

PRESCIENT

Dell EMC Isilon and Hadoop protect travelers in high-risk regions with Big Data security analytics

REAL-TIME SECURITY ALERTS DRAMATICALLY IMPROVE TRAVELER SAFETY

World travel can be exciting and rewarding, but it also can be dangerous. In fact, for employees of government agencies and corporations, traveling to certain regions at particular times may pose serious security risks. Lives and business reputations might be at stake, and liability costs could be astronomical.

Prescient, a global provider of full-spectrum intelligence, technology, and risk management offerings, has an answer. The company's start-up division, Prescient Traveler, is launching a mobile traveler safety application that uses Big Data analytics to track the whereabouts of travelers worldwide. It correlates location information with situational awareness to pinpoint safety risks for travelers at any moment.

To achieve such precision, Prescient Traveler must process huge amounts of structured and unstructured data, which could grow up to a terabyte per day. With people's lives at stake, alerts must be issued within seconds of discovering a dangerous scenario. Prescient Traveler needed a Big Data infrastructure that could meet such extreme requirements.

After evaluating offerings from Dell EMC®, VCE®, HP, and Juniper, Prescient Traveler chose Dell EMC and VCE to run Hadoop-based Big Data analytics.

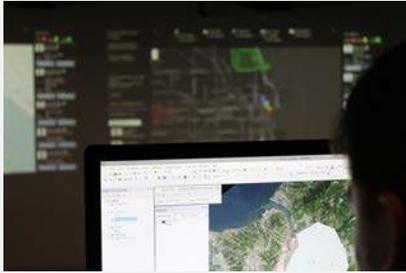
Mike Bishop, Prescient Traveler's managing director and chief systems architect, explains, "The rock-solid, high-performance infrastructure delivered by Dell EMC and VCE gives us peace of mind that our application will be there without fail for our Fortune 100 and government customers."

With Dell EMC and VCE, Prescient Traveler has a powerful, scalable, and highly reliable infrastructure for real-time Hadoop analytics to support its mobile travel security application. The company also expects to reduce the cost per gigabyte of data by nearly 84 percent on Hadoop and Dell EMC. As a result, Prescient Traveler can handle massive amounts of data to launch and grow its business cost-effectively.

ENVIRONMENT

Prescient Traveler deployed Dell EMC Isilon® scale-out storage to support Hortonworks Hadoop as part of a comprehensive data lake powered by VCE Vblock® Systems and Dell EMC XtremIO™ all-flash storage.

Hortonworks Hadoop will perform data analytics for Prescient Traveler's mobile travel security application, drawing from 49,500 data sources such as traveler GPS location, RSS news feeds, social media chatter, broadcast media reports, and weather data. Approximately 20 percent of data will be updated on a minute-to-minute basis.



ESSENTIALS

Industry

Traveler safety and business continuity

Organization Size

102 employees

Business Challenge

- Curate and analyze massive volumes of data for millions of travelers worldwide
- Deliver user-specific threat awareness around the clock

Results

- Delivered high reliability at massive scale for Big Data analytics
- Reduce the cost per gigabyte of data by 84 percent
- Enabled real-time data access and analysis to ensure traveler safety
- Achieved high performance and scalability for fast launch and expansion of new services

Solutions

- Dell EMC Isilon
- Dell EMC XtremIO
- VCE Vblock Systems
- PrescientTraveler™ Mobile and Dashboard applications
- SAP HANA
- Hortonworks Data Platform (HDP)



Vblock Systems running VMware-virtualized Hadoop servers will capture the data from Hortonworks and store it on Isilon for deep analytics and trend analysis. Vblock Systems also will capture current Hadoop data on XtremIO for real-time reporting and alerts.

Prescient Traveler leverages SAP HANA for certain real-time linguistic and geospatial analyses, the output of which also feeds into Vblock Systems, Isilon, and XtremIO.

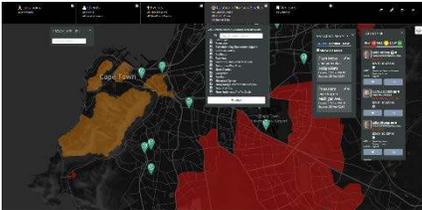
In addition, the company uses Dell EMC Data Domain® deduplication storage systems for backup of the entire infrastructure.

BUSINESS CONTINUITY ENSURES PERSONAL SAFETY

Prescient Traveler will process a huge confluence of data from global sites, which will be transformed into an easy-to-understand visual heat map for mobile users. This will help travelers steer clear of dangerous hot zones by providing them with instant alerts. The solution also includes a management dashboard for customers to confirm that employees have acknowledged alerts. This is essential for mitigating liability.

Personal safety and business continuity are top priorities for Prescient Traveler. That made Isilon and Hadoop an ideal choice since they can distribute data across multiple sites and ensure reliable data access at massive scale.

Mike Pasternak, Prescient Traveler's vice president of IT, comments, "A native interface between Hadoop and Isilon makes it easy to spread out Hadoop data across multiple Isilon clusters. It removes a lot of worry from an availability standpoint."



"Isilon helps us control the cost of maintaining a massive data lake against which we're constantly running analytics against.... For value and cost-effectiveness, there's nothing that comes close to Isilon and Hadoop for analytics on a massive scale."

Mike Bishop, Chief Systems Architect, Prescient Traveler

SUBSTANTIAL COST REDUCTIONS WITH HADOOP

Prescient Traveler also will reduce costs by using Isilon and Hortonworks for social media analytics, and SAP HANA for advanced linguistics and geospatial analyses. By running social media analytics in Hadoop with Isilon, Prescient Traveler already is seeing substantial savings. The ability to selectively transition linguistics and geospatial data to the Hadoop and Isilon environment offers significant savings potential.

"Isilon helps us control the cost of maintaining a massive data lake against which we're constantly running analytics," says Bishop. "We expect to go from roughly 80 cents per gigabyte to about 13 cents per gigabyte using Isilon and Hadoop—an 84 percent reduction. For value and cost-effectiveness, there's nothing that comes close to Isilon and Hadoop for data analytics on a massive scale."

GLOBAL SECURITY INTELLIGENCE IN SECONDS

To process data for potentially millions of global travelers, system performance is critical. For example, as natural disasters, civil unrest, and other disruptive events simultaneously affect multiple locations of interest worldwide, Prescient Traveler's customers will want to alert employees within seconds so that travelers can react appropriately.

“Dell EMC and VCE technologies give us the confidence that critical information will be available when we need it. Isilon and Hadoop help us correlate emergent threats with traveler positions in real time. We saw Vblock and XtremIO as the best way to meet our real-time data access and analysis requirements,” Bishop remarks. “We’ve already achieved record I/O, which enables us to transform numerous large data files quickly. Deduplications have also improved dramatically,” Pasternak adds.

READY TO LAUNCH

Prescient Traveler is confident the Dell EMC and VCE infrastructure will meet its rigorous requirements as it launches and grows its new mobile traveler safety offering.

Bishop concludes, “The processing power and flexibility Dell EMC and VCE provide are phenomenal. It’s exactly what our greenfield operation needs to evolve rapidly as our solution gains traction in the market.”

Company Overview

Prescient is a global risk management company that delivers full-spectrum intelligence, technology and security offerings to corporate, federal and international clients. Prescient Traveler, a start-up division of Prescient Holdings, is a software-as-a-service offering that provides real time, simplified traveler safety and customer awareness to global organizations and their travelers.

CONTACT US

To learn more, contact your local representative or authorized reseller.



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