

## ***Designing Interfaces for Exchanging Data with A Learning Management System***

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When a company purchases and implements a learning management system (LMS), they often need an interface to connect it to other systems used by the organization such as SAP, PeopleSoft, and others. Interfaces from one system to another are created so data can be updated, imported, or exported depending upon the individual business case. This article is a primer on HRIS (Human Resources Information System) and Active Directory using LDAP (Lightweight Directory Access Protocol) Interfaces, which are often required when implementing the exchange of relevant user/employee data with the Learning Management System. This article will supply guidelines to consider when preparing to work with a company or an internal team that will design and implement these interfaces (custom programming services).

### ***HRIS Interfaces:***

A Human Resources Information System is an integrated system which provides all types of information used for Human Resources (HR) decision making. HRIS is used to track and manage the many aspects of the HR function, such as employee information from payroll, salary information, worker demographics, time tracking, succession planning, benefits administration, talent management, and more.

For example, an HRIS interface may be needed when database maintenance activities are configured to happen automatically, such as updating employee records on a regular basis from the HRIS system to the Learning Management System. An organization may want an employee's test scores to appear in their overall individual personnel record in the HRIS, so the test data may need to be imported from the Learning Management System into the HRIS system. Individual business cases will vary depending on the organization and its internal constructs.

### ***Active Directory Interface Using LDAP:***

Active Directory is a technology used in Microsoft server environments that stores information about its users. Leveraging the Microsoft .NET framework, an Active Directory Interface can be created using the LDAP protocol. LDAP stands for Lightweight Directory Access Protocol.

For example, your company may have employee data stored on your servers in Active Directory and you want to populate the tables in the Learning Management System with the employee name and identification number. It would be best if the information would update automatically when changes occur, so your company would need an Active Directory Interface built to transport the data into the Learning Management System. Again, individual business cases will vary depending on the organization and its internal constructs.

*Considerations When Specifying the Requirements for the Interface With The Learning Management System:*

The first consideration for determining the requirements for the interface to the LMS depends strongly on the company's needs.

- Does company personnel change on a regular or irregular basis?
- Is there high turnover or low turnover?
- Is there a need for keeping track of training accomplished for legal reasons or other reasons?
- Do you need to keep track of inactive employees, employees on leave of absence, employees that have been fired, have quit, or died?
- What are company login standards and norms?

Once you know the reasons for the exchange of data, you need to determine what data you want to store in the LMS from the HRIS or LDAP. Do you need to store all the demographic data with the student on the Learning Management System as well as on the HRIS? There are security issues concerning personally identifiable information (PII). If you need to store any PII, you will need to make sure that the exchange of data is secure. If there is only a subset of data required for the LMS per student, then you only pass that information to the LMS. A rule of thumb is to pass only the information required by the LMS to identify the student and provide adequate reporting criteria. However, the business model may require more data, especially if the LMS is used to determine promotional pathways.

There are other issues as well, related to the business/ company practices regarding login standards and norms: How do you want students to log into the LMS? Do you want single sign-on from your Active Directory login? That is, do you want the student to only log into whatever computer system that the company is using, and then have a link to the Learning Management System that auto-logs them in? There are advantages to this scenario – less for the student to remember, particularly if they have to log into the same computer system every day. Training is available after they log into the normal company system without special effort.

Other considerations include:

- Do you need to update the Learning Management System with HRIS data every day at the same time of the day? Do you only need to update on a weekly basis?
- Do you need to update the HRIS system with LMS data on a regular basis?
- Do you need to update in real time?

There are advantages and disadvantages to both approaches. Batch updates at night can synchronize the data in one fell swoop. Real time updates may enable students to have access to their training more quickly, especially if promotion data as well as job role information is part of the data passed to the LMS.

Suffice to say there are many considerations when contemplating an HRIS or an Active Directory Interface for a Learning Management System implementations.

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