

Blackboard CE 6

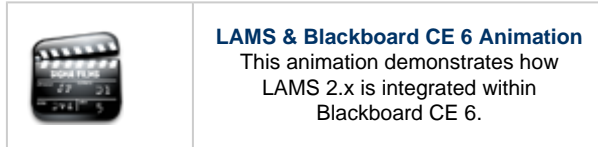
Integrating Blackboard CE 6 with LAMS

The LAMS2-Blackboard CE 6 (formerly known as WebCT) integration was developed with Blackboard Version 6.1.2 and has been tested for 6.2.

It is recommended that LAMS and Blackboard CE 6 be installed on separate servers to account for the heavy memory requirements of Blackboard CE and LAMS.

Please view the [release notes](#) for version update information.

Tutorials



System Requirements

- It is strongly recommended that you use separate servers for LAMS and Blackboard CE installations to account for the heavy CPU usage of Blackboard CE.
- LAMS 2.0.6 +
- MySQL 5 (LAMS database will do)
- A web app server to store the Powerlink image files. (LAMS server will do).
- JDK 1.4 + Required for Running WebCT and Powerlink.
- Ant 1.7 (included with LAMS Powerlink Package)

Installation Steps - Blackboard CE 6 Side

Pre-Steps

There is some setup before we can commence the installation of the Powerlink.

1. Follow the steps at in the appropriate Blackboard CE 6.x Setup guide to install Blackboard CE. Make sure you follow the correct setup guide for your version as the installation steps can change from version to version. The setup guides can be found at <https://behind.blackboard.com/s/developer/refcenter/docs/>.
2. Install LAMS 2.0.6 or higher on a separate server.
3. Ensure that each server can access the web addresses of the other, this can simply be done by accessing the LAMS or Blackboard CE login page.
4. Set up a web server address to store the images used by the Powerlink. The easiest way to do this is to copy it into the LAMS server images folder - Copy the 'treeicons' folder found in /path/to/lams2-webct-integration-1.0.0/deploy/web/tigra/ into /path/to/jboss-4.0.2/server/default/deploy/lams.ear/lams-central.war/images.
5. Test that the images are accessible on the web by opening a web browser and going to http://<your lams server>:8080/lams/images/tigra_base.gif.
6. Set up a MySQL database which is accessible from the Blackboard CE server (This can be the same database as used for the LAMS server if appropriate).
7. Set up a special MySQL user which the Powerlink can use to talk to the database. Make sure the user has cross-server permission if the MySQL server is not located on the same server as Blackboard CE. This can be done using a command on the MySQL command:
GRANT ALL PRIVILEGES ON <database name>. * TO '<username>'@'<host>' IDENTIFIED BY '<user password>';
8. You can test the cross-server MySQL access by installing a MySQL client and the typing the following command:
mysql -h <host> -u <user> -p <password> <database name>;
9. Open up the createTable_MySql.sql script in a text editor, edit all appearances of \${dbTable} to name the table as you wish.
10. Run the create table script using the following command:
mysql -u<mysql user> -p <database name> < path/to/createTable_MySql.sql

Installation of Powerlink

1. Download lams2-webct-integration-1.0.0.zip from the [downloads](#) page.
2. Unzip to a temporary location.
3. The package should contain the following files:
 - lams2 (directory)
 - authmodule_CE_1.4.jar

- commons-codec-1.3.jar
- lams2-webct-integration-1.x.x.jar
- mysql-connector-java-3.1.2-bin.jar
- xercesImpl.jar
- readme.txt
- license.txt
- release_notes.txt
- createTable_MySql.sql

4. Create a directory called "lams2" in the /path/to/bea815/weblogic81/config/WebCTDomain/deployablecomponents folder

5. Copy the authmodule_CE_1.4.jar, commons-codec-1.3.jar, lams2-webct-integration-1.x.x.jar, mysql-connector-java-3.1.2-bin.jar into this directory.

6. IF you are running Blackboard CE 6.2 or newer, copy xercesImpl.jar into the directory, otherwise DO NOT.

Blackboard CE instances are often tweaked and modified so it is difficult to provide a package suitable for every instance, if you find there are problems running the Powerlink, it may be because an included jar is clashing with another existing jar. In this case, simply remove the jar and try again.

Configuring the Blackboard CE Side

1. Login to the Blackboard CE server as serveradmin.
2. Make sure you are at the server level, by clicking it on the Administration tree on the left.
3. Click on utilities (the red box) tab, then settings to get to the admin screen.
4. Under the System Integration list there should now be a link called "LAMS Integration Module", click on that link.
5. Select the true option of the Enable setting and also ensure you select the "Override Setting at Child Contexts" option to enable it at all contexts.
6. Edit the configuration fields to suit your needs. The important fields are listing in the following steps.
7. The "Database Server Host" should be filled to match the JDBC URL to connect to your database.
8. The "Database driver jar" should be left as default, unless you are using a non-mysql database.
9. The "Database Table Name" should be the same name that you used for your table in the createTable_MySql.sql script in the pre-steps.
10. The "Database User" should be the same as the one set up in the pre-steps.
11. The "Database Password" needs to be correct to connect to the database.
12. The "LAMS server url" is the url to get to the LAMS login page, make sure it has a forward slash "/" at the end.
13. The "LAMS server id" is a arbitrary name that will be used to configure the LAMS/WebCT server connection, make sure you remember this feild.
14. The "LAMS server secret key", is the secret field that will be used to hash requests between LAMS/WebCT servers. Choose a field only your administrators know, and make sure you remember it.
15. The "WebCT request source" field is an arbitrary name which the LAMS server will use when returning to the Blackboard CE server, you can leave it as Blackboard CE, or change it to whatever you wish to call you 'home' Blackboard CE server.
16. The "Images URL" should be set to point to a web address folder containing the Tigma images, as was set up in the pre-steps.
17. The LAMS Author, Monitoring and Learner roles allow you to map WebCT roles to LAMS roles.
18. Once finished configuring settings, make sure for each setting the "Override Setting at Child Contexts" is selected and then save.
19. Next, click on the Powerlinks Proxy Tools tab, then click the Create Proxy Tool button.
20. From the drop down menu, select "LAMS Integration Module".
21. Enter the proxy tool name, version (1.0) and description, do not lock any of they settings, and do not select the "Release to My WebCT" option.
22. Click save, the new Proxy Tool should appear in the list.
23. Now return to the settings screen by clicking on the utilities (red box) tab then clicking settings.
24. Under tools, a new link should appear with the same name as you used for the proxy tool name. Click it.
25. The Enable Tool Field should be locked, you will need to unlock it first, then return to the menu again and select true to enable the tool. Make sure you select the "Override Setting at Child Contexts" also.

Configuring the LAMS Side

1. Follow the instructions to install LAMS, it is recommended that you install LAMS and Blackboard CE on separate servers to account for heavy memory requirements. You can either [build LAMS](#) from source or follow the instructions for [Window Installers](#) or [Unix Installers](#).
2. Login to LAMS as sysadmin.
3. Goto Sys Admin->Maintain integrated servers->Add New Server.
4. Setup the fields to match those that you put on the Blackboard side
5. The id and key should map to the "LAMS SERVER ID" and "LAMS SERVER SECRET KEY" fields respectively on the LAMS properties page in Blackboard (see above).
6. Fill in a description of the Blackboard server.
7. The "Prefix" field denotes a prefix that will be added to all users from Blackboard CE, for example if you put webct as the prefix and accessed LAMS with a user called "user", their name in LAMS would be "webct_user".
8. The 'disabled' checkbox disables this integration, you can select this later if you wish to disable the connection.
9. The User Information URL is arbitrary for LAMS/Blackboard CE integrations, so put a dummy URL in.

10. You can specify a timeout page that LAMS will go to if there is an error.

And you are done! You can now create and access LAMS content from Blackboard CE.

LAMS 2 Powerlink Source Code

The LAMS-Blackboard CE Integration Building Block source code is available on our [CVS server](#). You can access the source from from cvs by checking out the `lams_webct_integration` project. The project comes with an ant build script that will compile the code into .jar format, then just follow the installation step to install.

- access method: **pserver**
- user name: **anonymous**
- server name: **code.lamsfoundation.org**
- location: **/usr/local/cvsroot**

Help, Questions, Comments?

If you have any questions or comments, please post them in the LAMS Community [Tech Forums](#) 😊