

## Wirecast 16.0.2 Release Notes

### System Requirements

	<b>Minimum</b>	<b>Recommended</b>
<b>Operating System</b>	Windows 10 1809 or higher, Windows 11 21H2, macOS Ventura 13 or higher	Windows 10 22H2, macOS Sonoma 14
<b>Processor</b>	Intel® 6th Generation <sup>1</sup> or newer CPU <sup>2</sup> – or AMD Ryzen™ 1000 Series or newer CPU <sup>2</sup> ; Apple M1 or newer	Intel® 7th Generation <sup>1</sup> or newer CPU – or AMD Ryzen™ 3000 Series or newer; Apple M1 or newer
<b>Memory</b>	8GB RAM	16GB+ RAM; Apple silicon: 16 GB of unified memory
<b>Hard Drive</b>	7200 RPM for record to disk	Solid State Drive (SSD)
<b>Graphics Card</b>	Intel HD <sup>3</sup> , 2 GB video memory, DirectX 11 capable; Apple Silicon: 8 GB of unified memory	Dedicated Nvidia GeForce, 4GB+ video memory, DirectX 12 capable; Apple Silicon: 16 GB of unified memory
<b>Internet bandwidth:</b>	Recommended: Total bitrate needed x 2 = recommended upload bandwidth	
<b>Network ports</b>	<p>You may want to check that the following ports are open for traffic on your network:</p> <ul style="list-style-type: none"> <li>80 (HTTP/HTTPS),</li> <li>443 (SSL),</li> <li>1935 (RTMP),</li> <li>2935 (RTMPS),</li> <li>3478 (STUN/Rendezvous),</li> <li>5349 (STUN/Rendezvous),</li> <li>5353 (mDNS for NDI sources),</li> <li>5960-59xx (NDI port range, 1 port per each NDI source in use),</li> <li>7272 (Remote Desktop Presenter),</li> <li>8789 (Internal Services),</li> <li>49152-65535 (WebRTC Media/Rendezvous – selected at random).</li> </ul> <p>If you are behind a firewall, check with your streaming destination for any sites you may need to whitelist.</p>	

<sup>1</sup>[How to check the generation of your Intel processor](#)

<sup>2</sup>May be insufficient for 1080p+ or 60 fps workflows.

<sup>3</sup>Insufficient for advanced Multiviewer workflows.

### Languages Supported:

- English
- Brazilian Portuguese
- Korean
- French
- German
- Chinese (Simplified)
- Czech
- Spanish
- Italian
- Japanese
- Dutch
- Swedish

***Add-ons:***

- **Remote Desktop Presenter** - Please use the Remote Desktop Presenter version 2.0.8, available as a separate download from Telestream: [www.telestream.net/dtp](http://www.telestream.net/dtp)

## **Best Practices**

### **Minimum Required Upload Speed:**

- It is recommended that an upload speed rate of at least double the selected video bitrate be available, especially for a total target bitrate of 10Mbps (Megabits per second) or less, or when there are multiple outgoing streams.
- Upload speed can be tested at a website such as [TestMy.net/upload](https://TestMy.net/upload).
- Additional tasks that can consume upload bandwidth on the network should also be considered when determining how much of the available upload bandwidth can be allocated towards streaming.

### **Rendezvous**

Wirecast Rendezvous uses WebRTC technology that can be very resource intensive. For the best experience, we suggest considering the following table when choosing hardware:

	<b>Studio (2 guests + 1 host)</b>	<b>Pro (7 guests + 1 host)</b>
<b>Bandwidth<sup>4</sup></b>	Add 4 Mbps	Add 5+ Mbps <sup>5</sup>
<b>Processor<sup>4</sup></b>	i5 quad-core <sup>6</sup>	i7 quad-core <sup>6</sup>

<sup>4</sup> Based on a single simultaneous stream of 720p30 x264 @ 4.0Mbps.

<sup>5</sup> Bandwidth per guest will scale downwards as more are added to maintain reliability.

<sup>6</sup> Minimum recommended processor with example stream<sup>4</sup>. More demanding workflows may require a more capable CPU.

See our [Rendezvous Best Practices Guide](#) for more information.

### **ISO Recording:**

- Solid State Drive or fast RAID array recommended for ISO Recording and Replay functionality.
- Actual data rates will vary depending on quality level selected for ProRes or x264, as well as the resolution and frame rate selected.
  - For ProRes recording please refer to [Apple's ProRes data rate specifications](#).
- Total expected data rate should be compared to available disk write speed to ensure adequate disk throughput.

***Failure to ensure the available disk write speed is greater than the highest expected total data rate may result in frames being dropped from recordings (ISO, Replay, and Record-to-Disk).***

See our [ISO Recording Guide](#) for more information.

## **Best Practices (cont.)**

### **Hardware accelerated encoding requirements:**

- Intel Quick Sync Video encoding requires an Intel CPU with an Intel® QuickSync Video core.  
[List of Intel CPUs supporting QuickSync](#)
- NVIDIA NVENC encoding requires an NVidia GPU with Kepler architecture or newer.  
[NVIDIA only maintains a general list of supported GPUs](#)
- Apple Hardware Accelerated H.264 encoding requires a Mac with an integrated Intel GPU\*.  
*\*This may change in the future, as the Apple API decides what hardware acceleration method is to be used. At the time of this writing, only Quick Sync via an Intel GPU is supported.*

### **High frame-rate streaming (60fps):**

- High frame-rate streaming will result in increased CPU usage and require a higher bitrate (4Mbps or higher) for a quality encode.
- Simply switching to a higher framerate without ensuring the CPU and bitrate are sufficient may result in a lower quality encode.

### **CPU Usage:**

- Consider lowering your canvas frame rate and/or streaming resolution to lower CPU usage.
- Maintained system CPU usage greater than 60% will increase the likelihood of dropped frames.

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## Wirecast 16.0.2

### Features and Improvements:

- **Zoom App Store:** Login to your Zoom account with Wirecast to bring in multiple HD Callers. You can now find Wirecast in the Zoom App Store.

### Bug Fixes:

- **WC-374:** Streamlined subscription upgrade workflow for users with an existing serial license.
- **WC-372:** Fixed a crash on macOS with certain sources.
- **WC-363:** Fixed shortcuts for Clock Source.

## Wirecast 16.0.1

### Bug Fixes:

- **WC-353:** Fixed a crash on exit on macOS.
- **WC-352:** Fixed a crash on launch on Windows.
- **WC-350:** Fixed an issue that caused the Welcome Window to never load on slower Intel machines.
- **WC-348:** Removed the license tab from Preferences when using a subscription.

## Wirecast 16.0.0

### Features and Improvements:

- **Virtual Assistant:** Our new Virtual Assistant is here to help answer any questions. Simply type your questions in the chat and let the assistant show you the way.
- **Zoom Integration:** We have integrated Zoom into Wirecast. Now you can have the production power of Wirecast for your Zoom call.
- **Video Filters:** Have fun with your stream by adding a couple of our new video filters.
- **SRT Source:** Deliver the best quality and low latency video with SRT Source now in Wirecast.
- **Hardware accelerated NVENC encoder for SRT output:** Users will now be able to leverage the NVENC encoder for SRT output to decrease CPU usage and enjoy a smoother streaming experience.

### Tech updates:

- Update Virtual Camera on macOS to use new system extension API. This should improve compatibility with apps on macOS only. Users must allow this in System Settings.
- Stream Delay rework. See WIRE-19132/WIRE-17635.
- Update NDI SDK to 5.5.4.

### Bug Fixes:

#### Many more bug fixes included. Too many to list here!

- **WIRE-21710:** Fixed a rare crash with the Multiviewer on Windows.
- **WIRE-21583:** Fixed an audio issue with the Web Page source.
- **WIRE-21552:** Fixed a border issue with MS-Teams NDI sources.

- **WIRE-21474:** Fixed an issue where the Blackmagic output would not start the first time after the machine was power cycled.
- **WIRE-21001:** Fixed a hang when closing a document with a Remote Desktop Presenter source.
- **WIRE-20873:** Fixed a crash when running Wirecast in certain locales on Windows.
- **WIRE-20376:** Fixed stinger transitions don't render properly on Windows with D3D11 rendering engine.
- **WIRE-20312:** Fixed shot icons pixelated with certain Intel GPUs with the D3D12 rendering engine.
- **WIRE-19714:** Fixed using a Matte on a Chroma Key layer causes the layer to become transparent.
- **WIRE-19499:** Fixed a problem when sending two layers containing the exact same video file live simultaneously.
- **WIRE-18453:** Fixed inaccurate Facebook viewership count.
- **WIRE-18351:** Fixed an issue where NDI sources could randomly freeze.
- **WIRE-18301:** Fixed several problems with RTMP connections to YouTube.
- **WIRE-16023:** Fixed animations in Web Page sources aren't rendering at max frame rate.
- **WIRE-13782:** Fixed an issue with the Output Statistics RAM metric.
- **WIRE-7455:** Fixed stream delay only works when audio encoding is enabled.

