

TiVo Monitors the Customer Experience for Seamless Reliability



Executive summary

TiVo Inc. (NASDAQ: TIVO) is a global leader in next-generation television services. TiVo's innovative cloud-based software as a service solutions enable viewers to consume content across all screens in and out-of-the home. TiVo needed a way to gain real-time visibility into its award-winning TiVo user interface (UI) in order to deliver a seamless customer experience. Since deploying Splunk Enterprise, TiVo has seen benefits including:

- Real-time insight into services and operations that impact service delivery
- Proactive detection and prevention of service issues
- Reduced time required to prepare and install TiVo systems

Why Splunk

TiVo offers a suite of services that defines the TiVo experience for consumers and solidifies the company's market leadership. These services are at the core of TiVo's business and their continuous availability is critical to the company.

To ensure customer satisfaction, TiVo wanted to gain real-time visibility into its award-winning TiVo UI. Using the TiVo UI, consumers can browse programming guides to find and view the specific content they want, whenever they want it. TiVo has to monitor the delivery of these functionalities in order to provide a seamless customer experience. The company needed a solution that could report on key metrics and indicators, both historically and in real time.

TiVo deployed Splunk Enterprise and linked the platform to all the devices and applications that deliver the company's services. The solution ingests logs and other data from TiVo's systems into its searchable index. "Splunk software offers a single tool for end-to-end visibility into our processes and operations," says Sanjay Chandra, TiVo's vice president of IT. "Moreover, the solution is easy to deploy and query, ensuring we have whatever analytics we require."

Industry

- Media and entertainment

Splunk Use Cases

- Business analytics
- IT operations

Challenges

- Needed real-time visibility into the TiVo UI
- Required end-to-end insight into services and operations
- Reduce the time needed to prepare and set up set-top systems
- Alert and report on key metrics and performance indicators

Business Impact

- Monitor the customer experience to ensure reliable delivery of services
- Obtain data-driven Operational Intelligence to enhance service offerings
- Gain real-time views of essential infrastructure for time-saving efficiencies
- Proactive detection and prevention of issues
- Rapid root-cause analytics

Data Sources

- Servers
- Applications
- Database systems
- Proprietary software
- Open-source technologies
- APIs
- Operating systems

Splunk Products

- Splunk Enterprise

Safeguarding the TiVo experience

Splunk Enterprise has enabled TiVo to gain full visibility into how its UI performs in customers' homes and on mobile devices. TiVo can track the availability of the search functionality and programming guides, and ensure that consumers can find specific content. The company also has visibility into metrics specific to mobile devices—such as users' connectivity and how well they can stream content.

Dashboards at TiVo's network operating center display, in real time, the performance of the TiVo services experienced by millions of subscribers. These dashboards also display data over the previous 48 hours, allowing staff to identify trends, patterns and anomalies. Should there be a degradation of a service, such as a drop in connection rates or response times, Splunk software issues alerts that notify staff to take remedial actions before consumers are impacted.

When Splunk software reveals trendlines or metrics that portend slowdowns of services, if not outright outages, TiVo's engineers query the data within Splunk Enterprise to identify the problem. They can then correlate data from the affected systems to diagnose the source of the issue and take corrective measures to avert disruptions.

"Splunk Enterprise offers the visibility needed to prevent incidents that could undermine the TiVo experience," explains Chandra. "Should our customers encounter difficulties, we can dive into our infrastructure to diagnose the root cause of the problem. We then fix it and make sure it doesn't occur again."

Time saved where it counts most

When bringing new customers online, cable operators can provision each set-top box to ensure it links to TiVo's services. This configuration is done

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prior to delivery to reduce the time installers are in consumers' homes. Inefficiencies could prolong installation and undermine customer satisfaction. TiVo staff now monitors log data from the set-top boxes throughout the entire process, resulting in overall process acceleration.

"By harnessing the log data, we trimmed 15 minutes off the time to prepare boxes at the warehouses and shaved an average of 30 minutes installers need at customers' homes," says Chandra. "We found ways to save time and money, and cable providers can now more reliably predict how many boxes they can set up and install in a day. More importantly, we made deploying TiVo quicker and easier than ever for consumers."

Worth watching

Splunk Enterprise is helping TiVo ensure a superior customer experience by providing deep insight into content delivery systems, the TiVo UI and business operations. Moving forward, TiVo plans to use its Splunk-delivered insights to identify new ways to expedite and improve the TiVo experience. "The Splunk platform is so versatile because with it, your data can tell you so much about your business," concludes Chandra.

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