

# JUNOS CONTENT ENCORE PERFORMANCE INSIGHT USING SAWMILL

## Sawmill Content Delivery Analytics Gives You the Insight Needed to Optimize Performance and User Experience

### Challenge

To optimize use of Junos Content Encore, you need to understand the the network traffic patterns including time of day, day of the week, web site visitor location, device and the sites visited. You need actionable insight for optimal deployment.

### Solution

Sawmill quickly converts the log files generated by Junos Content Encore into attractive, dynamic, graphical reports. Reports are highly customizable for your specific needs, and can be filtered and zoomed dynamically for rapid forensic analysis of any segment of traffic.

### Benefits

- Generates top-level reports of aggregated traffic over the entire dataset, for easy inspection and optimization of traffic patterns
- Fast, efficient import and analysis scales for large installations
- Dynamic segmentation and filtering of data, for deep ad hoc forensic analysis
- Universal analysis of any type of log data

You need to know what is happening throughout your network, and you need precise and real-time analysis to make the right decisions that affect the growth of your business. Juniper Networks® Junos® Content Encore provides network access in a way that reduces costs and improves the user experience. Sawmill performance insight and analytics software provides a valuable tool for confirming and optimizing these benefits through advanced reporting, analysis, and alerting.

### The Challenge

The gateway from your network to the Internet routes and caches the activity of your network users as they browse or use network applications. Each byte costs money, and the costs of Internet access can easily mount beyond expectations, if access is not carefully monitored and controlled. Junos Content Encore can cache the largest or most frequently accessed Web content, to reduce bandwidth costs and to improve browsing speed for network users.

But to configure Junos Content Encore for optimal performance, you need information. Which sites and which users are the heaviest? Which webpages are the slowest? What are your peak traffic times by day or by hour? How has traffic varied over the long term, and how does it vary over a day? Once Junos Content Encore is in the optimal zone, you still need this information to understand and act on your network utilization, and to ensure that it remains optimal.

### The Juniper Networks-Sawmill Solution

Sawmill provides comprehensive reporting for all traffic information collected by Junos Content Encore. Sawmill can quickly generate top-level reports by site, by user, by day or month or year, or by any other category logged by the device. Sawmill also provides the unlimited ability to zoom or segment traffic, for instance focusing on traffic from a particular week, from a particular user, on a particular site, all three of these, or more. You can use this information to make the critical decisions on network policy, to keep your costs down, your network agile, and your users happy.

Sawmill software can be run on any x86 server and includes a web server. It is extremely easy to install and configure. You just initiate Sawmill, point your browser at the web server, choose a password, and you're ready to start using it. Sawmill's full featured Web interface allows you to access and configure reports from any computer, using any major Web browser. Once Sawmill is directed to your log data, it imports the data into a database, and reports are generated quickly as you request them.

The size of x86 server required to run Sawmill is a function of the log volume, number of concurrent users, report/query frequency and types of reports. Please contact Sawmill support for help in sizing the servers based on your environment.

Feature	Benefit
Flexible Log Formats	Juniper Content Encore can be configured to generate log records in any of several industry standard formats including Apache, NCSA CLF, NCSA Extended and W3C ELFF. Customers can select and specify up to 20 different fields in the log records to match their operational and business analytics requirements.
Out of the box reports	Sawmill default configuration provides a rich set of standard reports that are useful for content publishers and distributors. These include top content sources, top content users, bandwidth usage over time (by year, month, day, or hour), types of media accessed, demographic information (geographic location, device types), and media viewing time.
Customizable reports with deep insight	Sawmill customers can generate a large number of specialized reports to address their deployment, operations, and business requirements. These reports can be fine-tuned for ad hoc segmentation of log information for forensic analytics.
Dynamic filters and drill down views	Sawmill's advanced filtering feature dynamically segments reports to focus on particular content, particular users, particular regions, etc. Its one-click "zoom" feature provides the ability to drill down into the detailed log entries for all items in a report.
SQL relational database management system (RDBMS) integration	Sawmill can be configured to store log data and reports in industry-standard SQL databases including MySQL, Microsoft SQL Server, and Oracle. This allows shared access by all applications, including billing and customer support, instead of storing multiple copies of log records in different application-specific databases.
Role-based access control (RBAC)	Sawmill's RBAC feature includes support for login access via Active Directory, Lightweight Directory Access Protocol (LDAP), and other external authentication systems.
Enables optimization of Junos Content Encore	When deployed in conjunction with the advanced Junos Content Encore caching and content delivery system, Sawmill enables you to extract maximum performance from the Junos Content Encore system. This results in increased bandwidth savings and a superior user experience.

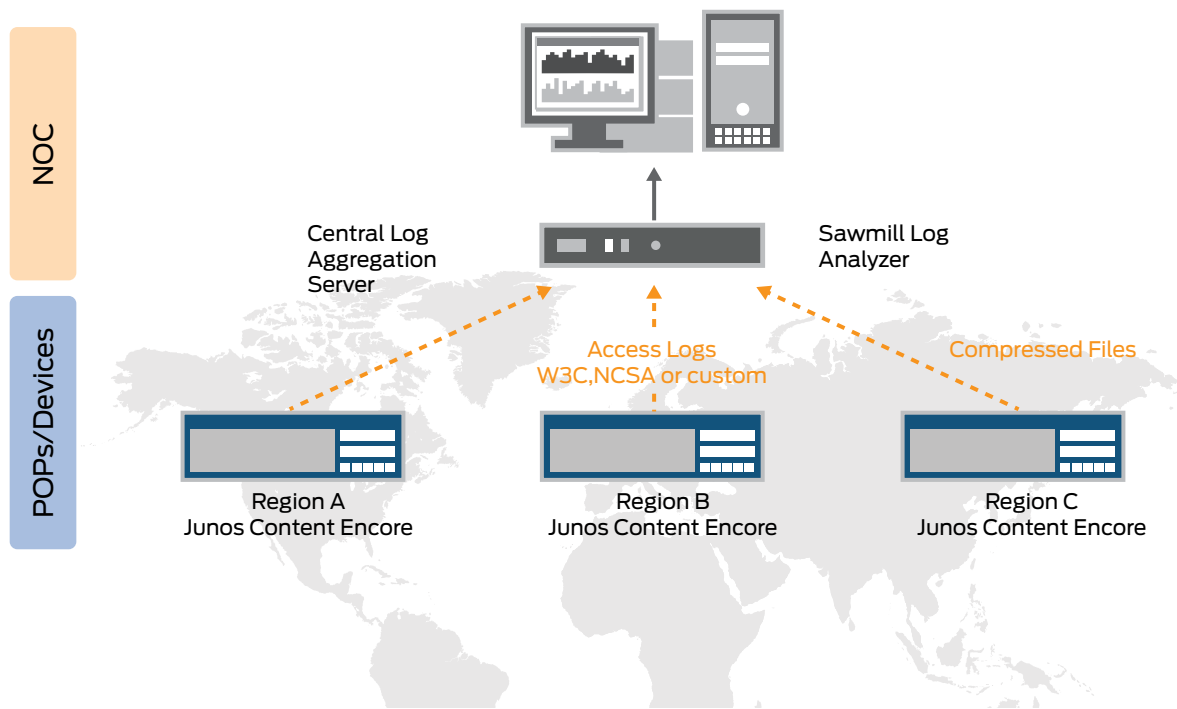


Figure 1. Sawmill and Junos Content Encore solution architecture

## Solution Components

**Juniper Networks Junos Content Encore**—A next-generation content delivery engine which enables customers to improve the profitability of delivering rich media content. Junos Content Encore maximizes system and disk performance to deliver unmatched throughput, session density, and storage scaling.

**Sawmill Software**—Analyzing the log files from your Junos Content Encore devices, Sawmill provides the reports that help you optimize your network, saving money and improving the browsing experience of your network users.

**x86 Server with CentOS or Redhat Linux**—Used to run Sawmill software for aggregating, storing, and processing compressed access logs exported from multiple Junos Content Encore devices.

## Summary—Improve User Experience and Increase ROI with Sawmill and Junos Content Encore

By deploying the best-in-class Junos Content Encore caching and content delivery system, you have already taken a significant step forward in terms of optimizing your network and improving the subscriber user experience. To ensure the best return on investment and to maximize the performance of your Junos Content Encore deployment, it is important to monitor it with a high-performance analytics solution—and Sawmill is just the right tool to achieve these goals.

Sawmill uses the detailed access log records collected by Junos Content Encore to show you where subscribers are, as well as the content mix and frequency of viewing, view times, and duration. It helps you understand the big picture of your network usage and pinpoints bottlenecks and growth trends. Sawmill helps you isolate and analyze the network usage pattern by server, by point of presence (POP) and by region. This insight can be used to increase delivery capacity or redeploy existing capacity to better match the subscriber usage patterns.

Together, Sawmill and Junos Content Encore allows you to anticipate and plan for future growth rather than just reacting to capacity constraints after subscribers have reported problems.

## Next Steps

For information about Sawmill, please visit [www.sawmill.net](http://www.sawmill.net) or contact [sales@sawmill.net](mailto:sales@sawmill.net). For information about Junos Content Encore, please visit [www.juniper.net](http://www.juniper.net).

## About Sawmill and Flowerfire, Inc.

Flowerfire, Inc., makers of Sawmill, is a software development company located in Santa Cruz, CA, USA. Since 1996, Flowerfire has provided high-quality analytics software for a variety of log data sources, including Web servers, media servers, firewalls, mail servers, and more.

## About Juniper Networks

Juniper Networks is in the business of network innovation. From devices to data centers, from consumers to cloud providers, Juniper Networks delivers the software, silicon and systems that transform the experience and economics of networking. The company serves customers and partners worldwide. Additional information can be found at [www.juniper.net](http://www.juniper.net).

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