



## Sun™ IPTV Solution

Delivering a fully integrated, end-to-end video service infrastructure



The emergence of Internet Protocol Television (IPTV) has brought about new opportunities for telecommunication, cable, and wireless providers. However, delivering the personalized services consumers seek—such as video on demand (VoD), time-shifted television, network personal video recording (nPVR), and community-based playlists—requires a platform that can support extreme bandwidth, throughput, reliability, and security. In addition, the technologies need to facilitate permission-based subscriber profiling and relevant targeted advertising, while also minimizing datacenter space and energy costs.

### The Sun IPTV Solution

The Sun™ IPTV Solution provides a fully integrated, end-to-end video services infrastructure that combines the Sun Streaming System with industry-leading applications from Digisoft.tv, IMAKE Software & Services, and Verimatrix. The solution's components include an industry-leading streaming switch, award-winning servers, back-office applications to manage digital assets, a service delivery platform to offer services across multiple channels, and security to protect offerings.

### Stream content rapidly and reliably with the Sun Streaming System

Providing the foundation for the solution, the Sun Streaming System includes the Sun Streaming Software, the high-performance Sun Fire™ X4950 Streaming Switch, and the Sun Fire X4500 and Sun Fire X4100 servers. Each Sun system runs on the carrier-grade Solaris™ 10 operating system (OS).

### Deliver personalized TV services on the Digihost Platform

The Digihost Platform taps into the power of the Sun Streaming System to deliver video and interactive services across multiple device types. The platform includes a Navigation server, a service delivery platform engine, and software developer kits (SDKs) that facilitate the development and extension of new services.

Other features include pre-developed client applications such as a set-top box that runs the Java™ Platform, Micro Edition and Java applications for TV like the Interactive Program Guide, Distance Learning, and Voting.

### Manage assets with IMAKE OpenVision

IMAKE OpenVision back-office solutions handle the ingestion, management, and delivery of high volumes of digital assets with modular components that take advantage of the underlying scalability and reliability of Sun server technologies. The components used in the Sun IPTV Solution include an Asset Management System for controlling assets, Session Resource Manager for managing session requests from clients, Entitlement/Subscriber Management for entitling VoD and linear services, and Streaming Broadcast Manager for controlling and generating program guide feeds.

### Provide for security with the Verimatrix Video Content Authority System

The Verimatrix Video Content Authority System (VCAS) offers an advanced suite of technologies that can extend and reinforce the security perimeter of the Sun Streaming System.

### Highlights

- Consolidate onto a fully integrated, high-performance video services platform from Sun™, Verimatrix, Digisoft.tv, and IMAKE Software & Services
- Experience the industry's highest streaming capacity at the lowest price point
- Facilitate greater average revenue per user (ARPU)
- Support future innovations by building on an open standards-based solution that can scale to meet changing requirements.
- Accelerate the delivery of differentiated services
- Reduce datacenter real estate requirements and utility costs
- Centralize management by using a single administrative console
- Secure content and services

Using two-way IP connectivity and Internet cryptographic standards, the VCAS provides a downloadable security system for IPTV clients that facilitates greater levels of security than smart card-based architectures. The VCAS solution also delivers encryption and subscriber key management for various delivery channels, advanced clone detection, and user-specific forensic watermarking of video to protect content.

### **Simplify management with an end-to-end solution**

Rather than building services on disparate technologies, providers need a tightly integrated solution that can accelerate the deployment of differentiated services and streamline system management. The Sun IPTV Solution operates as a unified platform that can support the rapid time to market of new services, the management of multiple asset types, and content security. In addition, the Sun Streaming Software provides a centralized point of control, easing administrative burdens.

### **Experience extreme performance**

Raw power is essential for reliable video services. The Sun Fire X4950 Streaming Switch provides the industry's highest available streaming over IP density—up to 320 Gbps or 160,000 streams at 2 Gbps—while costing less than \$50 per stream. In addition, the Sun's x64 server family set more than 130 world records, with the Sun Fire X4100 server delivering the fastest, most energy-efficient, and reliable one-way to four-way x64 1 RU rack server available today.

### **Save on space, power, and cooling**

Most datacenters are already overcrowded. Providers need hardware technologies that can minimize rack and datacenter space as well as energy and cooling costs to help contain operational expenses. Sun Fire servers help providers do just that. The Sun Streaming Software runs on a compact 1 RU Sun Fire X4100 server that delivers scalable, energy-efficient power. Sun Fire X4500 servers provide data storage—up to 24 TB of video content—and high throughput in a 4 RU footprint. The Sun Fire X4950 Streaming Switch supports video streaming, video switching, and up to 2 TB of memory-based content caching in a compact form factor.

### **Adapt to deliver new services**

To remain competitive, providers need to evolve service offerings to support innovations as well as a growing customer base. Rather than locking companies into a proprietary solution, all of the technologies that comprise the Sun IPTV Solution are scalable and are built on open standards, enabling companies to grow, adapt, and innovate.

### **Drive greater profitability**

Along with the other challenges, providers must be sure to build an architecture that does not fuel IT and operational costs, or create low average revenue per user (ARPU). The Sun IPTV Solution supports large numbers of subscribers from a few video headends and scales to provide an unlimited number of virtual personalized video streams, which can help cut operational costs and capital expenditures.

### **Learn More**

For more information, visit [sun.com](http://sun.com), [dighost.com](http://dighost.com), [imake.com](http://imake.com), [verimatrix.com](http://verimatrix.com) or contact your local Sun sales representative.

### **Secure premium content**

Providers must take steps to protect content against sophisticated piracy schemes and provide for digital rights management (DRM). The Sun IPTV Solution components facilitate security, along with the Solaris 10 OS. The Solaris OS enables applications to access the unique security and cryptographic capabilities inherent in Sun servers. Not only does the operating system deliver network-wide security, it also offers enhanced encryption algorithms and built-in virtualization and application isolation mechanisms.

### **Benefit from a powerful partnership**

Sun provides enterprises with proven, flexible, and scalable solution infrastructures that incorporate the latest server and switch architectures. Digisoft.tv, IMAKE Software & Services, and Verimatrix provide solutions that are used by leading telecommunications, cable television, and content providers to support cutting-edge services. Sun, IMAKE, Digisoft.tv, and Verimatrix have joined forces to offer the end-to-end Sun IPTV Solution that organizations can use to rapidly deliver personalized TV services that are innovative, cost-effective, and easy to manage.