

Cisco IP/TV Product Family

- Complete streaming video solution for online training, corporate communications, and business TV
- Offers comprehensive network video management
- Delivers live and prerecorded video broadcasts, and video on demand



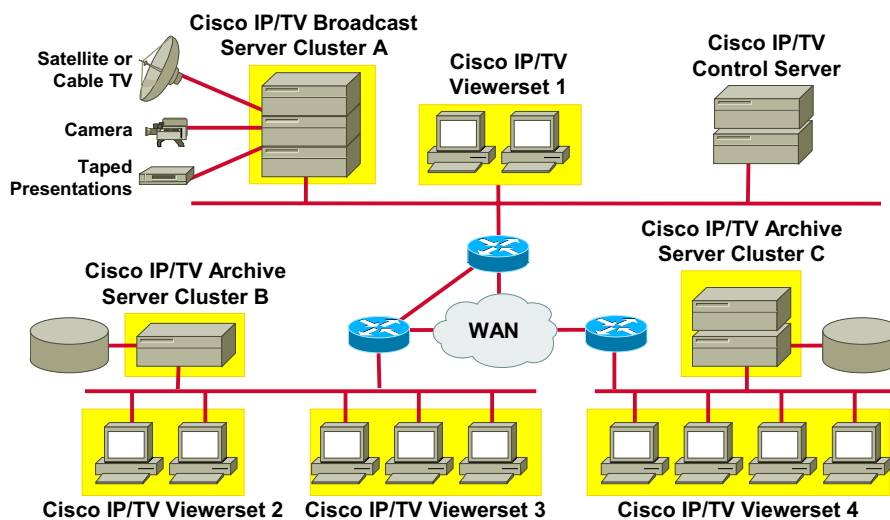
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Cisco IP/TV Product Family— Video Solutions



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The New IP/TV Family

- Cisco IP/TV 3411 Control Server
- Cisco IP/TV 3422/3423 Broadcast Servers
- Cisco IP/TV 3431 Archive Server
- Cisco IP/TV 3415 Video Starter System
- Cisco IP/TV Viewer



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Cisco IP/TV 3411 Control Server

- Centrally manages entire IP/TV system
- Provides bandwidth, server, and content management services
- Sends instructions to distributed broadcast and archive servers
- Communicates program information to Cisco IP/TV viewers



Easy to Use Web-based Administration Tool

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Cisco IP/TV 3411 Control Server

- Allows administrators to easily schedule on-demand and broadcast programs
- Lets managers quickly set up times and dates for initial and repeat showings
- Determines which servers will store what content
- Offers security features to control access



On-Demand and Scheduled Program Listings

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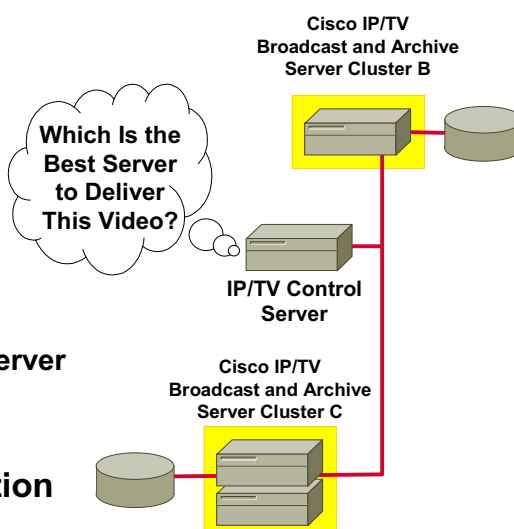
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Cisco IP/TV 3411 Control Server

- Ensures high-quality video delivery
 - Controls amount of bandwidth used
 - Distributes content to remote servers
 - Balances server load
 - Directs users to best server
- Centrally manages all aspects of video delivery and distribution



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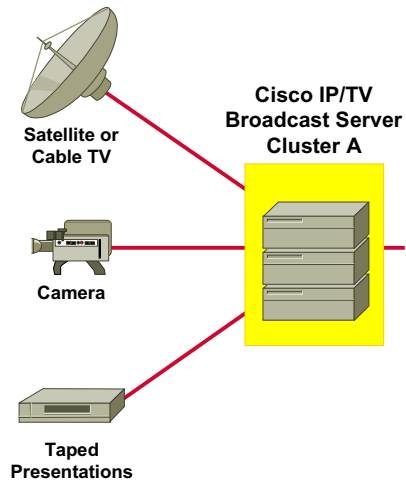
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Cisco IP/TV 3422 and 3423 Broadcast Servers

- Capture and broadcast real-time and prerecorded content
- Ideal for live and scheduled broadcasts using IP multicasting
- Receive content from a variety of sources including cameras, satellite and cable feeds, DVDs, and ASF, AVI, and MPEG digital files
- Offer a full range of video formats: MPEG-1, MPEG-2, MPEG-4, and H.261 for a variety of bandwidth and quality requirements



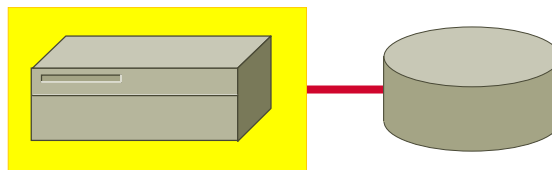
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Cisco IP/TV 3431 Archive Server



- Premium, high-performance platform for extensive use of video-on-demand
- Supports wide range of video formats including ASF, AVI, and MPEG
- Offers 120 hours of storage capacity at 1 Mbps
- Serves 50 high-quality 1-Mbps VoD streams concurrently

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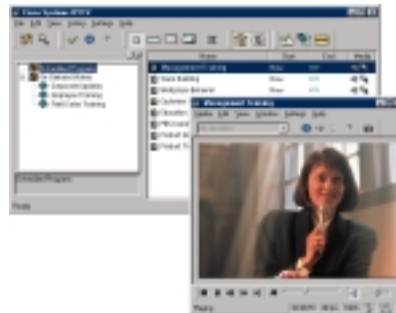
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Cisco IP/TV Viewer

- IP/TV client-side software
- Easy-to-use, intuitive interface
- Presents program listing with search capabilities
- Separate viewing window appears with TV-like controls
- Includes the Microsoft Windows Media Player
- Encompasses a range of e-learning services



Viewers Get Point-and-click Program Access and A Separate Viewing Window

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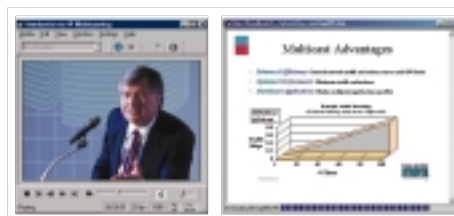
Cisco IP/TV Viewer for E-Learning

Web-Based Training Materials



Embed the IP/TV Plug-in into Your Web Page

Presentation Synchronized to Slides



Web Presenter Runs IP/TV Video and Web Pages at the Same Time

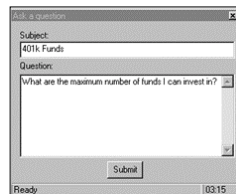
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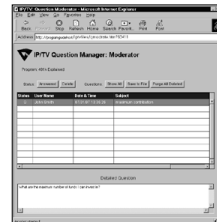
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Question Manager



Viewers Submit Questions



Real-Time Answers

Provides Presenter – Learner Interaction

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Cisco IP/TV Integrates Microsoft Windows Media

The Cisco IP/TV Solution is Now Built on Microsoft Windows Media

Windows Media audio and MPEG-4 video
for higher quality at lower bandwidths

Common user interface to Windows Media and
IP/TV delivered programs, expanding users choices

Windows Media Format synchronizes Web pages
with audio and video for multimedia presentations

Windows Media Tools, Media Player,
and Media Services are included

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Planning a Video Network

Key Points

- Identify video technologies to address your application requirements
- Enable your network for IP multicast
- Match your network bandwidth with your application quality needs
- Ensure Quality of Service (QoS)

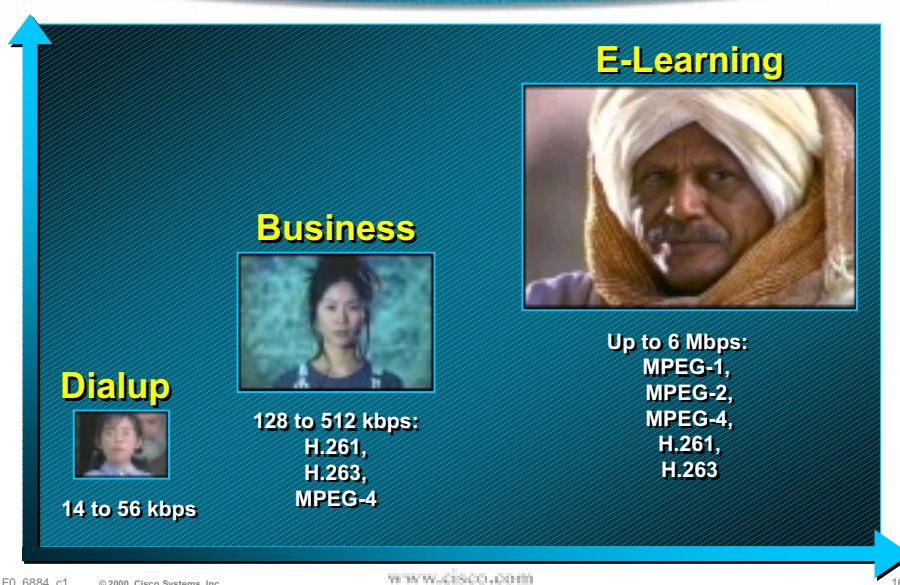
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Higher Quality Requires More Bandwidth



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Video Compression Standards

	Application	Recommended Bandwidth
MPEG-4	Over WANs	28.8 to 400 K
H.261	Low Motion	100 to 400 K
MPEG-1	VHS Quality	.5 to 1.5 M
MPEG-2	DVD Quality	1.5 to 10 M

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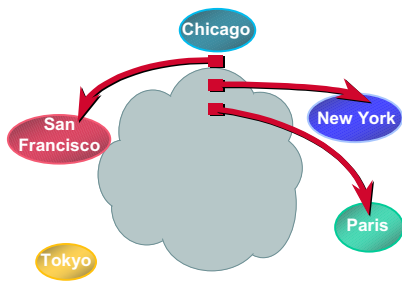
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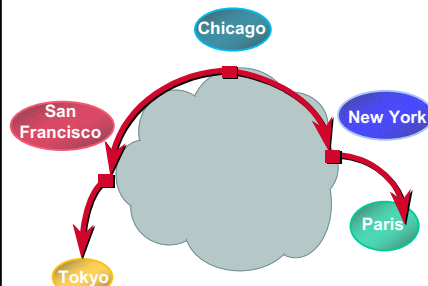
Two Inefficient Multipoint Techniques

Multiple Unicasts



Three Copies of the Same Packet Are Transmitted

Broadcast



The Entire Network Receives the Packet Even if the Receivers Are Only a Few

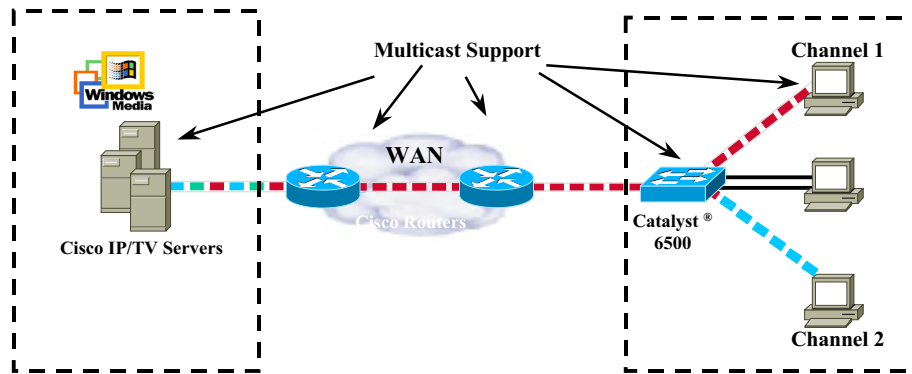
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Live Network Video Broadcasting



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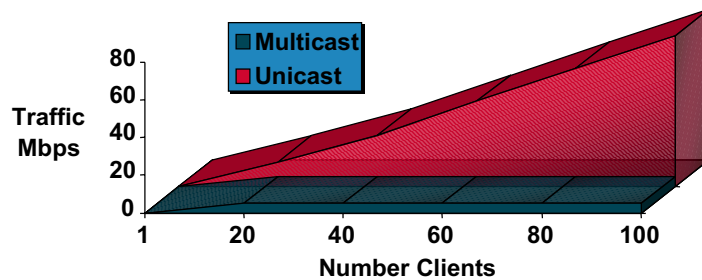
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Multicast Advantages

Example: Video Streaming
All Clients Viewing the Same 800 kbps Video



- Efficient and scalable information delivery
- Network cost savings
- Network enabled for new e-learning applications

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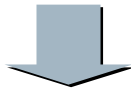
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What is Quality of Service?

The ability of the network to provide better or “special” service to users / applications

Data / Video / Voice



Consistent Predictable Performance

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Quality of Service: Taking Control

Desktop Conferencing, Distance Learning



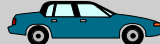
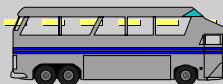
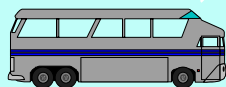
Mission-Critical Applications



Voice



File Transfer, E-Mail



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Bandwidth Controls and QoS

- **Use preferences to set limits on the amount of bandwidth to be used for scheduled programs**
- **Enable QoS for stream over WAN**

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Case Study – Cisco Enterprise TV

- **Reduce Costs**
 - Travel expenses
 - Presentation facilities
- **Increase Productivity**
 - More training available
 - Less time away from customers
- **Information Availability**

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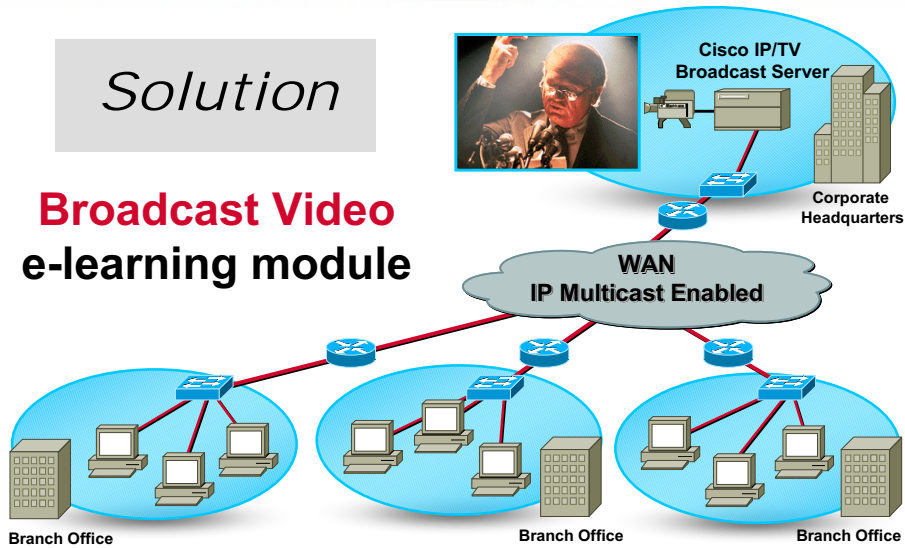
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Case Study – Cisco Enterprise TV

Solution

Broadcast Video e-learning module



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Cisco Internal Experience

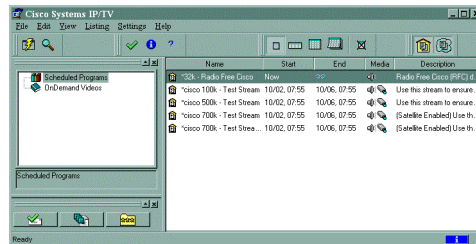
Cisco IP/TV

Company Meetings

Product Announcements and Updates

Learning Events

Marketing Seminars



*Average 1.25
Broadcasts / Day*

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$$\text{Yb}^{2+}/\text{Yb}^{3+} = 4.25 \times 10^{-4} \text{ mol/L}$$

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Selling Broadcast Video

- **Examine costs**
Moving people vs. data
- **Measure costs over time**
Cost per incident and number of incidents vs. deployment costs
- **Identify success factors**
Payback of 50% or more
Effectiveness and productivity
- **Cost of waiting**

Application Examples

Training for the Field

- Streaming media
- 3,053% ROI over four years*
- More effective than CD-ROM

Business Meetings for Sales

- Videoconferencing
- 1,429% ROI over four years
- Increased yearly sales by 15%

Consider Your Own Business

*Based on Cisco internal ROI models.

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Save \$\$\$ and Eliminate Lost Productivity

Cost Element	Instructor-led Training	IP/TV Live Delivery
<i>Number of students/class</i>	20	20 – 200
<i>Number of 5-day classes</i>	20	20
<i>Cost of instructor @\$1,000/day</i>	100,000	100,000
<i>Average travel cost/student</i>	\$1,200	0
<i>Total Cost</i>	100,000+(400x1200)= \$530,000	100,000+22500+40500= \$163,000

Size of student = 400

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Return on Investment

The screenshot shows the Cisco Total Cost of Ownership Calculator for IPTV Streaming Video. The page includes a navigation bar with links like Home, What's New, How to Buy, Login, Register, Feedback, Search, and What's Hot. The main content area is titled 'Total Cost of Ownership Calculator' and includes a sidebar with links to various Cisco products and solutions. The main text explains that the calculator compares the cost of implementing Cisco IPTV Streaming Video solutions against the cost of implementing a Cisco 3415 video server. It provides instructions on how to use the calculator and includes a 'Final Input' section with fields for 'Total number of training days per year (see note #1)', 'Monthly number of students per training session', 'Cost of Instructor Lead Techniques Student (IP) and a storage in the cloud, see note #2', and 'If you implement a streaming video solution for Cisco IPTV, what percent of your pricing...'. The 'Final Input' section also includes a 'Calculate' button and a '100%' indicator.

<http://www.cisco.com/warp/public/779/video/iptv/roicalc/>

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What to Suggest First

Cisco IP/TV Family

- Application suggestions
 - Broadcast within one building
 - Replay training
- Implementation
 - Install the free Cisco IP/TV Demo CD
 - Purchase the affordable Cisco IP/TV 3415 Starter System



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Cisco IP/TV 3415 Starter System

- **Affordable system for departmental deployments or initial trials**
- **Combines control, broadcast, and archive services into one box**
- **Supports MPEG-1, MPEG-2, MPEG-4, and H.261**



**All-in-one System for
an Easy Introduction
to Streaming Video**

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CISCO SYSTEMS



**EMPOWERING THE
INTERNET GENERATIONSM**

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