

Resisting Hackers in a Single Keystroke

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THE UNH WILDHATS COMPUTER SECURITY TEAM CELEBRATES ITS SECOND-PLACE WIN AT THE NORTHEAST COLLEGIATE CYBER DEFENSE COMPETITION RECENTLY. FRONT, LEFT TO RIGHT: CHRIS HUTCHINS, ALEX MACPHERSON, PAVAN NATTI, CHRIS NEVEU. BACK, LEFT TO RIGHT: COACH KEN GRAF, DAVID FITZPATRICK, BRYAN BICKFORD, SAM GALLETTA, FRANK KREIMENDAHL.

Some of the world's williest hackers were no match for a team of University of New Hampshire computer science students that triumphed with a second-place finish at the 2012 Northeast Collegiate Cyber Defense Competition earlier this month (March 9-11, 2012). In their second showing at the competition, the eight students of the UNH Wildhats beat out teams from Harvard University, Worcester Polytechnic Institute, Northeastern University and others, coming in behind returning champion Rochester Institute of Technology. Hosted by Northeastern, the competition was at the training facility of information technology company EMC in Franklin, Mass.

“This was a great effort for the entire team, which put in a lot of hours preparing for the competition,” says coach Ken Graf, lecturer in the computer science department at UNH. The team’s name, the Wildhats, is a play on “black hats,” a slang term for hackers.

For the competition, each of the 12 competing teams runs a common set of systems typical to a small business: email, websites, VPN (virtual private network), remote access, and others. During the three-day event, as each team’s “CEO” makes requests to these ersatz IT departments, some of the world’s best hackers, from the U.S. military, government, and top security firms, try to attack the teams’ systems.

“They use all the tools that are available to real attackers in the wild,” says Graf, who also works in application security and identity at Liberty Mutual. Points are awarded for keeping your services up, fulfilling requests for the CEO, and recognizing and diagnosing hacks. Teams lose points when the attackers succeed at bringing down their systems.

After a lackluster showing in its first competition last year, the UNH team showed great improvement. Graf credits the Wildhats’ dedication – they practiced on their own and as a team for up to 20 hours per week for an entire semester – for their success.

“Understanding when and how you’ve been attacked takes a lot of skill, which this year we had,” he says.

Team captain Frank Kreimendahl, a doctoral student, says that experience gave the Wildhats a boost as well. “This was our second time participating in the competition, so we had advance knowledge about the structure of the competition. From this we were able to develop a strong strategy,” he says. “Our team members were also more committed to advanced preparation than last year, and many of the members have actual business experience that helped.”

In addition to Kreimendahl, from Newton, Mass., the UNH Wildhats are Alex MacPherson ’12 of Derry, Chris Hutchins ’12 of Dover, Christopher Neveu ’12 of Nashua, Bryan Bickford ’13 of Newmarket, David Fitzpatrick ’13 of Reading, Mass., Sam Galletta ’12 of Dover, Pavan Vatti ’12 of Hudson, and alternates Stephen Passen ’14 of Amherst and Tad Hatch ’14 of Portsmouth.

The competition, says Graf, is a recruiting event for employers as much as a learning opportunity for students. All five seniors on the Wildhats team were offered interviews at the competition, and the two seniors from last year’s team got jobs at tech firms EMC and Akamai after the competition.

The University of New Hampshire, founded in 1866, is a world-class public research university with the feel of a New England liberal arts college. A land, sea, and space-grant university, UNH is the state’s flagship public institution, enrolling 12,200 undergraduate and 2,300 graduate students.

Photo courtesy of Heratch Photography

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