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Trace Network Routes

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Q. How do I trace network routes using Windows / Linux / UNIX / BSD operating systems?

A. You can easily tracks the route packets take across an IP network on their way to a given host. It utilizes the IP protocol's time to live (TTL) field and attempts to elicit an ICMP TIME_EXCEEDED response from each gateway along the path to the host. You need to use command as per your operating systems.

[1]

[2]

Trace Network Routes Using Windows XP / Vista / Server 2003 / 2008

Use tracert command. Click on Start > Run > Type cmd and press [Enter] key. At dos command prompt enter:

```
tracert server-ip-address
tracert 202.54.1.2
tracert google.com
```

Trace Network Routes Using Linux / UNIX

Use traceroute command. Open a shell prompt, enter:

```
traceroute server-ip-address
traceroute 202.54.1.2
traceroute google.com
```

Sample output:

```
 1  sl1-dallas.xyz.org (74.11.22.33)  0.561 ms  0.765 ms  0.755 ms
 2  po102.dar01.dal01.dallas-datacenter.com (66.228.118.177)  0.969 ms  0.961 ms  1.175 ms
 3  po1.cer02.dal01.dallas-datacenter.com (66.228.118.204)  1.165 ms  1.155 ms  1.361 ms
 4  xe-7-4.r02.dllstx09.us.bb.gin.ntt.net (157.238.224.69)  1.346 ms  1.561 ms  1.550 ms
 5  te-10-1-0.edge2.Dallas3.level3.net (4.68.63.225)  1.768 ms  1.760 ms  1.738 ms
 6  vlan79.csw2.Dallas1.Level3.net (4.68.19.126)  2.191 ms vlan69.csw1.Dallas1.Level3.net
 7  ae-62-62.ebr2.Dallas1.Level3.net (4.69.136.137)  7.784 ms ae-92-92.ebr2.Dallas1.Level3.
 8  ae-6.ebr3.NewYork1.Level3.net (4.69.137.122)  35.727 ms  35.958 ms  35.950 ms
 9  ae-83-83.csw3.NewYork1.Level3.net (4.69.134.106)  36.430 ms ae-93-93.csw4.NewYork1.Leve
10  ae-4-99.edge1.NewYork1.Level3.net (4.68.16.206)  36.610 ms ae-1-69.edge1.NewYork1.Level
11  GOOGLE-INC.edge1.NewYork1.Level3.net (4.71.172.86)  49.793 ms  49.785 ms  50.003 ms
12   (72.14.236.213)  49.993 ms 216.239.43.146 (216.239.43.146)  68.671 ms  (72.14.236.213)
13  66.249.94.92 (66.249.94.92)  69.160 ms  68.988 ms 66.249.94.90 (66.249.94.90)  69.088 m
14  66.249.94.92 (66.249.94.92)  64.541 ms  (72.14.236.134)  79.013 ms 66.249.94.92 (66.249
15  66.249.94.50 (66.249.94.50)  71.474 ms  (72.14.236.130)  71.460 ms 66.249.94.50 (66.249
16  eh-in-f99.google.com (72.14.207.99)  69.652 ms  69.382 ms  69.868 ms
```

Trace Network Routes Using Mac OS X

Use traceroute command. Open a shell prompt, enter:

```
traceroute server-ip-address
traceroute 202.54.1.2
traceroute google.com
```

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