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# Gaming Performance

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3 min read

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These settings are aimed at reducing latency and increasing performance at the cost of sacrificing image and rendering quality.

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Depending on the game you're playing, you may be able to increase the image and rendering quality without introducing latency or letting your framerate drop too much.

## NVIDIA & G-SYNC

[References & Further Reading](#)[3D Settings > Manage 3D Settings](#)

- Ambient Occlusion: Off
- Anisotropic filtering: Application-controlled or Off

- Anti-aliasing - FXAA: Off
- Anti-aliasing - Gamma correction: On/Off
- Anti-aliasing - Mode: Application-controlled or Off
- Anti-aliasing - Transparency: Off
- DSR - Factors: Off
- Low Latency Mode: Ultra
- Max Frame Rate: Limit to 3 frames below the max refresh rate of your monitor
- Monitor Technology: G-SYNC (if available)
- Multi-Frame Sampled AA (MFAA): Off
- Preferred refresh rate: Highest available
- Texture filtering - Anisotropic sample optimization: On (set to Off if you see "shimmering on objects")
- Texture filtering - Negative LOD bias: Allow
- Texture filtering - Quality: Performance
- Texture filtering - Trilinear optimisation: On
- Threaded optimisation: Auto
- Triple buffering: Off
- Vertical sync: Off
- Virtual Reality pre-rendered frames: 1 (minimum). If CPU seems to be struggling, try setting to 2 and see if framerate is smoother without introducing input lag.

If you own a G-SYNC monitor, you can set the following so you don't see any tearing but at the cost of introducing some latency (not recommended):

- Vertical sync: On
- Lower Latency Mode: Ultra
- In-game if available: NVIDIA Reflex Low Latency to On

## Display > Change Resolution

- Ensure the **Refresh rate:** is set to your highest possible Hz

## Display > Set up G-SYNC

- Tick **Enable G-SYNC, G-SYNC Compatible**
- Then, choose either **Enable for windowed and full screen mode** (recommended) or **Enable for full screen mode**

## Power and Sleep settings

- Use the High Performance plan if possible
- Check Processor Power Management
  - Minimum processor state: **100%**
  - System cooling policy: **Active**
  - Maximum processor state: **100%**

If you want to use more efficient power settings, you can disable the core parking by using an application such as Park Control

## In-Game

- If your game supports it, set NVIDIA Reflex Low Latency to On / On + Boost. This is even more effective setting NVIDIA Ultra Low Latency (NULL) in the NVIDIA Control Panel, and will take precedence if enabled.
- Always choose Fullscreen mode over Windows Full Screen or Windowed; windowed modes increase latency, sometimes over double the latency of full screen mode on lower refresh rates.
- Disable Vertical Sync

## Windows

- Enable Gaming Mode by going to Settings > Gaming > Game Mode (this is normally on by default)
- In System > Display > Graphics, you can ensure that your games are set to High Performance GPU mode.



## References & Further Reading

- <https://www.blurbusters.com/gsync/gsync101-input-lag-tests-and-settings/14/>
  - [Mouse Click Latencies](#)
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## Comments

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