IP Video over Cable: Maximize Your DOCSIS Network

What You Will Learn

The future of TV and media entertainment is here, powered by the cloud and IP-based delivery. As broadband becomes ubiquitous, the Internet is increasingly influencing the way cable consumers experience TV. Today's subscriber expects to be able to:

- Choose from a wide range of content and high-definition (HD) channels
- Find content quickly and easily through interactive user interfaces
- Enjoy a personalized experience that builds upon viewing taste
- Synchronize content across multiple screens
- Recommend content to friends using social TV

This solution overview describes how the Cisco® IP Video Over Cable solution helps you maximize your existing DOCSIS infrastructure to deliver the two-way advanced services that your subscribers desire.

Challenge

With the ubiquity of broadband Internet, cable TV subscribers are only too aware of the attractive video services available to consumers on competing platforms, over alternative infrastructures.

They want more live TV, video on demand (VoD), and HD channels. They want higher Internet bandwidth and a multiscreen, personalized user experience that is consistent across all the client devices they own. And they expect to receive these services quickly, with tiered pricing and packaging options. Otherwise they will lose patience and turn to alternative providers.

The need to meet, ever rising subscriber expectations is clear. But it requires overcoming significant business and technical challenges:

- **Spectrum Limitation:** Typically, more than half of the 750 MHz cable spectrum is already allocated for one-way video delivery. Expanding spectrum is an expensive option, estimated to cost anywhere from $100 to $250 per subscriber, and the new spectrum requires at least DOCSIS 3.0 based clients.
- **Subscriber Hardware:** In order to go digital, some cable operators deploy digital terminal adapters (DTAs), which are one-way set-top boxes. But these offer a short-term fix because they cannot support advanced, user interfaces, on-demand services, or other two-way interactive experiences. With such a limited feature set, they offer a very limited life span. Controlling CAPEX and OPEX without needing to upgrade existing subscriber hardware is therefore another challenge.

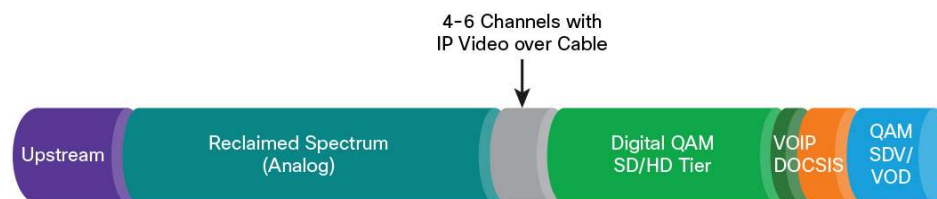The Cisco IP Video Over Cable solution helps you overcomes both these challenges.

Business Benefits

The Cisco Videoscape™ IP video over cable solution helps your cable platform move rapidly to the next generation of IP video delivery using your existing DOCSIS infrastructure. Instead of performing a costly expansion to 1GHz, you can reclaim your 750 MHz analog spectrum to deliver a competitive, interactive IP-based, two-way user experience from the cloud.

Maximize Your Hardware Investment

The Cisco IP video over cable solution frees your platform to invest in two-way IP set-top boxes (STBs) for delivering interactive and advanced services well into the future. You can roll out the latest user interfaces and on-demand services that are not possible with DTAs.

Additionally, migrating to the cloud enables you to use subscribers' IP devices, so you can reduce CAPEX.

4-6 Channels with
IP Video over Cable

| Upstream | Reclaimed Spectrum (Analog) | | Digital QAM SD/HD Tier | VOIP DOCSIS | | QAM SDV/ VOD |

Offer a Higher Quality Experience

By introducing two-way IP-based delivery to your platform, our IP video over cable solution improves the way you deliver content and ultimately how your subscribers experience it. You will be able to:

- Unify back-end workflows on the cloud to deliver video more efficiently and save OPEX.
- Manage bandwidth using adaptive bit-rate encoding and streaming from the cloud to deliver a better quality of experience across client devices.

Improve Service Velocity

Subscribers want new services quickly. To keep them loyal to your platform, you need to deliver these new services rapidly before they look elsewhere.

With enough IP STBs receiving IP content, your platform can move subscriber management, content management, and overall service management to the cloud as investment permits. This enables you to roll out new services faster and scale your resources according to demand.

Strengthen Loyalty and Generate Revenue

By enabling your subscribers to connect their smartphones, tablets, and other devices to your service, your platform can open up new revenue-generating opportunities, including:

- **Enhanced linear content** that includes an expanded choice of HD and SD channels
- **On-demand content** with a wider choice of movies, TV shows and episodes, and uninterrupted streaming
- **Personalization** through interactive, contextual content, as well as social integration and recommendations
- **Advanced user interface**, offering interactive and contextual apps and social TV across managed and unmanaged client devices
- **Time-shift TV and cloud DVR**, offering flexibility and control to watch content any time

- **Expanded advertising** through linear/on-demand insertion and targeting

Solution

The following primary factors are now aligned to make IP video over cable a reality:

- **Cable Modem Termination System (CMTS) channel bonding and RF spanning:** Higher density and capacity as CMTS moves control and unifies workflow to the cloud
- **Price comparability of IP STBs to DTAs:** Overcomes DTA limitations and enables advanced UI, VoD, and other new services
- **High-capacity DOCSIS modems and gateways:** Enables more bandwidth, more linear and VoD content, and more HD
- **Downloadable Conditional Access Systems (DCAS):** Ensures secure delivery of content to IP set-top boxes and multiscreen IP-based clients to reduce CAPEX

The IP video over cable solution draws on a combination of products from open and modular suites within the Cisco Videoscape platform; each with its own unique capabilities. When consolidated into a single offer together with Cisco integration services, they provide a cost-effective, customized, end-to-end solution for delivering profitable two-way video experiences:

- **Acquisition Suite**, which uses advanced encoding and transcoding tools to help you deliver real-time and on-demand media to any device, in the best video quality based on the available bandwidth.
- **Media Suite**, a full content lifecycle and workflow management platform for efficiently managing and publishing content across multiple screens.
- **Security Suite**, a comprehensive conditional access and digital rights management (DRM) security infrastructure for protecting TV services and premium content across multiple platforms and devices.
- **Advertising Suite**, which provides integrated solutions for managing, delivering, and measuring multiscreen advertising across broadcast and IP networks, for linear and on-demand content.
- **Distribution Suite**, an open, intelligent Content Distribution Network (CDN) platform for personalized media delivery across multiple screens, protocols, network services, and applications.
- **User Experience Suite**, a branded HTML5-based soft client offering a dynamic and customized multiscreen video experience. Based on the award-winning Snowflake UI, this suite maintains a consistent visual theme optimized to each subscriber device.

Cisco Videoscape for cable also includes a range of CMTSs, high-capacity DOCSIS-based modems and gateways, Hybrid Fiber-Coaxial (HFC), and optical and service provider Wi-Fi products.

Why Cisco?

As the market leader in cable video infrastructure, Cisco has the following superior capabilities that enable your cable TV business to deliver the next generation of video services:

- A comprehensive portfolio across our powerful cloud platform, intelligent network, and immersive clients that gives you end-to-end control and results in better managed services
- Pre-integrated, validated solutions that accelerate time to market
- Technology innovations that provide consistently high-quality experiences to any client
- Cisco Services, which help you plan, build, and manage your network

For More Information

Additional details on the Videoscape IP Video Over Cable solution are available upon request. Contact your Cisco sales representative for more information.

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