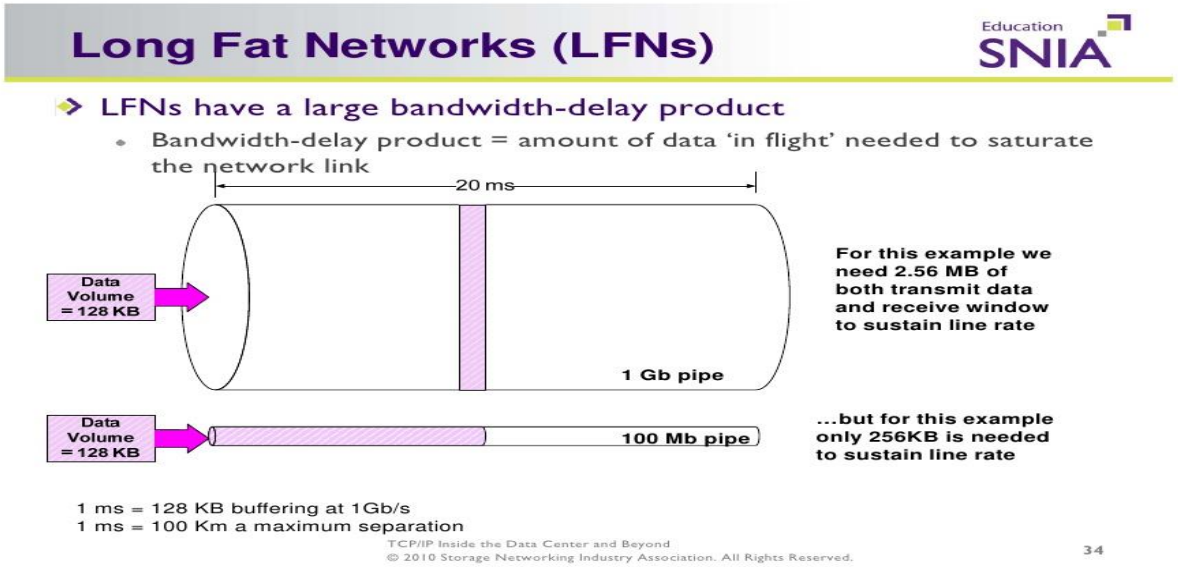
TCP Window Scaling

The TCP Window Scaling feature adds support for the Window Scaling option in RFC 1323, TCP Extensions for High Performance.

A larger window size is recommended to improve TCP performance in network paths with large bandwidth-delay product characteristics that are called Long Fat Networks (LFNs).

$$capacity\ (\text{bits}) = bandwidth\ (\text{bits/sec}) \times round\text{-}trip\ time\ (\text{sec})$$

and called this the bandwidth–delay product. This is also called the size of the pipe between the end points.



The TCP Window Scaling enhancement provides that support.

The window scaling extension in Cisco IOS software expands the definition of the TCP window to 32 bits and then uses a scale factor to carry this 32-bit value in the 16-bit window field of the TCP header.

The window size can increase to a scale factor of 14. Typical applications use a scale factor of 3 when deployed in LFNs.

The TCP Window Scaling feature complies with RFC 1323.

The larger scalable window size will allow TCP to perform better over LFNs.

Use **the ip tcp window-size** command in global configuration mode to configure the TCP window size.

In order for this to work, the remote host must also support this feature and its window size must be increased.