**Issue: Load Imposed by large Registration Groupings**

The LDMO’s PS Admins and DBAs have concerns about system performance during numerous of the midnight enrollment windows which include increasingly large groups. Note that our infrastructure is properly sized to accommodate extraordinary peak loads that we projected. When planning for registration, the LionPATH Team tested and planned anticipated a maximum of 6,000 students per registration window. This correctly assumed that about 2/3s of the population would attempt to login during the first hour of the timeslot. The system runs very well under a load of up to 4,000 concurrent users. As we approach 5,000, all attempting to register at once, various system components falter.

Last week, during the Tuesday, October 31st timeslot we had 5,600 unique logins in the first hour. During the first 15 minutes, some students were unable to login to LionPATH. As of today, the number in the 9-18 credit hour group slated for Sunday (Nov 12th) midnight is 9,966, and we are concerned about performance and system availability.

Registration now occurs against the backdrop of a rather different environment than the one for which we had performance tested. At midnight on any given evening, system is processing an array of batch jobs. When students login, the system is already running at 20% of load. In addition, the improved student UI which populates the initial page with much of what students normally want to see has a higher start-up cost than the “classic” page.

In summary, by design the current distribution of students across registration timeslots creates customer service issues. During implementation we followed the general pattern of registration scheduling used in ISIS; now, having a stable system in place, the LDMO proposes that we explore better options. Bottom-line is that we can structure the enrollment process to provide a better user experience without inflicting pain on OUR.

**Mitigation Measures/Options:**

**Short-term:** During the first week of class in fall, we engaged a high performance mode which loaded less data to the page at the outset. Our PS Admins who monitor this traffic and sit helpless at midnight as they watch the activity worked with on special measures to reduce the clicks required to reach the enrollment shopping cart. In addition, we present an option for going directly to the enrollment shopping cart. This has taken considerable planning, configuration, some development and requires piloting in production since we have no accurate way to test this in any other environment. However, it is required if we aren’t to shut people out at a time of the day when there is virtually no support or recourse for the student.

**Longer term**: Restructure the enrollment groups so that we never exceed 6,000 for a single enrollment appointment. At this stage, we know of no reason, why we cannot schedule enrollment appointments nightly 5 days/week instead of Monday, Wednesday, and Friday just after midnight. While we don’t want to propose a complicated algorithm for assigning enrollment appointments, we think there may be easy options, we have ideas about how we could easily split groups.

Consider whether we are wed to the midnight schedule which is in the middle of the nightly batch processing that is necessary to handle all of the background activities we perform.

**Completed**

* Successfully completed 420 of 461 of the tests scripts identified for the 8.56 upgrade effort. The only significant failure is due to CashNet not having installed the necessary upgrade script so that it can successfully take payments. They are aware of our deadlines and the need to do this.
* Completed testing of Bundle 47 in QNA; in PRD as of 11/9.

**In progress/ongoing**

* PeopleTools Upgrade
  + All issues surfaced through initial 8.56 testing have been resolved.
  + Upgrade time for QNA, whose infrastructure closely resembles production, was faster than anticipated. Down time may be less than 24 hours
  + Identifying content and placement of outage notifications both prior to and during the outage
  + Messages created for pre, during, and post upgrade
  + **ALL USERS WILL HAVE TO REFRESH CACHE** **POST-UPGRADE.** Messages with links to those instructions are ready. Service Desk is fully informed and knows how to help.
* Addition/Clean-up of query descriptions
* Work with OUR on approach to coding the new Gen Eds.
* Work with BI Team on testing of new and revised iTwo content for class meeting patterns, class enrollment, class instructor and academic class.
* Redesign of new public interface: public.lionpath.psu.edu
* Redesign of launch.lionpath.psu.edu website
* Adding LionPATH jobs to Control-M scheduling system
* Process for handling merges of “duplicate identities” handling process in conjunction with OIS
* Preparing for large post-PeopleTools upgrade release on 12/7

**Upcoming**

11/24-25 Upgrade PeopleTools to 8.56.04 on production

12/7 First migration post upgrade