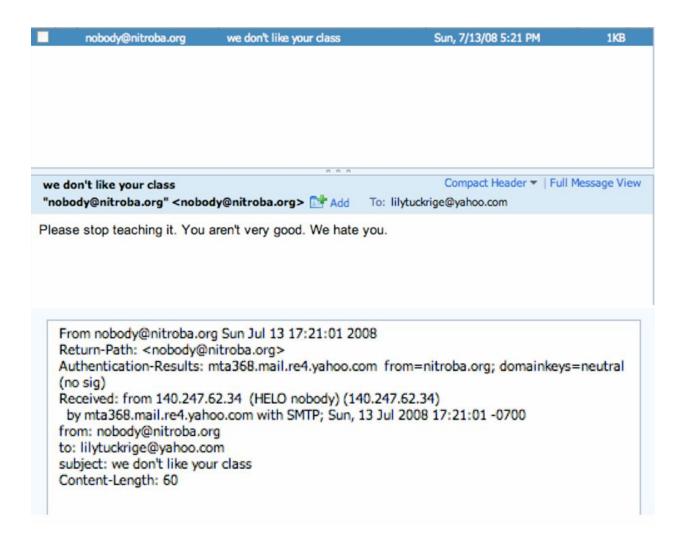
Digital Corpora

Nitroba case:

Lily Tuckrige

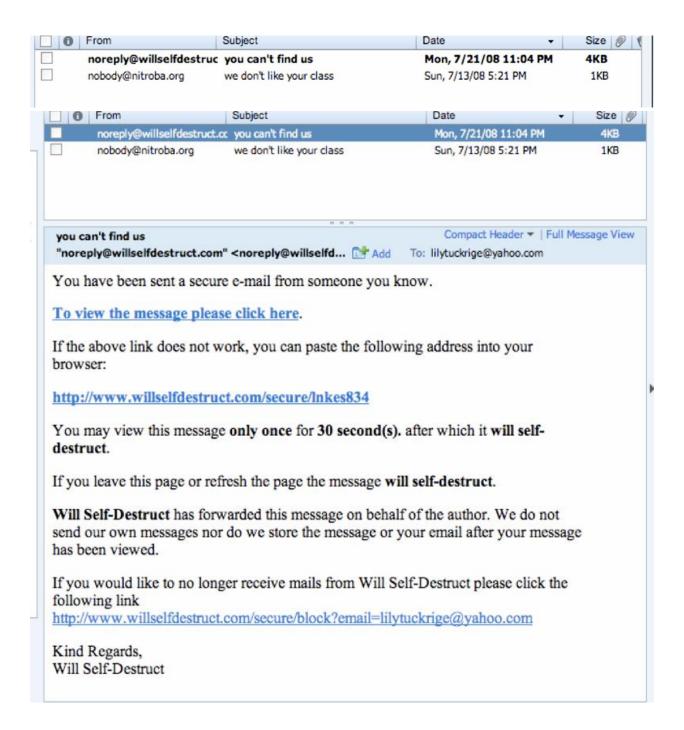
CHEM109 this summer at NSU

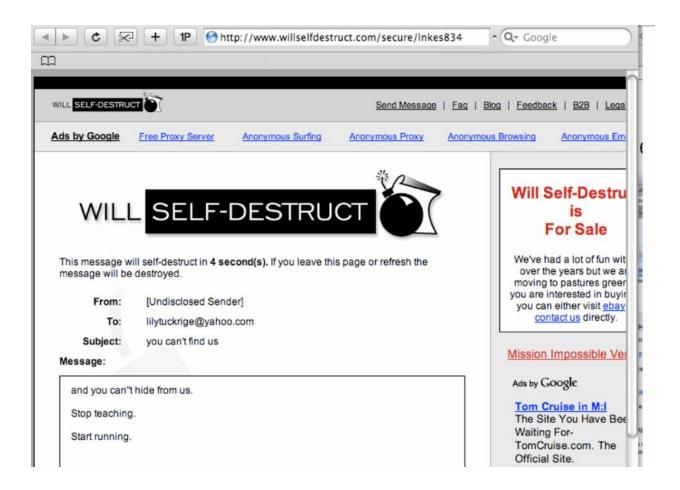
lilytuckrige@yahoo.com



host 140.247.62.34

in-addr.arpa domain name pointer G24.student.nitroba.org





Amy Smith

Burt Greedom

Tuck Gorge

Ava Book

Johnny Coach

Jeremy Ledvkin

Nancy Colburne

Tamara Perkins

Esther Pringle

Asar Misrad

Jenny Kant

- 1. Map out the Nitroba dorm room network.
- 2. Find who sent email to lilytuckrige@yahoo.com Look for a TCP flow that includes the hostile message • Find information that can tie that message to a particular web browser.
- 3. Identify the other TCP connections that below to the attacker
- 4. Find information in one of those TCP connections that IDs the attacker

1

Checking 140.247.62.34

```
p.addr==140.247.62.34
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          × - +
                                                                                                                                                                                                                                                                   ngth Info
82 34526 → 8000 [SYN] Seq=0 Win=65535 Len=0 MSS=1460 WS=2 TSval=734633743 TSecr=0 SACK_PERM
78 8000 → 34526 [SYN, ACK] Seq=0 Ack=1 Win=5792 Len=0 MSS=1408 SACK_PERM TSval=351651998 TSecr=734633743 WS=128
                                                                                                                                                                                                                                                                 70 34526 + 8000 [FAK] Seq=1 Acks1 Wine55612 Lene0 TSval=734633744 TSecr=351651998
82 34528 + 8000 [SVN] Seq=0 Wine55535 Lene0 MSS-1460 MS=1 TSval=7346340833 TSecr=0 SACK_PERN
78 8000 + 34528 [SVN, ACK] Seq=0 Ack=1 Wine5592 Lene0 MSS=1408 SACK_PERN TSval=351681047 TSecr=734634033 WS
70 34528 + 8000 [ACK] Seq=1 Ack=1 Wine55612 Lene0 TSval=7346340451 TSecr=351681047
70 8000 + 34526 [ACK] Seq=1 Ack=0 Wine55612 Lene0 TSval=734634051 TSecr=351681047
70 8000 + 34526 [ACK] Seq=1 Ack=0 Wine55612 Lene0 TSval=734634051 TSecr=351651098
70 8000 + 34526 [SVN, ACK] Seq=1 Ack=1 Wine55612 Lene0 TSval=734634233 TSecr=351651998
70 8000 + 34526 [FIN, ACK] Seq=1 Ack=2 Wine5808 Lene0 TSval=351701063 TSecr=734634233
70 34526 + 8000 [CK] Secr=2 Ack=2 Wine5612 Lene0 TSval=73463427 TSecr=551707308
70 SECRETARISHISTION 8000 + 34526 [FIN, ACK] Secr=2 Ack=2 Wine5612 Lene0 TSval=734634297 TSecr=551707308
                                                                                                                                                                                                                                                             75 34520
70 34526 + 8000 [FIN, ACK] Seq=1 Ack=1 Win=500.
70 34526 + 8000 [FIN, ACK] Seq=1 Ack=2 Win=5888 Len=0 TSval=35170200
70 34526 - 8000 [FIN, ACK] Seq=1 Ack=2 Win=5888 Len=0 TSval=35170200
70 [TCP Retransmission] 8000 + 34526 [FIN, ACK] Seq=1 Ack=2 Win=5888 Len=0 TSval=351707308
82 34544 + 8000 [SVN] Seq=0 Win=65612 Len=0 TSval=734634297 TSecr=951707308
82 34544 + 8000 [SVN] Seq=0 Win=65535 Len=0 MSS=1460 WS=2 TSval=7364330 TSecr=0 SACK_PERM
78 8000 + 34544 [SVN, ACK] Seq=0 Ack=1 Win=5792 Len=0 WSS=1408 SACK_PERM TSVal=351710703 TSecr=734634330 WS=128
70 34544 + 8000 [GVN] Seq=1 Ack=1 Win=65501 Len=0 TSVal=73463433 TSecr=9 SACK_PERM
82 34554 + 8000 [SVN] Seq=0 Win=65535 Len=0 MSS=1408 WS=1740 TSVal=3361736809 TSecr=0 SACK_PERM
83 34554 | SVN, ACK1 Seq=0 Ack=1 Win=5792 Len=0 MSS=1408 SACK_PERM TSVal=351736809 TSecr=734634590 WS=128
                                                                                                                                                      148.247.62.34
192.168.15.4
140.247.62.34
192.168.15.4
192.168.15.4
                        2799.258... 140.247.62.34
                     2817.474... 192.168.15.4
2817.560... 140.247.62.34
2823.804... 140.247.62.34
2823.806... 192.168.15.4
```

192.168.15.4 as source ip

Let's use again the filter capabilities of Wireshark: frame contains "tuckrige"

```
HTML Form URL Encoded: application/x-www-form-urlencoded
  Form item: "to" = "lilytuckrige@yahoo.com"
  Form item: "from" = ""
  Form item: "subject" = "you can't find us"
  Form item: "message" = "and you can't hide from us.\r\n\r\nStop teaching.\r
  Form item: "type" = "0"
  Form item: "ttl" = "30"
  Form item: "submit.x" = "92"
  Form item: "submit.y" = "26"
HTML Form URL Encoded: application/x-www-form-urlencoded
  Form item: "email" = "lilytuckrige@yahoo.com"
  Form item: "sender" = "the_whole_world_is_watching@nitroba.org"
  Form item: "subject" = "Your class stinks"
  ▶ Form item: "message" = "Why do you persist in teaching a boring class?\r\n\
  Form item: "security_code" = "xkpmkb"
  ▶ Form item: "submit" = "
```

http://www.sendanonymousemail.net/\r\n

The source IP is 192.168.15.4, and the destination IP is 69.80.225.91

```
⊠ □ • +
 Time Source Destination Protitergth Info
15110.452_192.168.15.4 69.88.252.91 HL 844 POST /send.php HTTP/1.1 (application/x-www-form-urlencoded)
15197.216.192.168.15.4 69.25.94.22 HL 719 POST /secure/submit HTTP/1.1 (application/x-www-form-urlencoded)
15532.131_66.163.181.179 192.168.15.4 YL 375 List V15 (status=Default) Status V15 (status=Default) Unknown Service: 239 (status=Server Ack) Ping (status=Server Ack)
                                                            ···.0`····E·
000 00 1d d9 2e 4f 60 00 17 f2 e2 c0 ce 08 00 45 00
                                                            ....<u>@.</u>?....E.
     02 bd 02 ca 40 00 3f 06 c3 95 c0 a8 0f 04 45 19
020 5e 16 8c cc 00 50 fc 72 02 f0 75 b8 f4 26 80 18
                                                            ^ Pr u &
                                                           ( · · · · · &c xs
030 fb 28 fa c7 00 00 01 01
                               08 0a 26 63 20 78 73 00
                                                            POST / secure/s
    cb 95 50 4f 53 54 20 2f
                                73 65 63 75 72 65 2f 73
050 75 62 6d 69 74 20 48 54 54 50 2f 31 2e 31 0d 0a
                                                            ubmit HT TP/1.1
060 41 63 63 65 70 74 3a 20 69 6d 61 67 65 2f 67 69
                                                            Accept: image/gi
1070 66 2c 20 69 6d 61 67 65 2f 78 2d 78 62 69 74 6d
                                                            f, image /x-xbitm
    61 70 2c 20 69 6d 61 67 65 2f 6a 70 65 67 2c 20
                                                            ap, imag e/jpeg,
090 69 6d 61 67 65 2f 70 6a 70 65 67 2c 20 61 70 70
                                                            image/pj peg, app
0a0 6c 69 63 61 74 69 6f 6e 2f 78 2d 73 68 6f 63 6b
                                                            lication /x-shock
10b0 77 61 76 65 2d 66 6c 61 73 68 2c 20 2a 2f 2a 0d
                                                            wave-fla sh, */*
Referer : http:/
0d0 2f 77 77 77 2e 77 69 6c 6c 73 65 6c 66 64 65 73
                                                            /www.wil lselfdes
    74 72 75 63 74 2e 63 6f 6d 2f 73 65 63 75 72 65
                                                            truct.co m/secure
    2f 73 75 62 6d 69 74 0d 0a 41 63 63 65 70 74 2d
                                                            /submit· ·Accept-
0f0
     4c 61 6e 67 75 61 67 65 3a 20 65 6e 2d 75 73 0d
                                                            Language : en-us
110 0a 43 6f 6e 74 65 6e 74 2d 54 79 70 65 3a 20 61
                                                            ·Content -Type: a
Ethernet II, Src: Apple_e2:c0:ce (00:17:f2:e2:c0:ce), Dst: HonHaiPrecis_2e:4f
   Destination: HonHaiPrecis 2e:4f:60 (00:1d:d9:2e:4f:60)
       Address: HonHaiPrecis_2e:4f:60 (00:1d:d9:2e:4f:60)
        .... ..0. .... .... = LG bit: Globally unique address (factory
        .... ...0 .... .... = IG bit: Individual address (unicast)
   Source: Apple_e2:c0:ce (00:17:f2:e2:c0:ce)
       Address: Apple e2:c0:ce (00:17:f2:e2:c0:ce)
        .... ..0. .... .... = LG bit: Globally unique address (factory
        .... ...0 .... .... = IG bit: Individual address (unicast)
     Type: IPv4 (0x0800)
     Frame check sequence: 0x60c8d0a3 [unverified]
     [FCS Status: Unverified]
HTML Form URL Encoded: application/x-www-form-urlencoded
   Form item: "to" = "lilytuckrige@yahoo.com"
   ▶ Form item: "from" = ""
   Form item: "subject" = "you can't find us"
   ▶ Form item: "message" = "and you can't hide from us.\r\n\r\nStop teaching.\r
   Form item: "type" = "0"
   Form item: "ttl" = "30"
   Form item: "submit.x" = "92"
   ▶ Form item: "submit.y" = "26"
```

IP	MAC	Hardware
192.168.15.4 (source)	00:17:f2:e2:c0:ce	Apple
140.247.62.34 (destination)	00:1f:d9:2e:4f:60	HonHaiPr

After checking packets

User-agent Mozilla/4.0 (compatible; MSIE 6.0; Windows NT 5.1; SV1)

```
| Instruction | No. | Time | Source | Destination | Problemgth info | Source |
```

I check for accounts by names

So I found google acount and mail acount

```
Cookie pair: S=gmail=L5hb7hHJ9B97n6StWA4FvA:gmail_yj=-OoenmU7qTeuQ1dsN3B1
Cookie pair: GMAIL_AT=xn3j32oktf2a0q6oa3k9sfr6d09yzf
Cookie pair: gmailchat=jcoachj@gmail.com/475090
Cookie pair: PREF=ID=8fc081df5e738a3c:TM=1210743469:LM=1216706486:GM=1:S=
Cookie pair: NID=13=tJ7LtEc6z12iH4BP_IPyV0gGhi4aLcZoJcjAf7l-9JQ2AeoD8oWGS
```

jcoachj@gmail.com

that was Johnny Coach