Introduction
Enterprise Web applications are built by integrating distributed components connected via a network. The runtime environment of these applications consists of an heterogeneous system of specialized components (Web Servers, Application Servers, Database Management Systems, etc …).

The problem
• Teaching in the area of enterprise Web applications development is a challenge.
• Students should acquire skills in various topics that have traditionally been separate areas of knowledge: software engineering, database management systems, operating systems, computer networks and computer security.
• The teaching of a practical laboratory component in this area requires a dedicated laboratory, isolated from the rest of the infrastructure of the center.
• Construction, management and maintenance of these environments is a complex task and requires a large amount of resources.

One solution
A virtual laboratories suited for the development of enterprise Web applications:
• Virtualization is an economically viable alternative.
• Allows to build a virtual lab in which students can develop every facet of the Web development.

Our solution
A virtual environment is based on NETinVM [1].
This tool allows you to create a computer network encapsulated in a portable environment (a VMWare virtual machine) on which all the services of an enterprise network are defined and executed.

Advantages
• It is an integrated tool that can be shared by different subjects in different areas such as operating systems management, computer networks, computer and network security and Web development.
• Students can develop, deploy and test their applications in their own portable environment without compromising the real network.
• Students and teachers share a common environment, so classroom demonstrations can be reproduced by the students.
• Better coordination between teachers of different subjects in a course.

Bibliografía