

ISC10D019

Networking Issues

This report provides a summary of the network problems that we encountered before Christmas and the actions that have been taken to resolve the problem and identifies further work that should be undertaken.

The advice of ISSC on this approach is sought.

Summary

In the early hours of Tuesday 14th December morning the network core within Computer Suite 1 failed. ISD staff worked throughout the day to try and identify and fix the problem but this was not possible and on Wednesday 15th December the focus of work shifted to the setup of a temporary solution in an attempt to restore services. The temporary solution was completed by midnight on 15th December and some services were available earlier in the day.

For most of Tuesday and Wednesday it was not possible to connect to any network services, and additionally a significant proportion of telephones were unusable and this had a significant impact on the communications ability of the University.

Both our local network support company and the suppliers of the equipment worked to try and identify the cause the problem and by Tuesday 21st December both had confirmed that they were unable to identify the cause of the problem without reconnecting the network core to the network.

Given the importance of a robust network and no clear identification of the problem the Executive Team agreed to bring forward the replacement of the network cores and on Thursday 23rd December an order was placed for two new cores. Given the urgency for the replacement and the need for certainty of interoperability it was agreed to procure the core from the same supplier, however moving to a higher specification and different architecture.

The temporary solution remained in place over the Christmas break. There were some problems which ISD staff tried to fix over the Christmas break however the Student Email service was unavailable for a significant proportion of the break.

The two new network cores were delivered to UEA on Friday 7th January and with the support of our supplier work commenced over the weekend on initial configuration and connection to the network. A programme for migrating all servers and services to the new network cores took place over the following week, with the bulk of work taking place outside of core working hours. This migration was achieved with very little impact on service.

Our suppliers have undertaken further testing of the broken core and have now identified what they believe to be the problem and are sending us replacement parts.

Next actions

The network cores are specified with high levels of internal redundancy and a failure of this type was exceptionally unlikely. Nonetheless this failure raises a number of questions that need to be addressed:

1. We need to complete the outstanding work from the migration. This is unlikely to cause further disruption however to mitigate any disruption this will be done out of hours or during at risk periods.
2. We need to work with our suppliers to review our network design to see whether this can be improved to further reduce the risk of a similar failure.
3. We need to review the dependency of the telephony solution on the network and determine whether there is anything further that can be done to mitigate against loss of telephones in the event of a network loss.
4. We need to determine whether an alternative method of communication can be provided in the event of this type of failure.
5. We already have plans in the programme of work to develop a new Network Strategy and this work needs to be progressed. We intend to seek external QA on the network strategy.
6. We need to develop proposals for ensuring that our external facing web presence is retained via a remote hosting solution and as part this identify other key areas of IT services that should be offered similar levels of protection.
7. The Disaster Recovery and Business Continuation Plans for all IT systems will be reviewed with community to determine whether these are appropriate. Where these need to be shorter then indicative costs will be obtained.
8. We recommend that faculties and departments review their Business Continuation plans.