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IDAHO STATE UNIVERSITY CASE STUDY

Idaho State University (ISU), a state-supported institution in Pocatello, Idaho, offers a remarkable combination of academic excellence and relaxed lifestyle. ISU serves more than 12,000 students with a wide array of undergraduate and graduate programs in the arts and sciences, health professions, business, education, engineering, and pharmacy.

THE PROBLEM

The ISU Computer Services department handles student e-mail accounts for the entire university. ISU students require access to e-mail accounts on- and off-campus. High network traffic caused by students logging in and out of the system rendered the available disk space inadequate. Computer Services tracked a consistent turnover of at least 250 clients every thirty minutes, twenty-four hours a day. Because servers frequently failed, causing the system to go down, students often could not access their e-mail accounts. Compounding the problem was the fact that system maintenance was horrendous for administrators. University system maintenance required administrators to modify, add, and delete student accounts on a daily basis, not to mention completely overhaul accounts with each new school year. Darl Bennett, ISU System Administrator, knew a solution was needed to alleviate the problems students and administrators faced. In addition to expanding disk space and simplifying network administration, Bennett needed a solution that provided other benefits. The ideal solution would also streamline the e-mail system, provide constantly available services, and allow students to access accounts from local and remote locations from Windows®, Macintosh®, NetWare®, and Unix® clients.

SEARCHING FOR THE SOLUTION

Bennett decided to search for a solution that would provide ISU with reduced downtime, support for high network traffic volumes, eased administration, and operating system interoperability. Bennett surveyed several solutions, but was unsatisfied. He stated, “I needed something that had a support system behind it, I did not want to have to deal with the freeware products out there.” Bennett discovered TotalNET Advanced Server (TAS), the core software component of LSI Logic Storage Systems, Inc.’s Syntax Enterprise Services. In addition to TAS interoperability software, Syntax Enterprise Services offered ISU access to personalized CustomerCare Services. Not only would Bennett be provided the technology necessary to achieve network goals, but also 24x7 technical support and access to all product upgrades and enhancements. Because ISU’s system provided services to students around the clock, 24x7 technical support was completely necessary because system complications occurred at all hours of the day.

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SYNTAX ENTERPRISE SERVICES: MEETING SYSTEM NEEDS

ISU invested in Syntax Enterprise Services to run on two Hewlett Packard® HP-UX servers, with 1000 client connections on each server. The implementation of Syntax Enterprise Services in the ISU environment met and exceeded the expectations of the Computer Services department. The proven reliability and scalability of the Syntax Enterprise Services-enabled Unix servers allowed Bennett to consolidate five existing servers onto the two HP-UX servers. These two servers adequately stored all student account information and operations. In addition, ISU maintains the necessary disk space to accommodate the influx of accounts that Bennett anticipated in upcoming years. The robustness of the Unix servers, augmented by TAS software, streamlined the logging in and out process. Because the system could more efficiently handle network traffic, remote access requests from students both on- and off-campus were responded to more quickly.

The simple process of deploying Syntax Enterprise Services software for server consolidation proved invaluable to ISU. Much needed disk space was created to allow the Computer Services department to more effectively meet the needs of current and future students. The combined utility of Unix and Syntax Enterprise Services provided ISU with a more reliable, stable system. This greatly depleted the amount of system downtime experienced in the environment. As Bennett puts it, “Now when there is a problem, it is much easier to figure out what is wrong and fix it quickly. Before TAS was installed, it sometimes took days to resolve a problem.” With Syntax Enterprise Services, Computer Services has not encountered a problem that requires more than one hour of administration to get the system back to full operation.

Syntax Enterprise Services also worked to drastically simplify system administration. With the consolidation of information from five to two servers, the time needed to maintain and administer student accounts was cut to a fraction of the time previously required. This allowed Bennett and his team to focus on other departmental concerns, such as security and backing-up/restoring files. The flexibility of Syntax Enterprise Services also enabled the Computer Services department to incorporate their own code so that the new system utilized the security mechanisms that existed prior to the switchover. Furthermore, ISU did not need to worry about changes in student authentication because Syntax Enterprise Services allowed all students, regardless of operating system, to gain access to the system using Unix passwords already set in place. In short, the deployment of Syntax Enterprise Services software in the ISU environment demanded little from administrators, yet greatly reduced administration complexity on a long-term basis.

ISU also reaped massive benefits from the interoperability afforded by Syntax Enterprise Services. Departments across the campus require different operating systems in the education process. Because Syntax Enterprise Services enables Windows, Macintosh, NetWare, and Unix to transparently share resources residing on a Unix server, Computer Services can meet every department’s requirements with the HP-UX system. With Syntax Enterprise Services, departments and students are no longer isolated from one another because of the technology they use. Students and faculty share files, applications, and printers seamlessly across the network, while experiencing no changes to the desktop.

PROVIDING SOLUTIONS

Prior to the implementation of Syntax Enterprise Services, Idaho State University’s network lacked adequate disk space to handle network traffic, required excessive administration, and did not allow for operating system interoperability. The deployment of Syntax Enterprise Services in the ISU environment furnished the university with a consolidated, two-server Unix system. Within the confines of this simple network, ISU was able to create a surplus of disk space, providing for smoother operation and the capacity to accommodate expected account growth. In addition, Syntax Enterprise Services drastically reduced time required for network administration and established transparent interoperability across Windows, Macintosh, NetWare, and Unix operating systems. The increased reliability, availability, and serviceability of the ISU network allow students, faculty, and administrators to enjoy the benefits of a more functional computing environment.