INDUSTRY
- Higher Education

CHALLENGE
- Support 24/7 research projects analyzing massive amounts of big data generated by social media

SOLUTION
- Vblock® Systems

RESULTS
- Enabled school to capture one percent of all Twitter feeds to aid research; reduced firmware updates from taking five days and 12 hours of downtime to one day with zero downtime; freed IT to pursue innovative projects

ANNENBERG SCHOOL FOR COMMUNICATION AT THE UNIVERSITY OF PENNSYLVANIA

Annenberg taps new communication research advancements with Vblock® Systems

RESEARCHERS CAPTURE SOCIAL MEDIA INSIGHTS FROM BIG DATA ANALYSIS; IT ELIMINATES DOWNTIME TO SUPPORT 24/7 RESEARCH PROJECTS

Annenberg School for Communication at the University of Pennsylvania educates doctoral students in theories, substance, and methods of communication research. Ph.D. candidates and their professors explore communication across many areas of society, including culture, politics, digital and social media, health, and mass media.

The scope of research has grown in recent years with new valuable insights available through analysis of Twitter, Facebook, and YouTube, and other social media feeds. Annenberg's IT infrastructure could not keep up with the big data generated by these networks. Its small IT staff also struggled to keep systems up and running, leaving little time for IT innovation and planning.

In response, Annenberg replaced its previous infrastructure running on siloes of servers, storage, and networks with VCE Vblock® Systems to provide an agile private cloud environment. Today, Annenberg enables big data research with increased performance and availability. The Vblock Systems also eliminated downtime due to system maintenance and shrunk weekly system management tasks from taking 15 to two hours. Researchers gained reliable access to online services and IT had more time for development and support of complex research.

EMC²

> "Our faculty and students conduct research that demands huge IT resources. With Vblock Systems, we're meeting our big data research needs quickly and efficiently. We also can deliver resources on the fly, which is essential to serving the constantly changing world of communication research."

— Tejash Patel, Senior Director, Information Technology Services, School of Nursing (formerly IT Director, Enterprise Infrastructure Services, Annenberg School for Communication), University of Pennsylvania

THE CHALLENGE

Previously, IT typically performed system maintenance off-hours since these tasks required bringing down systems and stranding researchers without access to email, research data, and other online services. This often meant IT needed to work weekends or holidays.

Maintenance downtime also presented issues for multi-year research projects that captured and analyzed social media feeds around the clock. Even a gap of a few minutes could skew results.

THE SOLUTION

Annenberg deployed a Vblock System 300 series converged infrastructure to run its production applications, such as Microsoft Exchange and Microsoft SQL Server, as well as Red Hat Enterprise Linux and an ASP.NET MVC development environment. The Vblock System, which is 99 percent virtualized, also runs a VMware Horizon virtual desktop infrastructure for 250 users.

The school deployed another Vblock System in an active-active configuration for business continuity. EMC RecoverPoint provides continuous replication between the two Vblock Systems. To monitor and manage the converged infrastructures, Annenberg relies on VCE Vision™ Intelligent Operations software.

THE RESULTS

With Vblock Systems, Annenberg improved overall systems and application performance dramatically. Emails synchronize 80 percent faster and virtual desktop users are able to access contents at unprecedented speeds.

As a big data platform, Vblock Systems enabled Annenberg to create a Twitter repository that captures one percent of all tweets 24/7. This provides students and faculty with valuable data on social trends and attitudes.

For example, Vblock Systems enable researchers studying dissemination of tobacco information through public media to collect data from tens of thousands of Twitter accounts, 8,000 websites, and other media feeds.

Laura Gibson, the study's research director at Annenberg, says, "We're able to take on such a large project because we have a big data platform that allows us to work with bigger data sets and untraditional social media sources. We're excited that we can ask a whole set of new questions and learn things that a few years ago might not have been possible."

Annenberg's IT organization also gained a number of valuable benefits, including

- Consolidated from two data centers to one data center with two racks of Vblock Systems.
- Decreased system maintenance tasks, such as firmware updates, from taking five days and 12 hours of downtime to one day with zero downtime.
- Automated and centralized system management, reducing weekly health checks from requiring 15 hours to two hours.
- Standardized firmware and software updates with VCE's Release Certification Matrix (RCM), improving data center stability and eliminating manual updates.
- Deployment of Vblock Systems into production in only 60 days from order.

With Vblock Systems, Annenberg's IT team is no longer consumed by system management and "keeping the lights green." IT now has time to focus on innovation and help researchers explore more complex theories and uncover valuable communication trends.

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