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Command Prompt
C:\Users\Julie>ping -n 10 www.ust.hk
Pinging www.ust.hk [143.89.14.2] with 32 bytes of data:
Reply from 143.89.14.2: bytes=32 time=181ms TTL=47
Reply from 143.89.14.2: bytes=32 time=180ms TTL=47
Reply from 143.89.14.2: bytes=32 time=182ms TTL=47
Reply from 143.89.14.2: bytes=32 time=182ms TTL=47
Reply from 143.89.14.2: bytes=32 time=180ms TTL=47
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Reply from 143.89.14.2: bytes=32 time=182ms TTL=47
Reply from 143.89.14.2: bytes=32 time=181ms TTL=47
Reply from 143.89.14.2: bytes=32 time=180ms TTL=47
Reply from 143.89.14.2: bytes=32 time=186ms TTL=47

Ping statistics for 143.89.14.2:
    Packets: Sent = 10, Received = 10, Lost = 0 (0% loss),
    Approximate round trip times in milli-seconds:
        Minimum = 180ms, Maximum = 186ms, Average = 181ms

C:\Users\Julie>tracert www.inria.fr
Tracing route to exp3.inria.fr [128.93.162.84]
over a maximum of 30 hops:
  0  1 ms  <1 ms  2 ms  10.0.0.1
  1  30 ms  27 ms  28 ms  tpe-76-80-232-1.dc.res.rr.com [75.80.232.1]
  2  31 ms  31 ms  30 ms  tge7-4.ycvcycaan02h.socal.rr.com [76.166.6.29]
  3  16 ms  14 ms  14 ms  agg24.pldscabx02r.socal.rr.com [72.129.38.86]
  4  19 ms  10 ms  10 ms  72-129-37-2
  5  23 ms  14 ms  21 ms  bu-ether16.tustca4200u-bcr00.thone.rr.com [66.109.64.64]
  6  104 ms  109 ms  100 ms  bu-ether14.lsanarc0yu-bcr00.thone.rr.com [66.109.6.41]
  7  98 ms  101 ms  97 ms  bu-ether16.chetluc00u-bcr00.thone.rr.com [66.109.6.226]
  8  100 ms  93 ms  110 ms  bu-ether11.chegildt87u-bcr00.thone.rr.com [66.109.6.20]
  9  99 ms  100 ms  100 ms  bu-ether21.nycny0837aw-bcr00.thone.rr.com [107.14.19.35]
 10  100 ms  99 ms  97 ms  0.ae0.pri.nyc20.thone.rr.com [107.14.17.216]
 11  93 ms  88 ms  94 ms  66.109.7.26
 12  160 ms  161 ms  161 ms  ae12-xcr1-ptl.cv.net [195.2.27.250]
 13  171 ms  160 ms  160 ms  ae5-xcr1.prp.cv.net [195.2.10.89]
 14  161 ms  163 ms  166 ms  giprenater-gu.par.cv.net [195.10.54.66]
 15  162 ms  162 ms  160 ms  tel-1-parisi-rtr-021.noc.renater.fr [193.51.177.251]
 16  161 ms  161 ms  161 ms  tel-1-inria-rtr-021.noc.renater.fr [193.51.177.107]
 17  162 ms  161 ms  162 ms  inria-rocquencourt-gi3-2-inria-rtr-021.noc.renater.fr [193.51.184.177]
 18  * * * Request timed out.
 19  163 ms  160 ms  161 ms  exp3.inria.fr [128.93.162.84]
 20

Trace complete.
C:\Users\Julie>
```

No.	Time	Source	Destination	Protocol	
Length Info					
11	17:00:01.772889000	10.0.0.10	143.89.14.2	ICMP	74
Echo (ping) request id=0x0001, seq=3/768, ttl=128 (reply in 12)					

Frame 11: 74 bytes on wire (592 bits), 74 bytes captured (592 bits) on interface 0 Ethernet II, Src: LiteonTe_al:7d:de (ac:b5:7d:a1:7d:de), Dst: Netgear_c7:80:e8 (00:22:3f:c7:80:e8)
Internet Protocol Version 4, Src: 10.0.0.10 (10.0.0.10), Dst: 143.89.14.2 (143.89.14.2)
Internet Control Message Protocol
Type: 8 (Echo (ping) request)
Code: 0
Checksum: 0x4d58 [correct]
Identifier (BE): 1 (0x0001)
Identifier (LE): 256 (0x0100)
Sequence number (BE): 3 (0x0003)
Sequence number (LE): 768 (0x0300)
[Response frame: 12]
Data (32 bytes)

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0000  61 62 63 64 65 66 67 68 69 6a 6b 6c 6d 6e 6f 70  abcdefghijklmnop
0010  71 72 73 74 75 76 77 61 62 63 64 65 66 67 68 69  qrstuvwabcdefghi
```

No.	Time	Source	Destination	Protocol	
Length Info					
12	17:00:01.953668000	143.89.14.2	10.0.0.10	ICMP	74
Echo (ping) reply id=0x0001, seq=3/768, ttl=47 (request in 11)					

Frame 12: 74 bytes on wire (592 bits), 74 bytes captured (592 bits) on interface 0

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Ethernet II, Src: Netgear_c7:80:e8 (00:22:3f:c7:80:e8), Dst: LiteonTe_al:7d:de
(ac:b5:7d:a1:7d:de)
Internet Protocol Version 4, Src: 143.89.14.2 (143.89.14.2), Dst: 10.0.0.10
(10.0.0.10)
Internet Control Message Protocol
  Type: 0 (Echo (ping) reply)
  Code: 0
  Checksum: 0x5558 [correct]
  Identifier (BE): 1 (0x0001)
  Identifier (LE): 256 (0x0100)
  Sequence number (BE): 3 (0x0003)
  Sequence number (LE): 768 (0x0300)
  [Request frame: 11]
  [Response time: 180.779 ms]
  Data (32 bytes)

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0000  61 62 63 64 65 66 67 68 69 6a 6b 6c 6d 6e 6f 70  abcdefghijklmnop
0010  71 72 73 74 75 76 77 61 62 63 64 65 66 67 68 69  qrstuvwabcdefghi

```

1. 10.0.0.10; 143.89.14.2
- 2.
3. 8; 0; Checksum, Identifier, Sequence number, Data; 2,2,2
4. 0; 0; Checksum, Identifier, Sequence number, Data; 2,2,2
5. 10.0.0.10; 128.93.162.84
6. No; 17 (according to Wikipedia)

Excerpted

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ICMP      106      Echo (ping) request id=0x0001, seq=66/16896, ttl=18 (no response
found!)
386 17:46:08.368845000 193.51.184.177      10.0.0.10      ICMP      70
Time-to-live exceeded (Time to live exceeded in transit)
393 17:46:09.402481000 10.0.0.10      128.93.162.84      ICMP      106
Echo (ping) request id=0x0001, seq=67/17152, ttl=19 (no response found!)
398 17:46:13.189448000 10.0.0.10      128.93.162.84      ICMP      106
Echo (ping) request id=0x0001, seq=68/17408, ttl=19 (no response found!)
416 17:46:17.181446000 10.0.0.10      128.93.162.84      ICMP      106
Echo (ping) request id=0x0001, seq=69/17664, ttl=19 (no response found!)
426 17:46:21.179408000 10.0.0.10      128.93.162.84      ICMP      106
Echo (ping) request id=0x0001, seq=70/17920, ttl=20 (reply in 431)
431 17:46:21.342539000 128.93.162.84      10.0.0.10      ICMP      106
Echo (ping) reply id=0x0001, seq=70/17920, ttl=43 (request in 426)
432 17:46:21.344942000 10.0.0.10      128.93.162.84      ICMP      106
Echo (ping) request id=0x0001, seq=71/18176, ttl=20 (reply in 433)
433 17:46:21.505059000 128.93.162.84      10.0.0.10      ICMP      106
Echo (ping) reply id=0x0001, seq=71/18176, ttl=43 (request in 432)
434 17:46:21.522435000 10.0.0.10      128.93.162.84      ICMP      106
Echo (ping) request id=0x0001, seq=72/18432, ttl=20 (reply in 435)

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7. Yes; A request with the same TTL is made 3 times. There are no replies until the very end because initially the TTL would expire.

No.	Time	Source	Destination	Protocol	Length	Info
337	17:46:01.638684000	195.2.10.89	10.0.0.10	ICMP	70	
Time-to-live exceeded (Time to live exceeded in transit)						

No.	Time	Source	Destination	Protocol	Length	Info
337	17:46:01.638684000	195.2.10.89	10.0.0.10	ICMP	70	Time-to-live exceeded (Time to live exceeded in transit)

Frame 337: 70 bytes on wire (560 bits), 70 bytes captured (560 bits) on interface 0
Ethernet II, Src: Netgear_c7:80:e8 (00:22:3f:c7:80:e8), Dst: LiteonTe_al:7d:de (ac:b5:7d:a1:7d:de)
Internet Protocol Version 4, Src: 195.2.10.89 (195.2.10.89), Dst: 10.0.0.10 (10.0.0.10)
Internet Control Message Protocol
Type: 11 (Time-to-live exceeded)
Code: 0 (Time to live exceeded in transit)
Checksum: 0xcbbb [correct]
Internet Protocol Version 4, Src: 10.0.0.10 (10.0.0.10), Dst: 128.93.162.84 (128.93.162.84)
Internet Control Message Protocol
Type: 8 (Echo (ping) request)
Code: 0
Checksum: 0x210e
Identifier (BE): 1 (0x0001)
Identifier (LE): 256 (0x0100)
Sequence number (BE): 53 (0x0035)
Sequence number (LE): 13568 (0x3500)

8. I don't see more fields.

9. They have data. They are actual replies from the intended destination, not error messages from an intermediate router.

10. The last 7 are significantly longer than the initial links; The last 4 are significantly longer than the initial links; France, (.fr)