SysMech

Telecommunications companies across the globe face an increasingly competitive landscape as they try to fulfill ever-increasing customer demands while facing more regulation and competition from Over the Top (OTT) applications and trying to reduce the operational costs of their networks. With Micro Focus® Vertica, SysMech gives telcos on-the-spot information and operational intelligence to optimize their networks.

Overview

SysMech, based in Reading, United Kingdom, resolves the challenge by offering telco operators a new generation of service management applications.

Most of SysMech's competitors have single domain applications they try to expand through analytics. This approach extends the reach of these applications in their existing domains but fail to extend their coverage in a highly scaled heterogeneous network. SysMech solves this scale and disparity management quandary from a data perspective merging all network data into one platform and one data model: network, customer, and service data streams. Therefore, SysMech applications enable major telco operators to correlate data from any part of their network, easily place the information in

a repository, provide network wide automation, and employ one user-friendly interface to view data by all employees.

Challenge

"We help operators understand more of their network and services with just one tool," says Andy Stubley, Chief Operations Officer for SysMech. To serve customers cost effectively, telco operators must be able to visualize, automate, monitor, report, and analyze their data across all their network interfaces which include traditional network interfaces (radio access, core, transmission, probing, WiFi etc.) and also value-added services (billing, fault/alarm management, trouble ticketing, configuration management, and inventory systems). The complexity and number of network interfaces is always the most difiuclt element of network management. The interfaces may provide delayed data capture into Zen by hours or even days. SysMech's Zen platform manages the challenges of late, missing, and duplicated source data.

Solution

"We needed a reliable platform that doesn't require a lot of management," Stubley says. "Vertica is our principal fixed-data store. There is no better platform on the market for managing real-time network data that doesn't change but is targeted at analytics. Plus,

> "We needed to conduct real-time analytics and for that Vertica is the best platform. It outperforms other databases in mass data capture and loading of real-time data, targeted for analytics."

ANDY STUBLEY
Chief Operations Officer
SysMech Ltd.

At a Glance

■ **Industry**
Telecommunications

■ **Location**
Reading, United Kingdom

■ **Challenge**
Drive an entirely new approach to network management based on metadata from every element of the network

■ **Solution**
Implement a scalable, top-tier database management platform to provide instantaneous, high-volume data for analytics, automation, incident management, and operational intelligence

■ **Results**
+ Provides data from 35-75+ network interfaces for use in resolving network issues
+ Affords 80-90% in hardware operational savings versus running data loads on traditional databases
+ Supports Zen software's alarm reduction capability by providing real-time data, which enables 80-90% reduction in alarms

Vertica enables us to operate on hardware that's a tenth or twentieth of what we would need to load data into traditional database engines. It's a cost-effective means of doing projects that have been cost prohibitive or impossible before."

A well-known telco uses SysMech's Zen Network Management Software, which incorporates Vertica, to correlate massive complex data from 75 various sources and relay information to hundreds of users.

"We couldn't do that without Vertica. It's the fastest engine for this use case. We're offering an environment where people can run work on data they couldn't see before. That's our differential," Stubley acknowledges.

A team of 80 engineers previously took two hours each to aggregate data from various areas of the network to conduct their analyses and run reports at the start of the day. Now with a streamlined dashboard, supported by Vertica, assimilates all of the data and provides visibility across the network before the engineering team arrives, saving up to two hours per engineer per day.

Results

The types of telco users counting on the Zen software and Vertica platform consist of network analysts, executive management, service operations, and network quality personnel.

Vertica assists in profiling end users of telco services, driving behavior, and monetizing services. With data across the entire network available to them, customers can conduct a new range of analyses and predictions about such items as power consumption, performance, and equipment failures. They are also deploying Machine Learning to address specific issues, such as, pinpointing network areas that were not carrying the amount of traffic they should—a revenue loss.

"When that happens a company is losing money, so we're able to predictably identify the trends that make those elements of the network appear to be "offline" and rectify them," Stubley explains. "We're also able to identify over-/under-provisioned network components and predict where a customer will need to put more equipment in the future and where they can put less."

At SysMech, Zen software captures 100s of billions of performance counters daily in real time, which process in Vertica.

Approximately 100 TBs of data may reside in the environment on a short-term basis. "It's a massive operation to consistently capture that volume of counters daily, but we've used Vertica successfully as the bulk real-time analytics platform in our environment," Stubley says.

Ahead, SysMech is looking to move network management to a self-analyzing, self-actioning stage. "Our vision is for the system to self-analyze and point out issues to users. We're all about fully optimizing telco operator networks and delivering true business value from underlying big data. Vertica helps us achieve this," Stubley concludes.

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