Use Case – Application usage

Scenario

As discussed in the IT Cluster room usage use case (http://research.ncl.ac.uk/rapid/outputs/), Newcastle University has nearly 40 IT cluster rooms/labs throughout the campus with over 1000 machines available to students. It is important that these machines are available to students when required, and just as important is ensuring that the appropriate applications are available for students to carry out their studies.

The University provides access to a multitude of applications to assist students with their studies. This can vary from an office suite of desktop applications, such as Microsoft Office, to more specialised applications specific to a course or module. Examples of specialised software include;

- MATLAB, a numerical computing environment.
- AutoCad Map 3D 2012, mapping software for model-based infrastructure planning and management.

These are just a couple of the applications that Newcastle University make available to students throughout the campus. Many of these applications will of course come at a cost to the University with software license agreements setup with the providers to enable students, and indeed staff, to make use of these applications. Some of the application/software licenses are set to allow campus wide access to all members of the University; this is the case for applications such as Microsoft Word within the Microsoft Office suite.

There are applications which are more specialised and have a smaller user group, for example the School of Electrical and Electronic Engineering may have a course which they need to provide access to an application for. They will purchase an agreement with the application vendor to allow a pre-defined number of instances of the application to be used within particular IT Labs or clusters.

Applications can often have a cross course use, Matlab, although predominately a mathematics application is mainly used by students within the School of Mathematics and Statistics, however students in other schools such as the School of Electrical and Electronic Engineering will also use the application. This can raise questions of who should fund the purchase of these shared purpose applications. In the scenario of one school funding the application which is then used by multiple schools, should the cost then be spread across all schools that use the application? This is not a question that this project will answer; however it will attempt to provide the management information to help inform these types of decisions.

Usage of applications within IT labs and cluster rooms is logged on a daily basis but like other logs is not put to use to provide any meaningful management information. The data that is captured has the potential to provide valuable information to inform on decisions for application provision. Each time an application is opened by a user the data, shown in figure 1, is captured. On the closing of the application another entry is made in the database as shown in figure 2. The data provides the basis to be able to create reports on a number of areas, including monitoring the length of time an application is used for, which schools are the predominant users of the applications and so on.

Action	Process	Date	Username	Machine	Process NameID	Process Version	ProcessCommand
Opened	Statistics	2010-09-15 11:52:08.000	A1234567	GILL12	Statistics2648	17.0.0.0	"C:\Program Files (x86)\SPSSInc\Statistics17\statis~1.exe" "H:\diss slim tables 2.spv"

Figure 1- Data captured on the opening of an application

Action	Process	Date	Username	Machine	Process NameID	Process Version	ProcessCommand
Closed	NULL	2010-09-15 11:52:12.000	NULL	GILL12	Statistics2648	NULL	NULL

Figure 2- Data captured on the closing of an application

Approach

This use case aims to try and provide meaningful management information about the student use of applications throughout Newcastle University. These reports will assist in the decision making processes involved on the provision of applications throughout the campus. Below are examples of the type of reports that will be looked at;

- Total number of accesses – it is important to be able to demonstrate the overall usage of applications throughout the campus. Therefore graphing and reports will be made available to present usage statistics for accesses to applications. This information will be important to help identify the most widely used applications and on the flip side of this, the applications which are under used.
- Number of accesses by programme type – after discussions with the team responsible for the provision of applications they have identified the ability to be able to distinguish students from different programme types (undergraduate and postgraduate).
- Number of accesses by faculty/school – as discussed earlier, the ability to be able to identify the school that a student belongs to could be beneficial. It will then be possible to identify application usage by school, which in turn can be used to help inform on funding decisions for future application purchasing.