




Security: A Necessary Piece of the Collaboration Puzzle

Alex Kisakye

kisakye@gmail.com


+256774420011

- 
- Background
 - Objectives
 - Methodology
 - Results
 - Recommendations
 - Future Work

Overview

- The use of computer systems has greatly evolved over the years
- The data that is stored on computers has also enormously increased
- It is increasingly cheaper to store and retrieve digital information on computers than on the traditional paper file system.
- The number of new nodes that connect to the Internet has been seen to increase over the years.

Background

- 
- Educational institutions among largest contributors to internet connected devices.
 - Educational institutions are centers of most industrial research making educational institutions soft targets for attackers.
 - Universities also store a lot of information about their current students and staff population as well as the alumni.
 - Over the last two years, many of the countries in Africa accessed high-speed broadband Internet connectivity by undersea cable.

Background

- The following where the objectives of the study
 1. What is the institutions reliance on ICT systems and services?
 2. What IT Security infrastructure has been deployed at the institution?
 3. What is the staff composition of the ICT department?
 4. What policies has the institution implemented to guide students and staff on the proper use of ICT resources?
 5. How does the respondent assess the institutions' readiness to fight Information Security challenges?

Objectives

- Study approached Nine members of RENU however only Six members responded positively to participate in the study.
- Study was carried out in two phases;
 - Phase one involved use of questionnaire
 - Phase two involved use of interview guide

Questionnaire was sub-divided into five themes;
Institutional Profiling, Infrastructure, Human Resource and Awareness, Policy, Self Assessment

Study

Research Question 1: “What is the institutions reliance on ICT systems and services?”

- The study found that the participating institutions were heavily reliant on ICT systems and services. This was exhibited by the fact that all institutions had already implemented more than three information systems of those that were asked during the study including, financial management systems, email systems and website management system. Other indicators of heavy reliance on ICT systems included; the numbers of computing facilities available to staff and student use, ICT budgeting and availability of remote access systems such as wireless systems


Results



Research Question 2: “What IT Security infrastructure has been deployed at the institution?”

- As much as newer security technologies were found to be implemented at all institutions, the absence of guiding information security policies at the institutions meant that all these technologies were being implemented subconsciously and in so doing partially improving the overall information security posture. Because of the fast evolving global Information Security community, many makers of hardware and systems have hardened them for hostile deployments such that by default some systems with no intervention of on-site security administrators are secure.

Results



Research Question 3: “What is the staff composition of the ICT department?”

- According to the data collected, all institutions have an established ICT department that oversees the distribution of ICT services in the institutions. More than half the institutions have ICT staff whose role is security of institutions information assets. It was found that all security roles in the organization are merged with other roles and also none of the staff is equipped with industry standard Security.

Results



Research Question 4: “What policies has the institution implemented to guide students and staff on the proper use of ICT resources?”

- Based on findings from the study, all institutions have a written ICT policy. The challenge was around policy sensitization and awareness campaigns for their staff and students. The composition of the policies was found to be lacking with none of the institutions classifying how information should be handled within the institution. Also none of the institutions include security related clauses in their contracts with third-party service provides.


Results



Research Question 5: “How does the respondent assess the institutions’ readiness to fight Information Security challenges?”

- Respondents assessed that their institutions were ready to fight information security challenges. Most of the respondents felt that their institutions were 80 percent ready to fight information security challenges.
- Despite the fact that respondents felt that their institutions where ready to fight information security challenges, other key indicators especially lack of Published Policy suggested otherwise as the security program of any organization can only be guided by its policy.

Results

- 
- NRENs can set up Security Requirements for members to join
 - Cost of Information Security can be shared by having one central team to manage NREN's Information Security Needs
 - Central team can also help institutions shape their Policies and also arrange ICT Audits for the institutions

Recommendations

Future Research

- Research on Information Security areas within National Research and Education Networks especially on the African continent are still not available. Future studies in this area could be beneficial for comparison purposes with results from other NRENs especially within UbuntuNet alliance, which brings together NRENs in East and Southern Africa.
- In this study, the survey instrument that was used was customized from another tool that was originally developed by EDUCAUSE for the assessment of universities in the United States of America. Future studies could evaluate the possibility of designing a tool that could be used to evaluate security practices of NRENs on the African continent.

Future Work



Questions
