

## Incident Report - March 14, 2017

Incident #2017-192

### *Network Outage*

#### Summary

On Tuesday March 14, at approximately 6:30 am, a planned configuration change was made to one of the university border routers located in Fleming Hall. This change facilitated blocking network ports as part of a security recommendation.

#### Impact

All campus network-based communication was impacted. The entire outage occurred between 6:30 am to approximately 1:30 pm on March 14. Network stability returned temporarily at approximately 9:30 am. The vendor then recommended the network border router back online, which caused the second outage. It then took until approximately 1:30 pm, working consistently with the vendor, to finally resolve the issue and restore network connectivity to the campus.

#### Root Cause

A new configuration had to be loaded into a core network router to prepare for new security features. The configuration change to the router did not behave as expected and effectively overloaded other key pieces of university core equipment. The back-out plan put in place was also now not usable. Getting the network stabilized and the router reloaded took almost 3 hours.

At this point, vendor support (Cisco) told ITS we could now reintroduce the offending router back into the network; however, the same issue reappeared and we were back to troubleshooting with Cisco. It took an additional three hours to restore the network.

#### Resolution

ITS Networks engaged Cisco TAC support (3 different levels over 6 hours) to work through restoring the Cisco core router and its dependent equipment until full network connectivity was restored.

#### Communications (Internal)

# INCIDENT REPORT

## INFORMATION TECHNOLOGY SERVICES



The ITS manager and network team were alerted as soon as the issue was identified. ITS engaged the vendor (Cisco) TAC support team almost immediately and let ITS Support Services know so they could field support calls. ITS networks continued troubleshooting the issues until resolved.

### ITSPP Communications (External)

A campus-wide notification was posted at 7:27 a.m. and updates posted at 2:49 pm, 2:56 pm, 4:29 pm, and 5:36 pm. Because of the network outage, the notification tool was difficult to access. The ITS Twitter account and the Queen's University Twitter account were used to get messages out to campus. Phone calls and email messages were used to talk to some of the affected customers.

### Lessons Learned

1. Extreme care must be taken when editing border prefix lists.
2. Console network requires improvement.
3. Cell phone service in Fleming Hall and Chernoff 156 is poor. Landlines exist in several communications rooms, including the Fleming data centre. They are, however, one shared DN. These landlines were not meant to communicate with other communications rooms. There was extreme difficulty opening a remote session for Cisco support TAC to access our network.

### Action Items

1. A note will be placed in the border configuration to be careful.
2. Noise cancelling, hands free headsets are necessary and need to be provided.
3. Install cell phone signal amplifier and test .

