## Wireshark Log

This log shows the progression from a normal TCP handshake and HTTP session into a SYN flood attack. Repeated SYN packets are sent without corresponding ACKs, leading to half-open connections. Eventually, the system responds with RST, ACK packets and HTTP 504 Gateway Timeout errors as it becomes unable to complete connections.

No.	Time (s)	Source	Destination	Protocol	Info
47	3.144521	198.51.100.23	192.0.2.1	TCP	42584->443 [SYN] Seq=0 Win=5792 Len=120
48	3.195755	192.0.2.1	198.51.100.23	TCP	443->42584 [SYN, ACK] Seq=0 Win=5792
					Len=120
49	3.246989	198.51.100.23	192.0.2.1	TCP	42584->443 [ACK] Seq=1 Win=5792 Len=120
50	3.298223	198.51.100.23	192.0.2.1	HTTP	GET /sales.html HTTP/1.1
51	3.349457	192.0.2.1	198.51.100.23	HTTP	HTTP/1.1 200 OK (text/html)
52	3.390692	203.0.113.0	192.0.2.1	TCP	54770->443 [SYN] Seq=0 Win=5792 Len=0
53	<mark>3.441926</mark>	192.0.2.1	203.0.113.0	TCP	443->54770 [SYN, ACK] Seq=0 Win=5792
					Len=120
54	3.493160	203.0.113.0	192.0.2.1	TCP	54770->443 [ACK] Seq=1 Win=5792 Len=0
55	<mark>3.544394</mark>	198.51.100.14	<b>192.0.2.1</b>	TCP	14785->443 [SYN] Seq=0 Win=5792 Len=0
56	<mark>3.599628</mark>	192.0.2.1	198.51.100.14	TCP	443->14785 [SYN, ACK] Seq=0 Win=5792
					Len=120
57	3.664863	203.0.113.0	<u>192.0.2.1</u>	TCP TCP	54770->443 [SYN] Seq=0 Win=5792 Len=0
58	3.73009 <mark>7</mark>	198.51.100.14	192.0.2.1	TCP TCP	14785->443 [ACK] Seq=1 Win=5792 Len=0
59	<mark>3.795332</mark>	203.0.113.0	192.0.2.1	TCP	54770->443 [SYN] Seq=0 Win=5792 Len=0
60	3.860567	198.51.100.14	192.0.2.1	HTTP	GET /sales.html HTTP/1.1
61	<mark>3.939499</mark>	203.0.113.0	192.0.2.1	TCP	54770->443 [SYN] Seq=0 Win=5792 Len=0
62	4.018431	192.0.2.1	198.51.100.14		HTTP/1.1 200 OK (text/html)
63	<mark>4.097363</mark>	198.51.100.5	192.0.2.1	TCP	33638->443 [SYN] Seq=0 Win=5792 Len=120
64	4.176295	192.0.2.1	203.0.113.0	TCP	443->54770 [SYN, ACK] Seq=0 Win=5792
					Len=0
65	4.25522 <mark>7</mark>	<b>192.0.2.1</b>	198.51.100.5	TCP	443->33638 [SYN, ACK] Seq=0 Win=5792
					Len=120
66	<mark>4.256159</mark>	203.0.113.0	<u>192.0.2.1</u>	TCP	54770->443 [ACK] Seq=1 Win=5792 Len=0
67	4.300001	203.0.113.0	192.0.2.1	TCP	54800->443 [SYN] Seq=0 Win=5792 Len=0
68	<u>4.301501</u>	203.0.113.0	<u>192.0.2.1</u>	TCP	54801->443 [SYN] Seq=0 Win=5792 Len=0
69	4.303002	203.0.113.0	192.0.2.1	TCP	54802->443 [SYN] Seq=0 Win=5792 Len=0
70	4.304503	203.0.113.0	192.0.2.1	TCP	54803->443 [SYN] Seq=0 Win=5792 Len=0
71	4.306004	203.0.113.0	192.0.2.1	TCP	54804->443 [SYN] Seq=0 Win=5792 Len=0
72	4.307505	203.0.113.0	192.0.2.1	TCP	54805->443 [SYN] Seq=0 Win=5792 Len=0
73	4.309006	203.0.113.0	192.0.2.1	TCP	54806->443 [SYN] Seq=0 Win=5792 Len=0
74	4.310204	203.0.113.0	192.0.2.1	TCP	54807->443 [SYN] Seq=0 Win=5792 Len=0
75	4.311171	203.0.113.0	192.0.2.1	TCP	54808->443 [SYN] Seq=0 Win=5792 Len=0
76	4.312602	203.0.113.0	192.0.2.1	TCP	54809->443 [SYN] Seq=0 Win=5792 Len=0
77	4.313816	203.0.113.0	192.0.2.1	TCP	54810->443 [SYN] Seq=0 Win=5792 Len=0
78	4.314800	203.0.113.0	192.0.2.1	TCP	54811->443 [SYN] Seq=0 Win=5792 Len=0
79	4.316043	203.0.113.0	192.0.2.1	TCP	54812->443 [SYN] Seq=0 Win=5792 Len=0
80	4.317192	203.0.113.0	192.0.2.1	TCP	54813->443 [SYN] Seq=0 Win=5792 Len=0
81	4.318140	203.0.113.0	192.0.2.1	TCP	54814->443 [SYN] Seq=0 Win=5792 Len=0
82	4.319344	203.0.113.0	192.0.2.1	TCP	54815->443 [SYN] Seq=0 Win=5792 Len=0
83	4.320256	203.0.113.0	192.0.2.1	TCP	54816->443 [SYN] Seq=0 Win=5792 Len=0
84	<del>4.321724</del>	203.0.113.0	192.0.2.1	TCP	54817->443 [SYN] Seq=0 Win=5792 Len=0

85	<mark>4.322628</mark>	203.0.113.0	192.0.2.1	TCP	54818->443 [SYN] Seq=0 Win=5792 Len=0
86	4.323458	203.0.113.0	192.0.2.1	TCP	54819->443 [SYN] Seq=0 Win=5792 Len=0
87	<mark>4.324298</mark>	203.0.113.0	<b>192.0.2.1</b>	TCP	54820->443 [SYN] Seq=0 Win=5792 Len=0
88	<mark>4.325694</mark>	203.0.113.0	<b>192.0.2.1</b>	TCP	54821->443 [SYN] Seq=0 Win=5792 Len=0
89	<mark>4.326662</mark>	203.0.113.0	<b>192.0.2.1</b>	<b>TCP</b>	54822->443 [SYN] Seq=0 Win=5792 Len=0
90	<mark>4.327955</mark>	203.0.113.0	192.0.2.1	TCP	54823->443 [SYN] Seq=0 Win=5792 Len=0
91	<mark>4.329360</mark>	203.0.113.0	192.0.2.1	TCP	54824->443 [SYN] Seq=0 Win=5792 Len=0
92	4.330451	203.0.113.0	192.0.2.1	<b>TCP</b>	54825->443 [SYN] Seq=0 Win=5792 Len=0
93	<mark>4.331263</mark>	203.0.113.0	192.0.2.1	TCP	54826->443 [SYN] Seq=0 Win=5792 Len=0
94	<mark>4.332426</mark>	203.0.113.0	192.0.2.1	<b>TCP</b>	54827->443 [SYN] Seq=0 Win=5792 Len=0
95	<mark>4.333869</mark>	203.0.113.0	<b>192.0.2.1</b>	TCP	54828->443 [SYN] Seq=0 Win=5792 Len=0
96	<mark>4.334881</mark>	203.0.113.0	<b>192.0.2.1</b>	<b>TCP</b>	54829->443 [SYN] Seq=0 Win=5792 Len=0
97	<mark>4.336103</mark>	203.0.113.0	192.0.2.1	<b>TCP</b>	54830->443 [SYN] Seq=0 Win=5792 Len=0
98	<b>4.337443</b>	203.0.113.0	<b>192.0.2.1</b>	TCP	54831->443 [SYN] Seq=0 Win=5792 Len=0
99	<b>4.338705</b>	203.0.113.0	<b>192.0.2.1</b>	<b>TCP</b>	54832->443 [SYN] Seq=0 Win=5792 Len=0
100	<mark>4.339561</mark>	203.0.113.0	<b>192.0.2.1</b>	TCP	54833->443 [SYN] Seq=0 Win=5792 Len=0
101	<mark>17.429678</mark>	<b>192.0.2.1</b>	203.0.113.0	TCP	443->54770 [RST, ACK] Seq=1 Win=5792
					Len=0
102	18.510001	192.0.2.1	203.0.113.0	<mark>HTTP</mark>	HTTP/1.1 504 Gateway Time-out (text/html)