

the importance of a reliable  
**video conferencing tool**  
cannot be overstated

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# Video Conferencing Solutions

# MEETING THE FUTURE: VIDEO CONFERENCING CONTINUES TO GROW AND EVOLVE

By *Steve Nathans-Kelly*

**2023** found the media and entertainment market that dominates so much of the streaming conversation in a state of transition, with industry pundits far and wide heralding the “end of peak TV.” Actors’ and writers’ guild strikes had much to do with it, as did streaming stock declines and austerity moves like premium streamers adding ad tiers and cracking down on password sharing for short-term, shore-up gains. As scripted programming showed the steepest decline, entertainment streaming’s pandemic-era peak became officially a thing of the past.

But the outlook for enterprise video and video conferencing in particular followed different trendlines, with the work culture shifts ushered in by COVID-19 continuing to drive growth in video conferencing. A Video Conferencing Global Market Report published by The Business Research Company in January 2024 projected an increase in global market value from \$7.01 billion in 2023 to \$7.62 billion in 2024, a CAGR of 8.8%. Year-over-year growth is expected to increase to 9.5% over the next four years, with the market growing to \$10.96 billion in 2028. Other projections show the market’s growth reaching \$22.26 billion by 2032, representing a CAGR of a whopping 12.3%.

Data collected by Owl Labs suggests that the increased reliance on virtual meetings and video conferences is not simply a by-product of widespread digital transformation, or simply a compromise rendered acceptable by other advantages of remote work operations. According to Owl Labs’ findings, more than 70% of employees say it’s both easier and less stressful to present to a group in remote meetings, and two-thirds of respondents say remote meetings are “just as productive” as meetings held in person, while only 15% consider remote meetings less productive.

What’s more, the lion’s share of these responses reflects the state of video conferencing of tools in 2021 or 2022, without regard for more recent innovations that promise to enhance the video conferencing experience, increase the value of remote meetings,

and further differentiate them from their on-site counterparts as these features are more widely implemented. Most of these innovations are AI-powered, including:

- live transcription and translations
- editable notes
- post-meeting summaries and action items/to-do lists
- video highlights and auto-generated topics and keywords for more efficient recording review
- meeting analytics to improve productivity for future meetings
- background blur and privacy enhancements
- auto-centering and face detection
- and improved voice tracking and even multicamera management to level the playing field between on-site participants who may be scattered throughout a conference room and those joining from home offices who are generally better framed and considerably closer to their camera and mic.

The virtually overnight shift to virtual meetings caught nearly everyone by surprise in March 2020, and although key players in video conferencing had been developing its underlying technology and evolving their solutions for years, many businesses who began deploying it for the first time in the pandemic may well have considered it a temporary or stopgap measure. In the intervening years, video conferencing has demonstrated its staying power again and again, and ongoing innovations only underscore its indispensability.



# Unlocking Seamless Conferencing With Circle on Ant Media Server: A COMPREHENSIVE OVERVIEW

In the ever-evolving landscape of online meetings, classes, and webinars, the importance of a reliable video conferencing tool cannot be overstated. With the onset of the COVID-19 pandemic, the demand for efficient streaming solutions skyrocketed, and the transition to remote work became a new norm that persisted even after the pandemic subsided.

[Ant Media Server](#), a real-time scalable [WebRTC streaming server](#), has been providing all the necessary infrastructure for such a conferencing solution for some time. Now, on top of Ant Media Server, Ant Media team has created a complete conferencing solution as a new project called [Circle](#).

## MEET ANYWHERE WITH ON-PREMISE POWER

Circle provides the freedom to host meetings on your own servers, ensuring the utmost [security](#) within your company's infrastructure. This level of control adds an extra layer of safety to your virtual meetings, offering peace of mind for sensitive discussions. You can handle all internal online [meetings](#), trainings or [webinars](#) with Circle.

For some countries, due to regulatory requirements, hosting your data within the country has become a necessity. In such cases, streaming services that offer solutions may not be a feasible option. However, [Circle](#) addresses this challenge seamlessly with its straightforward installation process and hosted structure.

Lastly, hosting your conferencing solution is always [cost effective](#) compared to using a streaming service. Circle is totally free and open source. If you are already an Ant Media Server user, you can install Circle on your server as free.

## NO LIMITS, JUST SCALE

[Scalability](#) is a crucial aspect of video conferencing solutions, and Circle provides you a highly scalable solution. It seamlessly manages large groups, accommodating even hundreds of participants for a smooth conversation. Through server-side and client-side performance adjustments, Circle effortlessly adapts to

high loads, providing customizable configurations to fit your CPU or bandwidth limitations.

With [automated](#) or manual controls over layout and stream properties (like resolution, fps, bitrate), Circle provides a good user experience even with limited resources or bandwidth on users environment.

## MERGE ROOM INTO A SINGLE STREAM

[Merging streams](#) of the participants into a unified stream is one of the most required features for some applications—for example, in webinars or panels with a limited number of presenters but a very high number of viewers. Having a consolidated stream for a room allows easy distribution to a wide audience. Also playing a single stream saves resources both on server and client side.

## SESSION RECORDING

[Recording](#) live sessions is one of the most important features for a conferencing solution. For instance, in online education settings, lecturers want to record the lecture for the future and for use by students who can't attend the lecture. Circle provides a built-in session recording feature that you can enable with a single click. You can start recording for the room anytime.

When you start recording a session, Circle will create a merged stream and record that single stream so that one can access the whole session by playing a single [video file](#).

Upon completing the recording, you can choose to [store](#) it on the server or upload it to cloud storage services.

## MAKE IT YOURS WITH OPEN SOURCE

Circle is an [open-source](#) project, providing the flexibility to explore and modify the code according to your specific needs or innovative ideas. Take advantage of the customizable nature of Circle, allowing your team to tweak the platform, add your logo, and implement unique features tailored to your style.

By customizing Circle, you can handle different [use cases](#) like online meetings, webinars, and online education projects easily.



## ALL THE BASICS, PLUS MORE

Circle encompasses a robust array of features commonly found in traditional conference tools, while also boasting a range of unique functionalities exclusive to its platform. Among these distinguishing features are:

**Screen Sharing:** Facilitating seamless presentations, Circle allows an unlimited number of participants to [share their screens](#) simultaneously, enabling dynamic collaboration and content sharing.

**Visual Enhancements:** With customizable [virtual backgrounds](#) and blur effects, Circle elevates the visual aspect of meetings, fostering a professional and immersive environment for participants.

**Interactive Communication:** Built-in [chat](#) functionality, coupled with support for emojis, fosters interactive communication and collaboration among participants, enhancing engagement and facilitating real-time exchanges.

**Restreaming to any end point:** With the [restreaming](#) function of Ant Media Server, Circle users can effortlessly broadcast their live conferences, meetings, or events to multiple platforms simultaneously, maximizing their audience engagement and visibility.

**Advanced Audio Quality:** Circle integrates advanced noise cancellation technology, ensuring that every voice is heard with utmost clarity, even in noisy environments, thus optimizing the communication experience for all participants.

**Dynamic Participant Highlighting:** Through dynamic [highlighting](#) of speaking individuals, Circle enhances focus and engagement during meetings, ensuring that the spotlight remains on active contributors.

**Bandwidth Optimization:** Circle intelligently manages bandwidth usage by prioritizing active participants and concealing non-participants, thereby [optimizing](#) network resources and ensuring a smooth meeting experience for all.

**Customization Options:** Offering on-the-fly language and theme adjustments, Circle empowers users to [tailor](#) their meeting environment to suit their preferences, enhancing comfort and accessibility.

**Security and Privacy:** With end-to-end [encryption](#) of all data exchanged during calls, Circle prioritizes security and privacy, providing users with peace of mind and confidence in their interactions.

**Engagement Features:** [Interactive](#) meeting experiences are further enriched by real-time reactions, enabling participants to express themselves and engage with content in dynamic and meaningful ways, fostering a sense of connection and friendship.

With its comprehensive suite of features and unparalleled user experience, Circle stands as a testament to innovation in the realm of conference tools, offering a sophisticated yet intuitive platform for modern communication and collaboration needs.

## CONCLUSION

Circle is a complete conferencing solution on top of Ant Media Server, providing an excellent video conferencing experience to users. Circle is a [free and open-source project](#). You can download and install it on your own servers and customize it according to your requirements.

The solution's [cost-efficiency](#) without compromise makes it attractive for organizations seeking to enhance virtual collaboration capabilities without straining their budgets. Dynamic scalability secures optimal performance even during large-scale virtual events, effectively managing costs based on varying participant numbers.

Ant Media Server is a comprehensive solution for organizations seeking an interactive streaming and [scalable video](#) conferencing platform. On a mission to offer an exceptional and unparalleled streaming experience to the market, Ant Media is redefining virtual collaboration through innovative state-of-the-art technologies.



Ant Media Server, a renowned product from [Ant Media](#), is a live video streaming engine that uses WebRTC technology to provide adaptive, [ultra-low latency streaming](#). It is trusted by over 1700 enterprises worldwide and simplifies the complex process of streaming, making it accessible to any user. Customers can easily deploy Ant Media's live video and [VoD streaming](#) solutions based on their requirements and preferences. They can choose to deploy it either on-premises or on public cloud networks such as [AWS](#), [Azure](#), [Google](#), [Linode/Akamai](#), and [Digital Ocean](#). It comes with free mobile [SDKs](#) and [Rest APIs](#) to fasten integration.

Ant Media has been serving a significant and growing number of **customers in 120+ countries all around the world for years**. Customers from different segments such as Educational Institutions, Live Auctioneers, Radio and TV Broadcasters, Security/Surveillance Companies, OTTs, Telehealth Solution Providers, Gaming Companies, and Mobile/Web App Developers use Ant Media Server to enhance their business benefit from its capabilities.