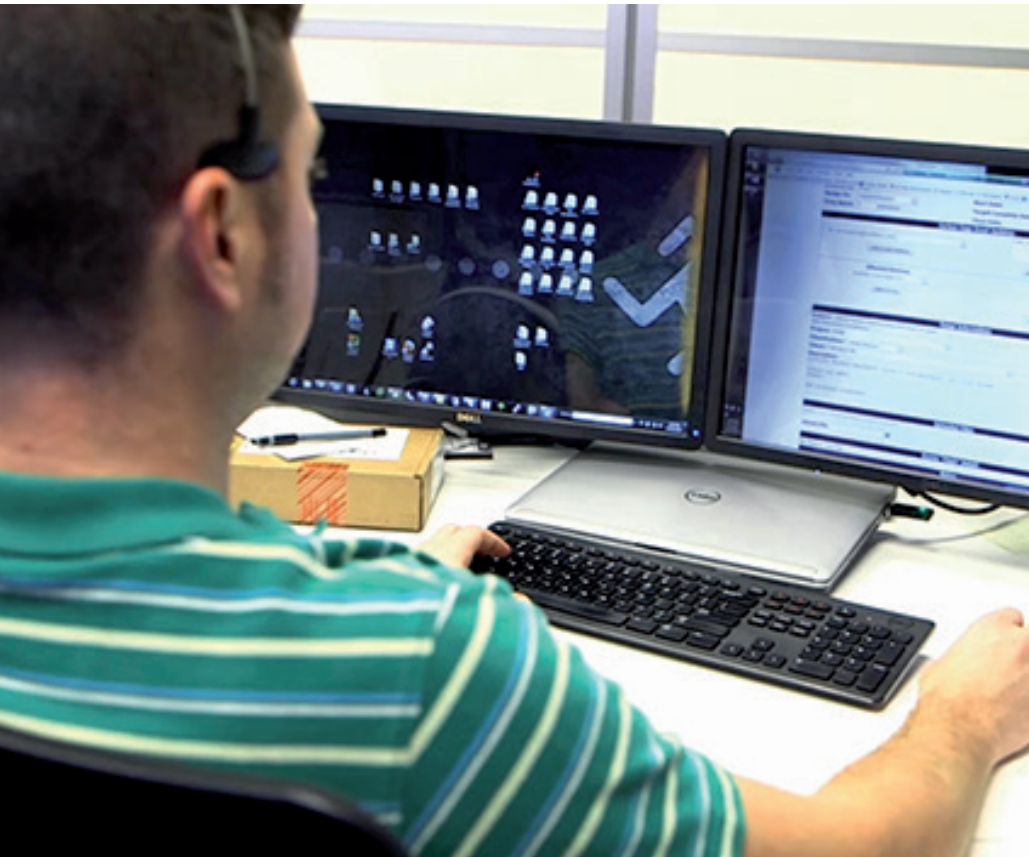




A powerful new foundation for creating customer campaigns

By taking advantage of big data, Merkle is unifying consumer data and helping its clients roll out more-effective, customized, marketing campaigns



Customer profile

MERKLE

Company	Merkle
Industry	Customer Relationship Marketing
Country	United States
Website	www.merkleinc.com

Business need

Merkle needed a scalable, cost-effective way to capture and analyze large amounts of structured and unstructured consumer data for use in developing better marketing campaigns for clients.

Solution

The company deployed a Dell and Hadoop™ cluster based on Dell and Intel® technologies to support a new big data insight solution that gives clients a unified view of customer data.

Benefits

- Partnership with Dell and Intel® leads to new big data solution
- Cluster supports the Foundational Marketing Platform, a new data insight solution
- Merkle can find patterns in big data and create analytical models that anticipate consumer behavior
- Organization cuts costs by 60 percent and boosts processing speeds by 10 times
- Solution provides scalability and enables innovation

Solutions at a glance

- Big Data

“We’ve completely redesigned how we capture, store and provision data with the new Dell Hadoop cluster. We can gather larger amounts of data, and our analysts and statisticians can mine that data in ways they couldn’t before.”

*Tony Giordano
Executive Vice President of the Technology Solutions Group, Merkle*

“When we moved from our existing architectures to the new Hadoop Dell cluster, we saw a 60 percent reduction in total cost of ownership. That’s huge for us, especially as we think about the architectures we’ve deployed in the past. It means we can drive more dollars into investing in this platform and bring even more capabilities to our clients.”

Matthew Mobley, Chief Marketing Technology Officer, Merkle

Marketing to today’s consumer is no easy task. People have a rapidly increasing number of ways they can be reached, from TV and the internet to cell phones and social media.

It’s a trend Merkle knows all about. The customer relationship marketing agency specializes in data-based marketing solutions that help Fortune 1000 companies worldwide capture first-party and third-party data on customers and prospects. Merkle then helps turn this data into actionable insights, helping its clients better understand their customers’ buying behaviors, so they can decide how to best reach them and how to use their advertising and marketing dollars more effectively. “Effective interaction with customers requires businesses to gain a deeper understanding of customers,” says Tony Giordano, the executive vice president of the technology solutions group at Merkle. “That means having a 360-degree view of customer data, including data gathered from both traditional and online sources.”

But capturing that view had become more challenging for Merkle because the organization needed to address the growing opportunities presented by big data. “The amount of data we collected in the past was limited by the number of homes and addresses that existed,” says Matthew Mobley, the company’s chief marketing technology officer. “Now, if you think about the number of devices a single consumer can have, you quickly span out. A consumer might have a mobile phone, a tablet and multiple PCs. Then you think about how all those devices connect to the digital world, and you realize there are many different signals you have to bring together and analyze to determine how it all works together. So you quickly end up with a scalability and big data problem.”

The company’s solution for data analysis, however, was not equipped to support massive amounts of data. “We sort of bolted some things together internally, and we recognized our solution wasn’t going to scale,” says Mobley. “We were spending a lot of money, and we were having difficulty providing just the basic data services to our customers, let alone trying to ingest all this digital data.”

Targeting a Hadoop solution

For Merkle, it made the most sense to move to Apache® Hadoop™, an open-source framework for storing and processing massive amounts of multistructured data in a distributed way on large hardware clusters. “We had to come up with a computing model that was way more scalable than what we had,” says Shawn Streett, the vice president of managed hosting for Merkle. “Hadoop was the logical target for us.”

But Merkle first needed to find a technology partner who could help design and build a Hadoop-based solution. “The Hadoop ecosystem is fairly immature, and it became critical for us to partner with someone with expertise that could bring our team up to speed very quickly,” says Tim Talbot, CIO of

Products & Services

Hardware

Dell PowerEdge R720xd rack servers featuring Intel® Xeon® E5 processors

Merkle. That partner turned out to be Dell, which Merkle had collaborated with on a number of solutions deployed within the company. "Dell was really focused on the Hadoop platform, and we trusted their expertise," says Talbot. "We knew they could bring a reference architecture to the table, which we needed."

Partnering with Dell to deploy a cluster based on Dell and Hadoop technologies

Dell worked with Merkle to implement a new Hadoop cluster based on Dell PowerEdge R720xd servers featuring Intel® Xeon® E5 processors. "The PowerEdge R720xd provided the storage requirements we needed in a compact, dense server," says Streett. "Coupled with the Intel processors, it gave us a high-performing, power-efficient system."

Initially, Merkle had tested different Dell hardware, which didn't suit the organization's needs. When Merkle approached Dell about the challenge, Dell engaged its engineers and architects to build a new cluster configuration based on the PowerEdge R720xds. "During that time, Dell invested in working with us to make sure this was successful," Talbot says. "That was a sign of their commitment to our partnership. They are helping us succeed, rather than just focusing on selling us hardware."

The new Hadoop cluster gives Merkle an adaptable provisioning solution. "We are able to process both structured data, including traditional marketing information like customer addresses, as well as unstructured data that includes all the digital data we want to analyze," says Talbot. The cluster, which can scale to support a petabyte of data, sits behind the organization's data analytics solution. The company also uses the Apache Flume and Apache Sqoop tools to move data to and from the Hadoop cluster.

Building a powerful new marketing platform

Merkle has been able to use its new Hadoop cluster to build a new marketing solution that employees can use to

analyze both traditional and digital customer data. "We've completely redesigned how we capture, store and provision data with the Dell Hadoop cluster," says Giordano. "We can gather larger amounts of data, and our analysts and statisticians can mine that data in ways they couldn't before."

With these capabilities, Merkle created the Foundational Marketing Platform, a data insight solution. "Our new Foundational Marketing Platform provides a much greater level of visibility into campaigns and media spend for our clients," says Talbot. More than 140 internal Merkle business customers currently use the platform to develop data insights for the company's clients.

Connecting consumer identity and experience

Using its new marketing platform, Merkle can deliver "connected recognition" solutions, which use big data to make connections between customers' identities and their experiences. These solutions find patterns in data from the organization's clients and then create analytical and predictive models designed to anticipate consumer behaviors. "Connected recognition provides a single view of all these different data assets, and it also creates a view of the experience a consumer has with an individual brand," says Mobley. "Using our Dell and Hadoop solution, we can do something we couldn't do before: take real-time digital data coming from a mobile device, for example, and connect it to transactional data to create a holistic unified view of a consumer."

Helping customers better target their marketing campaigns

Merkle can now give its clients solutions based on historical customer data and an integrated view of a customer. As a result, the company can help its clients position new marketing campaigns more effectively. "The connected recognition platform gives us a map of how to connect all the different ways



consumers can identify themselves, either with digital devices or with traditional vehicles like addresses or emails,” Mobley says. “We are then able to help our clients look at all that information and rationalize it so they can better understand who their customers are and how to best interact with them. For example, clients can more easily determine how relevant a certain offer is at a specific point in time.”

Merkle clients are using data delivered through the Foundational Marketing Platform to segment prospective new customers, determine which customers to target and how, and build longer-lasting relationships with existing customers.

Reducing costs by 60 percent, processing data 10 times faster

The new Hadoop cluster is also helping Merkle save a significant amount of money. “When we moved from our existing architectures to the new Dell Hadoop cluster, we saw a 60 percent reduction in total cost of ownership,” Mobley says. “That’s huge for us, especially as we think about the architectures we’ve deployed in the past. It means we can drive more dollars into investing in this platform and bring even more capabilities to our clients.”

In addition, the data-processing speed of Merkle’s new solution is up to 10 times faster than its previous data analytics solution. “Our ability to easily process big data with the new Dell Hadoop cluster gave us a significant performance improvement over what we saw with some of the traditional database platforms out there,” says Mobley.

Easy solution scaling and the ability to innovate

The organization is taking advantage of the Hadoop cluster to easily scale its solutions. “We have a scalable Hadoop-based cluster now that we are deploying marketing database capabilities on top of, and we can take any data that our clients bring in and support it on this system,” Mobley says. “We have the ability to easily scale this platform in specific areas in a more linear way. Previously, we would have to do a significant series of step increases in our platforms just to get to the scale we need from this platform.”

Merkle can also use its big data platform to focus even more on developing new solutions. “Merkle has to be innovative, and we have to be able to push new technologies,” says Mobley. “We are able to do that with partners like Dell and Intel that help us deliver the next level of solutions and services we must provide to our clients.”

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