	2025-11-19 20:52:18.52980...	142.251.47.195	192.168.114.249	OCSP	1168	Response
772	2025-11-19 20:52:18.60656...	142.251.47.195	192.168.114.249	OCSP	1169	Response
839	2025-11-19 20:52:18.89880...	142.251.47.195	192.168.114.249	OCSP	1169	Response
852	2025-11-19 20:52:18.90219...	142.251.47.195	192.168.114.249	OCSP	1169	Response
853	2025-11-19 20:52:18.90219...	142.251.47.195	192.168.114.249	OCSP	1168	Response
932	2025-11-19 20:52:19.05178...	142.251.47.195	192.168.114.249	OCSP	1169	Response
1149	2025-11-19 20:52:19.66131...	142.251.47.195	192.168.114.249	OCSP	1169	Response
1492	2025-11-19 20:52:20.76354...	142.251.47.195	192.168.114.249	OCSP	1169	Response
1779	2025-11-19 20:52:21.62273...	3.160.171.26	192.168.114.249	OCSP	1079	Response

Frame 136: 497 bytes on wire (3976 bits), 497 bytes captured (3976 bits) on interface wlan0, id 6

Ethernet II, Src: ea:66:37:13:92:ce (ea:66:37:13:92:ce), Dst: Intel_6e:d3:13 (04:e8:b9:6e:d3:13)

Internet Protocol Version 4, Src: 18.171.137.67, Dst: 192.168.114.249

Transmission Control Protocol, Src Port: 80, Dst Port: 45578, Seq: 1, Ack: 331, Len: 431

Hypertext Transfer Protocol

HTTP/1.1 302 Found\r\nDate: Wed, 19 Nov 2025 18:51:56 GMT\r\nServer: Apache\r\nLocation: https://rocktv.app/\r\nContent-Length: 203\r\nKeep-Alive: timeout=2, max=100\r\nConnection: Keep-Alive\r\nContent-Type: text/html; charset=iso-8859-1\r\n\r\n[Request in frame: 132]\r\n[Time since request: 0.409770088 seconds]\r\n[Request URI: /]\r\n[Full request URI: http://rocktv.app/]\r\nFile Data: 203 bytes\r\nLine-based text data: text/html (7 lines)

0040b8 2e 48 54 54 50 2f 31 2e 31 20 33 30 32 20 46 00506f 75 6e 64 0d 0a 44 61 74 65 3a 20 57 65 64 2c 006020 31 39 20 4e 6f 76 20 32 30 32 35 20 31 38 3a 007035 31 3a 35 36 20 47 4d 54 0d 0a 53 65 72 76 65 008072 3a 20 41 70 61 63 68 65 0d 0a 4c 6f 63 61 74 009069 6f 6e 3a 20 68 74 74 70 73 3a 2f 2f 72 6f 63 00a06b 74 76 2e 61 70 78 2f 0d 0a 43 6f 6e 74 65 6e 00b074 2d 4c 65 6e 67 74 68 3a 20 32 30 33 0d 0a 4b 00c065 65 70 2d 41 6c 69 76 65 3a 20 74 69 6d 65 6f 00d075 74 3d 32 2c 20 6d 61 78 3d 31 30 30 0d 0a 43 00e06f 6e 6e 65 63 74 69 6f 6e 3a 20 4b 65 65 70 2d 00f041 6c 69 76 65 0d 0a 43 6f 6e 74 65 6e 74 2d 54 010079 70 65 3a 20 74 65 78 74 2f 68 74 6d 6c 3b 20 011063 68 61 72 73 65 74 3d 69 73 6f 2d 38 38 35 39 01202d 31 0d 0a 0d 0a 3c 21 44 4f 43 54 59 50 45 20 013048 54 4d 4c 20 50 55 42 4c 49 43 20 22 2d 2f 2f 014049 45 54 46 2f 2f 44 54 44 20 48 54 4d 4c 20 32 01502e 30 2f 2f 45 4e 22 3e 0a 3c 68 74 6d 6c 3e 3c 016068 65 61 64 3e 0a 3c 74 69 74 6c 65 3e 33 30 32 017020 46 6f 75 6e 64 3c 2f 74 69 74 6c 65 3e 0a 3c 01802f 68 65 61 64 3e 3c 62 6f 64 79 3e 0a 3c 68 31 01903e 46 6f 75 6e 64 3c 2f 68 31 3e 0a 3c 70 3e 54 01a068 65 20 64 6f 63 75 6d 65 6e 74 20 68 61 73 20 01b06d 6f 76 65 64 20 3c 61 20 68 72 65 66 3d 22 68 01c074 74 70 73 3a 2f 2f 72 6f 63 6b 74 76 2e 61 70 01d070 2f 22 3e 68 65 72 65 3c 2f 61 3e 2e 3c 2f 70 01e03e 0a 3c 2f 62 6f 64 79 3e 3c 2f 68 74 6d 6c 3e 01f00a

The full requested URI (including host name) (http.request.full_uri)

Packets: 13105 - Displayed: 4

File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help



ip.addr==192.168.114.249

Interface **phy0.mon** ▾

Channel 1 - 2.412 GHz

No.	Time	Source	Destination	Protocol	Length	Info
123	2025-11-19 20:51:55.86183...	192.168.114.22	192.168.114.249	DNS	86	Standard query response 0xed40 A rocktv.app A 18.171.137.67
124	2025-11-19 20:51:55.86213...	192.168.114.22	192.168.114.249	DNS	151	Standard query response 0x0145 AAAA rocktv.app SOA ns-
125	2025-11-19 20:51:55.86291...	192.168.114.249	18.171.137.67	TCP	74	45578 → 80 [SYN] Seq=0 Win=64240 Len=0 MSS=1460 SACK_P
126	2025-11-19 20:51:55.86302...	192.168.114.249	18.171.137.67	TCP	74	45590 → 80 [SYN] Seq=0 Win=64240 Len=0 MSS=1460 SACK_P
127	2025-11-19 20:51:56.11354...	192.168.114.249	18.171.137.67	TCP	74	45600 → 80 [SYN] Seq=0 Win=64240 Len=0 MSS=1460 SACK_P
128	2025-11-19 20:51:56.37055...	18.171.137.67	192.168.114.249	TCP	74	80 ← 45578 [SYN, ACK] Seq=0 Ack=1 Win=62643 Len=0 MSS=
129	2025-11-19 20:51:56.37064...	192.168.114.249	18.171.137.67	TCP	66	45578 → 80 [ACK] Seq=1 Ack=1 Win=64256 Len=0 TSval=182
130	2025-11-19 20:51:56.37078...	18.171.137.67	192.168.114.249	TCP	74	80 ← 45590 [SYN, ACK] Seq=0 Ack=1 Win=62643 Len=0 MSS=
131	2025-11-19 20:51:56.37085...	192.168.114.249	18.171.137.67	TCP	66	45590 → 80 [ACK] Seq=1 Ack=1 Win=64256 Len=0 TSval=182
132	2025-11-19 20:51:56.37147...	192.168.114.249	18.171.137.67	HTTP	396	GET / HTTP/1.1
133	2025-11-19 20:51:56.57505...	18.171.137.67	192.168.114.249	TCP	74	80 ← 45600 [SYN, ACK] Seq=0 Ack=1 Win=62643 Len=0 MSS=
134	2025-11-19 20:51:56.57512...	192.168.114.249	18.171.137.67	TCP	66	45600 → 80 [ACK] Seq=1 Ack=1 Win=64256 Len=0 TSval=182
135	2025-11-19 20:51:56.78069...	18.171.137.67	192.168.114.249	TCP	66	80 ← 45578 [ACK] Seq=1 Ack=331 Win=62336 Len=0 TSval=2
136	2025-11-19 20:51:56.78124...	18.171.137.67	192.168.114.249	HTTP	497	HTTP/1.1 302 Found (text/html)
137	2025-11-19 20:51:56.78130...	192.168.114.249	18.171.137.67	TCP	66	45578 → 80 [ACK] Seq=331 Ack=432 Win=63872 Len=0 TSval
138	2025-11-19 20:51:56.78788...	192.168.114.249	192.168.114.22	DNS	70	Standard query 0xe4cf A rocktv.app
139	2025-11-19 20:51:56.78792...	192.168.114.249	192.168.114.22	DNS	70	Standard query 0x58f3 AAAA rocktv.app
140	2025-11-19 20:51:56.79374...	192.168.114.22	192.168.114.249	DNS	86	Standard query response 0xe4cf A rocktv.app A 18.171.137.67
141	2025-11-19 20:51:56.79374...	192.168.114.22	192.168.114.249	DNS	70	Standard query response 0x58f3 AAAA rocktv.app
142	2025-11-19 20:51:56.79450...	192.168.114.249	18.171.137.67	TCP	74	48444 → 443 [SYN] Seq=0 Win=64240 Len=0 MSS=1460 SACK_L
143	2025-11-19 20:51:57.04505...	192.168.114.249	18.171.137.67	TCP	74	48454 → 443 [SYN] Seq=0 Win=64240 Len=0 MSS=1460 SACK_L
144	2025-11-19 20:51:57.18944...	18.171.137.67	192.168.114.249	TCP	74	443 ← 48444 [SYN, ACK] Seq=0 Ack=1 Win=62643 Len=0 MSS=
145	2025-11-19 20:51:57.18952...	192.168.114.249	18.171.137.67	TCP	66	48444 → 443 [ACK] Seq=1 Ack=1 Win=64256 Len=0 TSval=18
146	2025-11-19 20:51:57.19106...	192.168.114.249	18.171.137.67	TLSv1.3	724	Client Hello (SNI=rocktv.app)
147	2025-11-19 20:51:57.46462...	192.168.114.249	34.107.221.82	TCP	66	[TCP Keep-Alive] 35898 → 80 [ACK] Seq=310 Ack=217 Win=
148	2025-11-19 20:51:57.46822...	18.171.137.67	192.168.114.249	TCP	74	443 ← 48454 [SYN, ACK] Seq=0 Ack=1 Win=62643 Len=0 MSS=
149	2025-11-19 20:51:57.46830...	192.168.114.249	18.171.137.67	TCP	66	48454 → 443 [ACK] Seq=1 Ack=1 Win=64256 Len=0 TSval=18

```

> Frame 136: 497 bytes on wire (3976 bits), 497 bytes captured (3976 bits) on interface wlan0, id
> Ethernet II, Src: ea:66:37:13:92:ce (ea:66:37:13:92:ce), Dst: Intel_Ed:d3:13 (04:e8:b9:6e:d3:13)
> Internet Protocol Version 4, Src: 18.171.137.67, Dst: 192.168.114.249
> Transmission Control Protocol, Src Port: 80, Dst Port: 45578, Seq: 1, Ack: 331, Len: 431
> Hypertext Transfer Protocol
> Line-based text data: text/html (7 lines)

```

0000	04	e8	b9	6e	d3	13	ea	66	37	13	92	ce	08	00
0001	71	f3	f9	69	40	00	2f	06	81	1b	12	ab	89	43
0020	02	f9	00	50	b2	0a	36	0a	7b	4c	4b	1d	5f	5a
0030	01	e7	dd	85	00	00	01	01	08	0a	ab	d3	68	71
0040	b8	2e	48	54	54	50	2f	31	2e	31	20	33	30	32
0050	6f	75	6e	64	0d	0a	44	66	74	65	3a	20	57	65
0060	20	31	39	20	4e	6f	71	20	32	30	32	25	20	31
0070	35	31	3a	35	36	20	47	4d	54	0d	0a	53	65	72
0080	72	3a	20	41	70	61	63	68	65	0d	0a	4c	6f	63
0090	69	6f	6e	3a	20	68	74	74	70	73	3a	2f	2f	72
00a0	6b	74	76	2e	61	70	70	2f	0d	0a	43	6f	6e	74
00b0	74	2d	4c	65	6e	67	74	68	3a	20	32	30	33	0d
00c0	65	65	70	2d	41	6c	69	65	65	3a	20	74	69	6d
00d0	75	74	3d	32	2c	20	6d	61	78	3d	31	30	30	0d
00e0	6f	6e	6e	65	63	7d	09	6f	6e	3a	20	4b	65	65
00f0	41	6c	69	76	65	0d	0a	43	6f	6e	74	65	6e	74
0100	79	70	65	3a	20	74	65	78	74	2f	68	74	6d	6c
0110	63	68	61	72	73	65	74	3d	69	73	6f	2d	38	58
0120	2d	31	0d	0a	0d	0a	3c	21	44	4f	43	54	59	30
0130	48	54	54	4c	20	50	55	42	4c	49	43	20	22	2d
0140	49	45	4d	46	2f	2f	44	54	44	20	48	54	4d	4c
0150	2e	30	2f	2f	45	4e	22	3e	0a	3c	68	74	6d	6c
0160	68	65	61	64	3e	0a	3c	74	69	74	6c	65	3e	33
0170	20	46	6f	75	6e	64	3c	2f	74	69	74	6c	65	3e
0180	2f	68	65	61	64	3e	3c	62	6f	64	79	3e	0a	3c
0190	3e	46	6f	75	6e	64	3c	2f	68	31	3e	0a	3c	70
01a0	68	65	60	64	6f	63	75	6d	65	6e	74	70	68	61
01b0	6d	6f	76	65	64	20	3c	61	20	68	72	65	66	3d