



## Testing Throughput Using Test TCP (TTCP)

The Test TCP utility (TTCP) is used to measure TCP throughput through an IP path. This utility is effective in determining the actual bit rate of a particular WAN or modem connection. This feature is also used to test the connection speed between any two devices with IP connectivity between them.

For information on the commands for configuring TTCP, see the *TTCP Commands* module in the *Cisco ASR 9000 Series Aggregation Services Router System Monitoring Command Reference* guide.

### Feature History for Implementing TTCP Utility

Release	Modification
Release 5.2.2	This feature was introduced.

- [Using Test TCP \(TTCP\) to Test Throughput, on page 1](#)

## Using Test TCP (TTCP) to Test Throughput

You can use the Test TCP utility (TTCP) to measure TCP throughput through an IP path. In order to use it, start the receiver on one side of the path, then start the transmitter on the other side. The transmitting side sends a specified number of TCP packets to the receiving side. At the end of the test, the two sides display the number of bytes transmitted and the time elapsed for the packets to pass from one end to the other. You can then use these figures to calculate the actual throughput on the link.

Since it is most common to evaluate connect speeds in kbps (kilobits per second, or 1000 bits per second) rather than kbps (kilobytes per second, or 1024 bytes per second), we must use the information from TTCP to calculate the bit rate (in kbps). Use the number of bytes received and the transfer time to calculate the actual bit rate for the connection. Calculate the bit rate by converting the number of bytes into bits and then divide this by the time for the transfer. For example, if the host received 409600 bytes in 84.94 seconds, you can calculate the bit rate to be (409600 bytes \* 8 bits per byte) divided by 84.94 seconds=38577 bps or 38.577 kbps.

