The theory behind this guide is that by eliminating/reducing fragmented network packets you will achieve a more stable connection to Combat Box, which means less chance of getting disconnected and experiencing other side-effects, for example lag and (speculative) planes being invisible for short periods.

What is packet fragmentation?

IP fragmentation is an internet protocol process that breaks packets into smaller pieces (fragments), so that the resulting pieces can pass through a link with a smaller maximum transmission unit (MTU) than the original packet size. The fragments are reassembled by the receiving host.

**Why do I need to do this for Combat Box and not the other servers I play on?**

If you live outside of the USA most of the servers you play on are probably much closer to you than Combat Box, which is hosted in a New York data centre. The network traffic between you and the Combat Box server may typically be going though many more links compared to other servers, raising the chances that one or more of them may not support the packet length you're sending to Combat Box, and they will be fragmented.

Follow these steps to optimize your MTU packet size:

1. Open an administrator command prompt:
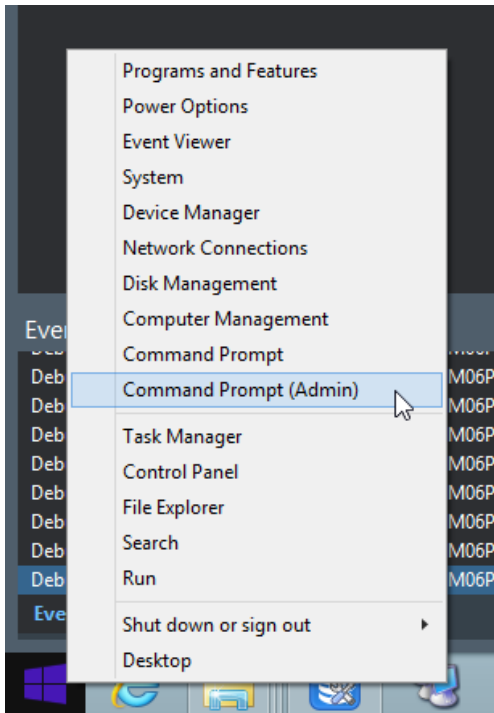
2. Type in: **ping boxy2.combatbox.net -f -l 1492**
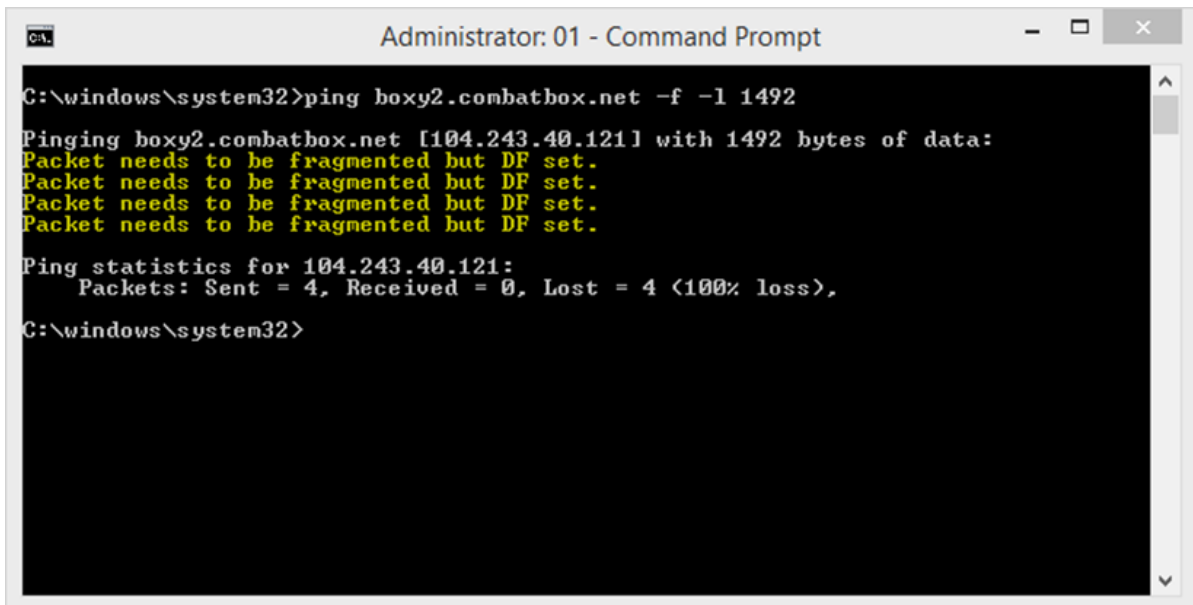
3. We need to find the largest packet size that does not cause fragmentation. If you don't see lines containing "Packet needs to be fragmented but DF set" you are done. If not, repeat the above command, lowering the size of the packet in increments of +/-10 (e.g. 1472, 1462, 1440, 1400) until you have a packet size that does not fragment. Begin increasing the packet size from this number in small increments until you find the largest size that does not fragment. Add 28 to that number (for the IP/ICMP headers) to get the optimal MTU setting. For example, if the largest packet size from your ping tests is 1462, add 28 to get a total packet size of 1490 which is the optimal MTU setting.

4. We need to find the name of your network interface. Enter the following command:

   netsh interface ipv4 show subinterfaces

   This should output your interfaces and current MTU size:

   Remember the interface name as you will need it to change the MTU size (For my example it is Ethernet).

5. Type the following command and substitute "Ethernet" for your interface name and "new MTU size" with the value you determined in step 3:

   netsh interface ipv4 set subinterface "*Ethernet*" mtu=*new MTU size* store=persistent

6. Reboot your PC.