

RSV Network Specifications

This application has the following network requirements for the network connection between :

- Bandwidth: 70-80 Mbps (Peak Bandwidth)
10 Mbps (Average Bandwidth)
- Latency: Less than 100ms
(One-Way latency from Client PC to RSV server)
- Packet Loss: Less than 1%
- Network Jitter: No special requirements
- Multicast Required

Bandwidth:

A network connection of 100Mbps between Client and Server should be enough to satisfy the bandwidth requirements. Stanford and University of Wisconsin Servers are connected to the network through a Gigabit Ethernet (1000Mbps) Network Interface Card (NIC) . Therefore the bottleneck between any client PC and the server should be located at the Client PC (If the NIC is fast Ethernet or lower) or at some point along the network pipe that connects client and server. The recommendation will be to have a

Internet2 network connections are usually high speed and won't be a concern. In case of public internet, it is desirable to have a network connection of 100 Mbps from the user's facility to the ISP.

Latency:

Long Distance Connections (within the U.S) normally satisfy the latency requirement. In case of international connections this requirement should be checked by using ping commands from the user's PC to the Server (remember that ping measures round-trip delay so you should divide the ping delay by two). The one-way delay that we measured between Stanford and Australia is in the order of 100ms.

Packet Loss:

Packet loss is dependant on the amount of traffic or congestion that the network connection between client and server might experience. Bottlenecks usually contribute to increased levels of packet loss. One way to get around bottlenecks and congestion (If the network connection between client and server is known to experience congestion), is to use the connection on off-peak hours. Network Administrators at the local network and the transport network (i.e. ISP, Internet2) should be able to advise on the best times of the day where there is low bandwidth utilization in the connection.