Network Degree Assessment Project Report

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Introduction

The initial project had two major goals:

1. Develop a hands-on project for use in a Capstone course. The project would assess network and server management knowledge and skills taught in the various network and operating systems courses required in the Network Degree. The Capstone course would require students to demonstrate competency in such tasks as installing and configuring workstations and servers using various operating systems and providing for interoperability between them, setting up important network services, and configuring important internetworking devices.
2. Develop a set of hands-on activities and exam essay questions targeting network management skills and knowledge employers consider important. These will be used in a number of first and second-year networking and operating system courses. The empahsis with the exam essay questions would be the assessment of knowledge retention of important networking concepts.

Challenges

Initially our top priority was the Capstone course project because we wanted to offer a noncredit course this summer to benefit the current cohort of graduating students. It turned out that not enough of the current Network majors could take the course. Therefore, we changed our strategy to focus on the hands-on activities and exam essay questions that would assess specific skills.

Process

We spent more than seven hours with the CIT Advisory Board member from Symantec. One outcome of these meetings was a compilation of skills that Network graduates should have for entry level jobs. Gary and Ron met a number of times to iron out details of the project.

Results

The tasks we accomplished are:

1. A document listing the mapping of network degree outcomes to specific courses
2. A description of the Capstone course
3. High-level description of the project for Capstone course
4. Dozens of hands-on activities and exam essay questions targeting employer specified network management skills. These span multiple first-year and second-year networking and operating system courses. They address the majority of the skills identified by the CIT Advisory Board member.

Conclusions and Future Plans

This workshop has been quite productive. Not only were we able to accomplish the creation of these assessment tasks that are employer centric, we learned a lot about the assessment process by attending the weekly workshop sessions. This knowledge will improve assessment in all courses we teach. We are excited about putting into practice concepts that were covered in the workshop but were not part of our project. For example, we look forward to developing self-assessment tools for students and rubrics for task and course assessment. In addition, assessment has become a larger part of our teaching conversation and others in the department are now talking more about it and its implications. We recommend that these workshops be offered to others who want to be reimbursed to work on an assessment project. Compensation for attending the workshop and developing the assessment project was an incentive.

Tasks related to this project that we plan on pursuing in the future include:

1. Continue to add new network management activities and essay questions to first and second-year courses.
2. Obtain more input from CIT Advisory Board members with the goal of adding server management activities and essay questions to first and second-year courses.
3. Have the Advisory Board provide feedback on the activities and questions.
4. The hope is that at some point there will be an automated system available that improves assessment and productivity. It would contain program and course outcomes and provide students, faculty, advisors and others access to data and software tools that focus on student activities and assessment. The activities and questions produced in this project could be used in this automated system.