

A KeyServer for Faculty, Not Just Labs

Christopher Jones

School of Architecture and Allied Arts
5249 University of Oregon
Eugene, OR 97403
541-346-2094

jonesey@uoregon.edu

ABSTRACT

Academic lab managers have been using Sassafras's KeyServer software for more than a decade to manage software licenses. KeyServer is server-based license management software that allows lab managers to install dozens of licensed software packages on most or all of their lab computers, even if they own just a few licenses for each software package.

This paper describes the use of KeyServer in a non-lab environment. The School of Architecture and Allied Arts at the University of Oregon installed a new KeyServer to reduce software costs for faculty computers. Faculty in our school, as they have become more comfortable with technology, have begun to purchase and use more advanced and more expensive software; if this trend continues, the potential expenditure is quite large, a problem in a time of tighter than usual budgets. Our goal was to maximize the availability of new software packages while minimizing software costs to departments in the school. Once a program is on the KeyServer, the marginal cost of providing an additional program to a faculty member is effectively zero.

If this faculty KeyServer proves successful, we hope to create a student KeyServer next year. For a minimal fixed cost, students would have access to a much wider variety of software, in current, legal versions, than they currently have.

Categories and Subject Descriptors

K.3.1 [Computer Uses in Education]

General Terms

Management, Human Factors, Economics, Legal Aspects.

Keywords

Faculty, KeyServer, Software Licensing, Sassafras.

1. INTRODUCTION

Academic lab managers have been using Sassafras's KeyServer software for more than a decade to manage software licenses. KeyServer is server-based license management software that allows lab managers to install dozens of licensed software packages on

Permission to make digital or hard copies of all or part of this work for personal or classroom use is granted without fee provided that copies are not made or distributed for profit or commercial advantage and that copies bear this notice and the full citation on the first page. To copy otherwise, or republish, to post on servers or to redistribute to lists, requires prior specific permission and/or a fee.

SIGUCCS'03, September 21–24, 2003, San Antonio, Texas, USA.
Copyright 2003 ACM 1-58113-665-X/03/0009...\$5.00.

most or all of their lab computers, even if they own just a few licenses for each software package.

When a "keyed" application is opened, the KeyServer checks out a key from the pool of licenses for that application. If all of the keys are checked out, a message appears on the computer's screen that allows the user to wait in line for a license to become available.

In order to reduce the cost and hassle of purchasing and installing software on faculty computers, we decided to create a faculty KeyServer. In the sections below, I describe the reasons for doing so, the problems we encountered along the way, and our plans for the future.

2. THE CHALLENGE

The School of Architecture and Allied Arts (A&AA) at the University of Oregon is made up of nine departments and programs with about 150 faculty and about 25 staff. For over a decade, students in the architecture departments have been required to purchase computers and software for their coursework, but as at many schools, faculty have lagged behind in their software knowledge, use, and purchases.

Faculty are starting to catch up, especially in the art and architecture departments. Especially in the art department, faculty are quickly becoming more comfortable with a wide variety of multimedia authoring software. They are increasing requests for software for their computers so that they can carry out their own teaching and research using modern technology.

Individual software licenses, even with steep academic discounts, are increasingly expensive, especially in a time of tight budgets. Installing and updating this software has become more time-consuming for computing support staff. Faculty computers, unlike public lab computers, can't simply be wiped out and rebuilt from a standard image when upgrades are needed; faculty computers need individual attention.

3. THE SOLUTION

The A&AA computing support group decided, on a trial basis, to set up a faculty KeyServer in order to make it easier and less expensive to distribute software to faculty in the art department.

The department purchased licenses for about fifteen programs that faculty members requested for their teaching and research. Computing support staff created keyed versions of the applications and placed them on a server, from which the faculty members could download and install the applications.

We believe that by using faculty software funds to purchase additional licenses for the KeyServer and keyed software instead of

licenses for individual computers, we will be able to either greatly reduce software expenditures by departments for faculty computers, greatly increase the variety of software available to faculty, or, ideally, both. In addition, faculty will be able to download and install software themselves instead of having to request software installations from the computing support group.

The KeyServer will also allow faculty to try out software easily, legally, and at no charge before their department purchases an additional license.

4. WHY NOT USE THE LAB KEYSERVER?

At first glance, it might seem more logical to simply expand the existing lab KeyServer, which currently serves two dozen licensed applications to about 125 public lab computers, than to create a new KeyServer. There were two issues with this approach.

The first issue was a budgetary one: funds that we use to purchase lab software, computers, and peripherals come from an educational technology fee paid by students. These “Ed Tech” funds are tightly restricted: they can be used only for technology that is directly involved in student academic work or teaching. Ed Tech funds may not be mingled with other funds, so we could not, for example, purchase a few additional Photoshop licenses for faculty and place them on the Ed Tech-funded lab KeyServer.

The second issue is related to a future project: we hope to use what we learn from this project to create a KeyServer for student-owned computers. See section 6 below for details on that future project.

5. NEW CHALLENGES

Creating a KeyServer for faculty computers poses a number of challenges; as in most technology projects, some of the challenges are technical, and some are political.

As noted in section 2, faculty computers, unlike lab computers, can't simply be re-imaged, assimilated, or otherwise wiped out when we want to install new software. Faculty computers have irreplaceable creative work on their hard drives, so new software must be added carefully and individually. So far, our trial program involves only Mac OS computers; since there are no registry entries to worry about, most programs for the Mac OS can be distributed as a single folder. We have had good success in allowing faculty to log into a software distribution server and copy keyed programs to their computers. Some programs require a few files to be moved to the System Folder in addition to the Applications folder; well-written instructions have been helpful in these cases. Sassafras claims that software installers can be keyed, creating installers that install pre-keyed applications. While we would find this useful, we had poor results in testing and moved to the single-folder approach instead. When we add Windows computers to the mix, we will have to revisit the keyed installer approach.

So far, just one department is using the KeyServer. Since this new service was a small trial project, extra departmental funds were available for startup. If the faculty KeyServer works out, many departments will want to participate. At that point, we will have to work out an equitable funding scheme. Since each new installation does not necessarily require the purchase of a license, we will need to work out how licenses will be paid for when they are needed.

Some software can't be keyed, either technically, legally, or both. For whatever reason, keyed versions of some applications fail to run correctly. These programs simply have to be left out of the KeyServer system. When software distribution is easy and inexpensive, it will feel like an increasing burden to explain about, purchase, and install such uncooperative software. Some software, while it is technically possible to key, comes with very restrictive licenses that appear to forbid operation from a KeyServer. Your site will have to make a decision about how to proceed with such software.

Faculty laptops introduce a new feature of KeyServer to our computing support group: portable keys. Many faculty have laptops that they carry with them from office to classroom to Starbucks to home. They want to be able to use keyed software in all of those locations, not all of which will have network connections. Portable keys make this mobility a possibility. At this writing, our faculty have not begun to demand portable keys, but I expect that I will have stories to tell about it at the conference presentation.

One challenge to consider is one that comes up whenever you add a service: who will be responsible for maintaining the KeyServer and providing and testing keyed software? While one goal of creating a new service may be to reduce workload in a given area, startup time is often underestimated.

6. THE NEXT PROJECT

The faculty KeyServer is really a practice project, though it will have real benefits, both in convenience and cost, for faculty who want to use new software.

One of the main reasons we agreed to provide this new service was as a test run for a student KeyServer. Students in the architecture departments are required to purchase computers and software for their design courses and studios. We find that compliance with these requirements is not unanimous, and because of high costs, students often end up “sharing” software. After a few years, the software that students buy for their computers is out of date, and they have a hard time moving files between their computers and lab computers. We believe that a student KeyServer, funded by a reasonable fee, could provide all students with up-to-date, legal versions of design software for their personal computers at a lower cost than they are currently asked to pay. Before we implement such a large-scale project for up to 500 students, we want to iron out the rough spots with faculty, who are less demanding when it comes to software distribution and use.

7. FOR FURTHER INFORMATION

The first place to go for information on KeyServer is the web site of the company that makes the software, Sassafras:

<http://www.sassafras.com>

For some reason, Sassafras's web site is not very organized. To download a trial copy of KeyServer and the accompanying documentation (which you will need to read), visit this web page:

<http://www.sassafras.com/revisions/downloads.html>