Managed Platform Unit 2014 T1 report

1   Effort

Development work accounted for 37% (0.83 FTE) of this trimester; 29% for specific projects and 8% for misc development. Whilst this is an improvement on T1 (27% 0.57 FTE), it is still lower than usual. This is due to a high level of effort expended on Farr.

Effort expended on operational work has reduced further from 22% (0.47 FTE) in T3 to 18% (0.42 FTE).

Personal development has decreased to a more normal 8% (0.19 FTE). Alastair and Stephen attended the FLOSS Spring conference, with Stephen presenting a talk.

Effort on User Documentation Editor activities accounted for 5% (0.12 FTE) of this trimester, up from T3.

Alastair, wearing his HoC hat, spent considerable effort on work for the Farr Institute - 17% (0.38 FTE). This had a detrimental effect on the SL7 and systemd projects. This figure should be significantly reduced in future periods.

The following projects were signed off :-

- LCFG client refactor - phase 1 (225)

2   Development

2.1   LCFG SL7 port (296)

18% 0.41 FTE 244 hrs

This project started in T1. Given the uncertainty surrounding the final choice of RHEL 7 compatible releases, we spent a while trying to predict likely possibilities. Licensing limitations with the RHEL 7 beta release led us to prefer a succession of other releases for our porting work. In this period we started the porting work using Fedora 19 then moved to Fedora 20. For each of these a basic package-building infrastructure was created: Package Forge support, local package mirrors of the OS repositories, a repository for locally built packages, 'yum' repositories. We tracked our F20-based progress using the ProjectF20Components topic on the LCFG wiki. Progress was also announced periodically at `http://blog.inf.ed.ac.uk/sl7project`. Core packages were built and adapted. The required changes mostly fell into two categories: those necessitated by changed build dependencies (for example caused by the formerly monolithic Perl package having been split into many smaller optional packages) and those related to booting and control of daemons (all of which is now under the control of Systemd). Since the version of grub is significantly different to that on SL6, Stephen wrote the new grub2 component to be used instead of the now outdated grub component.

2.2   LCFG client refactor II (274)

7% 0.15 FTE 90 hrs

During T1 the prototype LCFG::Profile framework was rewritten to use the lightweight Moo OO system. Switching away from the heavyweight Moose vastly improved the memory usage but more work is required to reduce it to an acceptable level. It was discovered that the XML::LibXML Perl module leaks approximately 15MB of memory which is not easily retrieved.

To avoid that additional overhead development work was started on a C-based library for parsing the LCFG XML profile. This new library is accompanied by a Perl XS interface and there will be the opportunity to use the same library with other languages (e.g. Python). To check that the API was suitable, work was begun on altering the LCFG client to use the new modules The API for the new framework was also thoroughly documented.

2.3   LCFG systemd component (297)

3% 0.07 FTE 44 hrs

In this period, Alastair spent time learning more about Systemd. After some consideration, he developed a prototype component to manage systemd unit files in /etc/systemd.

2.4   Redevelop School inventory (269)

1% 0.02 FTE 12 hrs

In this trimester, Alastair further refined his "design document". The project is now stalled pending completion of the LCFG SL7 project.

2.5   DICE light virtual machine image (239)

0% 0.01 FTE 3 hrs

The Virtual DICE project had very little activity in this period. In order to make it easier to login to Virtual DICE using DICE credentials, Chris met with the Infrastructure Unit to discuss the details of making Informatics LDAP available over EdLAN. Following this meeting Toby and Chris experimented to find the correct LDAP settings to enable the DICE logins to Virtual DICE without otherwise compromising the LDAP service. The required settings were discovered, but were not applied to the production LDAP servers during this period. As an experiment Chris made a Virtual DICE image free of VirtualBox in order to help a student with a heavy investment in VMware, for whom the standard images had not worked. The result was inconclusive but this is worth following up at some point with a few tests.

2.6   LCFG client refactor I (225)

0% 0.00 FTE 0 hrs

This project was signed off in this trimester.

2.7   Misc Development

8% 0.18 FTE 106 hrs

This category covers all minor development work which is too small to be a full project. This quarter this has included :-

- rewriting the logrotate template handling

- implementing a full disk warning script

- Improvements to rfe, om and the updaterpms check script

3 Plan for T2 2014

- Continue work on the LCFG port to SL7 project (296)

- Continue work on the LCFG systemd component project (297)

- Complete and signoff LCFG client component code II project (274)

- Signoff the DICE light virtual machine image project (239)

- Maintain effort spent on targeted personal development by tracking activity at weekly MPU meetings