Online Services

User Administration

1 The new password synchronisation application has now been rolled out, to bring the various passwords used in the Service’s primary systems into line with one another. It also permits trained IT Staff in departments and colleges to change passwords for their members rather than requiring them to come in to one of the UCS Service Desks. This has proved very popular with the users. It has had a mixed response from IT Staff in the University and Colleges with one faction objecting to the training (in the legal background, policy obligations, communication skills to decline inappropriate requests, etc.) and the other welcoming it. The exact nature of the training will be adapted over time based on constructive feedback.

Human Tissue Tracking Database

2 The Human Tissue act application has increased the number of laboratories using it and has recently been demonstrated to the University's licence holder for teaching with human tissue who is also keen to move to using it.

Web Support

3 Falcon continues to grow, though the rate of growth is finally starting to slow down. The service is now supporting 164 non-UCS live web sites and a further 142 development sites that have yet to go live (though not all will). The introductory Falcon courses continue to be very popular. More detailed support involving blocks of UCS staff time to help move existing web sites to Falcon has been provided to a number of departments. A special instance of the Falcon introductory course was given for the staff of Chemical Engineering and Biotechnology. A member of staff presented on the Falcon system to the UK Plone Users Group meeting and has had a response from Oxford who are considering creating a Falcon equivalent for themselves.

4 The roll-out of the Funnelback web search system has proved problematic. Progress is being made, though, and the delayed roll-out should take place this term.

Certificates

5 The Service is in discussion with Janet regarding the future of the certificate scheme they run and the "Project Moonshot" unified authentication system they are proposing. Janet may be about to take over the management of Grid certificates from the Rutherford labs and this will change how the Service interacts with the process.

Big Data

6 The Service has begun the development of a "ceph" storage system. Initially this will be for internal use but we hope to be able to extend it to create a facility for the entire University, including any "big data" initiatives. A formal business plan is being developed.

DNS Support

7 The MRC Biostatistics Unit are stopping running their own DNS zone and have asked to be integrated into the University-run main zone. The campaign to move to secure DNS (DNSSEC) has advanced with the Computer Laboratory signing their zone, supported by a signed delegation from the main Cambridge zone.

Linux

8 Across the division staff continue to migrate servers from SUSE Linux Enterprise Server version 10 to version 11SP3.

eScience

9 Members of staff have been involved with the C++ standards committees, have presented on the Falcon system to the UK Plone Users Group, and have contributed to IETF draft RFCs.
Staff have also provided large-scale support for the Square Kilometre Array project and the Theory of Condensed Matter group in Physics, and for the Department of Plant Sciences.

Institution Strategy & Media Services

The Service has been conducting a review of IT for a College and have assisted with the recruitment of three IT support staff, two for a Department and one for a College. For the first time staff were present on the University stand at the Cambridge Jobs Fair to answer questions about IT related employment opportunities in Departments and Colleges.

A well-attended Induction Day for IT staff new to the University was organised in November incorporating a range of presentations by UCS and Management Information Services Division (MISD) colleagues. With the increased focus on IT coordination at School level staff have attended two Arts & Humanities meetings and have hosted an event for Computer Officers in Physical Sciences.

The monthly TechLink seminar series continued, promoting liaison amongst IT support staff in the University and with external vendors working in areas of particular interest; topics included an update on the University Map, a discussion of announcement technologies and a hands-on session with thin clients.

Networks

Network Outages

<table>
<thead>
<tr>
<th>Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>29 Dec</td>
<td>Line card failures at Route-West. Due to complexity of arranging access over the closed period the cards were not replaced until 3 Jan.</td>
</tr>
<tr>
<td>31 Jan – 9 Feb</td>
<td>Repeated crashes of a wireless controller, ~700 access points failed over to backup controller.</td>
</tr>
<tr>
<td>12 Feb</td>
<td>Faulty power supply at Route-West caused software crash, possibly linked to the previous outage.</td>
</tr>
<tr>
<td>18 Feb</td>
<td>Links to Archaeology @ Storey’s Way severed due to building works at Churchill College. Work is in progress.</td>
</tr>
</tbody>
</table>

CUDN

The final three sites on the CUDN without redundant router connections were resolved in December 2013. These were Wesley House, Archaeology @ Storey's Way and Fitzwilliam College (the latter due to an odd configuration request from the College, rather than a problem with fibre paths or equipment).

The fortunate, timely completion of these arrangements before the crash of route-west in late December meant Archaeology and Fitzwilliam College did not experience an extended outage.

The University Security Office CCTV system has been reconfigured to use CUDN-wide multicast instead of unicast or global multicast. This will improve performance and reduce demand on the CUDN backbone; there are over 700 multicast groups in use by the CCTV system (equating to one camera per group).

The migration to CUDN-wide multicast groups completes the IPv4 multicast reorganisation to be compliant with the Janet / European research policies.

Multi-Protocol Label Switching (MPLS) has been introduced onto the CUDN backbone. This allows virtual networks (in the form of separately-routed IPv4 and IPv6 networks) and point-to-point bridges to be set up across the CUDN in a scalable, more reliable fashion, without the need for Spanning Tree and cross-backbone VLANs.
The initial [successful] test for this has been to provide a private routed network between the UCS door access system at the New Museums Site and the Roger Needham Building routing institution-private IP addresses on the CUDN, separately from the global routing space.

The remaining cross-CUDN VLAN services will be examined with a view to converting them into MPLS-based services.

Migration of cross-CUDN VLANs to MPLS AToM services -- two of these have been completed successfully, without incident: a circuit between the Redstone off-site co-location centre and Clare College, as well as a link for Earth Sciences between the Bullard Lab (at West Cambridge) and the Downing Site. One remaining link to be migrated is between Zoology on the New Museums Site and Madingley Hall (via the ACN - Administrative Computing Network). Aside from an odd VLAN to be shut down, the only cross-CUDN VLANs remaining are to support the UAS and should mostly disappear with the migration of the ACN to support BGP.

**Wireless**

The Lapwing Console front end has been rewritten over the past year to update it Project Light and introduce many usability improvements, additional features and fix outstanding bugs.

The new Console offers visibility of the current (up/down) state of access points and client associations, as well as historical usage statistics - per institution, per zone, per access point, by SSID and login type. It is being trialled internally by the UCS and follow with a trial by institutional Computer Officers.

A fourth Aruba wireless controller will be installed in the near future to expand capacity from the current ~2,000 APs up to ~3,000 APs.

The redeveloped Lapwing v4 Console will be launched at the end of February (to coincide with a TechLink on the University Wireless Service).

**GBN**

The connection to the ADC Theatre has moved from a slow (2Mbit/s) DSL leased line to a pair of GBN+CUDN connections to a regular PoP.

In preparation for the West Cambridge Data Centre completion in summer 2014, specification for an upgraded network to the UCS central services will shortly commence. This will be done in consultation with MISD.

A major diversion of the GBN resulting from the building of the Maxwell Centre is being planned. Work on this is due for completion March 2014.

Met with Westminster College and City Fibre on 15th January to discuss possible solution for current provision of 3rd party fibre to Kettles Yard and Westminster College and the proposed developments on Westminster College. Discussions and variable solutions are continuing to be explored.

Work has started on the Gisbourne Ct development at Peterhouse, which caused the GBN to be temporarily diverted. A permanent route has been established and should be ready for re-cabling in July 2014.

VC’s lodge is now served by MISD, via the GBN.

A section 50 application for 100 Histon Rd has been submitted to C.C.C and discussions underway with contractor to implement GBN extension.

Girton is building a new accommodation block. Initial GBN diversion required as foot print of building sat on existing GBN route. Diversion completed. Waiting for building contractor to request GBN feed into Ash Court.

GBN duct between Madingly Hall and Zoology sub department is complete. Cabling and termination of fibre due to be completed by w/c 13th January. This is a replace and upgrade of an existing link currently provided by Virgin Media.

Trinity Hall proposes to build a new hostel on Thompson’s Lane, the foot print of which will sit on the GBN. Trinity Hall waiting for planning consent. Have requested further details of the development but it is assumed a GBN diversion will be required.
A proposal to extend GBN along Chesterton Rd to connect college hostels for Caius & St John’s has been raised. This project could be extended to the Boathouses if there is enough interest.

Gravel Hill Farm, the NWC site offices, are now connected to the GBN.

A GBN small plant extension into King’s Chapel has been completed.

Sidney Sussex has informed the UCS that they are looking to building a new basement kitchen where the current GBN ducts run. Discussions are underway as to the impact on the GBN and what necessary diversions will be required.

Gonville & Caius is looking to connect all their hostels to the GBN. Initially GBN is looking at 2 Mill Rd and 47 Glisson Rd.

Isaac Newton Institute have requested GBN, and further CUDN services, into Benians Ct, a St John’s College site located on the c/o Madingley Rd & Storey’s Way. Permissions and a solution are being sought.

The UCS is heavily involved in the planning for providing network for the proposed public Tour de France wireless network.

Network Installations

Legacy optical fibre on the New Museums site was disconnected from the Arup building. Network cabling was removed and reinstated in the Phoenix user area as part of its conversion to a new teaching room.

Secondary network connections have been completed for Wesley and the Cambridge Archaeological Unit (CAU) at Storey’s Way.

GBN-related installation work is reported under the GBN operations report and includes new circuits between Zoology and the Sainsbury Lab, HPCF to New Addenbrooke’s and secondary circuits for Wesley and CAU.

Optical fibre site cabling for the Chaplaincy (Merton Hall) at West Cambridge has been rerouted because of the Maxwell Project.

Optical fibre cabling has been completed on the Downing site for Biochemistry.

Optical fibre work has been initiated on the Downing site for a connection between Genetics and new research labs in the Craik Marshall building.

Planning is in progress for the redevelopment of the 307 Huntingdon Road site network ahead of site works (Summer 2014) for a new research building.

CamCERT

During October 2013 to January 2014, wide-scale probes continue to increase in number, running at between 16K and 20K a month. The most popular probes continue to be for web servers, databases, Microsoft services, ssh and telnet.

Twenty one copyright infringement notifications were received, again including some where the generic information sent by the complainant agency was not sufficient to allow accurate identification from traffic flow logs. Requests for additional information continued to receive no reply. Malware incidents were highest in October, the start of the academic year. The scanning of the Managed Cluster Service systems and other Institution systems by the Managed ePolicy Orchestrator service continues to be very beneficial.

The largest incident, in November, was in relation to the Adobe compromise. The CERT team worked with Computing Service Sales to notify members of the University who had purchased Adobe products through them. A short time afterwards it received a larger list of Cambridge email addresses which had been published by the attackers. The CERT team worked with the User Administration database manager to identify closed accounts with no further contact information, then notified the University institutional contacts and asked them to contact their members.

In January a vulnerability in the Network Time protocol was exploited to cause denial of service attacks. A few Cambridge systems were abused as part of this. The CET team was able to use the results from the Friendly Probing suite to identify further vulnerable systems and worked with IT staff in the relevant institutions to secure them.
Other incidents included the usual phishing attempts for email accounts with some attempts to send spam from accounts where the user had responded, further compromised Raven accounts used for illicit access to ejournals, four compromised web sites and a compromised system participating in a distributed denial of service attack.

**Telecoms**

At the start of December, admin.phone had an update. The main new feature was the ability for admin.phone users to configure the line buttons on phones. My.Phone had a cosmetic tweak at the same time. This slight design change will (hopefully) make the transition to the new Project Light templates easier.

The new Virgin mobile phone tariffs have been applied. With the new tariff in place, the GSM gateway has been decommissioned. The monthly phone bill from Virgin has almost halved - this is despite all mobile calls going out via Virgin. The private link to Vodafone has been decommissioned, saving approximately £6K per annum.

Over the Christmas holiday, CallManager was upgraded from v8.6(2a) to v9.1(2), which is the latest current version of CallManager. The new CallManager version supports the new 78xx series phones Cisco have announced. These new phones will replace the 69xx phones. (Except the 6901). In addition, one of the CallManager firewalls was upgraded to the latest version of software. With the upgrade to V9 complete, we will next move CallManager to run under VMware, rather than on physical servers.

The new pager system is on order. It is anticipated that it will be in place by the end of January.

Negotiations with O2 regarding a temporary mast sited near the Mill Pond have reached a road block. We are trying to see if we can resolve this issue. Even with known issues concerning O2’s signal, since signing the new O2 contract, we’ve added over 200 new mobiles to the contract. This includes Trinity College moving their mobiles from their own contract to the University’s O2 contract.

**User Services**

**Desktop Services**

Corpus Christi College have joined the Managed Cluster Service (MCS), taking the number of colleges utilising the service to twenty six. Forty five institutions are now participating in the scheme overall (excluding the UCS).

At the time of writing, Windows 7 has been in service on the MCS for over four months and is proving a reliable solution. The list of available applications continues to grow almost weekly and the overall migration project is considered to be a great success.

The MCS Active Directory Domain and Forest levels have been raised to allow for new functionality within the Microsoft feature set.

The Managed Print Service (MPS) has continued to expand with eight additional printer / MFD devices being added over the reporting period.

Two Multi-Function Devices (MFDs) have been integrated into the MPS on a trial basis within the University Library.

Visitor printing and photocopying within the MPS framework has been made available to early adopter institutions and received broadly positive feedback.

The old Phoenix User Area on the New Museums Site has been redesigned and refurbished so as to provide a Macintosh teaching space. The area offers an ideal environment for teaching Mac based courses for up to sixteen candidates and has been renamed the Phoenix Teaching Room 2 (PHTR2).

**Desktop Services Outages**

Managed Print: Disruption to eCredit, and partial disruption to DMS causing failure to update DMS groups and users print credit. Service was restored at 1230 following an investigation to identify the root cause. The overall impact of the outage was low.
The 2013 IT Exhibition was held on Wednesday 20th November in the Examinations Halls on the New Museums Site. The event brought together thirty seven vendors and was attended by in excess of 200 delegates from across the collegiate university. In parallel to the exhibition, a series of TechLink seminars aimed at IT support staff were provided. Excellent feedback was received from vendors and delegates alike.

The 2014 UIS IT Exhibition is to be held on Wednesday 19 November 2014 at the Roger Needham Building, on the West Cambridge Campus. The event will make use of the available facilities plus utilise a heated marquee to extend the exhibitor space. Whilst keeping a similar format to previous events the 2014 exhibition will also introduce some new features aimed at the IT Support community.

The Service Desk has been busy throughout the reporting period and is now routinely operating across two sites. The start of the Michaelmas term proved a particularly busy period as would be expected.

The MRC-Cancer Unit is currently being provided with Institution Support in order to cover local staff absence. It is expected that this arrangement will last approximately six months.

The Office of Intercollegiate Services is now running an instance of “SystemsLink” which has been installed and configured by Institution Support. This is being used by the Colleges to submit data for the Carbon Reduction Commitment Energy Efficiency Scheme.

The programme of work at the Vet School continues with an initial project to migrate all suitable workstations into a managed Domain under ad.cam.ac.uk. These workstations are now also configured to utilise a managed instance of McAfee Endpoint Protection greatly reducing the Institutions susceptibility to virus and malware infection. Improved procedures have been put in place to deal with procurement of IT equipment and substantial new storage is currently on order.

The managed Endpoint Protection Service (built on ePO) has continued to expand with a total of 4,250 devices now protected across thirty six different university institutions. Recent adopters include Churchill College, the CMS and Hughes Hall. An associated training course for institution support staff has been trialled with the intention of it being made available to the wider IT community in the near future.

The Eduroam Configuration Administration Tool (CAT) has been tested and made available for Windows users. This tool greatly simplifies the initial setup and configuration of Eduroam on a Windows based device.

The Mac Support team have a prototype Mac Staff Managed Desktop now in service on 25 Macs with the UCS.

Preparations continue a pace for the 2014 Special Exams. An entirely new image using Windows 7 has been created during the reporting period and has recently undergone extensive internal testing.

The work to relocate the Video Conferencing suite within the New Museums Site has been completed. The replacement suite is situated on level 4 of the Cockcroft building and includes a meeting room, office, breakout area and kitchenette. The previous facility has been vacated and the new suite was used in earnest for the first time on 20th February.

The Computer Lab (CL) and UCS have reached an agreement to establish a new VC studio within the CL located on the West Cambridge site. The facility will be run by the UCS videoconferencing team and will be available to CL staff at no cost and to the wider university
community at equivalent rates to those currently charged by the UCS. The necessary equipment has recently been ordered and it is expected that the facility will go live in early April.

Training Services

80 During the reporting period a number of induction sessions were provided for University departments to explain how to best use all the facilities and AV equipment within the recently opened Titan Teaching Rooms. Feedback has been extremely positive about this centrally sited facility.

81 The project to establish the two training rooms in the Roger Needham Building has been completed on time. Both rooms accommodate fourteen delegates and are linked with a sliding partition to provide an interlinked twenty eight seat combined space. A number of induction sessions were run internally for UCS and MISD staff, which were enthusiastically received.

82 The following new courses were delivered as part of the core IT Training programme:
   (i) Save Time and Increase Your Productivity by Using Speech Recognition
   (ii) PowerPoint 2010/2013: Introduction (Self-paced)
   (iii) PowerPoint 2010/2013: Further Use (Self-paced)

83 As part of the launch of the new online UCS Password Management Application, a number of training sessions were designed and delivered to targeted computer officers.

84 Following user feedback, the “Presenting: How to Give a Better Presentation” course was extended to provide a peer observation component

85 A new Course ID management tool was developed by the Desktop Services group with the aim of improving the trainer experience in setting up their courses. It has been positively received by its users. Training sessions were delivered to support them.

86 With the version of MS Office changing from Office 2007 to Office 2010 across the MCS, there has been considerable effort applied to upgrading the course delivery material for related courses.

87 The UCS IT Training Programme brochure detailing UCS training for Lent 2014 was published. Personally addressed copies were distributed to all University staff via the internal mail.

S. Kearsey
26 Feb 2014
Service Statistics
February 2014

**Telephone Calls**
- Mobile
- PSTN
- Internal

**Lapwing Usage**
- Web Raven
- Web Ticket
- Eduroam Int.
- Eduroam Ext.

**Support Calls**
- Calls

**Managed Desktop Usage**
- Users
- Sessions (x10)

**Managed Printing Service**
- Pages

**Training Service**
- Individuals