

3C05 Advanced Software Engineering

Problem Class 4

You are still in charge of testing at a small software firm. You have won a contract from the Department of Computer Science UCL to upgrade their web server from the currently deployed CERN web server to the more modern Apache web server.

The department is very concerned whether the architecture of this new web server can meet the non-functional requirements, particularly performance and scalability. Users expect response times for medium-sized web pages, such as the home pages of academics or the publication lists of academics of under 10 milliseconds. Moreover, the department is aware that its web pages are requested concurrently by up to 50 users (which include students, staff, potential applicants etc). Many staff also make their publications available as PDF files on their web site for students, colleagues and search engines to locate them. The size of these papers varies between 100 Kbytes and 2 Mbytes. Users expect to download these within a few seconds.

Devise a test plan for the Apache web server deployment that covers the important non-functional requirements of performance and scalability.