

# Solve Network Congestion

## Video Delivery for Microsoft Live Events & VOD

### Ramp Universal eCDN

Consumer habits are spilling into the workplace, creating an insatiable demand for video communications. With Microsoft 365, virtually anyone can create, share and access video.

But how do you avoid the pitfalls created by bandwidth-consuming video?

Ramp is an enterprise content delivery network (eCDN) purpose-built to efficiently transport internal live streams and video on demand (VOD). Integrated with Microsoft Stream, Microsoft Teams, Yammer and Skype Meeting Broadcast, our software solutions are the most efficient, reliable and secure way to deliver video without impacting business-critical traffic on your network.

### Single Unified Solution: Highest QoE

If your viewers experience buffering, glitches, or even worse, they can't access the video at all, video has zero value. So how do you know which eCDN will give you the highest possible quality of experience (QoE)?

It depends on a variety of factors such as network topology, video sources, use cases and IT policies. You may find using more than one type of eCDN best meets your business needs, and Ramp can help.

To create a high-quality experience for all viewers, Ramp eliminates the network congestion created by bandwidth-intensive video by optimizing video traffic across your network.



Video streams crossing your firewall can create network congestion, resulting in a poor quality viewing experience.

### Why Ramp?

- Integrated with Microsoft streaming solutions—Stream, Teams, Yammer & Skype Meeting Broadcast
- Optimizes both live video and VOD
- Mix and match eCDNs—multicast, video cache, P2P
- Supports virtually any video source, any device, Wi-Fi, VPN and VDI
- Only direct replacement for legacy multicast solutions such as Adobe Flash and Microsoft Silverlight
- Software-only solutions use your existing hardware
- Deployed on the cloud, behind the firewall or hybrid.
- Enterprise-grade security with end-to-end encryption
- Advanced analytics examine attendance, network performance, and measure return on investment (ROI)



#### Efficient

Reduces bandwidth consumption by 90% or more while successfully reaching viewers throughout the enterprise

#### Reliable

Patented bandwidth smoothing overcomes packet loss to eliminate glitches and maintain the highest QoE

#### Secure

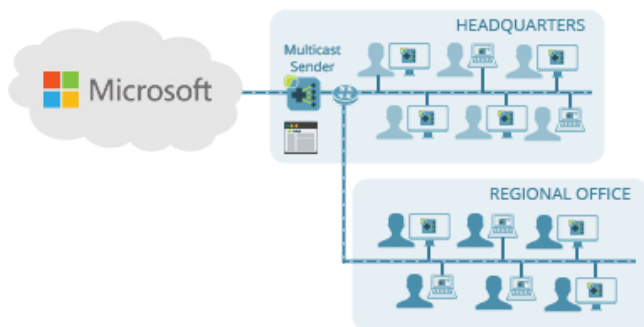
Deploys on premises, behind your firewall, and encrypts video end-to-end to maintain enterprise security policies

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## Video Delivery for Microsoft Live Events & VOD

### Ramp Multicast+

Ramp Multicast+ is the most efficient video delivery option for Microsoft 365. Multicast+ sends a single video stream simultaneously to tens and hundreds of thousands of viewers without consuming any more bandwidth than needed for one viewer. This level of efficiency and predictability makes it the preferred eCDN for enterprises with multicast-enabled networks, and it's the only direct replacement for organizations using end-of-life (EOL) multicast solutions. With pre-event simulations and insightful analytics, you can easily monitor and assess the health of your video network before, during and after live video events.

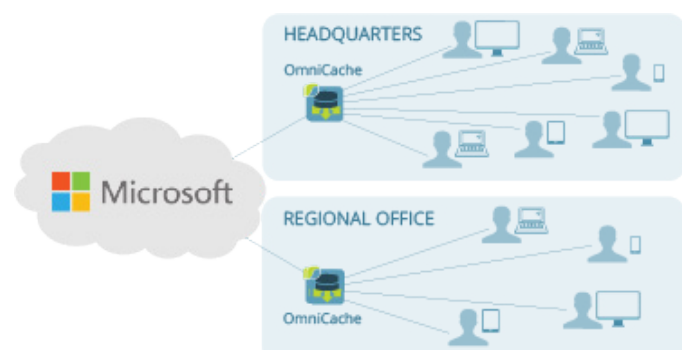


- Multicasting for live HTML5 video (HLS, DASH)
- Only replacement for EOL multicast solutions
- Predictable, deterministic network
- Best eCDN for live video on Wi-Fi networks
- Analytics dashboard to monitor and measure event participation, network performance and QoE
- Silent testing/event simulations to spot potential issues before a live event

### Ramp OmniCache™

Ramp OmniCache is an intelligent video caching solution that supports the widest variety of video sources, including Microsoft 365. Unlike other eCDNs, viewers can watch both live streams and VOD without installing software or plugins on their PC, tablet or mobile phone. OmniCache software is deployed on the LAN to serve video to nearby viewers. By redistributing video locally, you can save 90 percent or more on WAN and internet bandwidth. OmniCache supports the widest variety of use cases and deployment scenarios. Its ability to scale effortlessly gives you flexibility to address network congestion gradually as demand for video grows over time.

- No client software or plugin required
- Any video source, any device and any video player
- Best option for mobile devices
- Self-discoverable and self-healing for exceptional resiliency
- Pre-position video during off-peak hours to optimize network performance
- Easy to start small and scale as needed

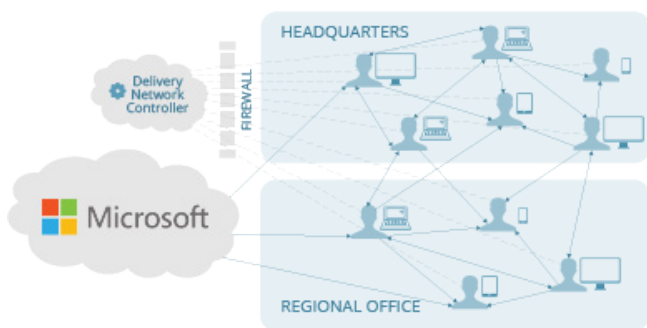


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### Ramp P2P

Ramp P2P uses WebRTC to create a peer-to-peer network (P2P) of end-user devices that are all streaming the same live video. A limited number of these devices (peers) pull video from the streaming platform then redistribute it to the other peers participating in the network. Ramp P2P requires no client software or plugins and has the option of a hosted network controller service, making it a relatively quick eCDN to deploy. P2P networking is ideal for corporate locations with limited infrastructure capabilities and a modest number of viewers using wired devices.



- No client software or plugins required
- Hosted in the cloud or on-premises
- Scales automatically with demand
- Encrypted, GDPR and DRM compliant
- Event statistics and video analytics
- Supports virtually any streaming video source
- Simultaneous support for multiple streaming platforms

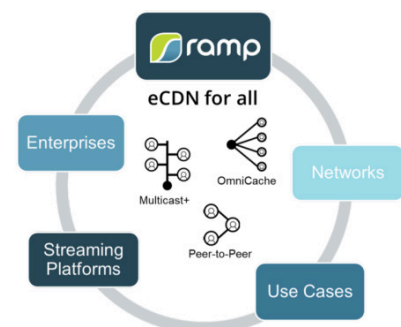
### One Provider | No Surprises

Because no two enterprises, networks, and streaming use cases are the same, Ramp eCDN for Microsoft 365 is an optimized eCDN that seamlessly combines technologies to address the different challenges presented by each location, device and type of video.

For large buildings and campuses, the bandwidth optimization of multicast is far superior to both caching and P2P networking. The impact on the internet connection, WAN links and the LAN is truly negligible regardless of how many people are watching.

P2P is the fastest and most convenient approach to eCDN, especially for offices and branches where infrastructure does not exist. Like multicast and P2P, caching optimizes bandwidth for live video, but is also the only reliable technology for VOD—such as pre-recorded training or town hall replays—that many people will access, though not necessarily at exactly the same time.

The most flexible eCDN allows multicast wherever possible, augmented by caching at locations that can support the necessary infrastructure—to provide multicast fallback and VOD—with P2P at remote locations that are not multicast connected and do not have the ability to host a cache.



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### Scale Video Without Harming Your Network

Ramp can design a vendor-neutral video distribution network to fit your enterprise needs, regardless of your network, use case or streaming platform.

Ramp is the first and only eCDN provider to offer all three technologies for enterprise video distribution—multicasting, video caching and P2P networking. You can choose which technology—or combination of eCDNs—works best for your enterprise.

Our software-based eCDNs eliminate network bandwidth issues created by enterprise streaming video. Ramp protects your network to give viewers a flawless viewing experience.

#### Complete eCDN for every network and every use case



##### eCDN Choices

Multicast  
Caching  
Peer-to-Peer



##### Video Types

Live  
VOD



##### Viewing Devices

Desktop  
Laptop  
Mobile



##### Connections

Wi-Fi  
VPN  
Virtual (VDI)



##### Platforms

Virtually any  
streaming  
platform

Security • Management • Analytics

### About Ramp

Ramp is focused on helping every organization tap into the power of live and on-demand streaming video. Our enterprise content delivery network (eCDN) solutions drastically reduce the bandwidth needed to stream uninterrupted, high-quality video on corporate networks. Using [multicasting](#), [video caching](#), [peer-to-peer networking](#), or any combination, Ramp is the eCDN for all—all enterprises, all networks, all use cases, and all streaming platforms. Ramp works with virtually any modern platform and is tightly integrated with leading streaming video solutions. Our software deploys entirely behind your firewall for maximum security and scales easily as demand for video grows. With centralized management, monitoring and insightful analytics, you get unprecedented visibility into and control over network performance to deliver the highest-quality viewer experience. Visit [rampecdn.com](https://rampecdn.com) for more information.