

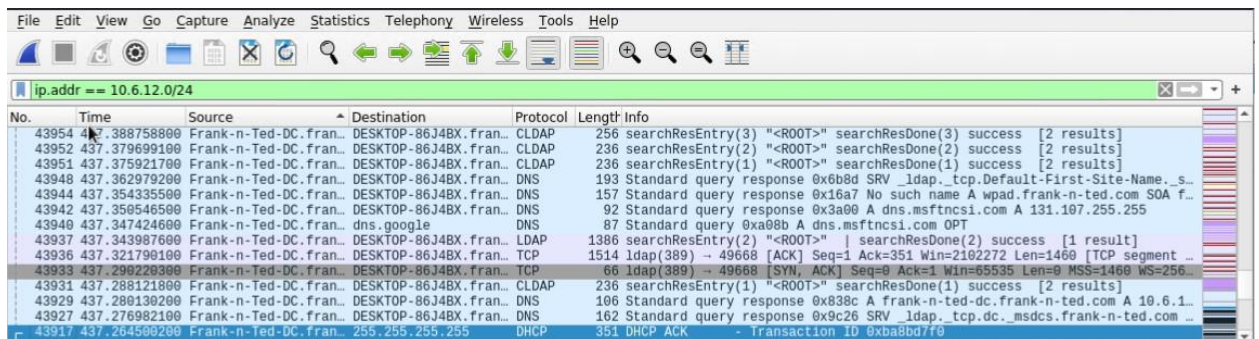
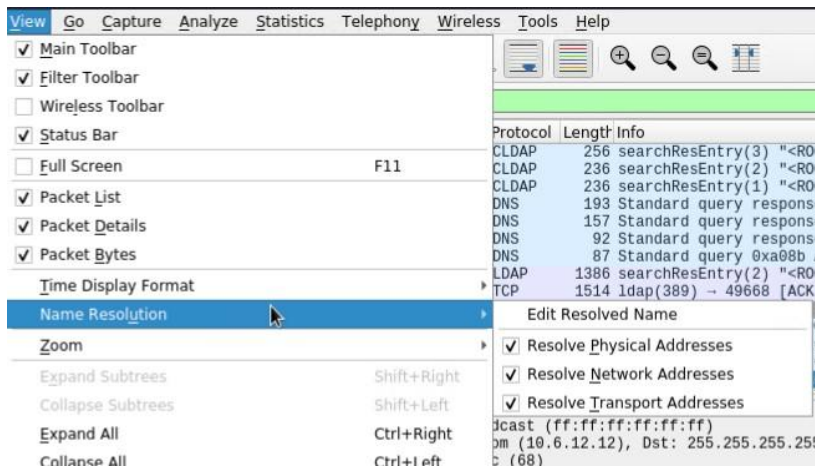
Network Forensic Analysis Report

Time Thieves

You must inspect your traffic capture to answer the following questions:

1. What is the domain name of the users' custom site?

Frank-n-Ted-DC.frank-n-ted.com



2. What is the IP address of the Domain Controller (DC) of the AD network?

10.6.12.12

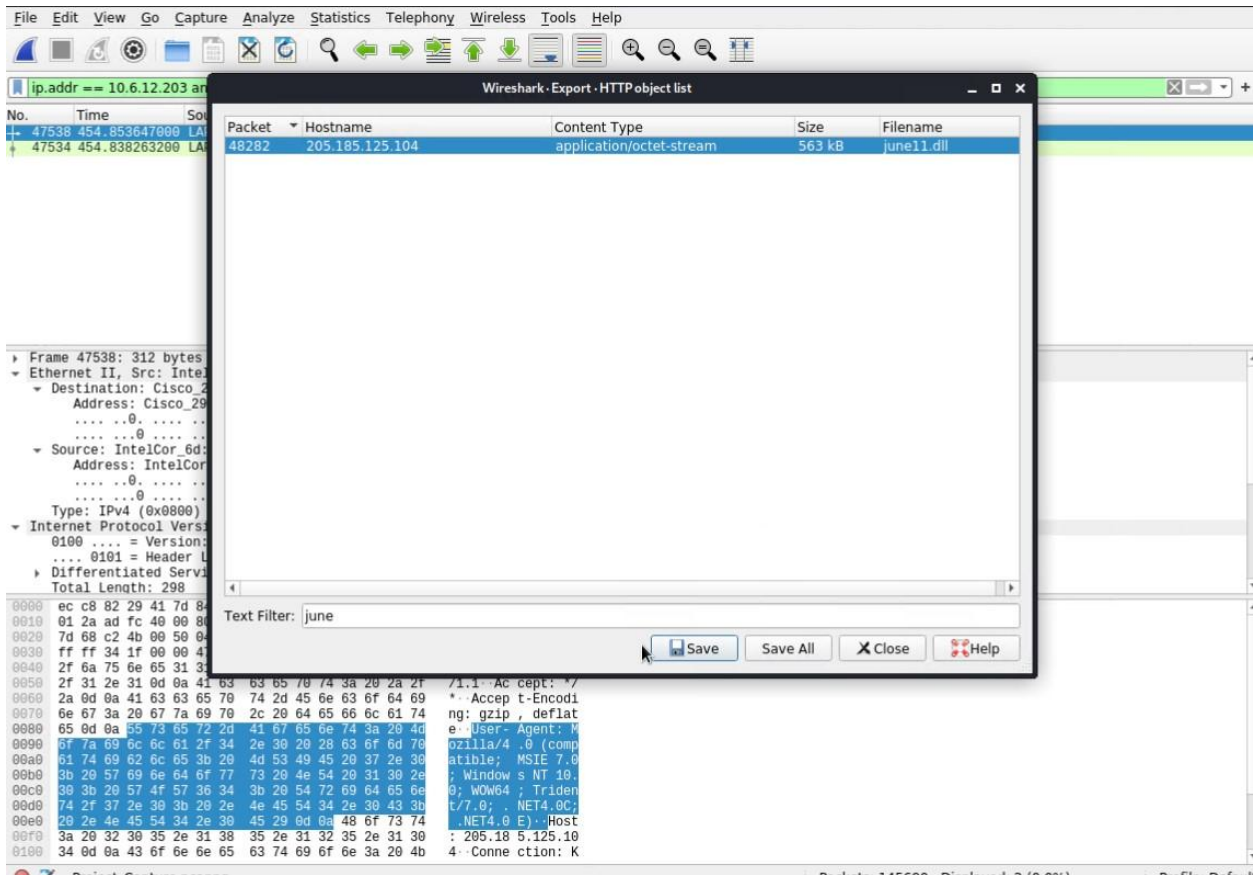
```
0100 .... = Version: 4
.... 0101 = Header Length: 20 bytes (5)
  ▶ Differentiated Services Field: 0x00 (DSCP: CS0, ECN: Not-ECT)
    Total Length: 337
    Identification: 0x3880 (14464)
  ▶ Flags: 0x0000
    ...0 0000 0000 0000 = Fragment offset: 0
    Time to live: 128
    Protocol: UDP (17)
    Header checksum: 0xeb0a [validation disabled]
    [Header checksum status: Unverified]
    Source: Frank-n-Ted-DC.frank-n-ted.com (10.6.12.12)
    Destination: 255.255.255.255 (255.255.255.255)
  ▶ User Datagram Protocol, Src Port: bootps (67), Dst Port: bootpc (68)
  ▶ Dynamic Host Configuration Protocol (ACK)
```

3. What is the name of the malware downloaded to the 10.6.12.203 machine?

june11.dll

| File Edit View Go Capture Analyze Statistics Telephony Wireless Tools Help | | | | | | |
|--|---------------|------------------------|-----------------|----------|--------|--------------------------------|
| ip.addr == 10.6.12.203 and http.request.method == GET | | | | | | |
| No. | Time | Source | Destination | Protocol | Length | Info |
| 47538 | 454.853647090 | LAPTOP-5WKHX9YG.fra... | 205.185.125.104 | HTTP | 312 | GET /files/june11.dll HTTP/1.1 |
| 47534 | 454.838263200 | LAPTOP-5WKHX9YG.fra... | 205.185.125.104 | HTTP | 275 | GET /pQ8twj HTTP/1.1 |

```
▶ Frame 47538: 312 bytes on wire (2496 bits), 312 bytes captured (2496 bits) on interface eth0, id 0
▼ Ethernet II, Src: IntelCor_6d:fc:e2 (84:3a:4b:6d:fc:e2), Dst: Cisco_29:41:7d (ec:c8:82:29:41:7d)
  ▼ Destination: Cisco_29:41:7d (ec:c8:82:29:41:7d)
    Address: Cisco_29:41:7d (ec:c8:82:29:41:7d)
    ....0. .... = LG bit: Globally unique address (factory default)
    ....0. .... = IG bit: Individual address (unicast)
  ▼ Source: IntelCor_6d:fc:e2 (84:3a:4b:6d:fc:e2)
    Address: IntelCor_6d:fc:e2 (84:3a:4b:6d:fc:e2)
    ....0. .... = LG bit: Globally unique address (factory default)
    ....0. .... = IG bit: Individual address (unicast)
  Type: IPv4 (0x0800)
▼ Internet Protocol Version 4, Src: LAPTOP-5WKHX9YG.frank-n-ted.com (10.6.12.203), Dst: 205.185.125.104 (205.185.125.104)
  0100 .... = Version: 4
  .... 0101 = Header Length: 20 bytes (5)
  ▶ Differentiated Services Field: 0x00 (DSCP: CS0, ECN: Not-ECT)
    Total Length: 298
```



4. Upload the file to [VirusTotal.com](https://www.virustotal.com).

VirusTotal - File - d3636666b407fe5527b96696377ee7ba9b6c

https://www.virustotal.com/gui/file/d3636666b407fe5527b96696377ee7ba9b6c

d3636666b407fe5527b96696377ee7ba9b6c9cf4561fa76af218ddd764dec

51 security vendors and 1 sandbox flagged this file as malicious

d3636666b407fe5527b96696377ee7ba9b6c9cf4561fa76af218ddd764dec

GoogleUpdate.exe

Invalid signature (oversig) pedt signed

549 KB Size

2021-11-23 09:06:52 UTC

19 hours ago

DL

| DETECTION | DETAILS | RELATIONS | BEHAVIOR | COMMUNITY |
|-------------------|----------------------------------|--------------------|-----------------------------------|-----------|
| Ad-Aware | Trojan.Mint.Zamg.O | AhnLab-V3 | Malware/Win32_RL_Generic.R346613 | |
| Alibaba | Trojan.Spy.Win32/Yakes.56555f48 | ALYac | Trojan.Mint.Zamg.O | |
| Antiy-AVL | Trojan.Generic.ASCcommon.1BE | Arcabit | Trojan.Mint.Zamg.O | |
| Avast | Win32:DangerousSig [Trj] | AVG | Win32:DangerousSig [Trj] | |
| Avira (no cloud) | TR/AD.Zloader.ladbd | BitDefender | Trojan.Mint.Zamg.O | |
| BitDefender Theta | Gen:NN.ZedialF.34294.lu9@au7OOgi | CrowdStrike Falcon | Win/malicious_confidence_100% (W) | |
| Cylance | Unsafe | Cynet | Malicious (score: 100) | |
| DrWeb | Trojan.Inject3.53106 | eGambit | Unsafe.AI_Score_98% | |

5. What kind of malware is this classified as?

trojan.malware

Vulnerable Windows Machine

- Find the following information about the infected Windows machine:
 - Host name: Rotterdam-PC.mind-hammer.net
 - IP address: 172.16.4.205
 - MAC address: LenovoEM_b0:64:a4 (00:59:07:b0:63:a4)
- What is the username of the Windows user whose computer is infected?

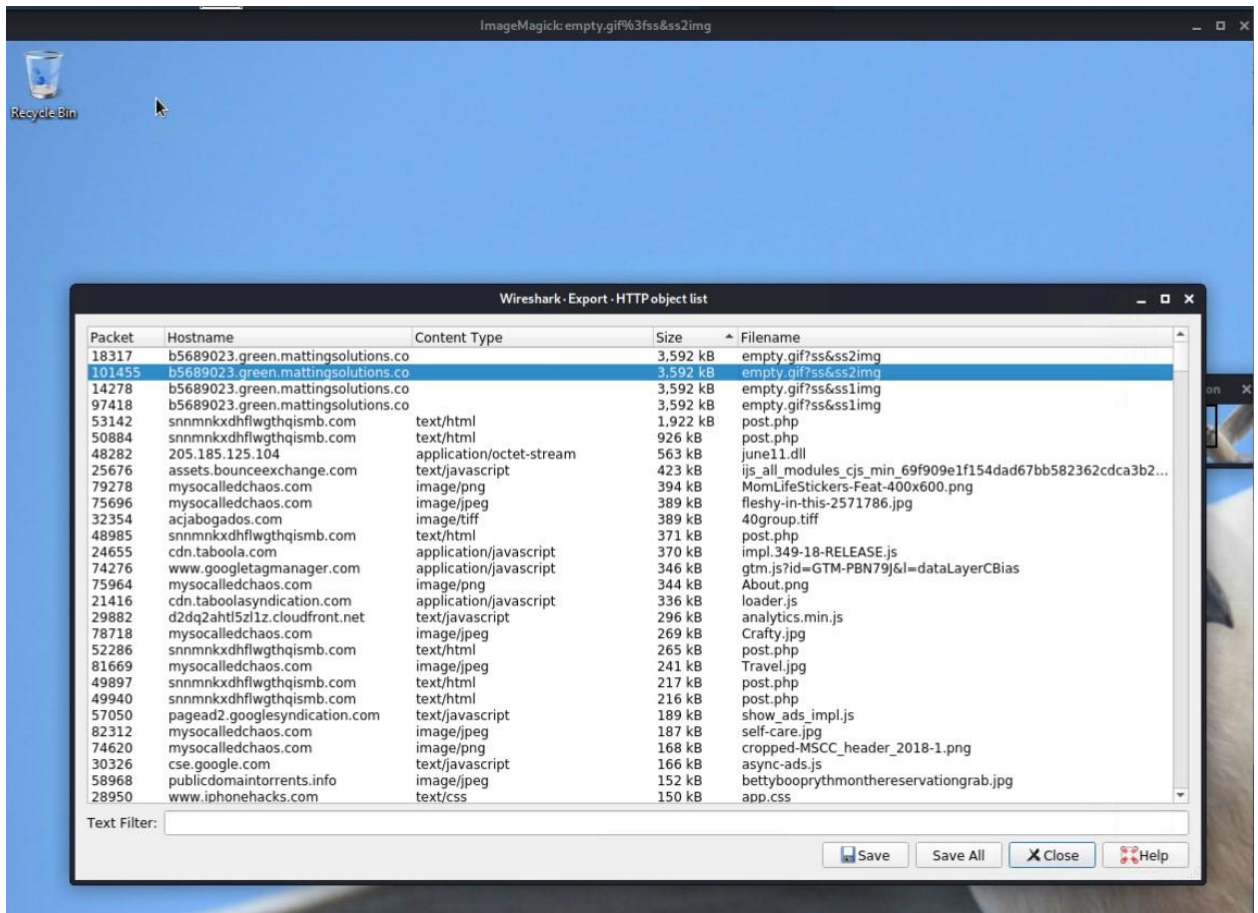
| ip.addr == 172.16.4.205 and kerberos.CNameString | | | | | | | |
|--|---------------|-------------------------------|------------------------|------------------|----------|--------|---------|
| No. | Time | Source | Destination | CNameString | Protocol | Length | Info |
| 72274 | 698.061139300 | mind-hammer-dc.mind-hammer... | Rotterdam-PC.mind-h... | ROTTERDAM-PC\$ | KRB5 | 158 | TGS-REP |
| 72294 | 698.167456100 | mind-hammer-dc.mind-hammer... | Rotterdam-PC.mind-h... | ROTTERDAM-PC\$ | KRB5 | 84 | TGS-REP |
| 72389 | 698.509927200 | Rotterdam-PC.mind-hammer.net | mind-hammer-dc.mind... | ROTTERDAM-PC\$ | KRB5 | 301 | AS-REQ |
| 72396 | 698.525556000 | Rotterdam-PC.mind-hammer.net | mind-hammer-dc.mind... | ROTTERDAM-PC\$ | KRB5 | 381 | AS-REQ |
| 72398 | 698.553076800 | mind-hammer-dc.mind-hammer... | Rotterdam-PC.mind-h... | ROTTERDAM-PC\$ | KRB5 | 204 | AS-REP |
| 72410 | 698.613694700 | mind-hammer-dc.mind-hammer... | Rotterdam-PC.mind-h... | ROTTERDAM-PC\$ | KRB5 | 130 | TGS-REP |
| 72428 | 698.652244000 | Rotterdam-PC.mind-hammer.net | mind-hammer-dc.mind... | matthijs.devries | KRB5 | 292 | AS-REQ |
| 72435 | 698.667803600 | Rotterdam-PC.mind-hammer.net | mind-hammer-dc.mind... | matthijs.devries | KRB5 | 372 | AS-REQ |
| 72437 | 698.695922300 | mind-hammer-dc.mind-hammer... | Rotterdam-PC.mind-h... | matthijs.devries | KRB5 | 242 | AS-REP |
| 72448 | 698.755261900 | mind-hammer-dc.mind-hammer... | Rotterdam-PC.mind-h... | matthijs.devries | KRB5 | 150 | TGS-REP |
| 72460 | 698.820252400 | mind-hammer-dc.mind-hammer... | Rotterdam-PC.mind-h... | matthijs.devries | KRB5 | 273 | TGS-REP |
| 72211 | 697.712101900 | Rotterdam-PC.mind-hammer.net | mind-hammer-dc.mind... | rotterdam-pc\$ | KRB5 | 297 | AS-REQ |
| 72219 | 697.729292600 | Rotterdam-PC.mind-hammer.net | mind-hammer-dc.mind... | rotterdam-pc\$ | KRB5 | 377 | AS-REQ |

matthijs.devries

- What are the IP addresses used in the actual infection traffic? 185.243.115.84

| Wireshark - Conversations - Project_Capture.pcapng | | | | | | | | | | | |
|--|----------------|------------|---------|----------|---------|---------------|-------------|---------------|-------------|-----------|----------|
| Ethernet · 85 | | IPv4 · 881 | | IPv6 · 9 | | TCP · 1040 | | UDP · 1817 | | | |
| Address A | Address B | Packets | Bytes | Packets | Bytes | Packets A → B | Bytes A → B | Packets B → A | Bytes B → A | Rel Start | Duration |
| 172.16.4.205 | 185.243.115.84 | 36,151 | 32 M | 19,338 | 15 M | 16,813 | 16 M | 0,000000 | 1109.1211 | | 114 k |
| 5.101.51.151 | 10.6.12.203 | 8,652 | 8,493 k | 6,524 | 8,355 k | 2,128 | 137 k | 466.107741 | 919.7071 | | 72 k |
| 192.168.1.90 | 192.168.1.100 | 8,628 | 40 M | 5,616 | 39 M | 3,012 | 840 k | 3.581061 | 1430.5809 | | 222 k |
| 166.62.111.64 | 172.16.4.205 | 7,864 | 8,082 k | 5,677 | 7,921 k | 2,187 | 160 k | 699.086815 | 149.9677 | | 422 k |
| 10.11.11.200 | 151.101.50.208 | 6,540 | 4,441 k | 3,226 | 224 k | 3,314 | 4,217 k | 368.134531 | 918.5023 | | 1,959 |
| 10.0.0.201 | 64.187.66.143 | 5,723 | 4,245 k | 2,632 | 170 k | 3,091 | 4,074 k | 567.877136 | 867.4994 | | 1,576 |
| 10.0.0.201 | 23.43.62.169 | 4,007 | 4,080 k | 1,310 | 71 k | 2,697 | 4,008 k | 629.516789 | 66.9059 | | 8,605 |

4. As a bonus, retrieve the desktop background of the Windows host.



Illegal Downloads

- Find the following information about the machine with IP address 10.0.0.201:
 - MAC address: Msi_18:66:c8 (00:16:17:18:66:c8)
 - Windows username: elmer.blanco
 - OS version: Windows NT 10.0

ip.addr == 10.0.0.201 and http

| No. | Time | Source | Destination | CNameString | Protocol |
|-------|---------------|--------------------------------|------------------------|-------------|----------|
| 56696 | 549.303839800 | BLANCO-DESKTOP.dogoftheyear... | files.publicdomaint... | | HTTP |
| 56693 | 549.291564400 | files.publicdomaintorrents... | BLANCO-DESKTOP.dogo... | | HTTP |
| 56682 | 549.151426400 | BLANCO-DESKTOP.dogoftheyear... | pagead46.l.doublecl... | | HTTP |
| 56672 | 549.132665600 | BLANCO-DESKTOP.dogoftheyear... | files.publicdomaint... | | HTTP |
| 56670 | 549.124226300 | BLANCO-DESKTOP.dogoftheyear... | files.publicdomaint... | | HTTP |
| 56668 | 549.115872800 | BLANCO-DESKTOP.dogoftheyear... | files.publicdomaint... | | HTTP |
| 56665 | 549.106466100 | BLANCO-DESKTOP.dogoftheyear... | files.publicdomaint... | | HTTP |
| 56663 | 549.098144300 | BLANCO-DESKTOP.dogoftheyear... | files.publicdomaint... | | HTTP |
| 56662 | 549.090663200 | files.publicdomaintorrents... | BLANCO-DESKTOP.dogo... | | HTTP |
| 56643 | 548.893408900 | BLANCO-DESKTOP.dogoftheyear... | files.publicdomaint... | | HTTP |
| 56641 | 548.884944100 | files.publicdomaintorrents... | BLANCO-DESKTOP.dogo... | | HTTP |
| 56608 | 548.658042200 | BLANCO-DESKTOP.dogoftheyear... | files.publicdomaint... | | HTTP |
| 56594 | 548.550704900 | BLANCO-DESKTOP.dogoftheyear... | files.publicdomaint... | | HTTP |

TCP payload (414 bytes)

Hypertext Transfer Protocol

GET /psp.gif HTTP/1.1\r\n

[Expert Info (Chat/Sequence): GET /psp.gif HTTP/1.1\r\n]

Request Method: GET

Request URI: /psp.gif

Request Version: HTTP/1.1

Referer: http://publicdomaintorrents.info/nshowcat.html?category=animation\r\n

Accept: image/png,image/svg+xml,image/*;q=0.8,*/*;q=0.5\r\n

Accept-Language: en-US\r\n

Accept-Encoding: gzip, deflate\r\n

User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chro

Host: publicdomaintorrents.info\r\n

Connection: Keep-Alive\r\n

\r\n

[Full request URI: http://publicdomaintorrents.info/psp.gif]

| OS | Version | Description |
|---------------------|------------|--|
| Windows 10 | 10.0[2437] | Home Single Language, Home China, Home, Pro, Pro Education, Pro for Workstations,[38] Enterprise, Education, Windows 10 S, IoT Core, Mobile, Mobile Enterprise[39][40] |
| Windows Server 2016 | | Essentials, Standard, Datacenter, Multipoint Premium Server, Storage Server, Hyper-V Server |
| Windows Server 2019 | | Essentials, Standard, Datacenter, Multipoint Premium Server, Hyper-V Server |
| Windows Server 2022 | | |
| Windows 11 | | Home Single Language, Home China, Home, Pro, Pro Education, Pro for Workstations, SE |

ip.addr == 10.0.0.201 and kerberos.CNameString

| No. | Time | Source | Destination | CNameString | Protocol | Length | Info |
|-------|---------------|---------------------------------|------------------------|------------------|----------|--------|---------|
| 56397 | 547.596619200 | DogOfTheYear-DC.dogoftheyear... | BLANCO-DESKTOP.dogo... | elmer.blanco | KRB5 | 303 | TGS-REP |
| 56375 | 547.511801600 | DogOfTheYear-DC.dogoftheyear... | BLANCO-DESKTOP.dogo... | elmer.blanco | KRB5 | 175 | TGS-REP |
| 56363 | 547.450871900 | DogOfTheYear-DC.dogoftheyear... | BLANCO-DESKTOP.dogo... | elmer.blanco | KRB5 | 237 | AS-REP |
| 56361 | 547.422848100 | BLANCO-DESKTOP.dogoftheyear... | DogOfTheYear-DC.dog... | elmer.blanco | KRB5 | 370 | AS-REQ |
| 56353 | 547.407304200 | BLANCO-DESKTOP.dogoftheyear... | DogOfTheYear-DC.dog... | elmer.blanco | KRB5 | 290 | AS-REQ |
| 54951 | 540.818498200 | BLANCO-DESKTOP.dogoftheyear... | DogOfTheYear-DC.dog... | blanco-desktop\$ | KRB5 | 382 | AS-REQ |
| 54938 | 540.789823200 | BLANCO-DESKTOP.dogoftheyear... | DogOfTheYear-DC.dog... | blanco-desktop\$ | KRB5 | 301 | AS-REQ |
| 54843 | 540.472694000 | BLANCO-DESKTOP.dogoftheyear... | DogOfTheYear-DC.dog... | blanco-desktop\$ | KRB5 | 381 | AS-REQ |
| 54835 | 540.456464100 | BLANCO-DESKTOP.dogoftheyear... | DogOfTheYear-DC.dog... | blanco-desktop\$ | KRB5 | 301 | AS-REQ |
| 54762 | 540.101102900 | BLANCO-DESKTOP.dogoftheyear... | DogOfTheYear-DC.dog... | blanco-desktop\$ | KRB5 | 382 | AS-REQ |
| 54748 | 540.053184100 | BLANCO-DESKTOP.dogoftheyear... | DogOfTheYear-DC.dog... | blanco-desktop\$ | KRB5 | 301 | AS-REQ |
| 54744 | 540.045393200 | BLANCO-DESKTOP.dogoftheyear... | DogOfTheYear-DC.dog... | blanco-desktop\$ | KRB5 | 381 | AS-REQ |
| 54723 | 539.925509400 | BLANCO-DESKTOP.dogoftheyear... | DogOfTheYear-DC.dog... | blanco-desktop\$ | KRB5 | 301 | AS-REQ |

Betty_Boop_Rhythm_on_the_Reservation.avi.torrent

| No. | Time | Source | Destination | CNameString | Protocol | Length | Info |
|-------|---------------|--------------------------------|--------------------------|-------------|----------|--------|--|
| 67773 | 630.015420900 | BLANCO-DESKTOP.dogoftheyear... | cs9.wac.phicdn.net | | HTTP | 292 | GET /MFewTzBNMEswSTAJBgUrDgMCGgUABBTnVAI%2Fn |
| 67750 | 629.786399600 | BLANCO-DESKTOP.dogoftheyear... | cs9.wac.phicdn.net | | HTTP | 290 | GET /MFewTzBNMEswSTAJBgUrDgMCGgUABBTnV27Rv |
| 67746 | 629.779013100 | BLANCO-DESKTOP.dogoftheyear... | cs9.wac.phicdn.net | | HTTP | 288 | GET /MFewTzBNMEswSTAJBgUrDgMCGgUABBSAUQYBMq |
| 59694 | 567.854324100 | BLANCO-DESKTOP.dogoftheyear... | moonstar.publicdomain... | | HTTP | 253 | GET /scrape?info_hash=K1dKa0dHka8%98kb%81 |
| 59674 | 567.807949200 | BLANCO-DESKTOP.dogoftheyear... | files.publicdomain... | | HTTP | 253 | GET /bt/scrape.php?info_hash=K1dKa0dHka8%98kb%81 |
| 59580 | 567.524851300 | BLANCO-DESKTOP.dogoftheyear... | moonstar.publicdomain... | | HTTP | 434 | GET /announce?info_hash=K1dKa0dHka8%98kb%81 |
| 59550 | 567.448173100 | BLANCO-DESKTOP.dogoftheyear... | files.publicdomain... | | HTTP | 434 | GET /bt/announce.php?info_hash=K1dKa0dHka8%98kb%81 |
| 59314 | 566.789702800 | BLANCO-DESKTOP.dogoftheyear... | torrent.ubuntu.com | | HTTP | 423 | GET /announce?info_hash=K4kb%9eMk8v%ke3%e3 |
| 59310 | 566.780271700 | BLANCO-DESKTOP.dogoftheyear... | ftp.osuosl.org | | HTTP | 195 | GET /version-1.0 HTTP/1.1 |
| 59266 | 566.583985900 | BLANCO-DESKTOP.dogoftheyear... | files.publicdomain... | | HTTP | 589 | GET /bt/btdownload.php?type=torrent&file=Bet |
| 59093 | 565.77546800 | BLANCO-DESKTOP.dogoftheyear... | fls-na.amazon-adsys... | | HTTP | 1067 | GET /1/associates-ads/1/OP?fb=1531628232887 |
| 59021 | 565.136522500 | BLANCO-DESKTOP.dogoftheyear... | rcm-na.assoc-amazon... | | HTTP | 885 | GET /e/cm7?publicdomain0f-20&o=1&p=4&l=opl1 |
| 58985 | 564.842243800 | BLANCO-DESKTOP.dogoftheyear... | www.assoc-amazon.com | | HTTP | 424 | GET /s/ads-common.js HTTP/1.1 |

TCP payload (535 bytes)

▼ Hypertext Transfer Protocol

GET /bt/btdownload.php?type=torrent&file=Betty_Boop_Rhythm_on_the_Reservation.avi.torrent HTTP/1.1\r\n

- ▶ [Expert Info (Chat/Sequence): GET /bt/btdownload.php?type=torrent&file=Betty_Boop_Rhythm_on_the_Reservation.avi.torrent HTTP/1.1\r\n]
 - Request Method: GET
 - Request URI: /bt/btdownload.php?type=torrent&file=Betty_Boop_Rhythm_on_the_Reservation.avi.torrent
 - Request URI Path: /bt/btdownload.php
 - Request URI Query: type=torrent&file=Betty_Boop_Rhythm_on_the_Reservation.avi.torrent
 - Request URI Query Parameter: type=torrent
 - Request URI Query Parameter: file=Betty_Boop_Rhythm_on_the_Reservation.avi.torrent
 - Request Version: HTTP/1.1

Referer: http://publicdomaintorrents.info/nshovmovie.html?movieid=513\r\n

User-Agent: Mozilla/5.0 (Windows NT 10.0; Win64; x64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/64.0.3282.140 Safari/537.36 Edge/17.17134\r\n

Accept-Language: en-US\r\n

Accept: text/html,application/xhtml+xml,application/xml;q=0.9,*/*;q=0.8\r\n

Upgrade-Insecure-Requests: 1\r\n