

# 2014-12-02 WiFi Address Allocation Problems

## Summary

On Tuesday December 2nd 2014 a disk space issue with both DHCP servers for several campus wifi networks (AirBears2, eduroam, CalVisitor) prevented users from obtaining IP addresses, making these networks unusable. The problem was solved by resolving disk space issues on these servers.

## Incident Description

At around 10:00 AM on Tuesday December 2nd, both DHCP servers providing IP addresses on the AirBears2, eduroam and CalVisitor wifi networks ran out of disk space due to log files not being properly archived. This resulted in users being unable to use these wifi services. By 11:10 AM service was restored by manually archiving log files to provide adequate free space.

## Incident Timeline

### 10:00 AM Tuesday December 2nd:

The servers which provide DHCP for the CalVisitor, eduroam and AirBears2 networks stop reliably providing IP addresses to users.

**10:24 AM:** The network group identifies that disk space issues on both redundant DHCP servers for these networks are preventing new address leases being allocated.

**10:46 AM:** It is identified that log files on the DHCP servers are not being archived as necessary to preserve available disk space. Log files are manually archived.

**11:10 AM:** DHCP server disk space issues are resolved, restoring service for users.

## Incident Resolution

Disk space was exhausted on both DHCP servers which provide addresses for Campus WiFi networks (with the exception of AirBears). Once disk space was freed up, service was restored.

## Root Cause Analysis

Log rotation was not adequately operating to prevent the large DHCP logs from filling up all available space on the servers.

## Other Findings

There was insufficient monitoring of the DHCP servers. These were new servers that had recently been implemented, and no monitoring had been configured for them.

## Remedial Actions

Resolve immediate disk space issues by archival of log files.

Correctly configure log rotation on the DHCP servers.

Add monitoring for DHCP servers.

Ensure that all new servers deployed have monitoring enabled when they are commissioned.