AVA

Ava Smart Path™ — intelligent media routing

Summary

The path that media takes between the camera and the user is critical for availability, as well as affecting latency and bandwidth requirements. With many cloud-based video surveillance systems, to view the video media, it has to travel from the camera, through the corporate network, out to the cloud video hosting service, and then back across the internet, into the corporate network and to the client viewing station. This process not only consumes bandwidth on the corporate network, at the internet gateway, and across the internet itself, it also makes that video more vulnerable to outages in any of the paths the media has to traverse. Additionally, quality might be impacted if any part of the media path becomes resource-restricted.

Ava addresses these concerns by using the Ava Smart Path™ technology to identify and use the most efficient path between the Ava Cloud Camera and either the viewing station or the Ava Aware™ mobile apps. This reduces bandwidth usage, improves latency and ensures end-to-end security.

Smart Path

When viewing either live or recorded video from an Ava Cloud Camera, the system uses Ava Smart Path. Smart Path is based on technologies such as WebRTC that allow real-time communication from media devices across local networks and the internet. This allows Ava Aware Cloud™ to intelligently determine the best path for the media to take in any given situation.

Smart Path reduces the total bandwidth needed to view the video media stream by ensuring that the media takes the most appropriate route between the camera and the viewing station. This helps reduce the bandwidth - for example,

by keeping the media stream within the local network if possible - whilst also reducing potential bottlenecks caused if navigating an overly-complex transmission path.

Whichever route Smart Path uses to stream the video media, the stream is always fully encrypted between the camera and view using transport layer security (TLS).

Connections on the local network

When the viewing system and the Ava Cloud Camera are on the same local network, Smart Path configures the media to flow directly from the camera to either the Ava Aware Cloud browser-based user interface or the Ava Aware mobile app.
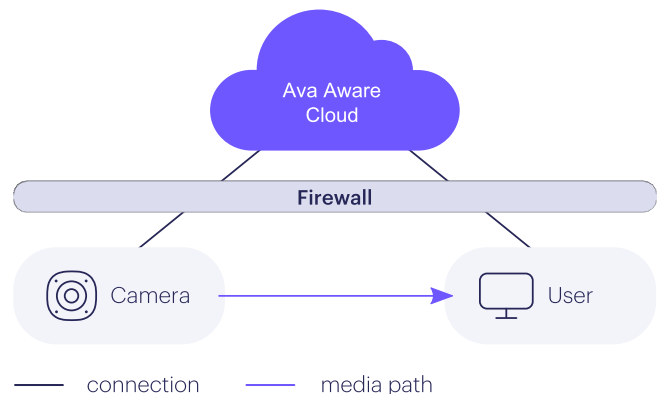

Figure 1 – Network paths on the local network

With the media remaining within your local network, minimal information is sent outside of your organization, significantly reducing the external bandwidth required to watch your video streams and allowing for higher quality video to be provided.

Cameras on separate camera network

Often, cameras might be placed on a separate camera network within the wider corporate network. Such networks are normally firewalled to prevent direct connection to the devices from other areas of the corporate network. However, devices inside the firewall are free to connect out to the Ava Cloud.

The viewing station cannot directly connect to the camera to view the video due to the firewall. In some competitor's cloud video surveillance systems, this prevents local video being available. Therefore those competitors need to route the video media from the cameras to the internet and then via the cloud video management system back to the viewing station.


— connection ⸻ media path
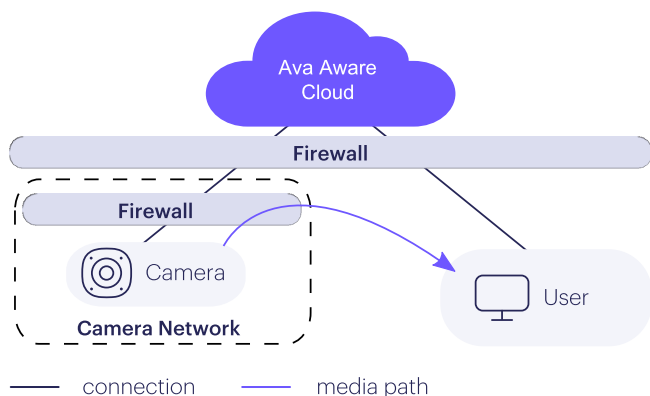
Figure 2 – Ava Cloud Cameras on the separate camera network

Ava Smart Path enables the media stream to be contained within the corporate network, with no external bandwidth required to send the media stream through the internet or the Ava Aware Cloud.

Media uses optimal path

When the Ava Cloud Camera and the viewing station are not on the same local network, the optimal path is used if possible.


— connection ⸻ media path
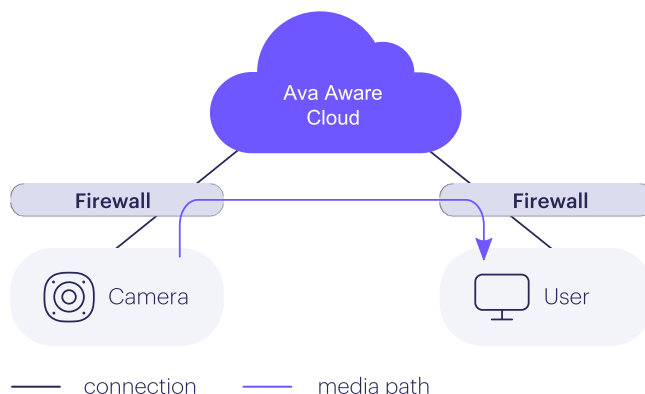
Figure 3 – Optimal network routing

Rather than always sending the traffic via the Ava Aware Cloud, media is sent directly from the camera to the viewing station across the internet when possible.

This optimized routing reduces latency and improves video quality.

Media available via Ava Aware Cloud

Only when the local path, the optimal path, or the route from a dedicated camera network are unavailable does the video media from your Ava Cloud Cameras traverse the internet via the Ava Aware Cloud.

— connection ⸻ media path
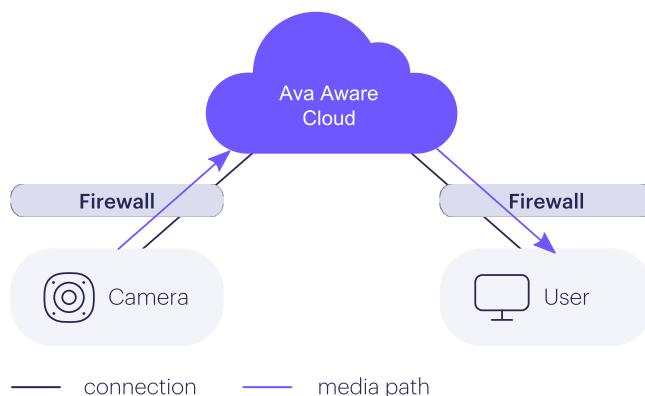
Figure 4 – Network paths with Ava Aware Cloud traversal

Conclusion

Smart Path ensures that your video media is transferred from your Ava Cloud Cameras to either your Ava Aware Cloud user interface or to your Aware mobile apps using the most efficient route available at any given time. This reduces bandwidth usage wherever possible.

With other features such as Smart Recording and camera configuration profiles where you can define the resolutions that your Ava Cloud Cameras use in different circumstances, Ava provides you with high quality video feeds whilst keeping your bandwidth usage under control.

AVA

Unified Security

Ava Security is a global technology company with offices in the UK, Norway, and the USA. It was founded in 2016 to create a better, smarter way to deliver security. Ava protects people, property, and data anywhere.

Innovative companies worldwide use Ava Reveal™ for human-centric data loss protection and Ava Aware Cloud™ for video security and analytics.

To learn more about Ava's smart solutions and how you can enjoy proactive security, visit our website or schedule a demo with a member of our sales team at sales@avasecurity.com.

www.avasecurity.com