UIS report following the temporary loss of University Exchange Online users’ licences, Sunday 13 January 2019

**Issue**
Between 16:05 and 17:14 on Sunday 13 January 2019 an automated process (script) ran that had the unintended effect of removing all users’ Exchange Online (ExOL) licences. The process re-ran later that day and all user licences were restored by 20:15.

**Extent**
All staff and students with a University Exchange Online email account were affected.

**Impact**
- During the period that users’ licences were absent, incoming emails to affected mailboxes were terminally bounced because the system did not recognise the recipients.
- After the licences were restored, ExOL accounts had lost two user-level settings: the Time Zone setting (all users) and Email Forwarding (for those users who had enabled forwarding on their ExOL mailbox), which required users to log in to the Outlook Web App to restore their settings.

**Cause**
The recent implementation of two Active Directory servers did not include the necessary firewall rules to prevent PowerShell API calls being blocked. As a result, the API calls did not complete and returned a ‘null’ value which then caused the script to begin individually removing users’ ExOL licences.

**Remedial action**
We are implementing three fixes to prevent a recurrence:

1. **Short Term Fix (implemented on 16/01/2019)**
   Implemented additional sanity checks within the automation script to safeguard against the impact of future anomalies.

2. **Medium Term Fix (February 2019)**
   Review and removal of all legacy code related to the removal of licences with ExOL that was implemented three years ago before the leavers process was defined; the leaving process is now automated and this code is no longer required.

3. **Long Term Fix (TBD – under investigation)**
   Microsoft has released new functionality that can now replace many of the functions performed by our PowerShell scripts. We will work to migrate our user management processes to use these tools, relying on custom scripts only where necessary. We aim to produce a timeline for this migration in the next few weeks.