



Annual Cisco Visual Networking Index Forecast Projects Global IP Traffic to Increase More Than Fourfold by 2014

Video to Surpass Peer-to-Peer as Top Internet Traffic Contributor by End of 2010, Global Online Video Community to Exceed 1 Billion Users by 2014

SAN JOSE, CA, Jun 02, 2010 (MARKETWIRE via COMTEX News Network) -- Today Cisco (NASDAQ: CSCO) announced the results of the annual Cisco(R) Visual Networking Index (VNI) Forecast, 2009-2014, which projects that global Internet traffic will increase more than fourfold to 767 exabytes, or more than 3/4 of a Zettabyte, by 2014. This amount is 100 exabytes higher than the projected level in 2013, or an increase the equivalent of 10 times all the traffic traversing Internet Protocol networks in 2008.

The growth in traffic will continue to be dominated by video, exceeding 91 percent of global consumer IP traffic by 2014. Improvements in network bandwidth capacity and Internet speeds, along with the increasing popularity of HDTV and 3DTV are key factors expecting to quadruple IP traffic from 2009 to 2014.

Overview:

- The Cisco VNI Forecast, which focuses on two primary user groups -- consumers and businesses -- was developed as an annual study to estimate global IP traffic growth and trends. Projections are based on Cisco analysis and modeling of traffic, usage, and device data from independent analyst sources. Cisco validates its forecast, inputs, and methodology with data provided by service providers worldwide.
- To help network users better understand global IP traffic growth drivers and trends, Cisco updated several of its unique resources:
 - The VNI Forecast widget provides customized views of the growth of various network traffic types around the globe (revised for this 2009 - 2014 forecast period).
 - The VNI PC Pulse application for desktop and laptop computers helps consumers learn more about their individual impact on IP networks and compare their network usage with that of others around the world.

Research Highlights:

Total Global IP Traffic in "Bytes"

- Global IP traffic is expected to increase more than fourfold (4.3 times) from 2009 to 2014, reaching 63.9 exabytes per month in 2014, up from approximately 56 exabytes per month in 2013. This is equivalent to 766.8 exabytes per year - almost three-quarters of a zettabyte, by 2014.
- The nearly 64 exabytes of global IP traffic per month projected for 2014 is equivalent to 16 billion DVDs; 21 trillion MP3's; or 399 quadrillion text messages.

Regional IP Traffic Trends

- By 2014, the highest IP-traffic generating regions will be North America (19.0 exabytes per month), Asia Pacific (17.4 exabytes per month), Western Europe (16.2 exabytes per month) and Japan (4.3

exabytes per month).

- The fastest growing IP-traffic regions for the forecast period (2009-2014) are Latin America (51 percent compound annual growth rate [CAGR], 7.9-fold growth), the Middle East and Africa (45 percent CAGR, 6.5-fold growth), and Central Europe (38 percent CAGR, 5.1-fold growth).

Primary Growth Driver: Video

- By 2014, the sum of all forms of video (TV, VoD, Internet video, and peer-to-peer) will continue to exceed 91 percent of global consumer traffic.
- Global Internet video traffic will surpass global peer-to-peer traffic by the end of 2010. For the first time in the last 10 years, peer-to-peer traffic will not be the largest Internet traffic type.
- The global online video community will include more than 1 billion users by the end of 2010.
- By 2014, it would take more than two years to watch the amount of video that will cross global IP networks every second; to watch all the video crossing the network that year would take 72 million years.

3DTV and HD (Advanced Video)

- Globally, advanced video traffic, including three-dimensional (3-D) and high-definition TV (HDTV), is projected to increase 13 times between 2009 and 2014.
- By 2014, 3-D is expected to account for 4 percent of total Internet video traffic.
- By 2014, 3-D and HD video is forecast to comprise 42 percent of total consumer Internet video traffic.

Global File Sharing

- Global file sharing traffic is projected to reach 11 exabytes per month in 2014, 22 percent CAGR from 2009-2014.
- P2P will grow at a CAGR of 16 percent, while web-based and other file sharing will grow at CAGR of 47 percent from 2009-2014.
- By 2014, global P2P traffic will be 17 percent of global consumer Internet traffic, down from 36 percent in 2009.

Global Business IP Traffic

- Global business IP Traffic is forecast to reach 7.7 exabytes per month in 2014, more than tripling from 2009-2014.
- Business video conferencing is projected grow ten-fold over the forecast period, growing almost three times as fast as overall business IP traffic, at a CAGR of 57 percent from 2009-2014.
- Web-based video conferencing is the fastest growing sub-category, growing 180-fold from 2009-2014 (183 percent CAGR from 2009-2014).

Mobile Broadband

- Global mobile data traffic will increase 39 times from 2009 to 2014.
- By 2014, annual global mobile data traffic will reach 3.5 exabytes per month (or a run rate of more than 42 exabytes annually).

Consumer vs. Business

- Consumer IP traffic is projected to grow faster than business:
 - For 2009, consumer IP traffic represented 79 percent of monthly total global IP traffic and business IP traffic was 21 percent of monthly total global IP traffic.
 - By 2014, consumer IP traffic (web surfing, instant messaging, user-generated videos, etc.) will represent 87 percent of monthly total global IP traffic; while business IP traffic (email, voice, Internet, HD and web-based video conferencing, etc.) will represent 13 percent of monthly total global IP traffic.

Network Speed Enables IP Traffic Growth: 2000 vs. 2010 Comparison

- In just a decade, the average global residential Internet connection download speed has increased 35 times, which has helped to dramatically increase Internet usage.
- In 2000, the average global residential Internet connection download speed was 127 kilobits per second (Kbps). The current (2010) average global residential Internet connection download speed is 4.4 megabits per second (Mbps.)

Network Download Evolution:

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Online Activity                2000 Download Time    2010 Download Time  
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Download a DVD-quality movie (4  
GB)                            3 days                2 hours  
-----  
Download a MP3 audio file (3 MB)  3 minutes            5 seconds  
-----  
Download an email attachment (1  
MB)                            1 minute             2 seconds  
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Cisco VNI Forecast Widget:

Media/Analysts/Bloggers: Use Cisco's interactive VNI Forecast widget to create custom forecast charts and views by region, application and end-user segment. [Get the VNI Forecast Widget.](#)

Enhanced Consumer Application:

Cisco VNI PC Pulse Application: The Cisco Visual Networking Index (VNI) PC Pulse application measures the amount and types of traffic that you generate from your PC (for example, Web browsing, video, e-mail, etc.). The application also provides a new "IP DNA" abstract image that represents your personal usage preferences. You can compare your individual data against aggregate global statistics from other Cisco VNI PC Pulse users around the world to see how you rate.

Get Cisco PC Pulse

Supporting Quote:

- Pankaj Patel, senior vice president and general manager, Service Provider Group, Cisco
"Service providers are faced with evolving bandwidth and scalability requirements as residential, business and

mobile consumers continue to demonstrate a healthy appetite for advanced video services across a variety of networks and devices. IP networks must be intelligent and flexible enough to support this tremendous variety of traffic growth. The Cisco VNI Forecast offers a global snapshot of video's significance in our daily lives and signals the need for further network preparations to support the quadrupling of the Internet and the more than 1 billion online video users by 2014."

Supporting Resources:

- Cisco Visual Networking Index Forecast Web Site:
<http://www.cisco.com/go/vni>
- Watch the full VoD: Top trends behind Cisco's annual VNI Forecast 2009-2014:
<http://tools.cisco.com/cmn/jsp/index.jsp?id=101868&redir=YES&userid=%28none%29>
- Blog: Cisco VNI Forecast: Highlights for Video Service Providers:
<http://blogs.cisco.com>
- Cisco VNI Forecast and Methodology, 2009 - 2014 White Paper:
http://www.cisco.com/en/US/solutions/collateral/ns341/ns525/ns537/ns705/ns827/white_paper_c11-481360_ns827_Networking_Solutions_White_Paper.html
- Cisco VNI White Paper on "Hyperconnectivity":
http://www.cisco.com/en/US/solutions/collateral/ns341/ns525/ns537/ns705/ns827/VNI_Hyperconnectivity_WP.html
- Cisco VNI Forecast FAQs:
http://www.cisco.com/en/US/solutions/collateral/ns341/ns525/ns537/ns705/ns827/qa_c67-482177_ns827_Networking_Solutions_Q_and_A.html
- Cisco Visual Networking Index Free Applications:
<http://www.ciscovnipulse.com/>
- Cisco VNI Data Visualization: <http://www.ciscovnipulse.com/>
- News@Cisco Feature: The Cisco VNI: Benchmark for Broadband Demand:
http://newsroom.cisco.com/dlls/2010/ts_052410.html?sid=BAC-NewsWire

Tags/Keywords:

Cisco, IP Traffic, Visual Networking, VNI, VNI Forecast, Mobile Broadband, Video, IP Video, HD Video, 3D Video, Video Networking, Service Provider, Peer-to-Peer

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