Incident Report – January 9, 2013
Incident #2013-0002

Summary

On January 4, 2013, at 13:14, all network services were unresponsive across campus. This affected all wired and wireless network access. Network services were restored at 14:27 the same day.

Impact

Calls immediately came into the IT Support Centre (ITSC). Connectivity within the data centres was not affected, therefore applications within them continued to run normally (although the network could not connect to them).

The downstream effects on services were:

➢ Mail delivery was delayed during this period (minutes)
➢ Mail delivery to BlackBerry devices was delayed (minutes)
➢ NetID account activation functionality slowed

Root Cause

A Cisco Support Engineer was working with ITServices on an unrelated task with the Dupuis border router. Although normally benign, this work inadvertently affected network services in this case. Cisco is still working to determine why the failure occurred following their recommended actions.

Resolution

Network analysts and technicians were immediately dispatched to both Fleming and Dupuis Halls to troubleshoot the issue. The problem was quickly traced to the core router. In cooperation with the Cisco Support Engineer, the issue was diagnosed, the server was taken offline and the issue was resolved.

Communications (Internal)

The ITSC was phoned immediately to notify them of the outage. The ITSC also notified the Networks & Telecom unit of the outage, unaware that they were already working on the issue. These notifications may have collided given the timeline. Text messaging and cell phones were used to communicate between team members. Since there was no network access, a cell phone tethered to a laptop was used to gain Internet access for Cisco's Webex session. Bo Wandschneider, Sam Mokbel, Andy Hooper and Terry Black were all kept up-to-date on status via text messages.

Communications (External)

The ITSC posted a voice recording for users who were calling in. Once network services were restored, an ITServices Notification was posted informing the University that the issue was known and resolved. Departments with Enhanced Support Agreements, and data centre services, were contacted via phone and voicemail messages were left.

Lessons Learned

➢ Access to services in Dupuis is routed only through the Fleming Core. Adding a connection and routing from Chernoff to Dupuis would reduce the impact of a similar outage. This was previously identified in the network infrastructure upgrade plan but needs its priority raised.

➢ Moving routing from the cores to the entry switches would also mitigate an outage.

➢ Access to printed connection information in Fleming and Dupuis Halls would improve time to resolution.

➢ Access to console server OOB network in Dupuis Hall offices would improve time to resolution. (OOB is an out-of-band dedicated management channel for devices to be maintained remotely, even when the network is unavailable).

Recommendations

➢ Determine if notification to the IT Support Centre was as early as possible. Did monitoring pick up the outage, and is this something the ITSC could have visibility into?

➢ Add a connection and routing from Chernoff to Dupuis. This was brought forward in the network infrastructure upgrade plan but needs its priority raised within the plan. Work towards implementing during Reading Week.

➢ Move routing from the cores to the entry switches as per the network infrastructure upgrade plan. (Major amount of work over the next 1-2 years.)

➢ Provide access to print copy of connection information in Fleming and Dupuis Halls.

➢ Provide access to console server OOB network in Dupuis Hall offices.