IT Security

Erv Blythe wrote to the deans, directors, and department heads on the reason for several coming changes to enhance security. A portion of the text is reprinted here:

We are working to enhance security on several fronts:

• Ensuring that electronic transmissions of sensitive information are encrypted;
• Working to minimize desktop vulnerability through up-to-date operating system patches and anti-virus software;
• Seeing that passwords are strong enough to resist likely attempts at guessing them;
• Promoting behaviors within the university community and other affiliates that foster secure systems;
• Completing realistic and useful Risk Assessments and Business Recovery Plans; and
• Providing enhanced tools that will give the user greater control over the e-mail received.

In our work to re-emphasize security, I have reassigned key personnel to form two groups: a unit called Secure Enterprise Technology Initiatives created to focus on developing secure applications, middleware, and interfaces to support the university’s computing and network services; and a Security Task Force to investigate emerging security concerns. Several years ago the state Auditors of Public Accounts required the establishment of the University IT Security Office to investigate critical IT security exposures. The Secure Enterprise Technology Initiatives group will work hand and hand with the University IT Security Office, which continues to be a valuable resource for information technology security issues (<www.security.vt.edu>).

Database Management Systems (DBMS)

DBMS is the university’s Oracle support team. Their work concentrates on the databases supporting Banner, including those supporting HokieSpa that faculty, staff, and students use to register for courses, check their pay stubs, and update their contact information. DBMS also supports the Oracle databases for the source code management system (Harvest), the Fixed Assets System (FAMIS) and the Enterprise Directory (Registry). Consultation is provided to other university departments using Oracle. DBMS conducts extensive performance tuning of the databases and of the Banner web applications. A robust monitoring system and other procedures ensure systems availability and reliability.

Team members are Shane Carpenter, Bill Dooley, Amanda Epperly, Richard Quintin, and Brian Rectanus. Since this past fall, support for the production databases they support has gone to round-the-clock service, with hot backups, flash refreshes, and greater on-call duties.

During recent months, the team handled the installation of Banner 6.0, promoting baseline and locally developed code through the development, test, and production instances. The team develops tools to enhance their efficiency and effectiveness and to provide additional functionality to the user areas. They developed a job scheduler, and an application promotion web tool that permits enhancements developed by the Banner teams to move from development and testing to production.

Current projects include the migration from client-based Banner access to Internet Native Banner (INB). INB permits users to access required systems from virtually any computer with a browser. Also in development is a new monitoring system. With this new tool, DBMS will have enhanced monitoring, greater ability to notify support teams when issues arise, and an ability to pinpoint dependencies.
The top viruses caught in the past month by the e-mail virus scanners.

VT STARS

Summer 2004 begins the fifth year of VT STARS. VT STARS is the Virginia Tech Summer Training Academy for Rising Students, a program for high school students from economically depressed regions of Virginia. Students engage in activities that strengthen their academic and technical skills and improve their motivation and ability to attain a college degree. Focusing on science, technology, engineering and mathematics, the program encourages participants to develop skills they will need to thrive in the knowledge economy.

Activities foster not only academic achievement, but also viable civic relationships and an entrepreneurial spirit.

The goals of VT STARS are to:

1. Prepare students to pursue advanced education related to science, technology, engineering or mathematics;
2. Strengthen students’ academic, interpersonal and technical skills; and
3. Improve participants’ motivation to attain a college degree.

The program begins with an intensive three-week summer residency at Virginia Tech for ninth graders. They use hands-on, technology-based activities to better understand scientific discovery. The second component of the program engages the students throughout the following academic year with after-school enrichment activities, civic projects and teacher involvement. The after-school supplemental activities continue through the remainder of the students’ high school years. The third component is a second summer residency that expands and integrates what the students have learned during the preceding school year. Students select a specific research project that forms the basis of their eleventh-grade after-school activities, and that, upon completion, may be on display in a local public venue.

Through the program, student participants will better understand jobs and careers related to math, science and technology, and subsequent choice of careers; increase their ability to apply information technology for school and work; enhance their teamwork and interaction with peers, instructors and parents; and hone their problem-solving, critical thinking and computational skills.

The VT STARS cohort beginning in the summer of 2004 will use the weather as a theme for their activities. The Weather Station Model engages students in collecting and analyzing data, in learning the physical science behind weather, and in understanding the interaction between weather and life systems.