

Check 1+1 SP Comms

Apr 2021

Introduction

The 1+1 SPs communicate with each other over the Management network using various ports, these are:

```
15771 for Mux comms
15772 for Simulcrypt
15778 for stat Mux
```

We can use tcpdump to monitor the traffic between the Muxes by specifying the relevant port.

```
tcpdump -i mngt port 15778 -Q out
```

This will show Stat Mux traffic (as in the stat mux control messages).

The active Mux will show something like below:

```
tcpdump -i eth0 port 15778 -Q out

tcpdump: verbose output suppressed, use -v or -vv for full protocol decode
listening on eth0, link-type EN10MB (Ethernet), capture size 262144 bytes
15:49:22.309719 IP sp01.15778 > 235.2.127.254.15778: UDP, length 61
15:49:22.851978 IP sp01.15778 > 235.2.127.254.15778: UDP, length 61
15:49:23.394021 IP sp01.15778 > 235.2.127.254.15778: UDP, length 61
15:49:23.936007 IP sp01.15778 > 235.2.127.254.15778: UDP, length 61
15:49:24.478037 IP sp01.15778 > 235.2.127.254.15778: UDP, length 61
15:49:25.019993 IP sp01.15778 > 235.2.127.254.15778: UDP, length 61
15:49:25.562039 IP sp01.15778 > 235.2.127.254.15778: UDP, length 61
15:49:26.104193 IP sp01.15778 > 235.2.127.254.15778: UDP, length 61
15:49:26.646276 IP sp01.15778 > 235.2.127.254.15778: UDP, length 61
15:49:27.188263 IP sp01.15778 > 235.2.127.254.15778: UDP, length 61
```

Where as the inactive mux will have no tcpdump output

```
tcpdump -i eth0 port 15778 -Q out

tcpdump: verbose output suppressed, use -v or -vv for full protocol decode
listening on eth0, link-type EN10MB (Ethernet), capture size 262144 bytes
```

If we look at the Mux Comms on 15771 then we see activity from BOTH Muxes:

```
On the Main Mux

tcpdump -i eth0 port 15771 -Q out

tcpdump: verbose output suppressed, use -v or -vv for full protocol decode
listening on eth0, link-type EN10MB (Ethernet), capture size 262144 bytes
15:58:10.290160 IP sp01.15771 > 235.2.127.254.15771: UDP, length 207
15:58:10.790638 IP sp01.15771 > 235.2.127.254.15771: UDP, length 207
15:58:11.290752 IP sp01.15771 > 235.2.127.254.15771: UDP, length 207
15:58:11.791356 IP sp01.15771 > 235.2.127.254.15771: UDP, length 207
15:58:12.291375 IP sp01.15771 > 235.2.127.254.15771: UDP, length 207
15:58:12.791417 IP sp01.15771 > 235.2.127.254.15771: UDP, length 207
15:58:13.291816 IP sp01.15771 > 235.2.127.254.15771: UDP, length 207
15:58:13.792613 IP sp01.15771 > 235.2.127.254.15771: UDP, length 207
15:58:14.293486 IP sp01.15771 > 235.2.127.254.15771: UDP, length 207
```

```
15:58:14.793887 IP sp01.15771 > 235.2.127.254.15771: UDP, length 207
```

On the Backup Mux

```
tcpdump -i eth0 port 15771 -Q out
```

```
tcpdump: verbose output suppressed, use -v or -vv for full protocol decode
listening on eth0, link-type EN10MB (Ethernet), capture size 262144 bytes
15:58:10.255915 IP sp02.15771 > 235.2.127.254.15771: UDP, length 209
15:58:10.756223 IP sp02.15771 > 235.2.127.254.15771: UDP, length 209
15:58:11.256603 IP sp02.15771 > 235.2.127.254.15771: UDP, length 209
15:58:11.756856 IP sp02.15771 > 235.2.127.254.15771: UDP, length 209
15:58:12.257007 IP sp02.15771 > 235.2.127.254.15771: UDP, length 209
15:58:12.757740 IP sp02.15771 > 235.2.127.254.15771: UDP, length 209
15:58:13.258254 IP sp02.15771 > 235.2.127.254.15771: UDP, length 209
15:58:13.758822 IP sp02.15771 > 235.2.127.254.15771: UDP, length 209
15:58:14.259383 IP sp02.15771 > 235.2.127.254.15771: UDP, length 209
15:58:14.760368 IP sp02.15771 > 235.2.127.254.15771: UDP, length 209
```

Unfortunately both outputs look the same, but if we add -A to the command line, so:

```
tcpdump -i eth0 port 15771 -Q out -A
```

We see the following:

From the MAIN Mux

```
tcpdump: verbose output suppressed, use -v or -vv for full protocol decode
listening on eth0, link-type EN10MB (Ethernet), capture size 262144 bytes
16:02:20.064957 IP sp01.15771 > 235.2.127.254.15771: UDP, length 207
E....6@.@..W.....=.=[
  "uid": "SP01",
  "groupName": "mux_mux_52_1_1",
  "startTime": 1617895607872,
  "removed": false,
  "privateData": {
    "oldest": true,
    "transmitting": true
  },
  "cc": 134
}

16:02:20.565987 IP sp01.15771 > 235.2.127.254.15771: UDP, length 207
E....]@.@..0.....=.=[
  "uid": "SP01",
  "groupName": "mux_mux_52_1_1",
  "startTime": 1617895607872,
  "removed": false,
  "privateData": {
    "oldest": true,
    "transmitting": true
  },
  "cc": 135
}

16:02:21.066788 IP sp01.15771 > 235.2.127.254.15771: UDP, length 207
E... .@.@.....=.=[
  "uid": "SP01",
  "groupName": "mux_mux_52_1_1",
  "startTime": 1617895607872,
  "removed": false,
  "privateData": {
    "oldest": true,
    "transmitting": true
  },
  "cc": 136
}
```

```
16:02:21.566860 IP sp01.15771 > 235.2.127.254.15771: UDP, length 207
E...!.@.@.....=.={
  "uid": "SP01",
  "groupName": "mux_mux_52_1_1",
  "startTime": 1617895607872,
  "removed": false,
  "privateData": {
    "oldest": true,
    "transmitting": true
  },
  "cc": 137
}
```

From the BACKUP Mux

tcpdump: verbose output suppressed, use -v or -vv for full protocol decode
listening on eth0, link-type EN10MB (Ethernet), capture size 262144 bytes

```
16:02:20.027155 IP sp02.15771 > 235.2.127.254.15771: UDP, length 209
```

```
E...j"@.@..h.....=.={
  "uid": "SP02",
  "groupName": "mux_mux_52_1_1",
  "startTime": 1617895627134,
  "removed": false,
  "privateData": {
    "oldest": false,
    "transmitting": false
  },
  "cc": 135
}
```

```
16:02:20.527548 IP sp02.15771 > 235.2.127.254.15771: UDP, length 209
```

```
E...j"@.@.....=.={
  "uid": "SP02",
  "groupName": "mux_mux_52_1_1",
  "startTime": 1617895627134,
  "removed": false,
  "privateData": {
    "oldest": false,
    "transmitting": false
  },
  "cc": 136
}
```

```
16:02:21.028483 IP sp02.15771 > 235.2.127.254.15771: UDP, length 209
```

```
E...k"@.@.....=.={
  "uid": "SP02",
  "groupName": "mux_mux_52_1_1",
  "startTime": 1617895627134,
  "removed": false,
  "privateData": {
    "oldest": false,
    "transmitting": false
  },
  "cc": 137
}
```

```
16:02:21.528890 IP sp02.15771 > 235.2.127.254.15771: UDP, length 209
```

```
E...mZ"@.@..0.....=.={
  "uid": "SP02",
  "groupName": "mux_mux_52_1_1",
  "startTime": 1617895627134,
  "removed": false,
  "privateData": {
    "oldest": false,
    "transmitting": false
  },
  "cc": 138
}
```

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