

PROJECT CODE
INDUS-11

NORTH DAKOTA UNIVERSITY SYSTEM
CONNECTND CAMPUS SOLUTIONS
Information System Audit

September 18, 2012

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STATE AUDITOR

Office of the State Auditor
Division of State Audit

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TRANSMITTAL LETTER

September 18, 2012

The Honorable Jack Dalrymple, Governor
Members of the North Dakota Legislative Assembly
Hamid Shivani, Chancellor, North Dakota University System

Transmitted herewith is the information system audit of the ConnectND Campus Solutions system dated September 18, 2012. This audit resulted from the statutory responsibility of the State Auditor under NDCC § 54-10-01.

ConnectND Campus Solutions is a comprehensive web-based student information system. It records information such as student records, financial aid, and financial information (i.e. tuition, fees, and receipts).

ConnectND Campus Solutions was selected for this audit because it is considered a high-risk information system. ConnectND Campus Solutions is considered a high-risk information system because it is a large financial system processing millions of dollars and is the primary system for student information for the North Dakota University System. "High-risk" does not necessarily indicate problems with the system, but indicates a higher potential for significant problems to occur.

Inquiries or comments relating to this audit may be directed to Donald LaFleur, Information Systems Audit Manager, by calling (701) 328-4744. We wish to express our appreciation to the North Dakota University System for the courtesy, cooperation, and assistance provided to us during this audit.

Respectfully submitted,



Robert R. Peterson
State Auditor

EXECUTIVE SUMMARY

The purpose of this report is to provide our analysis, findings, and recommendations regarding our information system audit of security for the ConnectND Campus Solutions system.

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Significant Recommendations

We reviewed the security of ConnectND Campus Solutions. We had the following findings:

- Developers were given access to modify security in Campus Solutions.
- There were test accounts in the Campus Solutions production environment.

BACKGROUND INFORMATION

System Overview

The Campus Solutions system offers a comprehensive web-based solution for academic activities of students, faculty, and staff. The modules contained within Campus Solutions are:

- Campus Community
- Admissions and Recruitment
- Student Records
- Student Financial Aid
- Student Financials

In addition, the NDUS has several ancillary systems that support other activities related to the student system, including ApplyYourself, an on-line admission application; Hobson's Connect recruiting and admissions management; a room scheduling system called Ad Astra; billing, credit card, and e-check processing through TouchNet; a student housing system from Adirondack; and parking registration and enforcement from T2 Systems. The NDUS has also recently added mobile device access to Campus Solutions.

The recruitment/admissions module in ConnectND works interactively with ApplyYourself and Hobson's Connect to attract, communicate, recruit, admit, and matriculate students to allow them to enroll at their chosen Institution.

The recruitment/admissions function provides an on-line admission application that allows potential students to apply to one or as many as all 11, of the state colleges and universities from one single point of contact. It allows recruitment officers to enter data on prospective students, track their interests (both academic and extra-curricular), keep track of educational data, offer and track scholarships, bill students for application fees, communicate (using campus community) with the students, track student letters, calls, and personal visits, assign required admission data, and setup and carry out recruitment campaigns such as high school visits.

The Student Records module is the core of the PeopleSoft Campus Solutions system. Some examples of what the Student Records module provides are the ability to:

- Maintain programs and plans (majors and minors);
- Maintain the campus course catalog and term schedule;
- Provide web-based registration, drop & add for students;
- Allow students to view their schedules;
- Provide class roster access and grading for professors;
- Enable advisers to provide guidance to students;
- Allow enrollment appointments to be made;
- Activate students for a careers, programs, or plans;
- Waitlist students for overfilled courses;
- Create transcripts;
- Create Federal Right to Know cohorts;
- Provides for automated transfer of credit among the 11 NDUS institutions;
- Assists with national reporting like IPEDS and National Student Loan Clearinghouse;
- Offers three types of transcripts: Official, Unofficial, and Academic Advisement; and
- Enables campuses to determine course equivalencies for courses taken at another Institution and process transfer credit, manually or through an automated process.

The Student Financial Aid module allows financial aid offices to assist students in funding their education. Financial Aid Offices use this module to ensure that recipients of grants, Federal Work Study programs, loans and scholarships meet the eligibility requirements laid out by the Federal, State, and Institutional regulations.

The Financial Aid module also receives ISIR's, has a verification section, builds terms to insure students qualify for assistance, budgets, packages, awards, and distributes aid. In addition Student Financial Aid exchanges ISIR date corrections with the Department of Education, loan information with NSLDS, Pell information with COD, originates loans with lenders, receives response files from those lenders, tracks Federal Work Study earnings, transmits Federal Pell originations, disbursements, and disbursement acknowledgements, monitors students for Satisfactory Academic Progress, has the data necessary for completion of the annual FISAP report, identifies students for exit loan counseling, and completes return of Title IV funds.

The Student Financial module enables institutions to manage and calculate tuition and fees, bill customers, establish payment plans, issue refunds, provide US and Canadian tax information and forms, and through integration with TouchNet, accept electronic payments. It integrates with the General to track financial information.

Finally, students and others access the functionality in Campus Solutions through a portal which allows self-service access, and also enables students to update personal information such as addresses, phone numbers, and email addresses.

Financial Summary

For the fiscal year ended June 30, 2012 ConnectND Campus Solutions processed approximately \$604.5 million in revenue and \$96.4 million in expenditures. The primary revenue sources are tuition, fees, and departmental receipts, while expenditures cover primarily financial aid and waivers.

OBJECTIVES, SCOPE, AND METHODOLOGY

The objective of this audit of ConnectND Campus Solutions for the fiscal year ended June 30, 2011 was to answer the following question:

1. Is security designed to provide access based on a demonstrated need to view, add, change, or delete data?

This audit was conducted in accordance with *Standards for Information Systems Auditing* issued by the Information Systems Audit and Control Association and *Government Auditing Standards* issued by the Comptroller General of the United States.

IS SECURITY DESIGNED TO PROVIDE ACCESS BASED ON A DEMONSTRATED NEED TO VIEW, ADD, CHANGE, OR DELETE DATA?

Summary of Audit Work Performed

We obtained and reviewed a list of the ConnectND Campus Solutions roles and their access rights. We reviewed these roles to ensure the access they provided was consistent with their stated purpose. We reviewed default accounts to ensure they were being locked in a timely manner. We reviewed policies and procedures for adding, changing, and deleting user access. We tested superuser accounts to determine if the access was necessary and appropriate.

Audit Findings

Improper superuser access

We noted developer accounts with the access to modify security in ConnectND Campus Solutions. Developers should have no access or inquiry only access to the production system. The current level of security increases the risk of unauthorized changes to security. North Dakota University System stated they were aware of the access given to developers, but felt it was necessary to the developer's job duties.

Recommendation:

We recommend the North Dakota University System properly limit developer's access to the production environment.

Agency Response:

Partially concur. The NDUS will examine whether reasonable ways exist to limit developer access to security, while still allowing them to view security, which is necessary to assist in troubleshooting and problem resolution. To help mitigate the potential risk associated with the auditors' concern, the NDUS has put a daily report in place that identifies security changes and the person who made the changes.

Test accounts in production

We noted test accounts in ConnectND Campus Solutions creating an increased risk of unauthorized access. Testing should be done in an environment separate from production. North Dakota University System stated these accounts are developed in the production environment to more easily troubleshoot user issues.

Recommendation:

We recommend the North Dakota University System not develop test accounts in the production environment.

Agency Response:

Partially concur. Several of these test accounts are used to validate production security, to ensure permissions, roles, and institutional security function as expected. Because security varies in other, non-production environments, we believe these accounts give the best potential for ensuring permissions and roles do what we expect, but do not grant unexpected access. The NDUS will ensure that these test accounts are locked when not being used to validate security, and that the locking/unlocking process is done through the security team. We will remove other "test" accounts that are not used for maintenance of security.

Auditor's Opinion

In our opinion, except as noted above, security is designed to provide access based on a demonstrated need to view, add, change, or delete data.

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