

WHITE PAPER

By Loom Systems - Intelligent Analytics Platform

The Differences Between Traditional & AI-Powered Log Analysis Tools

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For IT Operations departments that are the foundation of digital transformation, the key methodology to detect and resolve issues is log analysis. Organizations today are experiencing exponential growth in the volume, variety, and velocity of log files, which all must be analyzed to

extract value. While traditional tools guaranteeing only incremental and unscalable growth are still the norm, new AI-powered log analysis tools have the potential for unlimited analysis. As businesses undergo digital transformation, AI-powered tools may be just the thing to take them farther, faster.

New & Old Log Analysis Technology

In recent years, artificial intelligence and machine learning have made substantial inroads into the log analysis process, enabling organizations to extract the full value of their ever-growing log data in real time. These solutions automate the end-to-end log analysis value chain, from data ingestion and structuring to data processing and analysis, some ending with human-like recommendations for resolving issues.

Meanwhile, traditional log analysis tools are manual, labor intensive, time consuming, and costly, making them unscalable and unsuited to the needs of organizations today. These tools require significant human intervention at every stage of the analysis process, from the first step of data ingestion and processing to the final stages of root cause analysis and issue resolution. Furthermore, many need to be integrated piecemeal with other tools to meet the needs of the modern, digital business, adding configuration, integration, and maintenance overhead.

A Run-Through of Traditional vs. AI-Powered Log Analysis Tools

The differences between traditional and AI-powered log analysis tools are numerous. Here's a detailed rundown.

Types of Log Files Supported

Traditional log analysis tools don't support every type of log file, leaving companies to manually pre-process any that aren't supported just so that the data can be analyzed. Compare that to an AI-powered log analysis tool that ingests every type of data out of the box, including log files from proprietary applications.

Measured Parameters

With traditional log analysis tools, IT Operations teams need to manually define any and all of the parameters that will be monitored. That's partly because the tool doesn't scale up as more parameters are needed. In comparison, AI-powered log analysis tools will automatically measure any and all parameters, no manual definition needed.

Baselines & Thresholds Configuration & Optimization

AI Operations teams must manually configure baselines and thresholds according to the data available when installing a traditional log analysis tool. They must also manually recalibrate the configuration to continuously adapt to changes in the environment, which are constant. That's a lot of work. Instead, AI-powered log analysis tools are set based on the organization's unique signature and will automatically adjust as the environment changes without any reconfiguration.

Anomaly & Trend Detection

With traditional log analysis tools, AI Operations teams must manually make correlations between different

issues that happened simultaneously. By comparison, AI-powered log analysis tools will automatically detect anomalies and trends across the environment.

Alerting

Traditional log analysis tools require alerts to be manually configured. For that, IT Operations teams need to know what to watch out for, which is a tall order. AI-powered log analysis tools can automatically set up alerts according to an organization's unique behavior.

Data Correlation & Aggregation

Data correlation and aggregation simply aren't available on traditional log analysis tools. Alerts end up being inconsistent and fragmented. With AI-powered log analysis tools, you can automatically correlate between different alerts to reduce alert fatigue.

Root Cause Analysis

With traditional tools, root cause analysis is done manually and IT Operations teams average 3-4 hours per incident. With AI-powered tools, everything is automatically analyzed.

Recommend Resolution

With traditional tools, no recommended resolutions are available. IT Operation teams are on their own when it comes to investigating possible resolutions.

With AI-powered log analysis tools, IT Operations teams are automatically recommended a resolution for issues and the resolutions are continuously added to a growing knowledge base that teams can access at any time.

Predictive Insights

With traditional log analysis tools, IT Operations teams don't get the benefit of predictive insights that could prevent issues from occurring. With AI-powered log analysis tools, they're available out-of-the-box.

Pricing Model

Traditional log analysis tools are typically priced based on fluctuating volumes of data. In comparison, AI-powered log analysis tools are usually based on the number of monitored issues, tying the tool's price directly to the tool's value.

Learning Curve

Unfortunately, traditional log analysis tools often require that IT Operations teams learn a unique query language. That takes time and resources, hampering their ability to derive immediate value from the tool. AI-powered log analysis tools, instead, are fast, simple, and intuitive. With plug-and-play installation, IT Operations teams would see immediate value.

Conclusion

Despite the ubiquity of traditional log analysis tools, businesses everywhere still struggle to capture value from their logs, and the gap is widening. 82% of organizations reported the inability to manage large amounts of data as the key reasons for not monitoring all the events and system elements in their environment.[1]

Instead, digitalizing businesses can look ahead to AI-powered log analysis tools that can predict application and infrastructure issues before they affect the business. Any AI-powered log analysis tool should be able to mathematically model the analytic powers of the human mind and infuse it with computational speed, accuracy, and diligence.

By incorporating cutting-edge methodologies, AI-powered log analysis tools are learning the unique

behavior of log data in each organization. Once an anomaly is detected by the system, they perform automatic root cause analysis, providing users with the context they need to understand the cause of the issue and the potential effects. The root cause analysis is then matched with recommended resolutions, which can be extracted from a proprietary resolutions database.

AI-powered log analysis tools have the ability to drastically reduce the mean time to resolution (MTTR) of issues. Built for low-touch operational simplicity and usability, AI-powered log analysis tools will empower IT, DevOps, System Admins, NOC teams, and Security Specialists by transforming reactive users into proactive power users - and vastly accelerate the pace of digital transformation.

[1] Techworld, Interviews & Sales meetings