User Datagram Protocol, or UDP, is a connectionless transport level version of IP. UDP is a simple protocol that does not attempt to regulate flow, control errors, or retransmit data. Instead, each datagram transmitted via UDP has the full address of the recipient and it is the job of the receiver to sequence and rebuild the data for use by applications (Pessach, n.d.).

In order to ensure reliable data transmission and correctly sequenced data delivery, a stop-and-wait protocol can be implemented between the client and server. Specifically, if too many requests are made of the server, such that the server will be bogged down, the server will simply reject or ignore some of the requests (Pessach, n.d.). **Unfortunately, this the the basis of a Denial of Service Attack**.

In a Denial of Service Attack, the attacker sends many dummy requests to a server (Pessach, n.d.). By doing so, the server will necessarily begin dropping messages as they are being received too quickly. As a result of the flood of invalid messages, many valid messages will be dropped or ignored. DoS attacks can effectively cripple communications between client and server using UDP to transmit data.

References

Pessach, Y. (n.d.). “Take Total Control of Your Networking With >NET and UDP.” Retrieved from <http://msdn.microsoft.com/en-us/magazine/cc163648.aspx>