



BINGHAMTON UNIVERSITY

STATE UNIVERSITY OF NEW YORK

APV SERIES CASE STUDY

Binghamton University

University finds the 'sweet spot' for features versus price in Array application delivery controllers; load balancing assures responsive and reliable service for mission-critical student information systems and other infrastructure.

Background

Located just outside Binghamton, New York, on the banks of the scenic Susquehanna River, Binghamton University is part of the State University of New York (SUNY) system. The University is consistently recognized as one of the premier public universities in the nation and serves more than 17,000 undergraduate and graduate students. In addition, the University has nearly 3,900 faculty and staff, with a student-to-faculty ratio of 20:1.

Binghamton's Information Technology Services team supports network, computing and educational technology services for the entire campus community. The team is focused on creating and supporting an enhanced computing and educational environment, and continually upgrades resources to ensure that the most current and effective technologies are available.

Industry:

Higher Education

Challenges:

Provide 24x7x365 availability of key applications such as Banner to faculty, students and staff

Replace older commercial and open-source load balancers with a state-of-the-art, supported load balancing solution

Achieve the right balance of features without a high price tag

Perform on-the-fly maintenance of front-end servers without downtime

Solution:

Two Array APV2600 application delivery controllers, with AppVelocity-S for load balancing and SSL offloading/acceleration

Benefits:

APV Series delivers a strong set of features at about half the price of similar products

Faculty, students and staff have access to critical applications with no downtime

Application servers can be taken off-line for maintenance without impacting application performance

Local support through iSECURE, backed by Array's industry-leading technical support team

Challenges

In keeping with its mission to provide top-end technology resources for the university, Binghamton's IT team had deployed [Banner by Ellucian](#), a student information system with a host of features designed to strengthen workflows for higher education institutions. Banner is primarily used for student enrollment and course registrations, financial aid processing, degree advising, and academic administration, as well as student billing and payment, and financial management.

To meet the needs of thousands of students, faculty and staff, Banner is deployed across three application servers. To ensure application performance, Binghamton University's IT team had deployed two load balancers in the past – an older commercial solution and an open-source solution. The team had encountered a number of functional problems with the latest deployment.

In addition, the team wanted to expand load balancing to other network-based services in the future such as Web servers and [Blackboard](#), a learning management system that includes course management, distance learning and on-campus education experience enrichment.

In order to achieve these goals, Binghamton's IT department wanted a state-of-the-art, supported load balancing solution. It began an evaluation of multiple vendors' load balancing products, using the virtual appliance editions as a baseline.

Long-time Array reseller [iSECURE](#), a woman-owned IT security solutions provider, provided the initial consultation as well as technical support throughout the extended evaluation. "Having a test virtual appliance allowed us to get comfortable with the various products and gain experience with them as well," noted Tony Poole, assistant director for systems programming at Binghamton.

Solution and Results

"Array Networks' APV Series application delivery controllers hit the sweet spot," said Poole. "Another product was very feature-rich but came with a big price tag. Yet another was less expensive, but lacked some features that were important to us. The Array solution hit the 'Goldilocks spot' with the right balance of features and price."

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Binghamton University**

iSECURE ported the configurations from the vAPV virtual application delivery controllers to a pair of new APV2600 dedicated appliances deployed in a high-availability cluster. The University's IT team also availed itself of a Webinar tour of the APV Series' features, conducted by an Array sales engineer.

"The installation went very smooth," reported Poole. "After our walk-through via the Webinar, we got the Banner system load balanced, and haven't had to touch it since."

Benefits

Since deploying the APV Series appliances, Poole reports that the University has experienced minimal downtime for the Banner application, and the IT team is able to perform front-end maintenance on the application servers as needed without affecting performance. Load balancing via the APV Series also protects against a failure in one server without affecting the service, and allows the team to add more front-end servers as needed to support growing demand.

Since the initial deployment, the IT staff has implemented load balancing for the four Blackboard application servers, the Active Directory servers, and will be doing the Web servers next.

Summary

Array's APV Series application delivery controllers help Binghamton University meet the needs of faculty, students and staff for highly available, responsive and reliable access to critical student information systems. Downtime is minimized, and maintenance can be performed on front-end application servers without impacting service. Going forward, the APV Series' role will expand to load balance additional important services as needed.

