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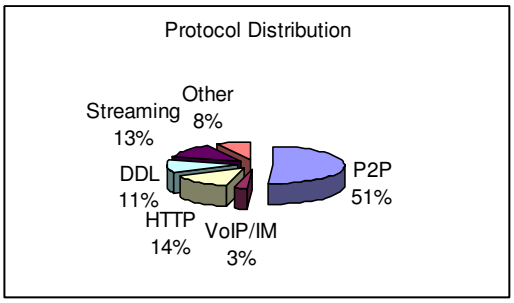
Intercai Briefing

Traffic Analysis and Management

The Bandwidth and Performance Challenge

Bandwidth intensive applications such as peer-to-peer-based file sharing (P2P) use up a disproportionately high amount of network resources. This drives up communication and infrastructure costs and adversely affects the quality of important business applications such as ERP and CRM systems as well as next generation applications like Internet telephony or video on demand.



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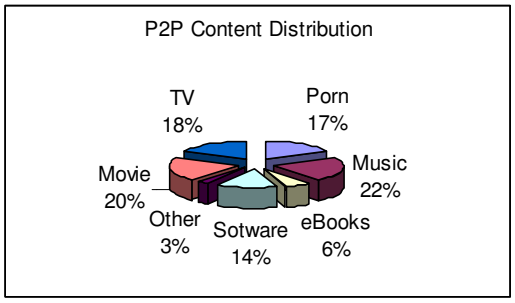

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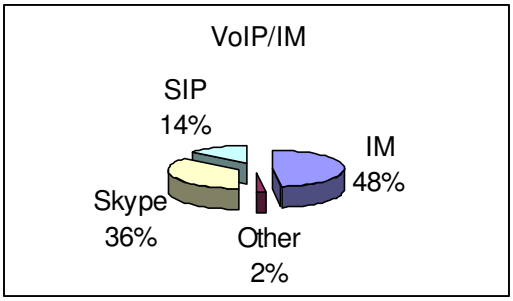
P2P networks are used on a massive scale to distribute copyright-protected content, which can cause legal consequences for network operators. Many file sharers are also using one-click file hosting services that provide direct download links to the shared content (DDL). Specifically ISP and educational networks often encounter a small percentage of heavy users consuming a large proportion of the available bandwidth.

Uncontrolled and unmanaged availability of P2P, Internet telephony (VoIP, Skype), instant messaging (IM) and video streaming applications are known to pose serious security threats and decrease staff productivity due to their often non-work-related nature.



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Traditional Internet gateway products such as firewalls often fail to recognize these applications as they frequently use stealth techniques like protocol obfuscation and encryption to evade detection. In many instances such systems are overwhelmed by the large number of parallel connections that are opened by these applications.

Traffic Analysis and Management

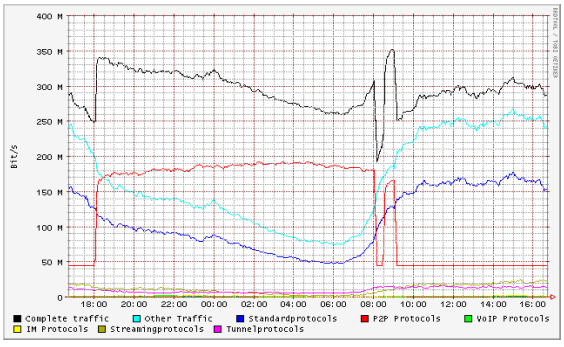
Traffic Analysis has to detect applications with a combination of layer 7 deep packet inspection (DPI) and behavioral traffic. All major protocols including P2P file sharing, instant messaging, media streaming and Internet telephony have to be supported. QoS management has to be integrated to allow prioritization, shaping and blocking of classified traffic. Extensive accounting features have to be provided for in-depth application and subscriber-aware network visibility.

Traffic Management has to provide a comprehensive and cost effective use of bandwidth enabling operators to monitor and control network traffic per application and per subscriber.

Traffic Control

- Layer 7 deep packet inspection and behavioral analysis technology detects the most elusive protocols, no matter if they use advanced obfuscation, port hopping, encryption or other techniques to hide detection.
- It provides comprehensive and detailed insight into the network's per application and per user traffic. This information can be used to define bandwidth management rules to prioritize, shape, block and log individual applications' traffic either in total or for individual users or user groups.
- Operators can offer tiered network service and pricing models along with flexible and fair bandwidth allocation. Premium applications can be prioritized and bandwidth-intensive P2P or streaming applications can be limited.
- Unique white listing feature can be provided for BitTorrent trackers to allow providers to offer legal P2P services with no copyright infringements.
- All important protocols used for Internet telephony based on Voice over IP (VoIP) are supported including SIP, Skype and H.323. The availability of phone service can be selectively controlled per protocol, user and VoIP provider.
- QoS functionally enforces priority and guaranteed bandwidth for real time applications.
- Detailed logging functions can be activated to analyze the service usage

P2P limitation during office hours



Simple prioritization of non-P2P