Stream optimization

It is important for any webcasting professional to understand if their network is ready to support a webcast. While our webcasting platform consumes far less bandwidth than major web conferencing tools, it still requires a high-speed connection to the internet to assure a quality user experience. Since the Webcast platform can support video-enabled webcasts for up to 10,000 attendees or more, there is a greater need to ensure your network can handle the attendance capacity.

If your audience resides largely on a single corporate network, you may need to consult with the IT department to confirm there is adequate bandwidth to support your event. If adequate bandwidth is not available, you should consider leveraging one of the Webcast platform's stream optimization solutions. These options include:

- Adaptive bitrate streaming

- Peer-to-peer streaming

- Stream caching

Adaptive bitrate streaming

Adaptive bitrate streaming works by detecting a user's bandwidth and adjusting the quality of the video stream accordingly. This allows your webcast viewers to receive streaming video at an appropriate bitrate for their bandwidth, ensuring a high-quality experience for all participants.

Benefits of adaptive bitrate streaming:

- Allows viewers with high-speed internet connections to receive a HD quality video stream.

- Viewers who do not have a high-speed internet connection, who may be on a public wifi connection or on a shared internet connection, will receive a lower bit-rate stream to ensure a buffering free video stream.

- Adaptive bitrate streaming is fully automated in the Webcast platform, making the process seamless for viewers.

Peer-to-peer (P2P) streaming

A P2P network optimizes video by enabling audience members to pull streams from other event participants on the same network. This method can reduce the amount of public IP bandwidth by up to 95%. A P2P solution requires a software client to be distributed to the global viewing audience by group policy or other installation method. The P2P software client is fully integrated with the webcast application and it automatically connects to, routes, and rebroadcasts video signals.

We partner with Hive Streaming in this space for P2P stream delivery.

Benefits of P2P streaming:

- Allows a high volume of viewers on the same corporate network to view HD video with minimal impact on the corporate internet connection.

- Once deployed the solution eliminates the need for the Network Engineering resources typically required to support video streaming using network appliances.

- P2P streaming is fully automated, making the process seamless for viewers.

Stream caching

Stream caching requires a minimum of two network appliances capable of intercepting, caching, and distributing video streams. This limits the amount of public IP bandwidth consumed by delivering streams from cache behind the firewall. While this method normally requires ongoing dedicated resources from an internal Network Engineering or Security team, once deployed the solution does not require any software to be distributed or maintained on end user machines.

The Webcast platform fully supports video optimization using any device capable of caching HTML5 (HLS) streams, such as Blue Coat ProxySG.

Benefits of stream caching:

- Significantly reduces the bandwidth utilized by webcast viewers.

- Stream caching with your webcast is seamless for viewers.