

Tugas Komunikasi Data

Penganalisa Jaringan Menggunakan Tracert

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1. Wifi unsri trial (website indonesia)

```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.16299.192]
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C:\Users\Fachrudin Abdau>tracert kompas.com

Tracing route to kompas.com [202.146.4.100]
over a maximum of 30 hops:
  0  179 ms  230 ms  446 ms  10.0.40.254
  1  92 ms  96 ms  9 ms  ip-103-208-137-249.unsri.ac.id [103.208.137.249]
  2  *  *  *  Request timed out.
  3  129 ms  73 ms  189 ms  ip-203-176-181-205.moratelindo.co.id [203.176.181.205]
  4  *  *  *  Request timed out.
  5  84 ms  210 ms  136 ms  gramedia.openixp.net [218.100.27.147]
  6  1320 ms  175 ms  237 ms  202.146.4.100
  7

Trace complete.

C:\Users\Fachrudin Abdau>
```

2. Wifi unsri trial (website luar negeri)

```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.16299.192]
(c) 2017 Microsoft Corporation. All rights reserved.

C:\Users\Fachrudin Abdau>tracert sciencedirect.com

Tracing route to sciencedirect.com [198.81.200.2]
over a maximum of 30 hops:
  0  430 ms  32 ms  20 ms  10.0.40.254
  1  964 ms  212 ms  478 ms  ip-103-208-137-249.unsri.ac.id [103.208.137.249]
  2  716 ms  *  75 ms  ip-179-53.moratelindo.co.id [202.43.179.53]
  3  76 ms  73 ms  109 ms  103.66.199.5
  4  86 ms  82 ms  112 ms  xe-11-3-0-740.cr0-sin1.ip4.gtt.net [213.254.227.217]
  5  243 ms  257 ms  231 ms  xe-1-0-4.cr3-sea2.ip4.gtt.net [89.149.130.209]
  6  285 ms  272 ms  238 ms  as3350-sea21.ip4.gtt.net [199.229.231.186]
  7  703 ms  302 ms  332 ms  4.69.209.33
  8  *  *  *  Request timed out.
  9  *  *  *  Request timed out.
  10  *  *  *  Request timed out.
  11  *  *  *  Request timed out.
  12  *  *  *  Request timed out.
  13  577 ms  423 ms  499 ms  198.185.25.248
  14  717 ms  734 ms  424 ms  xpharm.com [198.81.200.2]

Trace complete.

C:\Users\Fachrudin Abdau>
C:\Users\Fachrudin Abdau>
```

3. Wifi indihome (website Indonesia)

```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.16299.192]
(c) 2017 Microsoft Corporation. All rights reserved.

C:\Users\Fachrudin Abdau>tracert kompas.com

Tracing route to kompas.com [202.61.113.35]
over a maximum of 30 hops:

  0  1 ms    1 ms    1 ms    192.168.192.in-addr.arpa [192.168.100.1]
  1  2 ms    2 ms    1 ms    180.251.240.1
  2  2 ms    2 ms    2 ms    161.subnet125-160-14.speedy.telkom.net.id [125.160.14.161]
  3  2 ms    2 ms    2 ms    61.94.115.209
  4  12 ms   11 ms   25 ms   telkom.openixp.net [218.100.36.56]
  5  *      *      *      Request timed out.
  6  11 ms   11 ms   11 ms   kompas.openixp.net [218.100.36.67]
  7  12 ms   12 ms   12 ms   35.113.61.202.in-addr.arpa [202.61.113.35]
  8  11 ms   11 ms   11 ms   35.113.61.202.in-addr.arpa [202.61.113.35]

Trace complete.

C:\Users\Fachrudin Abdau>
```

4. Wifi indihome (website luar negeri)

```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.16299.192]
(c) 2017 Microsoft Corporation. All rights reserved.

C:\Users\Fachrudin Abdau>tracert sciencedirect.com

Tracing route to sciencedirect.com [198.81.200.2]
over a maximum of 30 hops:

  0  1 ms    <1 ms   <1 ms   192.168.100.1
  1  3 ms    2 ms    2 ms    180.251.240.1
  2  2 ms    2 ms    4 ms    161.subnet125-160-14.speedy.telkom.net.id [125.160.14.161]
  3  2 ms    *      4 ms    61.94.115.209
  4  11 ms   12 ms   12 ms   17.193.240.180.in-addr.arpa [180.240.193.17]
  5  12 ms   11 ms   11 ms   18.193.240.180.in-addr.arpa [180.240.193.18]
  6  199 ms  203 ms  216 ms  214.190.240.180.in-addr.arpa [180.240.190.214]
  7  196 ms  196 ms  197 ms  141.171.150.80.in-addr.arpa [80.150.171.141]
  8  204 ms  205 ms  203 ms  ams-sb04-1.AMS.NL.NET.DTAG.DE [62.154.15.42]
  9  *      *      *      Request timed out.
 10  *      *      *      Request timed out.
 11  *      *      *      Request timed out.
 12  *      *      *      Request timed out.
 13  *      *      *      Request timed out.
 14  *      *      *      Request timed out.
 15  *      *      *      Request timed out.
 16  271 ms  270 ms  270 ms  248.25.185.198.in-addr.arpa [198.185.25.248]
 17  272 ms  270 ms  270 ms  sciencedirect.com [198.81.200.2]

Trace complete.

C:\Users\Fachrudin Abdau>
```

5. Menggunakan Modem axis (website Indonesia)

```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.16299.192]
(c) 2017 Microsoft Corporation. All rights reserved.

C:\Users\Fachrudin Abdau>tracert kompas.com

Tracing route to kompas.com [202.146.4.100]
over a maximum of 30 hops:
  0  2 ms   1 ms   3 ms   192.168.43.1
  1  *      *      *      Request timed out.
  2  74 ms  57 ms  72 ms  10.217.245.97
  3  93 ms  94 ms  111 ms 10.195.32.222
  4  90 ms  60 ms  63 ms  112.215.125.13
  5  75 ms  72 ms  77 ms  112.215.125.2
  6  74 ms  77 ms  76 ms  112.215.81.42
  7  83 ms  *      *      tiga-0-1.openixp.net [218.100.36.2]
  8  103 ms 87 ms  100 ms 218.100.27.147
  9  97 ms  76 ms  76 ms  202.146.4.100

Trace complete.

C:\Users\Fachrudin Abdau>
```

6. Menggunakan Modem Axis (jaringan luar negeri)

```
C:\WINDOWS\system32\cmd.exe
Microsoft Windows [Version 10.0.16299.192]
(c) 2017 Microsoft Corporation. All rights reserved.

C:\Users\Fachrudin Abdau>tracert sciencedirect.com

Tracing route to sciencedirect.com [198.81.200.2]
over a maximum of 30 hops:
  0  2 ms   2 ms   2 ms   192.168.43.1
  1  *      *      *      Request timed out.
  2  68 ms  59 ms  54 ms  10.217.245.97
  3  56 ms  64 ms  57 ms  10.195.32.222
  4  75 ms  94 ms  80 ms  120.29.215.58
  5  120 ms 88 ms  71 ms  ix-ae-24-0.tcore1.SQ-Singapore.as6453.net [120.29.215.57]
  6  302 ms 303 ms 319 ms lf-ae-20-2.tcore2.SVM-Singapore.as6453.net [180.87.96.22]
  7  311 ms 312 ms 276 ms lf-ae-7-2.tcore2.LW-Los-Angeles.as6453.net [180.87.15.26]
  8  *      *      *      Request timed out.
  9  *      *      *      Request timed out.
 10 310 ms 298 ms 278 ms 4.69.209.33
 11 *      *      *      Request timed out.
 12 *      *      *      Request timed out.
 13 *      *      *      Request timed out.
 14 *      *      *      Request timed out.
 15 462 ms 403 ms 435 ms 198.185.25.248
 16 450 ms 390 ms 472 ms sciencedirect.com [198.81.200.2]

Trace complete.

C:\Users\Fachrudin Abdau>
```

Kesimpulan

1. Semakin banyak hops/latensi maka jaringan anda tidak optimal karena terlalu banyak routing dari ISP ke lokasi anda dan begitu juga sebaliknya.
2. Jika RTO (Request Timed Out) maka disana anda bisa mengetahui dimana koneksi tersebut terputus koneksi terputus.
3. Dilihat dari analisis jaringan menggunakan unsri trial lebih cepat. Karena hops nya sedikit.
4. Dilihat dari analisis website luarnegeri lebih banyak hops karena website luar negeri memiliki banyak router untuk menjalankan proses pntransferan data. Sehingga jika menggunakan website luar negeri sedikit terhambat.