

What Is...

IMS Enterprise?

by Scott Wilson

In Brief

What is Enterprise?

IMS Enterprise is a specification for transferring data about people and groups (for example, students on a course) between systems such as Virtual Learning Environments (VLEs), Portals, Student Record Systems (SRSs), and Management Information Systems (MISs).

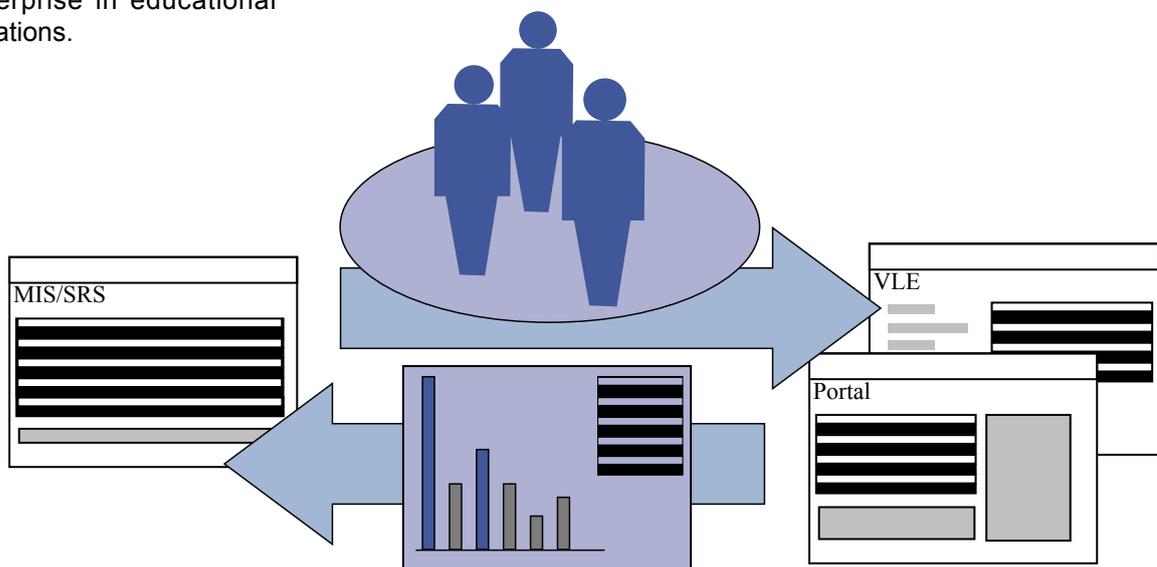
The Enterprise specification has been used by a number of institutions in the UK to populate learning delivery applications such as VLEs with lists of students and groups from an institution's records, usually held in a student record system or MIS. Enterprise can also be used for returning results from courses delivered by a VLE back to the SRS or MIS.

Because it's a very generic specification, these are only some of the potential uses for Enterprise in educational organisations.

What is Enterprise for?

Some of the main things that Enterprise helps you achieve are:

- Sending enrolment information from the records system to a VLE or Portal
- Returning results from a delivery system such as a VLE into your records system
- Sending enrolment information from your records system into your library system, content management system, or learning content management system (LCMS)
- Sending awards information from an awarding body to your records system



Technical Details

How Enterprise works

IMS Enterprise is all about three kinds of “object”:

- Person
- Group
- Membership

People are, as you might imagine, people. The definition of a person in Enterprise is very lightweight, with information about name, contact details, date of birth and so on. The latest version of Enterprise (version 1.1) also adds information about the person’s role in the institution and within the system environment; however, all versions of Enterprise allow you to define a Person’s role in a group using the Membership object.

Groups are very generic objects, and collect together people and other groups. You can have hierarchies of groups; for example, a course group could contain module groups and seminar groups.

(Enterprise doesn’t really make a distinction between groups that are about delivering learning as opposed to groups that are primarily administrative or have other functions; this is something you have to work out within the systems you’re using if it affects your requirements.)

Memberships link people with groups, and contain information about the role of the person in the group. Memberships also have fields for providing results information.

To use Enterprise, information about people, groups and memberships (plus a special “Properties” section defined by the specification) are created in XML and

sent from one system to another.

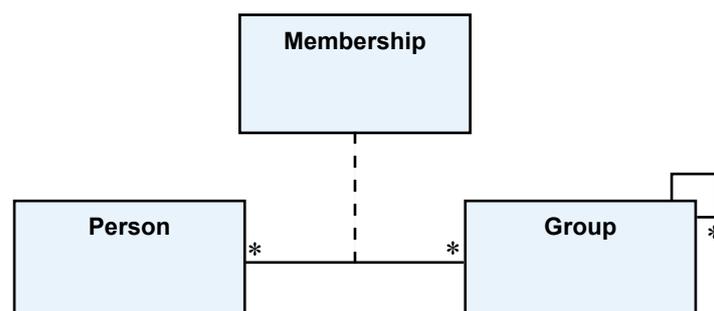
The specification doesn’t define how the information is sent; you could use any standard Internet transfer protocol such as TCP/IP, HTTP, FTP or SOAP, or you could use batch-automation scripts that work with your file system.

There are some basic transaction-handling fields specified within Enterprise; these allow you to mark an object as an Add, Modify or Delete, for example. This is sufficient for simple integration, but you will have to give more consideration to this area if you have more sophisticated integration for requirements; for example, if you are implementing an event-driven or web services architecture with larger numbers of providers and consumers of Enterprise data.

Requirements

The key requirements for using Enterprise are:

- to have defined your requirements for integrating your systems using Enterprise
- to be recording all the information that you need to transfer to support those requirements
- to have a strategy for moving the data between the systems
- to have the originating system be capable of generating the Enterprise XML data
- to have the receiving system be capable of reading and correctly interpreting the Enterprise XML data



Enterprise uses a simple data model with three main objects

Related specifications

If you need to provide much more detailed information about learners than the Person part of Enterprise can provide, then you should look at the IMS Learner Information Package (LIP) specification. LIP is designed to allow the transfer of complete learner progress information, and provides a more sophisticated model for representing learners achievements and competencies than is possible with Enterprise.

If you need more rigorous transaction control or you need to handle payments and other commercial transactions between systems, then you may find ebXML would be more suitable. ebXML is a lot more “heavyweight” than Enterprise, but is more suited to commercial applications.

For integration using human-resource management systems, there is a specification called HR-XML that may be worth looking at if your needs are specific to your personnel systems rather than for students and courses.

Implementations

JISC Projects implementing Enterprise

The JISC Managed Learning Environments programmes have funded a large number of projects using the IMS Enterprise specification.

One of these programmes was the MLE Interoperability in FE pilot programme. This involved 12 short pilot projects, many of which used the Enterprise specification to transfer data between college systems. Further information is available on the programme website, including final reports from each of the projects:

<http://www.jisc.ac.uk/mle/interop>

This programme is being followed up by pilot projects in Scotland, Wales and Northern Ireland:

<http://www.jisc.ac.uk/mle/swani>

The Building MLEs in Higher Education programme also featured projects involving IMS Enterprise, including some tool development:

<http://www.jisc.ac.uk/mle/7-99>

Projects in this programme with a focus on Enterprise included CoManTLE at the University of Wales, Bangor, the MLE project at De Montfort University, MARTINI at the University of East Anglia.



Resources

People, products and services

The CETIS LIP Special Interest Group (LIPSIG) provides a good starting point for learning more about Enterprise (and LIP of course), and finding other UK practitioners interested in it. For more information, contact Peter Rees Jones (prj@leeds.ac.uk).

If you are using Enterprise as part of a JISC-funded managed learning environment project, CETIS can provide workshops and guidance. Ask your JISC programme manager for more details.

There are a large number of commercial systems supporting Enterprise in some fashion, including the most popular VLEs and MIS systems. You can use the JISC programme links on the previous page to see projects that used particular commercial systems. There is also a product directory on the CETIS website.

Resources on the Internet

The Enterprise Specification is published on the IMS Global Learning Consortium website:

<http://www.imsglobal.org>

LIPSIG (LIP Special Interest Group) has a website at:

<http://lipsig.cetis.ac.uk>

The main CETIS website contains useful articles on all the IMS specifications, including Enterprise:

<http://www.cetis.ac.uk/>

For information on ebXML, you can visit their website:

<http://www.ebxml.org>

For information on HR-XML:

<http://www.hr-xml.org>

About this guide

This guide was produced by CETIS, the Centre For Educational Technology Interoperability Standards. For more information on CETIS, visit <http://www.cetis.ac.uk>.

Scott Wilson is an Assistant Director of CETIS, and is based at the University of Wales, Bangor.

About CETIS

CETIS is the JISC's Centre For Educational Technology Interoperability Standards. For more information visit the CETIS website at <http://www.cetis.ac.uk/>



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