A Program of Study for Web Skills Development at LANL

The IA project is a Laboratory-wide effort to develop the framework for the selection, implementation, and support of computing and communication products and services. From its project office under the Chief Information Officer (CIO), the IA project reaches out to include members from throughout the Laboratory and bridges the real world needs of customers and the technical expertise of providers.

The Web Computing Team has representatives from multiple LANL organizations with the common purpose of adopting guidelines that provide a standard approach to building Web sites, developing applications targeted for the Web, and managing the content within the LANL intranet.

In an effort to standardize the criteria and associated skills needed for Web Developers at Los Alamos National Laboratory (LANL), a recent Standard was developed by the Web Computing Team in the Information Architecture (IA) Project. The Selecting Web Server-Side Database and Middleware Applications Standard (IA-C60102,) proposed the need to build dynamic web pages that are based on information stored in databases and that database information needs to be collected through interactive forms on a web page.

This IA standard recommends several technologies to accomplish server-side database connections. The intent is to suggest technologies for developers with a wide range of experience levels and for a wide variety of machines and operating systems. As background, the authors categorized three levels of responsibility and technical complexity in regard to the Web skills needed by employees working a particular project, audience, domain, and information exchange at LANL. In developing this standard, the Web Computing Team of the IA project outlined three levels of Web skills experience, identifying the basic, intermediate and enterprise levels. For each of these levels, there are outlined criteria that employees should possess in order to achieve a level of competence working on Web sites at LANL.

In order to build on IA-C60102, there is a need to develop a series of Web skills courses that employees at LANL can take in order to increase their Web skills, both in static and dynamic Web environments. It is the purpose of this paper to outline a program of study for Web skills development at LANL. Employees who meet the requirements of the program of study through classes at LANL (or equivalent classes with outside agencies) would receive an IA qualification certificate for the appropriate level of their demonstrated Web skills.

The qualification would consist of three tracks (Track 1 – Web Site Architect, Track 2 – Dynamic Web Site Architect and Track 3 – Web Site System Administrator). An employee at LANL could then take classes and enter them into a corresponding Training Plan administered by the Enterprise Support and Computer Education Group (IM-2). The corresponding Training Plans would allow employees who take classes to work towards one of three levels of demonstrated competence in the Web development arena. Upon completion of a given track (Track 1 – Web Site Architect, Track 2 – Dynamic Web Site Architect and Track 3 – Web Site System Administrator), and having the verifiable courses entered into the Employee development System (EDS), completing a peer level demonstration of skills, the employee would receive institutional acknowledgement for their Web skills at the specific level.

This approach is similar to the Training Staff Qualification Program (TSQP) administered by the Human Resources division. The TSQP is a qualification and development-training program for trainers at LANL. For example, if someone wants to be a Performance Based Training (PBT) specialist, they must complete a training plan that consists of a number of LANL Training courses, or demonstrate that they have met the appropriate criteria by submitting a university transcript and course description.

For the IA Web Skills Qualification Program (WSQP), it will be the job of the Project Leader in IM-2 to make the determination as to which courses will be accepted and entered into EDS. Upon completion of a given level, the employee would become a qualified Information Architect as endorsed by the IA Project. The importance of IA qualifying the employee gives institutional acknowledgement to the training the employee has received and allows the employee to gain an endorsement by the Laboratory as to their Web skills training level.

The goal of this proposal is to establish a series of training plans that will be administered by IM-2 for the IA project in order to qualify LANL employees within a range of Web skills, and to give employees an endorsement as an Information architect that results from a program of study at LANL. The completion of a given program of study does not directly change an employee's job status or job assignment.