

# **Incident Report for Regent Distribution Router Outage**

September 13, 2012

### Issue

On Monday, Sept. 10, 2012, at 4:00 p.m., the Office of Information Technology (OIT) received an automatic notification from its monitoring systems as well as from clients that wired and wireless network connectivity services were offline in the Regent and the University Administration Center buildings. Restarting the Regent distribution router resolved the problem at approximately 4:40 p.m. that day.

# Background

The CU-Boulder campus network architecture uses distribution router chassis in eleven geographic areas to distribute networking services to multiple buildings. One of the router locations is in the Regent building and supplies network services to Regent, the University Administration Center (UCTR), the UTCR Annex and portions of the Center for Community (C4C). The router includes a chassis populated by line cards that provide downstream connectivity to individual building network switches as well as redundant processor cards that provide routing functionality for network traffic. These routers include redundant power supplies that are simultaneously connected to campus AC power and an uninterruptible power supply (UPS) system for battery backup power.

#### Cause

The Regent distribution router was exposed to higher than normal ambient operating temperatures due to an in-room air conditioning outage in the Regent building. Although the router did not reach maximum operating temperature, it stopped its normal router processing functions. This impacted wired and wireless networking services in Regent, portions of the C4C, 914 Broadway and 924 Broadway.

#### Solution

The router chassis was restarted and returned to normal operations. Based on a previous technical case with the manufacturer's support team and their recommendation, both primary and secondary supervisor routing engines were replaced in the chassis on Tuesday, Sept. 11, 2012, at 6:30 p.m.



# What Can Be Done to Prevent This Again?

In the near term, OIT will continue upgrading all internal router components so that it has all new hardware and firmware. Over the longer term, OIT will work with the vendor to determine if future processor card features will allow same-building networking services to be virtualized across more than one distribution router and effectively eliminate a single point of failure.

# Report prepared by:

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