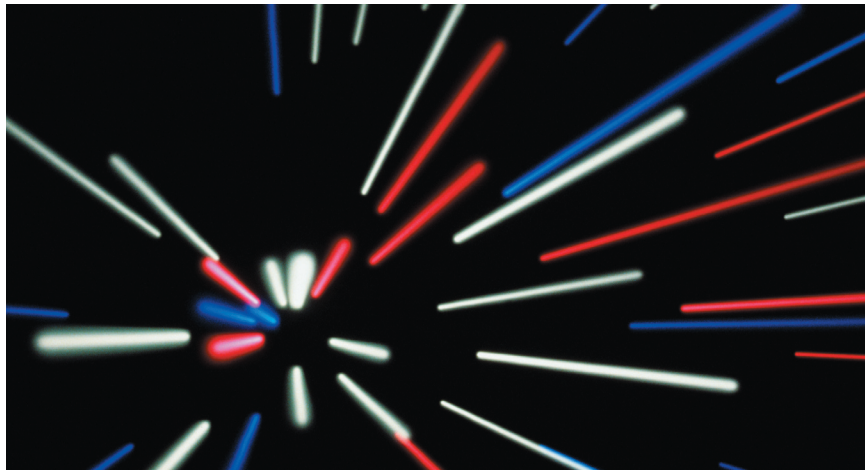IBM

Broadcasters and Telecom Service Providers get the full picture with video over IP from Thales and IBM

Overview

- **The Challenge**
  Reduce the costs of interactive IP television, while delivering high reliability and performance; create an easy-to-scale, highly integrated platform for video over IP

- **The Solution**
  Thales Broadcast & Multimedia and IBM joined forces to provide an end-to-end solution for video over IP: Thales SmartVision TV™, with IBM WebSphere, and IBM @server BladeCenter servers based on Intel® Xeon™ processors

- **The Benefit**
  Highly reliable interactive IP video services delivered through simple, low-cost home receivers; excellent performance with ability to handle extremely heavy user loads; solution provides generic 'building-blocks' for fast, easy, low-cost scalability

The Thales Group's broadcast & multimedia business (www.thales-bm.com) designs, develops, manufactures and markets equipment, systems and solutions in the fields of terrestrial transmission (radio and TV), digital video processing and multimedia distribution for broadcasting, cable TV, satellite and telecommunication service providers worldwide. Thales' Broadcast & Multimedia systems are deployed in 170 countries.

Telecommunications providers (telcos) are starting to use Internet Protocol (IP) to stream live TV pictures – both free-to-air and pay-per-view – to their subscribers, and some are now adding video on demand services. Thales is a true pioneer in this field, building on its years of video broadcasting experience to deliver innovative, high-quality video-over-IP

solutions. In order to reduce the cost of implementing video solutions for large subscriber bases, Thales has taken an innovative approach.

Benoit Joly, Broadband Marketing Manager for Thales, explains: "Typically, the industry loads functionality onto the set-top box, which then accounts for up to 70% of the cost of a global roll-out. We wanted to create a server-centric architecture, to centralise the cost of video over IP, while improving the scalability and reliability, allowing Service Providers to broadcast IP Video services on lower-cost thin clients, and evolve toward new kinds of mobile devices: tablet PC, mobile handsets, and so on.

"Together with IBM, we have created a scalable, carrier-grade platform for video services providers, packaged as a single solution offering low costs, high quality and close integration with existing systems."

Scaling out with blades

Thales' involvement in video over IP stemmed from an in-house development program aiming at positioning the company to tackle this emerging market. Says Benoit Joly, "The initial solution led to the creation of a commercial platform for streaming video over IP-based networks. This early tool then evolved into SmartVision, a robust carrier-grade platform."

He adds, "We wanted to move SmartVision to a server platform that could scale through the addition of physical building-blocks – the so-called scale-out model. IBM BladeCenter was the ideal solution, offering excellent performance and clustering capabilities, with incredibly easy scalability."

Following a detailed proof of concept (POC) run by IBM at its Products and Solutions Support Center (PSSC) in Montpellier, France, Thales chose IBM @server BladeCenter, which uses Intel® Xeon™ processors, as its core streaming platform. The POC, which was conducted with support from Intel, demonstrated the performance and cost advantages of the server. BladeCenter is a chassis that provides shared power, cooling, drives, switches and ports for ultra-slim blade servers, which simply plug into a pair of midplanes.

Says Benoit Joly, "IBM helped us to benchmark the migration of our J2EE applications to the IBM WebSphere environment, and to validate the performance on Intel®-based server hardware. Moving to Intel has enabled us to take advantage of frequent improvements in CPU price-performance."

Robust support

The Thales solution concentrates the video streaming workload centrally, so that customer set-top boxes can be little more than HTML browsers with embedded multimedia players. This helps to keep costs low and reliability high. On the server side, the solution is in three tiers: the underlying databases of content, subscribers and transactions; the SmartVision platform for managing video streams on IBM @server BladeCenter; and the front-end servers to manage communications with receivers, also running on IBM @server BladeCenter platforms.

"Our SmartVision application platform needs to be far more robust that a typical Web server," comments Benoit Joly. "For instance, an ISP delivering streamed video might serve around 10% of its install base at any given time. By contrast, our customers face situations where almost the entire install base switches channel at the same time – at the end of a news programme, for instance.

"The need to support the possibility of millions of viewers changing channel within a period of five seconds is extremely challenging. Our three-tier platform, combined with the IBM BladeCenter, is a market-proven solution that offers the required robustness."

End-to-end solution

By switching to BladeCenter, Thales moved from an expensive proprietary platform to a totally generic architecture, with hot-pluggable components and offering easy scalability. To support more subscribers, its customers can simply add new blades into the chassis.

Benoit Joly concludes, "For telcos, the key challenge is to integrate video over IP into the existing value chain – which is something that IBM understands very well. Thales provides specialist knowledge on the video side, while IBM can handle the integration with existing systems, such as billing, CRM and data mining. The end-to-end nature of the IBM/Thales solution makes an extremely compelling value proposition."