Bringing Multimedia Content to Multiple Screens

Telecom Italia develops next-generation Cubovision web TV services.

EXECUTIVE SUMMARY

Customer Name: Telecom Italia
Industry: Telecommunications
Location: Italy
Company Profile:

- 15M traditional lines (71% of Italian voice traffic)
- 9M Broadband/DSL lines
- 30M mobile lines
- European backbone of 55,000 km of fiber optics
- Launched Alice triple play services in late 2005, which currently supports
  - 6M broadband retail customers
  - high speed internet access up to 20 Mbps
  - 390,000 IPTV subscribers

CHALLENGE

- More modern user interface than legacy portal
- Shift from pay-per-use model to advertising supported free subscription model
- Capability for users to view interactive online video across different screens

SOLUTION

- Cisco Content Delivery System with Internet Streaming

RESULTS

- Differentiated new web TV offering from other service provider competitors
- Retained subscribers while creating new revenue-generating streams
- Developed platform for multi-screen delivery of content in any format

---

Challenge

Legacy Content Delivery Solution

In 2004, Telecom Italia (TI) launched its first web portal for broadband users, known as RossoAlice. The solution was based on a Content Distribution Network (CDN) platform and employed 100+ cache engines spread across the Italian backbone. The subscription and pay-per-use business model for the RossoAlice service afforded subscribers access to a video social networking community and to stream Windows media-based, multimedia content, including movies, news (live), sports (video on demand [VoD]/live), and music.

New Business Drivers for WebTV Portal

As Internet video consumption accelerates, viewers expect more reliable, high-quality experiences that surpass traditional television viewing. Furthermore, an increasing number of end-users want to view content across a myriad of screens, such as PCs, tablets, mobile phones, game consoles, and other types of personal devices. Similarly, Telecom Italia's subscribers expect to view their interactive online video with a truly hassle-free, instant-on web video experience. Therefore, to accommodate this changing consumer demand, TI determined that their new WebTV portal needed to support several key requirements in order to be relevant and competitive in the industry. First, the new portal required a more modern user interface than the RossoAlice portal, while maintaining user-friendly features for social networking and viewing content. Second, Adobe Flash streaming was needed to attract a wider audience by offering the best viewing experience for end-users, while increasing core network bandwidth savings for TI. Third, the VoD service needed to be complemented by a live video-streaming service for broadcast TV channels (i.e. news and sports). Last, but not least, the service had to shift from a classic subscription and pay-per-use business model to a new one based on free subscription supported by an advanced advertising insertion revenue stream.

With these pre-requisites in mind, Telecom Italia was intially biased toward deploying the new WebTV service based on Adobe Flash Media Server (FMS) software, running on rack-mounted PC servers. However, after further investigation, TI determined that the proposed solution may not be compatible with future innovations and also lacked enough flexibility to support a variety of popular streaming protocols (i.e. Windows Media Technologies [WMT], HTTP/PDL), and others (i.e. Smooth, HTML5, Zeri) that were showing signs of becoming industry leaders in the coming years based on projections from market trend data.

Furthermore, TI determined that the solution fell short of the expected level of scalability and resiliency to help ensure that consumers' high quality of experience would promote service stickiness and high retention. And, ultimately, TI really preferred a fully distributed network-based CDN solution architecture, which is not what the PC server-based solution was based on. As a result, this proposal was shelved, and thereby, Telecom Italia began their search for a more robust next-generation CDN solution.

Solution

Why TI Chose Cisco CDS-IS

To find a solution that surpassed its initial PC server-based WebTV solution proposal, TI engaged Cisco as a trusted advisor to help identify an appropriate CDN solution that offered even more robustness, flexibility, and investment protection. As a result of a more intensive investigation and evaluation process, TI chose the Cisco® Content Delivery System with Internet Streaming (CDS-IS) platform, along with Adobe Flash streaming technology, to deliver live TV channels and on-demand content through TI's Cubovision WebTV portal (formerly known as Yalp!).

Cisco CDS-IS offers the desired scalability and service velocity that facilitates easy enablement of new features/services and streaming capacity expansion, complemented by easy management and provisioning. The CDS-IS solution has Adobe Flash streaming fully embedded, the combined benefits of which include a comprehensive integrated streaming solution that has massive scalability, high resiliency, Cisco System Integration Service, and open interfaces to leverage for deploying new services that can quickly adapt to changing market trends. In addition to Flash, CDS-IS also supports simultaneous multiprotocol/format (i.e. WMT, HTTP/PDL, Smooth, HTML5) streaming from the same platform for both VoD and live use cases involving a full suite of popular fixed and mobile client devices across multiple screens.
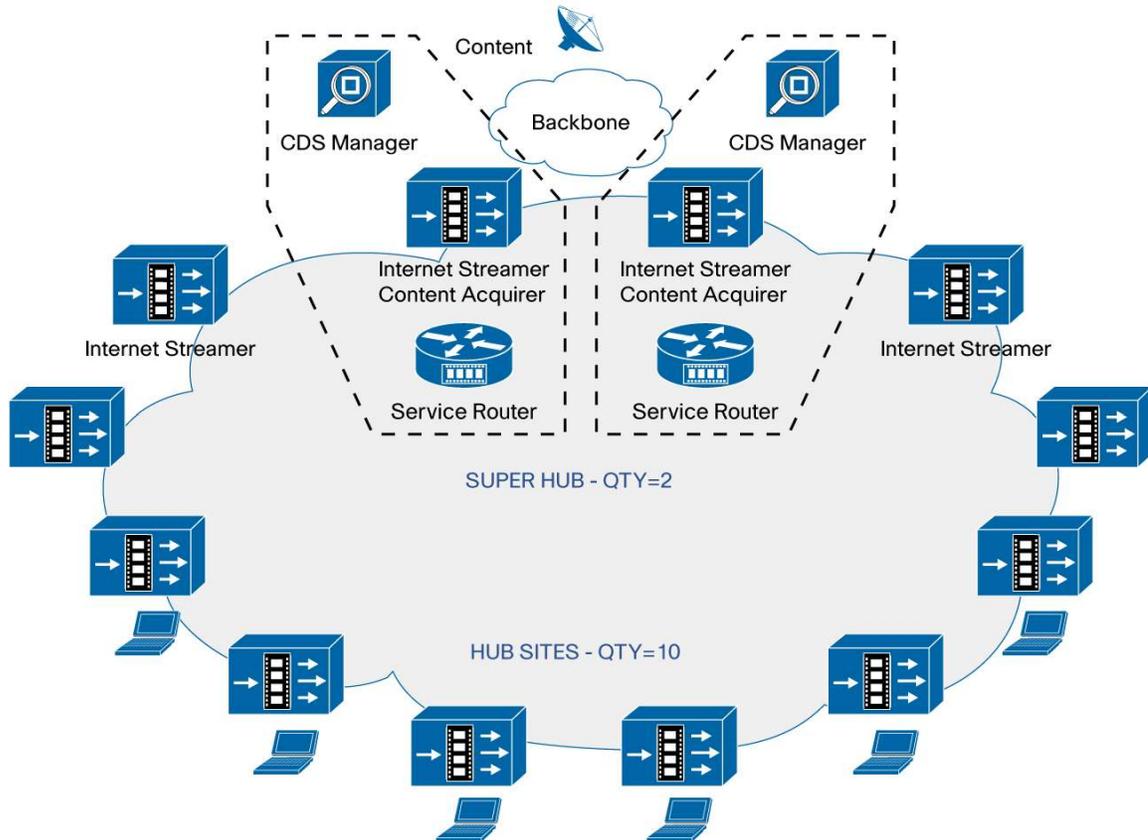
Telecom Italia's Cubovision WebTV Portal

Empowered by Cisco CDS-IS, the Cubovision WebTV portal is open and free in Italy to all broadband subscribers (9 million) who have full access to various innovative services. (Note: By using geo-filtering technology, Telecom Italia has the ability to block any client outside of Italy from viewing the Cubovision portal content, thereby easily abiding by their Content Provider licensing agreements.) The "Community TV" service offers consumers the ability to create, publish, and share their own TV channel playlists with others in the Cubovision social network community. And for users wanting a more passive lean-back viewing experience, the web portal serves up professional live and on-demand video content that was traditionally only viewed via walled-garden IPTV set-top boxes (STBs), for example, 19 major national and international TV channels, and a VoD library of approximately 40,000 movies, TV programs, music, news, and sports.

Cubovision WebTV Solution Topology

TI's CDS-IS platform enables up to 18,000 concurrent Flash streams, leveraging the following gear:

- 2 Central Headends and 12 points of presence (PoPs), consisting of 2 CDS Managers, 2 CDS Content Acquirers, and 17 CDS Streamers
- **Note:** Cisco also supplied 10 units of Cisco 7600 Series Routers for TI's network infrastructure upgrade

Results

By partnering with Cisco, Telecom Italia achieved its primary goal of building a future-proof CDN solution that differentiates its Cubovision WebTV service offering from other Service Provider and over-the-top (OTT) Provider competitors in the industry, thereby retaining subscribers and creating new revenue-generating streams. With the CDS-IS platform and Adobe Flash technology, Telecom Italia delivers high-quality, rich, streaming media content to its viewers, enabling them to watch TV shows on their laptops and PCs, thereby accelerating the convergence of TV and the Internet. And because the CDS-IS system supports all major streaming and download formats, including integrated native Adobe Flash Player, Telecom Italia now has the platform foundation for multi-screen delivery of any content in any format.

"We are constantly striving to improve our customer services and experiences," says Sandro Dionisi, VP of Network Development and Innovation at Telecom Italia. "The Cisco CDS-IS with Adobe Flash technology will provide us with the flexibility and scalability we needed to elevate our services to the next level, enabling us to scale Flash streaming, while providing resiliency and high-quality services that our customers expect from us. CDS-IS offers us greater control of our delivery infrastructure so that we can cost-effectively create differentiated services that span across multiple screens."

Consequently, Telecom Italia is now poised to meet the content access and consumption demands of its current subscriber base and to readily adapt its CDN solution to support the next wave of live and on-demand TV Everywhere services being defined by its prospective subscribers, both locally in Italy and globally as well.

Next Steps

Telecom Italia ultimately needs to continue aggressively growing its CDN business portfolio and thereby increase its market share, while keeping its competitors at bay. To that end, TI's primary business areas in the near-to-mid term will focus on:

- Hosting and delivering on-net/off-net web, mobile, and IPTV services with the Cubovision offer
- Selling CDN resources to content owners and other broadcasters as a national wholesale offer

Additionally, some secondary business initiatives under investigation as a basis for new service offerings include:

- Improving quality of experience (QoE) and bandwidth via advanced service routing leveraging Proximity and Content Affinity, as well as upgrading to higher performance next-generation CDS gear
- Supporting new small-object HTTP adaptive bitrate protocols (Smooth, HTML5, Zeri) and additional client devices such as mobile phones, tablets, and hybrid STBs
- Expanding its CDN service offerings in order to facilitate publishing user-generated content (UGC), mastering content into DVDs, leveraging interconnected CDN Federation, and watching various types of non-linear TV programs.

For More Information

To learn more about the Cisco Content Delivery System, go to:
http://www.cisco.com/en/US/products/ps7191/Products_Sub_Category_Home.html.

Cisco's Videoscape Solution and CDS Internet Streaming White Papers are located here:
http://www.cisco.com/en/US/solutions/collateral/ns341/ns1043/white_paper_c11-639820.html.
http://www.cisco.com/en/US/prod/collateral/video/ps7191/ps7127/prod_white_paper0900aecd8063caba.html.

To view Telecom Italia's press release on WebTV Services powered by Cisco CDS, visit:
http://newsroom.cisco.com/dlls/2008/prod_092908.html.