

ABSTRACT

The learning environment today is diverse, dynamic and demanding. Students and researchers' use computers at length both within and outside classrooms to conduct research, experiments and also interacting with one another. Most of these facilities are accessed through physical labs which are provided and distributed within the universities and colleges. Most of these Labs have heavy investments in terms of hundreds of computers in them that are providing both specialized and general purpose application software's. With the growing number of users within the learning institutions, access to these limited resources is increasing day by day and universities are unable to cope with it due to the heavy investments involved. This project dwelled on tackling the growing set of computational needs of learning and research institutions, by designing and developing a secure, scalable and sustainable Virtual IT lab using available Open Source solution, to provision user required solution for Variety of diverse services on demand or by reservation anytime anyplace. It turned out to be significant in providing many benefits to both students, instructors and Administrators by reducing the hardware cost, software purchases, maintenance, administration and that it also improve student's access to computing resources by providing a reliable standardized virtualized software and hardware environment for use.