



What Is the Value of Medianet?

Video will account for close to 90 percent of consumer Internet traffic by 2012, according to the Cisco Visual Networking Index (2007). New rich-media applications are flourishing: gaming, video collaboration, IPTV, music streaming, and more. More networked video devices are coming onto the IP network (for example, video surveillance and digital signs). Video is becoming a mainstream capability for consumers and businesses alike, as increasing globalization increases the desire for more personal contact across distance and cultural boundaries. Businesses are also using video to transform critical business processes to create competitive advantage, lower costs, and reduce environmental effect.

All forms of communications, collaboration, and entertainment are becoming digitized and connected. This trend will not only load networks, it will change them.

What Problems Does Medianet Help Solve?

Traditional IP networks are not well equipped to deal with interactive and real-time requirements, making delivery and quality of media unpredictable and increasing complexity for the network operators and managers.

Networking technology is evolving to enable optimization for rich media, evolving current IP networks to medianets.

A medianet is media-, endpoint-, and network-aware, ensuring an optimal quality of the total experience while automating many aspects of configuration and optimization. A medianet can format video to best match the characteristics of the end device. It detects traffic conditions and ensures proper transmission of all the needed streams, and it recognizes the types of media going over the network and makes sure that they are properly created, sent, and delivered. For example, sending an HD video stream from a surveillance camera to a mobile device requires adapting the media type to suit the mobile device (resolution and format) as well as the speed of the wireless connection (including Wi-Fi, third-generation [3G], Global System for Mobile Communications [GSM], and edge connections).

Interactive video has the most stringent network requirements. A network capable of supporting interactive video can easily handle the less-demanding requirements for the delivery of voice and data.

Product, Technology, or Solution Name

The medianet represents the evolution of converged IP networks. This evolution consists of adding new medianet technologies, which are services added to existing devices as well as new classes of devices. Services are added to routers, switches, and rich-media endpoints. The medianet technologies deliver the media-, endpoint-, and network-aware capabilities that conventional IP networks lack. Video applications are raising new requirements in terms of bandwidth, latency, and jitter. The network is uniquely positioned to understand the source and destination of video streams as well as the ever-changing capacity characteristics of the connection. A medianet can therefore apply the necessary media transformations (transcoding) as well as change media and signal encoding to adapt to changing network conditions. A medianet helps enable a new degree of interoperability between previously incompatible video endpoints while ensuring a consistent and optimal quality of experience.

What Are the Benefits of Medianet?

A medianet has built-in intelligence that optimizes rich media by providing adaptability, predictability, and guaranteed experiences to deliver visual networking experiences transparently to any device. A medianet provides specific capabilities to address the unique challenges of video and rich media in six critical areas:

- Quality of experience
- Content virtualization
- Mobility
- Session control
- Security
- Management

Why Cisco?

The time for medianets is now, and Cisco will lead the evolution to medianets across the service provider, business, and consumer segments. Cisco alone is positioned to address video from an end-to-end perspective: taking advantage of comprehensive expertise in network platform, video systems, and customer solutions.