

Capture the power of IP data

As telecommunications firms and Internet service providers worldwide retain data under a new directive, they should look to find additional business benefits. *by Chris Jeffery*

For telecommunications firms and Internet service providers (ISPs) in many countries, IP-based data retention requirements are becoming a compliance issue. Most telecoms are currently capturing circuit-switched data, and now with new legislation, the focus has been extended to include IP data. Because of the directive, telephone and Internet communication data handled by these firms must be retained by them for a defined period of time. This means header information must be collected, not message content.

Besides complying with the new directive, this data could enable significant benefits for businesses. Once the capability to capture, store and analyze IP communications data has been enabled, a small investment could extend this capability to other business purposes, which could deliver deep insights into traffic patterns and customer behavior.

Leveraging the data warehouse to achieve compliance

The requirement for telecom operators and ISPs to retain this data is defined in a European Union directive that will go into effect September 2007. For some countries, however, specific parts of the directive will not be required until March 2009.

Providers of publicly available electronic communication services or of public communications networks must retain certain data generated or processed by them and make it available upon request to law enforcement agencies—without “undue delay”—for the purposes of investigation, detection and prosecution of serious crimes. The period of



Illustration by Chad Shaffer

retention is between six months and 24 months and is to be determined by national regulation. (Certain other aspects of the requirements are left to member states to define in national laws.)

The information covered by the directive includes all data generated, processed, stored or logged by a service provider when means of communication—including SMS, MMS, WAP, Web browsing, instant messaging and voice over Internet protocol calls—takes place over publicly available networks for fixed and mobile telephony, Internet telephony and Internet access. The data to be stored is necessary to identify the source, destination, date, time, duration, type of communication and location; it does not include the content of the communication.

The directive sets two deadlines for implementation. The member states that have chosen to implement both traditional telephony and IP data by September 2007 are: Denmark, France, Hungary, Ireland, Italy, Malta, Portugal, Slovakia and Spain.

The following member states must comply with the traditional voice telephony storage requirements by September 2007 and with the IP data requirements by March 2009: Austria, Belgium, Cyprus, the Czech Republic, Estonia, Finland, Germany, Greece, Latvia, Lithuania, Luxembourg, the Netherlands, Poland, Slovenia, Sweden and the United Kingdom.

Other countries are also preparing laws for IP data storage, so service providers around the world will need to put in place facilities to capture the data generated by all IP communications. To work with this data, leading service providers will benefit from a scalable data warehousing platform that will provide infinite growth opportunities and process hundreds of millions of records. In addition to providing long-term, cost-effective and flexible storage and retrieval of intelligence, solutions will need to include advanced analytics and reporting to comply with the directive.

The tools to enable each of these capabilities are available and proven; the challenge will be to plan and implement seamless business and technical solutions in a pragmatic way.

Additional business benefits

It may be possible to maximize return on investment (ROI) for compliance by first creating a strategy to identify and collect data for business purposes (such as network utilization and fraud) prior to collecting data for compliance. This may, for example, justify

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keeping the data for longer than the period specified by the regulation.

What are some of the benefits that can be reaped as a result of collecting and retaining IP data? For one, many service providers that cope with growing traffic volumes suffer from ever-increasing network capacity costs. However, closer inspection of traffic patterns—which could be accomplished by studying retained data—may reveal high volumes of low-priority traffic, such as spam communications. Once identified, these can be addressed appropriately.

In addition, better understanding of traffic and service usage patterns at a macro level may enable improved network efficiency and service design adjustments, resulting in reduced cost-to-serve, better customer service and possibly additional revenues.

Companies could also experiment with targeted marketing activities using newly available customer usage data on IP services. For example, for better security against fraud, organizations could use the data to detect unusual traffic patterns, helping to identify fraud in real time and enable an immediate response.

There is also the opportunity to deliver additional technical benefits, such as a cost-effective and flexible long-term storage and retrieval system (up to two years in an efficient retrievable format such as Teradata's

multi-temperature load capability), advanced analytics and the ability to provide information on IP service usage—potentially in real time—to other business systems.

All of these activities could generate additional revenues, reduce capital and operational expenditure, and improve

customer satisfaction—thereby encouraging operators to develop a strategy for IP data retention and build their investment early.

Making the most of it

The European Union directive's requirement for storage of IP communications data presents additional opportunities for businesses to drive revenue, retention, customer satisfaction and cost benefits through development of insights into customer behaviors and preferences.

Telecom operators and ISPs with converged products are likely to have the greatest of such opportunities. They will be able to construct a 360-degree view of customer behavior for cross-selling, up-selling, advertising and communications with customers across a range of channels.

This is one directive that is not only making the world a safer place but, made with a smart approach, could also significantly benefit companies in Europe and worldwide—including in Australia and the United States, which are progressing in these initiatives. **T**

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