



Blackboard™ Enterprise Deployment and Data Integration Project

Initial Implementation – Spring 2002

Project Plan

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Document Authors: Amy Campbell, Neal Caidin

Abstract

This document insures a common understanding of the high level scope and objectives for the Blackboard™ Enterprise Deployment and Data Integration Project: Initial Implementation – Spring 2002. This document contains the portions of the overall project plan of interest to the general public and project stakeholders. More detailed information is available by contacting the core Blackboard Project Team.

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1 – Project Overview

The essence of this project is the upgrade of the environment for the Blackboard software. Blackboard is a commercial courseware application that has been “piloted” at Duke for about 2 years. The current users of the system are Arts & Sciences, Divinity, Medicine, Nursing, Nicholas School of the Environment, and Engineering, with a total of 1,940 courses and 12,805 of users as of October 2001.

The upgraded environment is anticipated to serve the whole Duke campus as an enterprise application and to integrate with SISS (Student Information Systems: most notably PeopleSoft). The Project team’s expectation is that the new environment will provide significantly improved performance and functionality as compared to the status quo environment.

The upgraded environment, when complete, will provide the following:

- Blackboard v 4.1x upgraded to Blackboard 5.5.x Level 3.
- Hardware production environment upgraded from one Sun Ultra 60 to at least two Sun machines. At minimum a Sun 420 with 4 gigs RAM and attached to the IBM Shark device (Large Disk Array) for the database server and a Sun 220 (probably will be replaced with a 420) as an application server.
- Database migration from MySQL to Oracle 8.1.7
- Supporting OS software to be compatible with the Blackboard 5.5.1 environment and Oracle.
- Automated integration with SISS (Student Information System) for enrollment and course data.

The project will be divided into two phases. The first phase needs to be completed for the Spring 2002 semester, which begins on January 8, 2002. The second phase we are targeting for the Summer 2002 semester.

In Scope for Spring 2002

- Upgrade of Blackboard from 4.1.x to 5.5.1
- Test Blackboard with Microsoft Internet Explorer 4.0 or higher on Windows 98/2000/ME/XP, Macintosh System 9/X environments.
- Test Blackboard with Netscape Navigator 4.01 or higher on Windows 98/2000/ME/XP, Macintosh System 9/X, Red Hat Linux, Solaris environments.
- May or may not include use of “Snapshot” environment for performing updates to meet the requirement to be able to “drop” a student from a course without losing the work that the student has performed (so that, if the student were to re-enroll in a dropped course, s/he would have access to her/his work-to-date).
- Deployment on new hardware. Original plan called for one Sun 420 with 4 gigs RAM and a hookup to the IBM Shark for the database server and at least one Sun 220 with 2 gigs RAM for the application server. Reference the System Architecture plan for latest

plan.

- A test/development platform for Bb 5.5.1.
- A business recovery strategy as a contingency for the production environment.
- A plan for monitoring performance of the new environment.
- Training of Help Desk personnel on the new system.
- Minimum configuration of new environment to provide at least the same functionality as the status quo.
- An authentication scheme that is robust, secure and accounts for ACPUB and non-AC PUB users of the system.
- Data migration from 4.1.x production environment to 5.5.1 production environment. Requirement calls for every data element possible to be migrated and documentation of elements that can not be migrated for whatever reason. This documentation will be a key input to the Project Communications Plan.
- Basic “standard” Tivoli monitoring for system availability. The standard will be based on the status quo monitoring of Oracle on AIX environments.
- Provide support structure to end users, including new website at blackboard.duke.edu and multiple training options.

Out of Scope for Spring 2002

- We will not be attempting integration using PeopleSoft’s Snapshot Generator for Spring 2002. This is a “Full Implementation” - Summer 2002 activity, and then will not be event-driven integration but snapshot integration.
- We will not attempt to test every combination of IE and Netscape browser versions on every Windows/Mac/Linux environment.
- We won’t necessarily be taking advantage of all the features and functionality of Bb 5.5.x that are applicable to our environment. This is a “Full Implementation” - Summer 2002 deliverable.
- Decommissioning plan for the current production environment (“Spades” server). This may be a “Full Implementation” - Summer 2002 deliverable.
- Full integration of the authentication module with the new enterprise-wide LDAP implementation. This is part of “Full Implementation” - Summer 2002.
- We will not be implementing Web Mail from within Blackboard 5.5.1. Web Mail lets the user see her personal mail without leaving the Blackboard environment (I.e., web browser). As in Blackboard 4.1, sending e-mail from within Blackboard to people in your course will still be a fully supported feature.

2 – Schedule Constraints for Spring 2002

Our target dates are:

- Target date Dec 20, 2001 to shutdown “Spades,” the status quo CourseInfo server; copy the data to “Gothic” (new production database server); and start testing the new production Blackboard 5.5.1 environment. Copying data from current to new server on December 20, rather than earlier, should allow us to capture 99+% of data from Fall 2001 semester, since this date is after the final grade due date for Arts & Sciences, Divinity, NSOE, Engineering, and Nursing, and is after the last day of classes for Medicine.
- Blackboard 5.5.1 production environment will be made available to users on December 26, 2001.
- Limited use from December 26, 2001 through January 2, 2002 will allow support staff to track usage and respond to problems, if any, before full-scale use begins after January 2.

Between the date the current server is shutdown (Dec. 20) and the new server is in place (targeted for Dec. 26), no version of Blackboard or CourseInfo will be available to users. The Project Team feels that having the server completely unavailable is better than the alternative, because if the CourseInfo server were made available between Dec 20 – 26, and yet no data from that 6-day period were saved, faculty could lose important data (student accesses, tracking, discussion posts, etc.) If users are informed that the server will not be available for those 6 days, they will make other arrangements for communications that might need to occur with students during those days.

January 2, 2002 is the day we need to have Blackboard 5.5.1 up and running on a production server, because this is the date faculty may come back from break and begin final work on their course site before classes start on Jan. 8. By targeting December 26, 2001 as the actual go-live date, we allow for extra time to resolve technical problems that may have arisen during the final data migration. If the entire migration were not conducted until the week of Dec. 26, we risk not hitting our critical go-live date of January 2, 2002.

The Project Team feels that these dates will allow us to meet the needs of the majority of users, while still maintaining quality in the production environment and planning around the time constraints imposed by the Holiday period during which the upgrade falls.

3 – Communication and Training Plan

This plan is intended to address the types of communications and training necessary to inform about the process and progress of the Blackboard upgrade, and to prepare users and support staff for the implementation of the upgrade in January 2002. Planning for ongoing communication (during Spring 2002 and beyond) will be described in a different document.

There are several constituencies that should be kept in-the-know about the pending upgrade to Blackboard 5.5.1. These include:

- Current faculty users
- Current student users
- Department and school support staff who assist faculty using Blackboard
- Help Desk staff
- CIT staff
- Stakeholders in the upgrade (e.g., those involved in the decision to upgrade)

The information that needs to be communicated varies depending on the constituent, although at the most basic level there are some standard items that should be communicated across the board. We need to communicate the timeline and status of the upgrade, the implications of the upgrade (impact on current courses, changes in procedures, administrative set up of Bb 5.5.1, etc.), and information about the features of Bb 5.5.1. All constituencies need to have an opportunity to have their questions answered, either in a face-to-face session or by some other mode.

Timeline and Status of Upgrade:

- Information about the upgrade will be posted on the web site <http://blackboard.duke.edu> as it becomes available
- CIT staff will receive weekly e-mail updates from the Project Manager about the status of the upgrade, starting 11/15/01.
- Decision-makers or their designees will be invited to bi-weekly meetings and will receive bi-weekly e-mails about the upgrade status, starting 11/15/01.

Implications of the Upgrade:

- Information about the upgrade will be at <http://blackboard.duke.edu>
- Individuals listed as "Instructors" in a CourseInfo course site will be contacted via e-mail two or three times before the end of the semester (e.g., November 26, December 3, December 15), with basic information about the upgrade, dates when the servers will be unavailable, pointers to the web site, and lists of training scheduled.
- Instructors of Fall 2001 courses in Medicine will be contacted individually to verify that they understand and are satisfied with the target dates (server to be unavailable December 20 – 26, 2001).

- Help Desk and school support staff (who can be identified) will be contacted via e-mail with a similar message as "Instructor" individuals.
- Individuals newly requesting a course site, after the first of the "Instructor" e-mails has been sent, will be sent a confirmation e-mail including general information about the upgrade, and pointers to the web site for information about training sessions.
- CIT staff weekly notices
- Decision-maker bi-weekly meetings
- Each current CourseInfo course will have a graphic added to the bottom of the course Announcements page during the last two weeks of the term, to explain the coming changes to students.

Information about Blackboard 5.5.1 features

- CIT staff will be provided with access to demo courses on Blackboard 5.5.1 test server as soon as possible, or by 11/15/01 at latest.
- Help Desk and school support staff who can be identified will be offered hands-on training sessions during the first week of December at latest.
- Members of ANSA (Arts and Sciences Network Associates) will be oriented to the new Blackboard at their regular Dec 7, 2001 meeting, and will be invited to sign-up for hands-on training if they wish.
- Help Desk staff will be offered administrative training (during the first week of December at latest) with Jim Coble and Neal Caidin to prepare them to support blackboard@duke.edu mailbox and other Help Desk queries.
- Current faculty users will be offered two types of training sessions during the first through third weeks of December and first through third weeks of January: "What's New in Blackboard?" demonstration sessions (1 hour) and hands-on sessions exploring Blackboard's new features (2 hours)
- New faculty users will be offered two types of training sessions during the first-third weeks of December and first through third weeks of January: "Introduction to Blackboard" demonstration sessions (1 hour) and hands-on sessions exploring Blackboard's basic features (2 hours).
- All faculty (and graduate students?) will be sent an e-mailing (via the CIT Advisory Board) around mid-December about the "new improved" Blackboard 5.5.1 and the Erroyo CD, inviting them to request a CD and sign up for Blackboard demonstration training sessions.
- Early-December Dialogue and Chronicle ads about the Erroyo CD, and the "new" Blackboard 5.5.1, etc.
- Story in the Dialogue, to appear in early January 2002, about the Blackboard upgrade, mentioning the Erroyo CD.
- Article in the Glove Box News, to appear in mid-Dec., with information about the upgrade, training and the Blackboard 2-CD set.