

---

Subject: Refresher course on lag and its causes  
Posted by [Crimson](#) on Mon, 08 Aug 2005 19:33:50 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

There are four factors of lag. If you don't know this already (most do know), press F8 or ~ and type "fps" and press enter. Your FPS, SFPS, KBPS, and PING will appear on the screen.

FPS: A product of your own system. A combination of processor, RAM, and Video card. When there are more players in the game, there are more people to keep track of and even if your modem is downloading enough information, your computer still has to process it, store it in RAM, and your video card has to draw the screen.

Most players will find 20FPS or higher playable for Renegade. If you have an nVidia card, you'll want to download nvRefresh Tool at <http://www.majorgeeks.com/download.php?det=1457> to increase your refresh rate in-game to 85 which will also move your FPS's maximum to 85.

SFPS: This is strictly a product of the server. The Renegade FDS has a maximum FPS of 60 though you will sometimes see 61 and 62. When there are a lot of players and vehicles, this number can drop, depending on the power of the system running the game. If it's a dedicated server (most are) the RAM and CPU are the only factors. The FDS generates text only so the video card isn't a factor.

KBPS: This is a huge indicator of lag. This can be caused by the server OR the player. It's an indicator of how much information you are receiving from the server. If you don't receive enough updates from the server, you and other players will lag. You will "ice-skate" and players will run into walls, then warp back into their right location.

Causes of KBPS lag:

- The server isn't configured to send enough bandwidth out - Edit server.ini to either auto-detect or use a fixed amount high enough. A 24 player server uses about 2300 kbps on average.
  - The server can't send enough data. Example, my cable modem at home is only allowed to send out 256 kbps. If I try to host 24 players at home, I won't be able to send out the 2300 that you need and you will warp.
  - WOL sucks and your bandwidth capability was auto-detected too low. Solutions: On the screen where it says "Quick Match" / "Advanced Game Listings", "Chat", move your mouse to the left and pick "My Information". Set your connection to something matching what you have instead of auto-detect. Usually this will stop any problems you have and your KBPS will be sufficient.
- Or, you can manually set your bandwidth budget in-game. Press F8 or ~ and type "sbbo <number>" where <number> is your bandwidth download capability. To find your best number, do this:

\* Go to <http://www.dslreports.com/stest>

\* Choose a location and follow the instructions to test your line speed.

\* Your results will read something like this (yours will probably be a lot less because I was at work when I ran this):

Your download speed : 5610362 bps, or 5610 kbps.

A 684.8 KB/sec transfer rate.

\* The "bps" number is theoretically your maximum download rate. Remove the last digit and round it to a nice even number (I would use 550000 on my results). This is your optimum bandwidth

setting. Press F8 or ~, type "sbbo 550000" and press Enter. If your KBPS was too low before, you might see the KBPS increase each second up to the amount the server can send you.

--- Just like a server, if you have a limit on your kbps (like 56k modem), you won't be able to pull down the necessary bandwidth for a lag-free game.

Now that you know this, you can now understand why 56k people don't lag a server. When you connect to the server, you tell it "I can handle 150000 kbps so lay it on me" and the server says "ok dude". It puts together 150000 kb per second and sends it to you. The 56k guy comes on and he says "Go easy on me I can only get 32000 kbps" and the server says "ok dude". So the server puts together 32000 kb per second and sends it to him. The server doesn't have to wait for the 56k guy's updates before you are sent yours. He might warp on your screen as his updates come in late, but he won't make everyone lag, and he won't make you lag. You and the server deal with your lag independently of the other players.

PING: Ping is a pretty easy factor. Rarely is ping lag caused by you OR the server. It's usually some router between you and the server that's busy. Most players won't notice ping lag until it's about 300+. High ping is sometimes caused when your little brother is leeching on Kazaa and taking all your bandwidth, and could be caused by the server being too busy to respond to pings (which usually means the SFPS is extremely low as well). Determining the cause of ping lag is beyond the scope of this post, and usually there's nothing you can do except find another server to play on.

I hope this helps you understand lag and stop blaming it on the host when it's not warranted.

---

---

Subject: Re: Refresher course on lag and its causes

Posted by [Dave Mason](#) on Mon, 08 Aug 2005 21:14:28 GMT

[View Forum Message](#) <> [Reply to Message](#)

---

Well said. Nothing irritates me more on Renegade than people whinging that "those n00b 56kers are lagg1ng t3h server".

This should be a sticky. Maybe in tech support too for people who complain about lag (forgive me if it is already there I havn't been to that forum yet).

Anyway, what possessed you to write this? Was somebody complaining about lag and blaming it on you?

---

---

Subject: Re: Refresher course on lag and its causes

Posted by [Crimson](#) on Mon, 08 Aug 2005 21:18:58 GMT

[View Forum Message](#) <> [Reply to Message](#)

---

I was looking for an old post and came across it, so I decided to update and repost it.

---

---

Subject: Re: Refresher course on lag and its causes  
Posted by [Aprime](#) on Mon, 08 Aug 2005 22:21:02 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

DJM wrote on Mon, 08 August 2005 17:14 Well said. Nothing irritates me more on Renegade than people whinging that "those n00b 56kers are lagg1ng t3h server".

I thought they actually did back a few years ago because of the shared lag and performance in games like Red Alert 2 and Tiberian Sun, but then I found out it wasn't the case in Renegade.

---

Subject: Re: Refresher course on lag and its causes  
Posted by [danpaul88](#) on Mon, 08 Aug 2005 22:27:08 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

actually ren has no limit on your max FPS...I changed my monitors refresh rate from 60 to 70 and my FPS in renegade also went up to 70...although it also increased my SFPS

\*Edit: Didn't read the part about FDS only\*

---

Subject: Re: Refresher course on lag and its causes  
Posted by [Renx](#) on Mon, 08 Aug 2005 22:51:14 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

Dedicated servers have a limit of 60FPS. Non-dedicated servers have the same FPS as the whoever is hosting it.

---

Subject: Re: Refresher course on lag and its causes  
Posted by [danpaul88](#) on Mon, 08 Aug 2005 22:55:30 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

Oh rite, I should read things more carefully

---

Subject: Re: Refresher course on lag and its causes  
Posted by [terminator 101](#) on Tue, 09 Aug 2005 20:13:30 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

Crimson wrote on Mon, 08 August 2005 15:33 Most players will find 20FPS or higher playable for Renegade. If you have an nVidia card, you'll want to download nvRefresh Tool at <http://www.nvrt.org/> to increase your refresh rate in-game to 85 which will also move your FPS's maximum to 85.

Where on that website is a dowlad link for the nvRefresh Tool? I don't see one.

---

---

Subject: Re: Refresher course on lag and its causes  
Posted by [Renx](#) on Wed, 10 Aug 2005 03:55:42 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

Looks like the domain expired.

---

Subject: Re: Refresher course on lag and its causes  
Posted by [Kanezor](#) on Wed, 10 Aug 2005 06:19:16 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

Crimson wrote on Mon, 08 August 2005 13:3356k people don't lag a server.  
I just can't help but reiterate that. Every time I see someone say something like that, I have to keep myself from going on and on about the exact things you've already said in your post. I even wrote a small document months ago explaining the difference between latency (ping) and bandwidth, which is a source of another common confusion.

[http://linkware.clan-mac.com/kanebot/misc/bandwidthvslatency .txt](http://linkware.clan-mac.com/kanebot/misc/bandwidthvslatency.txt)

---

Subject: Re: Refresher course on lag and its causes  
Posted by [Goztow](#) on Wed, 10 Aug 2005 06:36:59 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

Can I mirror this?

---

Subject: Re: Refresher course on lag and its causes  
Posted by [Crimson](#) on Wed, 10 Aug 2005 09:19:43 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

<http://www.majorgeeks.com/download.php?det=1457>

I should have checked the link, sorry.

Yes, you can mirror this. It serves all of us for people to understand this.

---

Subject: Re: Refresher course on lag and its causes  
Posted by [icedog90](#) on Thu, 11 Aug 2005 02:04:39 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

Crimson wrote on Mon, 08 August 2005 14:33Most players will find 20FPS or higher playable for Renegade. If you have an nVidia card, you'll want to download nvRefresh Tool at <http://www.majorgeeks.com/download.php?det=1457> to increase your refresh rate in-game to 85

which will also move your FPS's maximum to 85.

Or better yet, just disable vertical sync and your FPS reaches its actual maximum (usually above 100 if your computer doesn't suck). However, it's impossible to notice the difference, so the only point in doing that is to show off to your friends, which is also completely useless.

---

Subject: Re: Refresher course on lag and its causes  
Posted by [terminator 101](#) on Thu, 11 Aug 2005 21:29:32 GMT  
[View Forum Message](#) <> [Reply to Message](#)

Crimson wrote on Wed, 10 August 2005  
05:19<http://www.majorgeeks.com/download.php?det=1457>

I should have checked the link, sorry.

Yes, you can mirror this. It serves all of us for people to understand this.

It is only for 2000/XP

Oh well. Then I suppose it is not needed for Win 98.

---

Subject: Re: Refresher course on lag and its causes  
Posted by [Dave Anderson](#) on Thu, 11 Aug 2005 22:27:33 GMT  
[View Forum Message](#) <> [Reply to Message](#)

I got that NvRefresh tool...but I get an error and it will not run. There is nothing in the help about it but I get a "No compatible Detonator version found". Is there a way around this? Also I have tons of Windows services turned off so is there a certain one that needs to be on?

---

Subject: Re: Refresher course on lag and its causes  
Posted by [mrpirate](#) on Fri, 12 Aug 2005 01:50:14 GMT  
[View Forum Message](#) <> [Reply to Message](#)

You have an ATI video card, genius.

---

Subject: Re: Refresher course on lag and its causes  
Posted by [Dave Anderson](#) on Fri, 12 Aug 2005 06:14:32 GMT  
[View Forum Message](#) <> [Reply to Message](#)

OH...I just figured that out...NV as in Nvidia...OOOPS.

Subject: Re: Refresher course on lag and its causes  
Posted by [icedog90](#) on Fri, 12 Aug 2005 21:26:23 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

Just take my advice since you have an ATi card, Deadfive.

---

Subject: Re: Refresher course on lag and its causes  
Posted by [Dave Anderson](#) on Fri, 12 Aug 2005 22:50:54 GMT  
[View Forum Message](#) <> [Reply to Message](#)

---

I plan to.

---