

Tugas Komunikasi Data & Jaringan Komputer



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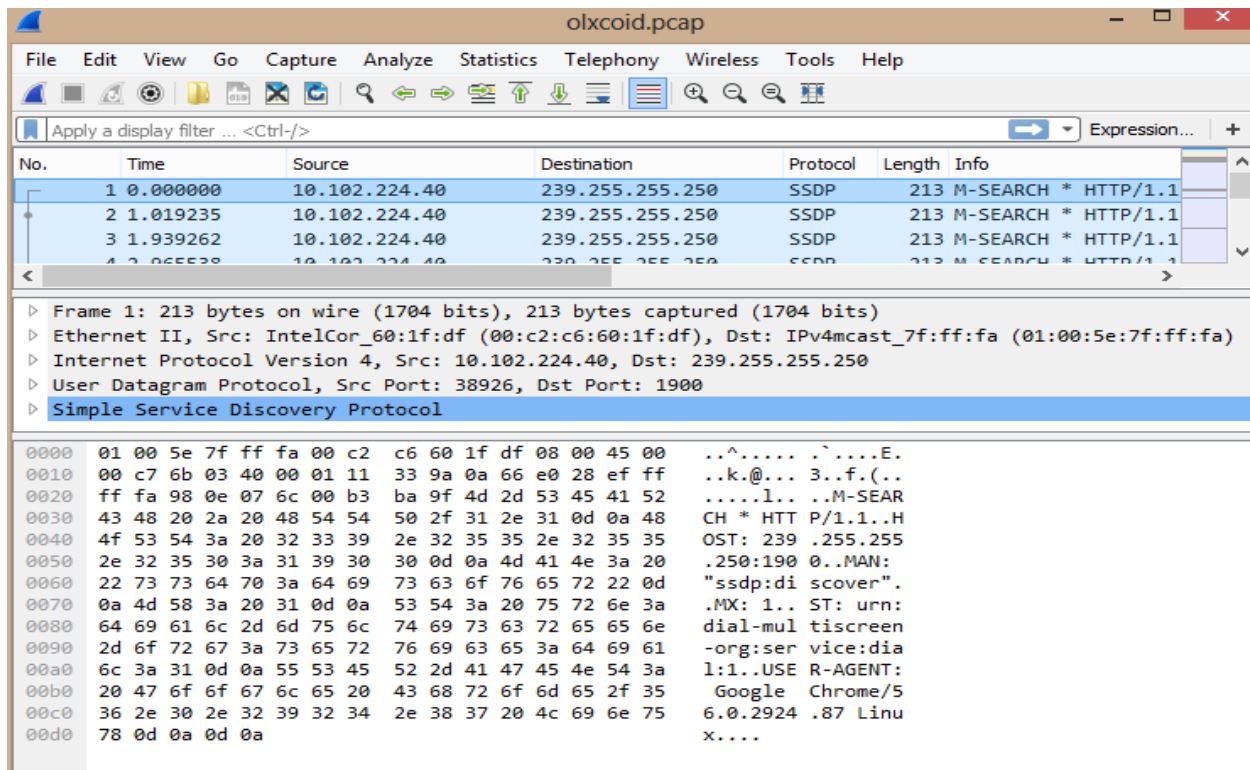
Kelas : Sistem Informasi Reg 4B

Sistem Informasi

Fakultas Ilmu Komputer

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Gambar diatas adalah aplikasi wireshark kegunaan dari wireshark itu sendiri adalah untuk penganalisaan kinerja jaringan. Penganalisaan Kinerja Jaringan itu dapat melingkupi berbagai hal, mulai dari proses menangkap paket-paket data atau informasi yang berlalu-lalang dalam jaringan, sampai pada digunakan pula untuk sniffing (memperoleh informasi penting seperti password email, dll). Wireshark sendiri merupakan free tools untuk Network Analyzer yang ada saat ini. Dan tampilan dari wireshark ini sendiri terbilang sangat bersahabat dengan user karena menggunakan tampilan grafis atau GUI.

IP Conversation

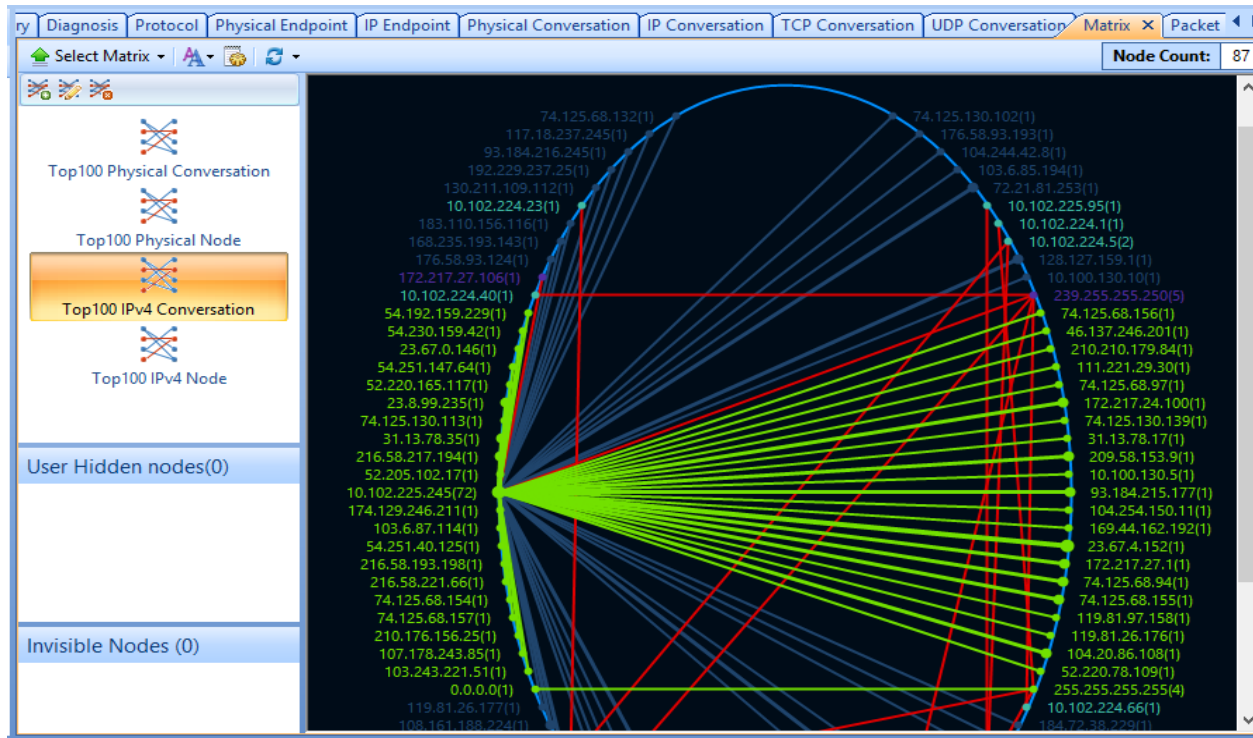
Endpoint 1 ->	<- Endpoint 2	Duration	Bytes	Bytes ->	<- Bytes	Packets	Packet
10.102.225.245	239.255.255.250	00:00:03	860 B	860 B	0 B	4	
10.102.224.19	224.0.0.252	00:00:00	140 B	140 B	0 B	2	
10.102.225.245	118.98.26.12	00:00:06	501.867 KB	6.211 KB	495.656 KB	423	
10.102.225.245	74.125.130.102	00:00:20	5.435 KB	3.647 KB	1.787 KB	44	
10.102.225.245	74.125.68.132	00:00:09	5.947 KB	958 B	5.012 KB	19	
10.102.224.19	239.255.255.250	00:00:15	1.025 KB	1.025 KB	0 B	6	
10.102.225.245	176.58.89.100	00:00:03	6.492 KB	1.045 KB	5.447 KB	22	
10.102.224.5	10.102.239.255	00:00:06	2.709 KB	2.709 KB	0 B	28	
10.102.224.26	239.255.255.250	00:00:15	1.025 KB	1.025 KB	0 B	6	
10.102.225.245	176.58.93.193	00:00:06	2.004 KB	1,010 B	1.018 KB	18	
10.102.225.245	117.18.237.245	00:00:01	47.295 KB	2.131 KB	45.164 KB	42	
10.102.225.245	74.125.68.100	00:00:31	9.849 KB	6.019 KB	3.830 KB	74	
10.102.225.245	117.18.237.172	00:00:19	39.789 KB	7.088 KB	32.701 KB	99	
10.102.225.245	104.244.42.8	00:00:19	11.597 KB	5.129 KB	6.468 KB	58	
10.102.225.245	93.184.216.245	00:00:03	4.038 KB	2.083 KB	1.955 KB	24	
10.102.225.245	205.185.216.10	00:00:06	117.326 KB	8.380 KB	108.946 KB	172	
10.102.225.245	210.210.179.104	00:00:28	4.966 KB	1.151 KB	3.814 KB	22	
10.102.225.245	103.6.85.194	00:00:01	5.764 KB	854 B	4.930 KB	15	
10.102.225.245	192.229.237.25	00:00:29	62.405 KB	5.205 KB	57.200 KB	94	
10.102.225.245	74.125.68.138	00:00:29	73.848 KB	7.370 KB	66.478 KB	141	
10.102.225.245	216.58.193.195	00:00:41	34.646 KB	19.539 KB	15.106 KB	75	
10.102.225.245	72.21.81.253	00:00:04	111.913 KB	4.712 KB	107.201 KB	114	
10.102.225.245	130.211.109.112	00:00:02	2.748 KB	1.738 KB	1.010 KB	17	
10.102.224.26	224.0.0.252	00:00:37	192 B	192 B	0 B	3	
10.102.226.131	10.102.239.255	00:00:30	352 B	352 B	0 B	2	

IP tab Percakapan menyediakan Anda dengan statistik percakapan alamat IP. Setiap record percakapan tunggal memiliki alamat IP sumber, alamat IP tujuan, paket yang dikirim dan diterima, ukuran paket dan durasi komunikasi, dll. Tab ini menunjukkan bagaimana kalimat aslinya komputer berbicara tentang daripada tersebar dan out-of-order paket.

✓ Salah satu contoh IP Conversation 10.102.225.245 – 239.255.255.250

The screenshot shows a detailed view of a packet in the NetworkMiner tool. The packet list at the top shows four packets of size 215 bytes, all using the SSDP protocol. The selected packet (No. 245) is a UDP packet from source IP 10.102.225.245:65417 to destination IP 239.255.255.250:1900. The packet length is 181 bytes, and the checksum is 0xD9F0. The extra data section shows the raw packet bytes in hexadecimal and ASCII. The ASCII portion of the data is a search request: ".M-SEARCH * HTTP/1.1..HOS T: 239.255.255.250:1900..MAN: "ss dp:discover"..MX: 1..ST: urn:dial -multiscreen-org:service:dial:1.. USER-AGENT: Google Chrome/54.0.28 40.99 Windows....".

Matrix



Tab Matrix adalah visualisasi semua koneksi jaringan dan rincian lalu lintas dalam satu grafik tunggal. Berat dari garis antara node menunjukkan volume lalu lintas dan warna menunjukkan status. Ketika kita bergerak kursor pada node tertentu, rincian lalu lintas jaringan dari node akan disediakan.

✓ Matrix dengan 74.125.130.102(1)

Matrix tersebut dengan

- peer host : 1
- packets sent : 20 bytes sent : 1,787 KB
- packets received : 24 bytes received : 3,647 KB

Top100 IPv4 Conversation(Full Analysis) - 74.125.130.102 - Packets

No.	Absolute Time	Source	Destination	Protocol	Size	Decode	Summary
173	15:09:22.202898	10.102.225.245:52914	74.125.130.102:443	HTTPS	66		Seq=0196612728,
175	15:09:22.242917	74.125.130.102:443	10.102.225.245:52914	HTTPS	68		Seq=4055812235,
176	15:09:22.243015	10.102.225.245:52914	74.125.130.102:443	HTTPS	54		Seq=0196612729,
177	15:09:22.243413	10.102.225.245:52914	74.125.130.102:443	HTTPS	571		Seq=0196612729,
178	15:09:22.260011	74.125.130.102:443	10.102.225.245:52914	HTTPS	56		Seq=4055812236,
179	15:09:22.260015	74.125.130.102:443	10.102.225.245:52914	HTTPS	206		Seq=4055812236,
180	15:09:22.262009	10.102.225.245:52914	74.125.130.102:443	HTTPS	254		Seq=0196613246,
181	15:09:22.283596	74.125.130.102:443	10.102.225.245:52914	HTTPS	102		Seq=4055812388,

Packet Info:

- Packet Number: 173
- Packet Length: 66
- Captured Length: 66
- Timestamp: 2017/02/15 15:09:22.202898
- Ethernet Type II** [0/14]
- Destination Address: 00:1E:C9:44:8A:74 [0/6]
- Source Address: 24:FD:52:88:DF:42 [6/6]
- Protocol: 0x0800 (Internet IP(IPv4)) [12/2]

```

0000 00 1E C9 44 8A 74 24 FD 52 88 DF 42 08 00 45 00 00 34 6C 4C 40 00 06 D5 38 0A 66 E1 F5 4A 7D 82 ...D.t$.R..B..E..41L@....8.f..J].
0021 66 CE B2 01 BB 0B B8 12 78 00 00 00 00 80 02 20 00 A7 33 00 00 02 04 05 B4 01 03 03 08 01 01 04 02 ...P.a?...nj.....
0042

```

✓ Matrix dengan 176.58.93.193(1)

Matrix tersebut dengan

- peer host : 1
- packets sent : 8 bytes sent : 1,018 KB
- packets received : 10 bytes received : 1,010 B

Top100 IPv4 Conversation(Full Analysis) - 176.58.93.193 - Packets

No.	Absolute Time	Source	Destination	Protocol	Size	Decode	Summary
3407	15:09:43.374138	10.102.225.245:52992	176.58.93.193:80	HTTP	66		Seq=3613474716,
3426	15:09:43.584407	10.102.225.245:52994	176.58.93.193:80	HTTP	66		Seq=3429585760,
3434	15:09:43.715577	176.58.93.193:80	10.102.225.245:52992	HTTP	68		Seq=3522234409,
3436	15:09:43.715675	10.102.225.245:52992	176.58.93.193:80	HTTP	54		Seq=3613474717,
3437	15:09:43.715917	10.102.225.245:52992	176.58.93.193:80	HTTP	500		C: GET /i/148720
3443	15:09:43.920073	176.58.93.193:80	10.102.225.245:52994	HTTP	68		Seq=3030663384,
3444	15:09:43.920170	10.102.225.245:52994	176.58.93.193:80	HTTP	54		Seq=3429585761,
3449	15:09:44.045478	176.58.93.193:80	10.102.225.245:52992	HTTP	56		Seq=3522234410,

Packet Info:

- Packet Number: 3,407
- Packet Length: 66
- Captured Length: 66
- Timestamp: 2017/02/15 15:09:43.374138
- Ethernet Type II** [0/14]
- Destination Address: 00:1E:C9:44:8A:74 [0/6]
- Source Address: 24:FD:52:88:DF:42 [6/6]
- Protocol: 0x0800 (Internet IP(IPv4)) [12/2]

```

0000 00 1E C9 44 8A 74 24 FD 52 88 DF 42 08 00 45 00 00 34 38 CF 40 00 06 C7 9D 0A 66 E1 F5 B0 3A 5D ...D.t$.R..B..E..48.@....f...:
0021 C1 CF 00 00 50 D7 61 3F 9C 00 00 00 00 80 02 20 00 6E 6A 00 00 02 04 05 B4 01 03 03 08 01 01 04 02 ...P.a?...nj.....
0042

```

✓ Matrix dengan 104.244.42.8(1)

Matrix tersebut dengan

- peer host : 1
- packets sent : 28 bytes sent : 6,468 KB
- packets received : 30 bytes received : 5,129 KB

No.	Absolute Time	Source	Destination	Protocol	Size	Decode	Summary
1793	15:09:33.188020	10.102.225.245:52960	104.244.42.8:443	HTTPS	66		Seq=2969817158,
1846	15:09:33.243369	104.244.42.8:443	10.102.225.245:52960	HTTPS	68		Seq=0787214451,
1850	15:09:33.243567	10.102.225.245:52960	104.244.42.8:443	HTTPS	54		Seq=2969817159,
1854	15:09:33.244887	10.102.225.245:52960	104.244.42.8:443	HTTPS	258		Seq=2969817159,
1897	15:09:33.315217	104.244.42.8:443	10.102.225.245:52960	HTTPS	56		Seq=0787214452,
1898	15:09:33.315217	104.244.42.8:443	10.102.225.245:52960	HTTPS	1,514		Seq=0787214452,
1899	15:09:33.315218	104.244.42.8:443	10.102.225.245:52960	HTTPS	275		Seq=0787217372,
1901	15:09:33.315219	104.244.42.8:443	10.102.225.245:52960	HTTPS	1,514		Seq=0787215912,

Packet Info:
Packet Number: 1,793
Packet Length: 66
Captured Length: 66
Timestamp: 2017/02/15 15:09:33.188020

Ethernet Type II
Destination Address: 00:1E:C9:44:8A:74 [0/6]
Source Address: 24:FD:52:88:DF:42 [6/6]
Protocol: 0x0800 (Internet IP(IPv4)) [12/2]

```
0000 00 1E C9 44 8A 74 24 FD 52 88 DF 42 08 00 45 00 00 34 0F 50 40 00 80 06 6C 1C 0A 66 E1 F5 68 F4 2A ...D.t#.R..B..E..4.P#...l..f..h.*
0021 08 CE E0 01 BB B1 03 D0 46 00 00 00 00 80 02 20 00 7D D2 00 00 02 04 05 B4 01 03 03 08 01 01 04 02 .....F.....}.....
0042
```

✓ Matrix dengan 103.6.85.194(1)

Matrix tersebut dengan

- peer host : 1
- packets sent : 8 bytes sent : 4,930 KB
- packets received : 7 bytes received : 854 B

No.	Absolute Time	Source	Destination	Protocol	Size	Decode	Summary
5269	15:09:55.673941	10.102.225.245:53072	103.6.85.194:80	HTTP	66		Seq= 1704021699,
5270	15:09:55.750233	103.6.85.194:80	10.102.225.245:53072	HTTP	68		Seq=2086145785,
5271	15:09:55.750346	10.102.225.245:53072	103.6.85.194:80	HTTP	54		Seq= 1704021700,
5272	15:09:55.750776	10.102.225.245:53072	103.6.85.194:80	HTTP	506		C: GET /i2/1/1987
5274	15:09:55.910421	103.6.85.194:80	10.102.225.245:53072	HTTP	56		Seq=2086145786,
5275	15:09:55.987803	103.6.85.194:80	10.102.225.245:53072	HTTP	1,514		S: HTTP/1.1 200 C
5276	15:09:55.987807	103.6.85.194:80	10.102.225.245:53072	HTTP	1,514		S: Continuation o
5277	15:09:55.987808	103.6.85.194:80	10.102.225.245:53072	HTTP	329		S: Continuation o

Packet Info:
Packet Number: 5,269
Packet Length: 66
Captured Length: 66
Timestamp: 2017/02/15 15:09:55.673941

Ethernet Type II
Destination Address: 00:1E:C9:44:8A:74 [0/6]
Source Address: 24:FD:52:88:DF:42 [6/6]

```
0000 00 1E C9 44 8A 74 24 FD 52 88 DF 42 08 00 45 00 00 34 73 A6 40 00 80 06 DD F9 0A 66 E1 F5 67 06 55 ...D.t#.R..B..E..4#.0.....f..g.U
0021 C2 CF 50 00 50 65 91 4E C3 00 00 00 80 02 20 00 21 F7 00 00 02 04 05 B4 01 03 03 08 01 01 04 02 ...P.Pe.N.....l.....
0042
```

- ✓ Matrix dengan 72.21.81.253(1)

Matrix tersebut dengan

- peer host : 1
- packets sent : 82 bytes sent : 107,201 KB
- packets received : 32 bytes received : 4,712 KB

No.	Absolute Time	Source	Destination	Protocol	Size	Decode	Summary
5303	15:09:57.883230	10.102.225.245:53075	72.21.81.253:80	HTTP	66		Seq=2102011949,
5305	15:09:58.069871	10.102.225.245:53076	72.21.81.253:80	HTTP	66		Seq=2681497888,
5306	15:09:58.146270	72.21.81.253:80	10.102.225.245:53075	HTTP	68		Seq=3342978440,
5307	15:09:58.146368	10.102.225.245:53075	72.21.81.253:80	HTTP	54		Seq=2102011950,
5308	15:09:58.146643	10.102.225.245:53075	72.21.81.253:80	HTTP	642		C: GET /img/249t
5309	15:09:58.282825	72.21.81.253:80	10.102.225.245:53076	HTTP	68		Seq=0829333430,
5310	15:09:58.283000	10.102.225.245:53076	72.21.81.253:80	HTTP	54		Seq=2681497889,
5313	15:09:58.392466	72.21.81.253:80	10.102.225.245:53075	HTTP	56		Seq=3342978441,

Packet Info:

- Packet Number: 5, 303
- Packet Length: 66
- Captured Length: 66
- Timestamp: 2017/02/15 15:09:57.883230
- Ethernet Type II: [0/14]
- Destination Address: 00:1E:C9:44:8A:74 [0/6]
- Source Address: 24:FD:52:8B:DF:42 [6/6]

- ✓ Matrix dengan 10.102.225.95(1)

Matrix tersebut dengan

- peer host : 1
- packets sent : 9 bytes sent : 828 B
- packets received : 0 bytes received : 0 B

No.	Absolute Time	Source	Destination	Protocol	Size	Decode	Summary
289	15:09:25.201701	10.102.225.95:137	10.102.239.255:137	NBNS	92		C: NAME=WORK
292	15:09:25.918413	10.102.225.95:137	10.102.239.255:137	NBNS	92		C: NAME=WORK
535	15:09:26.637171	10.102.225.95:137	10.102.239.255:137	NBNS	92		C: NAME=WORK
5367	15:09:59.507963	10.102.225.95:137	10.102.239.255:137	NBNS	92		C: NAME=WORK
5459	15:10:00.224340	10.102.225.95:137	10.102.239.255:137	NBNS	92		C: NAME=WORK
5482	15:10:01.041519	10.102.225.95:137	10.102.239.255:137	NBNS	92		C: NAME=WORK
6362	15:10:05.956262	10.102.225.95:137	10.102.239.255:137	NBNS	92		C: NAME=X453M
6386	15:10:06.673070	10.102.225.95:137	10.102.239.255:137	NBNS	92		C: NAME=X453M

Packet Info:

- Packet Number: 289
- Packet Length: 92
- Captured Length: 92
- Timestamp: 2017/02/15 15:09:25.201701
- Ethernet Type II: [0/14]
- Destination Address: FF:FF:FF:FF:FF:FF [0/6]
- Source Address: B8:86:87:AB:38:90 [6/6]

- ✓ Matrix dengan 128.127.159.1(1)

Matrix tersebut dengan

- peer host : 1
- packets sent : 76 bytes sent : 105,309 KB
- packets received : 50 bytes received : 4,782 KB

No.	Absolute Time	Source	Destination	Protocol	Size	Decode	Summary
6357	15:10:05.933171	10.102.225.245:53116	128.127.159.1:80	HTTP	66		Seq=3112846290,
6368	15:10:06.139954	128.127.159.1:80	10.102.225.245:53116	HTTP	68		Seq=0216880752,
6369	15:10:06.140124	10.102.225.245:53116	128.127.159.1:80	HTTP	54		Seq=3112846291,
6370	15:10:06.140544	10.102.225.245:53116	128.127.159.1:80	HTTP	640		C: GET /img/1478
6372	15:10:06.336077	128.127.159.1:80	10.102.225.245:53116	HTTP	56		Seq=0216880753,
6373	15:10:06.336083	128.127.159.1:80	10.102.225.245:53116	HTTP	504		S: HTTP/1.1 200 C
6376	15:10:06.346810	10.102.225.245:53116	128.127.159.1:80	HTTP	640		C: GET /img/1478
6380	15:10:06.564796	128.127.159.1:80	10.102.225.245:53116	HTTP	504		S: HTTP/1.1 200 C

Packet Info:

- Packet Number: 6,357
- Packet Length: 66
- Captured Length: 66
- Timestamp: 2017/02/15 15:10:05.933171
- Ethernet Type II: [0/14]
- Destination Address: 00:1E:C9:44:8A:74 [0/6]
- Source Address: 24:FD:52:88:DF:42 [6/6]

```

0000  00 1E C9 44 8A 74 24 FD 52 88 DF 42 08 00 45 00 00 34 42 A2 40 00 80 06 AC 45 0A 66 E1 F5 80 7F 9F ...D.t#.R..B..E..4B@...E.f.....
0021  01 CF 7C 00 50 B9 8A 43 D2 00 00 00 00 02 20 00 76 0A 00 00 02 04 05 B4 01 03 03 08 01 01 04 02 ...l.P.C.....V.....
0042
  
```

- ✓ Matrix dengan 239.255.255.250(5)

Matrix tersebut dengan

- peer host : 5
- packets sent : 0 bytes sent : 0 KB
- packets received : 36 bytes received : 7,066 KB

No.	Absolute Time	Source	Destination	Protocol	Size	Decode	Summary
1	15:09:12.817853	10.102.224.40:38926	239.255.255.250:1900	SSDP	213		Src=38926;Dst=15
2	15:09:13.837088	10.102.224.40:38926	239.255.255.250:1900	SSDP	213		Src=38926;Dst=15
3	15:09:14.757115	10.102.224.40:38926	239.255.255.250:1900	SSDP	213		Src=38926;Dst=15
4	15:09:15.783391	10.102.224.40:38926	239.255.255.250:1900	SSDP	213		Src=38926;Dst=15
245	15:09:23.439054	10.102.225.245:65417	239.255.255.250:1900	SSDP	215		Src=65417;Dst=15
269	15:09:24.439961	10.102.225.245:65417	239.255.255.250:1900	SSDP	215		Src=65417;Dst=15
291	15:09:25.440410	10.102.225.245:65417	239.255.255.250:1900	SSDP	215		Src=65417;Dst=15
432	15:09:26.440648	10.102.225.245:65417	239.255.255.250:1900	SSDP	215		Src=65417;Dst=15

Packet Info:

- Packet Number: 1
- Packet Length: 213
- Captured Length: 213
- Timestamp: 2017/02/15 15:09:12.817853
- Ethernet Type II: [0/14]
- Destination Address: 01:00:5E:7F:FF:FA [0/6]
- Source Address: 00:C2:C6:60:1F:DF [6/6]

```

0000  01 00 5E 7F FF FA 00 C2 C6 60 1F DF 08 00 45 00 00 C7 6B 03 40 00 01 11 33 9A 0A 66 E0 28 EF FF FF ...?.....E..k.#..9..f.(...
0021  FA 98 0E 07 6C 00 B9 BA 9F 4D 2D 53 45 41 52 43 48 20 2A 20 48 54 54 50 2F 31 2E 31 0D 0A 48 4F 53 ...l.....M-SEARCH * HTTP/1.1. HOS
0042  54 3A 20 32 33 39 2E 32 35 35 2E 32 35 35 2E 32 35 30 3A 31 39 30 30 0D 0A 4D 41 4E 3A 20 22 73 73 ...T: 239.255.255.250:1900. MAN: "ss
0063  64 70 3A 64 69 73 63 6F 76 65 72 22 0D 0A 4D 58 3A 20 31 0D 0A 53 54 3A 20 75 72 6E 3A 64 69 61 6C ...dp:discover".MX: 1..ST: urn:dial
0084  2D 6D 75 6C 74 69 73 63 72 65 65 6E 2D 6F 72 67 3A 79 65 72 76 69 63 65 3A 64 69 61 6C 3A 31 0D 0A ...-multicast-req:service:dial.1..
00A5  55 53 45 52 2D 41 47 45 4E 54 3A 20 47 6F 6F 67 6C 65 20 43 68 72 6F 6D 65 2F 35 36 2E 30 2E 32 39 ...USER-AGENT: Google Chrome/56.0.29
00C6  32 34 2E 38 37 20 4C 69 6E 75 78 0D 0A 0A 0A ...24.87 Linux....
  
```