

Liberate Connect™

Network operators are using Liberate's server solutions to increase subscriber revenue and efficiently manage their services.

New Opportunities

The growing popularity of information appliances represents an important new opportunity for network operators.

With the power to deliver low-cost, easy-to-use Internet applications directly to consumers, information appliances come in many forms: televisions, digital cable boxes, set-top boxes, telephones, game consoles, and embedded devices, among others. By serving these devices, network operators can gain new subscribers and offer compelling interactive services to existing customers. These additional subscribers and devices are connecting to a new class of intelligent servers offering network operators unparalleled manageability and scalability.

Liberate Connect™ server software is the ideal solution for deploying and managing information appliances. Designed for Internet service providers, cable operators, telecommunications companies, and satellite service providers, Liberate Connect software enables network operators to deliver cost-effective, branded, centrally managed services to information appliances where control, scalability, and integration with existing systems is critical to achieving business objectives.

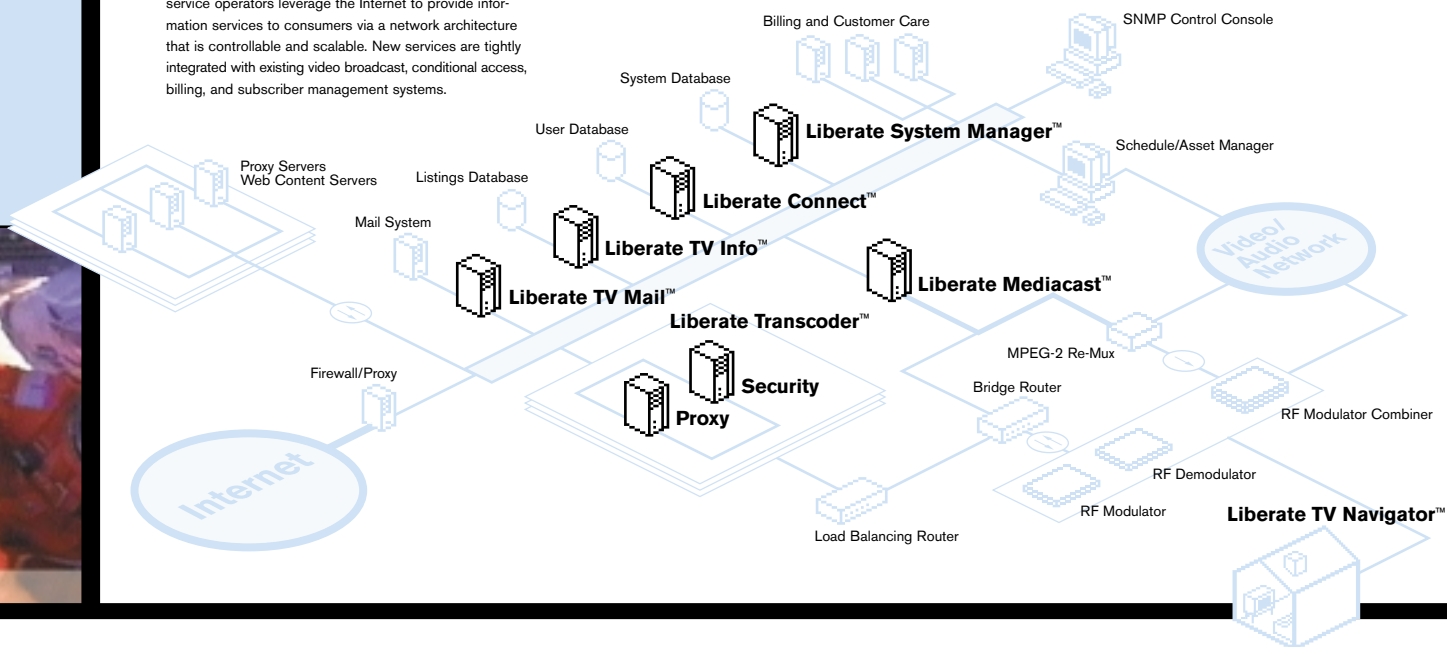
Liberate Connect software features consumer-level scalability and reliability; centralized management of subscribers, devices and applications; easy integration with existing network infrastructure; and a strategic applications development environment including deployment-ready, bundled applications.



Liberate Connect™ DTV Suite

Liberate Connect DTV Suite manages deployments of digital cable and satellite TV set-top boxes populated by the TV Navigator for DTV client software.

Liberate Connect DTV Suite provides the head-end infrastructure cable and satellite TV operators need to deliver value-added interactive applications to consumers. With Liberate Connect DTV Suite, cable and satellite service operators leverage the Internet to provide information services to consumers via a network architecture that is controllable and scalable. New services are tightly integrated with existing video broadcast, conditional access, billing, and subscriber management systems.



Brand and Service Differentiation

Network operators struggle to establish brand differentiation in the highly competitive access market.

With the Liberate solution, network operators own their subscribers, subscriber services, and all associated revenues, including income from advertising, transactions, promotions, and content partnerships. Liberate Connect software provides the framework and tools operators need to design and deploy applications that fit their market and draw additional revenue to their business.

Liberate Connect is the cornerstone technology network operators need to establish themselves in the information appliance market.

Open, Flexible Architecture

Large network operators such as telephone and cable companies manage complex, expensive systems. Deploying new services requires integration with these systems. Liberate Connect is built using open standards that leverage existing Internet infrastructure. This makes integration easy, and ensures longevity of investment.

Liberate Connect's flexible architecture meets individual network requirements and can be distributed across a network. This flexibility and use of Internet standards means network operators can integrate Liberate Connect into their specific network topology with minimal effort.

Centralized Service Management

Liberate Connect provides the robust management services necessary to control a large-scale information appliance network. Centralized network management maintains functionality of information appliances and subscriber services and keeps subscriber churn to a minimum.

The integrated subscriber management features give operators control of subscriber authentication, subscriber data management, subscriber access, automatic restore of client services, smart card and roaming support, and multiple subscribers per account.

The device management features offer operators control of device access and state including: device authentication, multi-device management, automatic content modification for lower performance devices, software updates, first contact management, and time services.

Consumer-level Scalability and Reliability

In an environment where any loss of service means a loss of business, network scalability, reliability, and availability are fundamental service requirements.

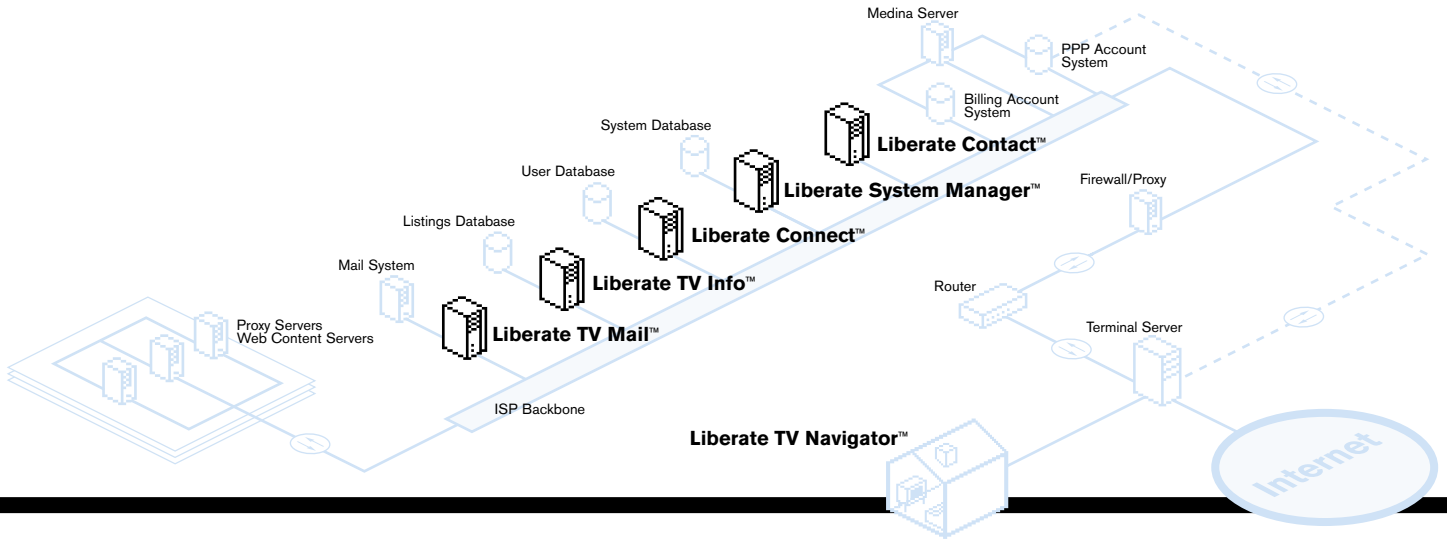
As network operators build information appliance services, their server software must accommodate a growing client base. Using a server group architecture, Liberate Connect meets maximum scalability and performance for millions of devices on the network at minimum cost. Scalability is achieved incrementally, predictably, and economically.

Liberate Connect prevents service disruption and data loss by using stateless application servers and distributed session management. What's more, Liberate Connect runs on one of the industry's most scalable operating systems, Sun™ Solaris™.

Liberate Connect™ ISP Suite

Liberate Connect ISP Suite manages deployments of analog set-top boxes, game consoles, Internet TVs, and embedded devices.

Liberate Connect ISP Suite provides the network infrastructure and management applications ISP operators need to deliver value-added interactive services to consumers using information appliances. With Liberate Connect ISP Suite, network operators leverage the Internet to provide services to consumers via a network architecture that is controllable and scalable. New services are tightly integrated with existing PPP, billing, mail, DNS, and other ISP infrastructure.



Reduced Time to Market

Liberate's patent-pending security management features enable operators to control service security and use SSL to ensure a highly secure relationship between subscribers and operators. Real-time security features allow a seamless response to global certificate authorities by the client.

Finally, Liberate affords a set of centralized server management tools, including server configuration, software update management, and SNMP. These tools provide network operators with centralized control, configuration, and monitoring of their server environment.

Getting to market quickly using minimal resources is a strategic advantage in deploying Enhanced TV networks. Liberate Connect minimizes a network operator's development effort and maximizes existing network efficiencies. The software features deployment-ready applications including subscriber-critical services such as e-mail, allowing operators to get up and running quickly.

Liberate's customization tools make it easy to modify the subscriber applications with operator branding and interface elements. Liberate Connect serves a range of information appliances using standard HTTP, JavaScript, and SSL, allowing operators to develop applications rapidly and inexpensively and offer standard Internet content with their service.

Nothing jeopardizes a deployment more than costly and time-consuming development; Liberate Connect solves this problem by enabling fast, efficient rollout to customers. Liberate Connect integrates easily with cable-specific systems such as digital video, subscriber management and conditional access; ISP-specific systems such as PPP; and systems common to both, such as billing, e-mail, and databases. Liberate Connect uses standard protocols to integrate with standards-based services and efficient integration interfaces for non-standard services.

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Liberate Connect™ Software Specifications



Liberate Connect™ DTV Suite Includes:

Liberate Connect manages subscriber data and access.

Liberate Mediacast carousels Internet media into digital cable and satellite systems.

Liberate Transcoder translates full Internet content for thin-client digital TV devices.

- Proxy: server-side storage of transcoded content.
- Security: security gateway to the Internet.

Liberate System Manager provides centralized configuration management.

Integration tools for ISP networks allows easy integration into networks.

Liberate Connect™ ISP Suite Includes:

Liberate Connect manages subscriber data and access.

Liberate Contact manages first contact for dial-up devices.

Liberate System Manager provides centralized system management.

Integration tools for ISP networks allows easy integration into networks.

Applications: TV Mail, registration, favorites, address book, settings, tutorial, and help.

Liberate Connect DTV Suite

Information Appliances	Digital cable and satellite set top box	
Clients	TV Navigator for DTV 1.0/1.1	
Operating Systems	NT Server 4.0, Solaris 2.7	
Hardware (minimum)	Solaris:	NT:
	SPARC 20 workstation 128 MB DRAM 3 GB Hard Disk	Dual processor Pentium II/350 MHz 256 MB DRAM High performance 4 GB hard disk 2 network interface cards
Standards	HTTP, JavaScript, SSL, MPEG-2, DVB, ATSC, OpenCable, SNMP, CORBA, ODBC, JDBC	
Web Servers	Netscape Enterprise 3.6 and above	
Databases	Oracle 8.0.4/8.0.5	
SNMP Tools	Any standard SNMP clients including: Hewlett-Parkard OpenView	
Proxy Servers	Netscape Proxy, Apache Proxy	
Parental Control	Any standard proxy-side parental control service including: SurfWatch, Cyber Patrol	

Liberate Connect ISP Suite

Information Appliances	Analog set-top box, game console, Internet TV, embedded devices	
Clients	TV Navigator for ISP 1.2, 2.0, 2.1, 2.2, eNavigator 1.0	
Operating Systems	Solaris 2.6, 2.7, NT Server 4.0	
Hardware (minimum)	Solaris:	NT:
	SPARC 20 workstation 128 MB DRAM 3 GB Hard Disk	200 MHz Pentium class processor 128 MB DRAM 2 GB Hard Disk
Standards	HTTP, JavaScript, Perl, ODBC, SMTP, IMAP4, POP3, SNMP, SSL	
Web Servers	Netscape Enterprise 3.6 and above	
Databases	Oracle 8.0.4, 8.0.5, Microsoft SQL Server 6.5	
SNMP Tools	Any standard SNMP client including: Hewlett-Packard OpenView	
Mail Servers	Any standard IMAP4 or POP3 mail server including: Netscape Messaging Server, Sun Internet Mail Server, Isocor N PLEX Global, Qualcomm WorldMail	
Proxy Servers	Any standard proxy server including: Apache Proxy, Inktomi Traffic Server	
Parental Control	Any standard proxy parental control service including: SurfWatch, Cyber Patrol	