

Blackboardlearn⁺

Release 9.0 Service Pack 3
Release Notes
9.0.539.0



Blackboard

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Worldwide Headquarters	International Headquarters
Blackboard Inc.	Blackboard International B.V.
650 Massachusetts Avenue NW Sixth Floor Washington, DC 20001-3796	Dam 27 2nd Floor 1012 JS Amsterdam The Netherlands
+1 800 424 9299 toll free US & Canada	
+1 202 463 4860 telephone	+31 20 5206884 (NL) telephone
+1 202 463 4863 facsimile	+31 20 5206885 (NL) facsimile
www.blackboard.com	www.blackboard.com

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Introduction

About the Release Notes

The Release Notes provide Instructors with information about new features and enhancements. This includes information on browser compatibility, new feature descriptions, and changes to the system from the previous release.

The Release Notes contain the following sections:

- [New Features and Enhancements](#) – Describes new features in this release and additional important enhancements that have been made to the system.
- [Bug Squad](#) – Details on the latest Bug Squad held by the Maintenance Experience team.
- [Known Issues](#) – Describes any changes in functionality or known regressions in the release.
- [Performance and Scalability Notes](#) – Details the latest analysis from our Performance Engineering team and how to tune an installation of Blackboard Learn 9 Service Pack 2.
- [Supported Technologies](#) – Gives an overview of the changes to supported platform technologies and client technologies in this release. This section also lists supported upgrade paths to this release of Blackboard Learn.
- [Installation Instructions](#) – Provides basic instructions for upgrading to this version of Blackboard Learn.

Where are the Resolved Issues?

The Resolved Issues Report has been replaced by a [Resolved Issues Page](#) on the Maintenance Center. This new page can be searched and sorted easily. There were over 100 client-reported issues addressed in this release and the new format should help Administrators quickly find the issues most important to them.

New Features and Enhancements

Blackboard Learn Release 9.0 Service Pack 3 introduces a number of new features and enhancements to the existing features in response to user feedback.

Individual Enhancements

AS-135317	When attaching a submission to an assignment, the user now only needs to click Attach File once.
AS-137947	Gives the K-12 Course Builder user role the ability to edit a gradeable item without the ability to also edit individual grades.
AS-140334	Expiring Licenses no longer fail to validate when the expiration is within Daylight Savings Time. The workaround that was used for SP1 and SP2 is no longer necessary.

New Sync Building Block

The Blackboard Sync Building Block has been updated to include support for the new Blackboard Learn Toolbar for Internet Explorer and Firefox. The updated building block provides a Community Module that can be displayed on the Institution Portal Page. The building block also provides an additional User Tool for non-Community System clients. The module/tool directs the user to download the Toolbar from Microsoft and provides the authorization code needed to register the toolbar.

Bug Squad

In November 2009, Blackboard reached out to early Release 9.0 adopters to prioritize the bugs for Service Pack 3 by voting using UserVoice.com. Blackboard provided our top 30 issues, and participants were able to add their own issues to the list for voting. Over 90 clients participated and the results helped shape the Service Pack 3 release.

As a result of this project, 12 new issues were targeted for Service Pack 3 and three issues were removed. The 9 issues that received more than 20 votes each are listed below:

JIRA Issue	Description	Votes	Issue Analysis
AS-135317	User must click Attach File twice	60	Originally targeted for 9.0 SP3. Remained in the scope.
AS-139655	Test deployment availability date error	51	New issue resulting from Bug Squad. Issue targeted for 9.0 SP3.
AS-133923	Student gets error message if they SAVE an assessment prior to completing it	46	New issue resulting from Bug Squad. Issue targeted for 9.0 SP3.
AS-138973	Course copy may not copy all elements within the Content System	45	Originally targeted for 9.0 SP3. Remained in the scope.
AS-133221	Tracking reports may contain errors	38	Originally targeted for 9.0 SP3. Remained in the scope.
AS-139454	System Administrator must have control over course availability Notifications	33	New issue resulting from Bug Squad. Issue targeted for 9.1 SP1 and 9.0 SP4.
AS-137517	Large enrollments over Snapshot may cause performance issues	28	Originally targeted for 9.0 SP3. Remained in the scope.
AS-139306	Tool links on menu are duplicating when content imported	25	New issue resulting from Bug Squad. Issue targeted for 9.0 SP3.
AS-133245	Unqualified searches may lead to performance issues	23	Originally targeted for 9.0 SP3. Remained in the scope.

Known Issues

WebDAV on Windows Vista and Windows 7

In Windows Vista and Windows 7, Microsoft requires SSL for all WebDAV connections. This applies to both 32 and 64-bit versions. Without SSL, the user is repeatedly asked for a username/password and the WebDAV connection fails.

There are two possible ways to work around this. Having Microsoft Office or Microsoft Web Folders installed may allow non-SSL access. The other workaround currently requires changing the registry value for BasicAuthLevel from 1 to 2 (<http://support.microsoft.com/kb/841215>).

Using “Save As” to save to a WebDAV folder

On some Windows environments, saving a Word document (*.doc or *.docx) from *within* Word causes two different folders to be created in “My Network Places.” The folders represent the same physical directory on the server despite the inclusion of the port number in the name of one folder. Windows may not properly update the folder display, but refreshing the folder view (View->Refresh) will correct the problem. This issue can be tracked as AS-142602 on the Blackboard 9.0 [Known Issues list](#).

WebDAV on Mac OSX 10.6

Users may see an unwanted warning pop-up while copying an item into a WebDAV folder with read and write permissions. Additionally, the user will see accessory files created on the WebDAV share by Mac OSX. This is expected behavior in OSX 10.6.

Online course conversion through the LEC

For Release 9.0 Service Pack 3, Blackboard recommends against using the online course conversion feature in the Learning Environment Connector. There is an issue causing conversion failures in Service Pack 3. The offline course conversion tool performs properly. This issue can be tracked as AS-142789 on the Blackboard 9.0 [Known Issues list](#).

Performance and Scalability

Blackboard continuously invests in making Blackboard Learn more responsive and able to handle greater volumes of user traffic. This section describes the performance and scalability issues in this release of Blackboard Learn.

Performance issues occur when application responsiveness for a system not under load fails to meet user expectations. Scalability issues occur when application responsiveness or stability of a page request for a system under load fails to meet user expectations.

Issues are identified by clients through our traditional support channels and as a result of the performance and scalability exercises performed as part of all Service Pack releases.

Performance Improvements

In general, Release 9.0 Service Pack 3 performs better than Service Pack 1 or Service Pack 2 from both a responsiveness perspective and a scalability perspective across all supported platform configurations. No degradation was reported during any performance tests or benchmarks when comparing against any previous service pack using regression performance settings. Performance improvements have been confirmed on both SQL Server and Oracle configurations.

Release 9.0 Service Pack 3 contains fixes to address performance challenges on the database side resulting in slow response time behavior for users.

Notifications

Customers have reported issues in Release 9.0 surrounding Notifications, a new feature in Release 9.0, including high CPU utilization and possible database deadlocks. These issues have been addressed through query optimization and the addition of database indexes.

Query Optimization

Performance changes were introduced to address latency when reusing text questions, when searching the Discussion Board, and when accessing content within the Content Collection. The underlying queries have been optimized to resolve this issue.

Recommended Tuning Set

For every Service Pack release, the Blackboard Performance Engineering team spends many hours studying the transactional and systemic performance of Blackboard Learn and whether particular tuning sets will have a positive or negative impact on performance or scalability.

This section provides the recommended Java Virtual Machine (JVM) tuning set as executed in the Blackboard Performance Engineering laboratory against Release 9.0 Service Pack 3.

JVM sizing varies from platform to platform. 32-bit Windows and Linux deployments are limited to JVM sizes no greater than 1.7GB of addressable memory. This consists of the main heap area (Old and New Space) plus the permanent space. 64-bit Linux and Solaris configurations are not impeded by this limitation of addressable memory.

Blackboard recommends the following tuning set for 1.4GB JVMs (32-bit and 64-bit) on Windows, Linux, and Solaris systems using Java 1.6. These recommended settings can be managed within the `bb-config.properties` file or `wrapper.conf` file:

```
-Xms1400m -Xmx1400m -XX:NewSize=300m -XX:MaxNewSize=300m -XX:+UseConcMarkSweepGC  
-XX:+UseParNewGC -XX:ParallelGCThreads=4 -XX:+UseTLAB -XX:PermSize=256m  
-XX:MaxPermSize=256m -XX:+PrintVMOptions -XX:+PrintGCDetails  
-XX:+PrintGCTimeStamps -XX:+PrintGCTaskTimeStamps -XX:+PrintCommandLineFlags  
-XX:+PrintGCApplicationStoppedTime -XX:+PrintGCApplicationConcurrentTime  
-Xloggc:/usr/local/blackboard/logs/tomcat/gc.log
```

For 64-bit JVMs on Red Hat Enterprise Linux and Solaris platforms, Blackboard recommends that 64-bit clients take advantage of large heap sizes, such as 4GB and 8GB

When using a 4GB heap size, change the following parameter values in the recommended tuning set:

```
-Xms4096m -Xmx4096m -XX:NewSize=1024m -XX:MaxNewSize=1024m
```

When using an 8GB heap size, change the following parameter values in the recommended tuning set:

```
-Xms8192m -Xmx8192m -XX:NewSize=4096m -XX:MaxNewSize=4096m
```

Understanding the Settings

Concurrent Mark Sweep Collector

With the certification of Java 6, Blackboard recommends using the Concurrent Mark Sweep Collector (`-XX:+UseConcMarkSweepGC`) instead of the Parallel Collector (`-XX:+UseParallelGC`).

Local Allocation Buffer (TLAB)

The `-XX:+UseTLAB` parameter forces the JVM to use thread-local object allocation. A Thread Local Allocation Buffer (TLAB) is a region of Eden that is used for object allocation by a single thread, which is faster than performing an atomic operation on a top pointer shared across threads. Using a TLAB improves concurrency by reducing contention on the shared heap lock. Users can specify TLAB initial size and disable the resizing through the `-XX:TLABSize=<size in kb>` `-XX:-ResizeTLAB` parameter. The default setting of 256KB provides adequate performance. Blackboard's tests do not show increased performance when changing the TLAB size from the default value 256KB to 128KB or to 512KB. To discover which settings have a positive, negative, or neutral effect on performance, trace all TLAB operations, using the `-XX:+PrintTLAB` parameter.

Survivor Spaces

The `-XX:SurvivorRatio` parameter controls the size of the two survivor spaces. If survivor spaces are too small, the JVM will copy collection overflows directly into the old generation. If survivor spaces are too large, they will be empty. At each garbage collection, the JVM determines the number of times that an object can be copied before it is tenured, which is called the tenure threshold (`-XX:MaxTenuringThreshold`). After experimenting with setting `-XX:SurvivorRatio` to 4, 8, 16, and 4096 with `-XX:MaxTenuringThreshold` set to 0, Blackboard's tests have found that customers who use our heap setting recommendations can improve Eden space memory management by changing the `-XX:SurvivorRatio` parameter to 4 or lower. Configurations that use JVM heap sizes larger than 8GB require different settings.

New Space Region

Use the `-XX:NewSize` and `-XX:MaxNewSize` parameters instead of the previously recommended `-XX:NewRatio` parameter to determine the memory needs in the New Space region of the JVM. During performance tests, the `-XX:NewRatio` parameter did not size and resize the new generation space of the JVM correctly. Size the `-XX:NewSize` and `-XX:MaxNewSize` parameters to roughly 1/4 or 1/3 the size of the JVM.

TIP for ORACLE DBAs	For performance reasons, <code>CURSOR_SHARING</code> should be set to <code>EXACT</code> or <code>FORCE</code> , especially for clients on Oracle 10g and licensing the Content Management module.
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Supported Technologies

The most up-to-date information about Supported Technologies can be found on the [Maintenance Center](#) on Behind the Blackboard. The following list highlights the new Server and Client configurations tested for this release.

There was no change in the supported server configurations for Service Pack 3. The following matrices will not change during the life cycle of Service Pack 3.

32-bit Server Configurations

	Application Server / JDK 1.6	SQL Server 2005 (32 bit)	SQL Server 2008 (32 bit)	Oracle 10g R2 (32 bit)
Windows Server 2003 SP1 (32-bit)	Certified (32-bit JDK)	Certified	Compatible	Unsupported
Red Hat Enterprise Linux Server 4 (32-bit)	Certified (32-bit JDK)	Unsupported	Unsupported	Certified
Red Hat Enterprise Linux Server 5 (32-bit)	Compatible (32-bit JDK)	Unsupported	Unsupported	Compatible

64-bit Server Configurations

	Application Server / JDK 1.6	SQL Server 2005 (64-bit)	SQL Server 2008 (64-bit)	Oracle 10g R2 (64-bit)
Window Server 2003 SP1 (64-bit)	DATABASE ONLY	Certified	Compatible	Unsupported
Red Hat Enterprise Linux Server 4 (64-bit)	Compatible (64-bit JDK)	Unsupported	Unsupported	Compatible
Red Hat Enterprise Linux Server 5 (64-bit)	Compatible (64-bit JDK)	Unsupported	Unsupported	Compatible
Sun Solaris 10 (64-bit SPARC)	Certified (64-bit JDK)	Unsupported	Unsupported	Certified

Configuration Notes:

- Microsoft SQL Server 2005 must be SP2 or later.
- Windows Server 2003 64-bit can be used to host the SQL Server Database but the application server in such configurations should be Windows Server 2003 32-bit. This is because the 64-bit JDK is not yet compatible on Windows.
- Windows Server 2008 is not supported.
- Oracle 11g is not supported
- As of Blackboard Learn 9.0 SP1, Sun JDK 1.5 is no longer supported on 32-bit or 64-bit platforms.
- Non-English applications, both operating systems and databases (such as a Chinese-language version of Oracle), are considered compatible with Blackboard Learning System. These systems have not undergone official Blackboard Product Development testing.
- Oracle RAC is supported with the assistance of Blackboard Consulting.

Supported Browsers and Operating Systems may change during the life cycle of Service Pack 3. As new client-side technologies become available they may be listed as Provisional. The matrices below will remain static so please visit the [Maintenance Center](#) for the most current information.

Windows Client Configurations

	Internet Explorer 8	Internet Explorer 7	Firefox 3.6	Firefox 3.5
Windows XP (32-bit)	Compatible	Compatible	Compatible	Compatible
Windows Vista (32-bit)	Certified	Compatible	Certified	Compatible
Windows Vista (64-bit)	Compatible	Compatible	Compatible	Compatible
Windows 7 (32-bit)	Certified	Unsupported	Certified	Compatible
Windows 7 (64-bit)	Compatible	Unsupported	Compatible	Compatible

Mac OSX Client Configurations

	Safari 4.0	Safari 3.2	Firefox 3.6	Firefox 3.5
Mac OSX 10.4 "Tiger"	Certified	Compatible	Certified	Compatible
Mac OSX 10.6 "Snow Leopard"	Certified	Unsupported	Certified	Compatible

Configuration Notes:

- *Blackboard strives to make all its products as accessible as possible. JAWS for Windows 9 and 10 were used during accessibility testing of Service Pack 3*
- *Deprecations from Service Pack 2:*
 - *Firefox 3.0.x*
 - *Mac OSX 10.4 "Tiger"*
- *Browsers NOT supported: Internet Explorer 6; Firefox 1.x, 2.0, & 3.0; Safari 2.0; Google Chrome*
- *Internet Explorer 8 was tested in Standards Mode only. Some known issues can be resolved by using Compatibility Mode (emulates IE7 behavior).*
- *Java 5 is no longer supported. It may continue to work but Java 6 Update 13 is the only supported JRE.*

Supported upgrade paths

Details on upgrade paths to Release 9.0 Service Pack 3 (9.0.539.0)

Direct upgrade paths:

- Blackboard Academic Suite 8.0 Service Pack 6 (8.0.475.0)
- Blackboard Learn Release 9.0 Service Pack 2 (9.0.505.0), & Hotfix 1 (9.0.505.15)

CE 4.1.7 and Vista/CE 8.0 Service Pack 4 clients can use course migration to move to this release. Use of the Learning Environment Connector (LEC) for co-production is no longer recommended by Blackboard.

Chart of non-direct upgrade paths

Previous Version	Suggested Path
9.0 GA	Upgrade to 9.0 SP1, then 9.0 SP2 before upgrading to SP3
8.0 GA, SP1, SP2, Sp3, and SP4	Increment through the service packs to 8.0 SP6; then upgrade to 9.0 SP3
7.3 SP2	BASE PATH: Upgrade directly to 8.0 SP6; then upgrade to 9.0 SP3
7.3 SP1	Upgrade directly to 7.3 SP2; then follow the BASE PATH
7.3 GA	Upgrade to 7.3 SP1; then SP2; then follow the BASE PATH
7.2 SP1	Upgrade directly to 7.3 SP2; then follow the BASE PATH
7.2 GA	Upgrade to 7.2 SP1; then 7.3 SP2; then follow the BASE PATH
7.1 SP2 or later	Upgrade directly to 7.3 GA; then SP1; then SP2; then follow the BASE PATH
7.1 GA and SP1	Upgrade to 7.1 SP2, then upgrade to 7.3 GA; then SP1; then SP2; then follow the BASE PATH
7.0.x	Upgrade to 7.0 SP1; then 7.1 SP2; then 7.3 GA; then SP1; then SP2; then follow the BASE PATH
6.3.x	Upgrade to 6.3 SP2; then 7.0 SP1; then 7.1 SP2; then 7.3 GA; then SP1; then SP2; then follow the BASE PATH

Supported Paths for Importing and Restoring Courses

The table below identifies the supported paths for importing or restoring a Course that was exported or archived from an earlier version. Certified paths are fully tested and supported by Blackboard. Compatible paths are not fully tested but should function correctly based on past performance.

NOTE: Paths for Importing and Restoring Courses are not backward compatible. Courses may be Imported or Restored to a newer version, but Courses from a newer version may not be Imported or Restored to an earlier version.

Source	Support
Academic Suite Release 8	Certified
Academic Suite Release 7	Certified
Academic Suite Release 6	Certified
Blackboard ML	Certified
Blackboard 5.5**	Certified
Blackboard 5.0**	Compatible
CourseInfo 4	Not Supported

**Blackboard 5 and Blackboard 5.5 did not include an Archive and Restore function. Courses from these releases may be imported but courses cannot be restored with user data and interactions intact.

Upgrade Instructions for Windows

Preparation

Before running the updater, please backup the system and make sure it can be restored. It is strongly recommended to turn off various utilities that may conflict with the upgrade process, such as Firewalls, Virus Scanners, and Backup Utilities.

WARNING! - Customizations

Running the Updater on an existing system will reset many back-end and user interface customizations. Examples of affected back-end settings include:

- `JAVA_HOME` system environment variable
- SSL and custom authentication settings
- Settings in the `bb-config.properties`, `authentication.properties`, and `wrapper.conf` files

Examples of affected user interface settings include:

- Course Settings (which control the Course menu)
- Building Block availability
- Module and Tab availability, role settings, and custom layouts

Customizations will need to be reapplied after the upgrade. To make this process easier, create a detailed document outlining all existing customizations.

Any configuration files removed by the upgrade will be placed in the `<blackboard_directory>/backups/<upgrade_timestamp>` directory. Use these files as a guide when updating the new configuration files to reapply your previous customizations.

Run the Updater on a Load-Balanced System

The Updater must be run on each Application server and the Collaboration server on a load-balanced system. After running the Updater the first time, choose the Update an App Server for all other Application servers and the Collaboration server. This option will upgrade the application files without making any of the database changes.

Run the Updater on Windows

Follow these steps to run the Updater on Windows:

1. Make sure that the Java environment variable is properly set.
2. Click on the Updater file to launch it.
3. A welcome message will appear with a reminder to read the release notes and the installations instructions completely before updating. Click **Next** to continue.
4. The first updater page confirms the auto-detected install and content directories. Click **Next** to accept the defaults or enter new values and then click **Next**. Load-Balanced users should use the mapped UNC path.
5. The next prompt presents several options. The options are **Update**, **Provide new License file**, **Uninstall Blackboard Learn**, and **Uninstall Application Server**. Select the

appropriate option and click **Next**. The **Update** option will use the license file already configured and **Provide new license file** will upgrade the system and apply the new license.

6. A message will appear that displays the changes that will be made when the Updater is run. Click **Next** to start the upgrade. If the Updater was launched from the command line, do not close the command line window or any of the other windows that pop-up during the upgrade.

Troubleshooting the Updater

The Updater logs are an important source of information when troubleshooting issues that arise during an upgrade. The Updater writes the following logs:

```
\blackboard\logs\bb-installer-log.txt
```

If the installer log file does not identify the problem, the update tool log most likely contains the cause of any installation errors:

```
\blackboard\logs\update-tools\update-tool-log.txt
```

Also check:

```
blackboard\logs\install\
```

```
\blackboard\logs\install\db-install-errors-log-bb_bb60.txt
```

```
\blackboard\logs\install\db-install-errors-log-bb_bbadmin.txt
```

```
\blackboard\logs\install\db-install-info-log-bb_bb60.txt
```

```
\blackboard\logs\install\db-install-info-log-bb_bbadmin.txt
```

Language Pack Changes

To ensure consistency across releases, the Blackboard Learn Updater will compare the existing en_US language pack against the version that is being installed. The differences are noted and output in a file called `bundle_diff.txt`. This file is added to the `blackboard/backups/<updater_time_stamp>` directory. Use this file to review the text differences between releases and make updates to any custom Language Packs.

Upgrade Failure due to Strict Password Requirements (SQL Server)

On an upgrade with SQL Server, the installation may fail due to the strict parameters for password requirements. The user will receive the following message:

Password validation failed. The password does not meet Windows policy requirements because it is too short.

To override or reset the password requirements run the Academic Suite installer as follows (text in caps should be filled in as appropriately): `java -jar bb-as-PLATFORM-VERSION.jar -config mycustom.properties`

Upgrade Instructions for UNIX

Preparation

Before running the updater, please backup the system and make sure it can be restored. Solaris users: ensure that the Swap space for the operating system is at least twice the amount of physical RAM on the server. It is strongly recommended to turn off various utilities that may conflict with the upgrade process, such as Firewalls, Virus Scanners, and Backup Utilities.

WARNING! - Customizations

Running the Updater on an existing system will reset many back-end and user interface customizations. Examples of affected back-end settings include:

- `JAVA_HOME` system environment variable
- SSL and custom authentication settings
- Settings in the `bb-config.properties`, `authentication.properties`, and `wrapper.conf` files

Examples of affected user interface settings include:

- Course Settings (which control the Course menu)
- Building Block availability
- Module and Tab availability, role settings, and custom layouts

Customizations will need to be reapplied after the upgrade. To make this process easier, create a detailed document outlining all existing customizations.

Any configuration files removed by the upgrade will be placed in the `<blackboard_directory>/backups/<upgrade_timestamp>` directory. Use these files as a guide when updating the new configuration files to reapply your previous customizations.

Run the Updater on a Load-Balanced System

The Updater must be run on each Application server and the Collaboration server on a load-balanced system. The method is similar to the Installer—the Updater is run on each Application server in sequential order and then run on the Collaboration server (if the Collaboration server resides on a separate server). After running the Updater the first time, choose the Update an App Server for all other Application servers and the Collaboration server. This option will upgrade the application files without making any of the database changes.

Run the Updater on UNIX

Follow these steps to run the Updater on UNIX.

1. Open a command-line prompt and navigate to the directory that holds the Updater.
2. Run the following command to launch the Updater:

```
$JAVA_HOME/bin/java -jar <updater_file>
```

If Xwindows or a similar GUI is running and the `DISPLAY` variable is properly configured, the Updater will launch in GUI mode (remember that the following steps assume that the command line Updater is used)

- A welcome message will appear with a reminder to read the release notes and the installations instructions completely before updating. Hit ENTER to continue.
3. Instructions will appear for navigating through the Updater prompts. The Updater, in most cases, will provide a default value in brackets. Hit ENTER to accept the default and continue or enter a different value. Hit ENTER to continue after entering a new value.
 4. The first Updater prompt asks for the directory where Blackboard will be found. Hit ENTER to accept the default or enter a new value and then hit ENTER. If The Blackboard Learn is not found in the directory provided, the Updater will attempt to install at the given location.
 5. The next prompt presents several options. The options are “**1 – Upgrade and Convert**” and “**2 – Upgrade App Server Only.**” Type **1** and hit ENTER to select **Upgrade**.
 6. A message will appear that displays the changes that will be made when the Updater is run. Hit ENTER to start the upgrade.

Troubleshooting the Updater

The Updater logs are an important source of information when troubleshooting issues that arise during an update. The Updater writes the following logs:

```
/blackboard/logs/bb-installer-log.txt
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Also check:

```
/blackboard/logs/install/
```

```
/blackboard/logs/install/db-install-errors-log-bb_bb60.txt
```

```
/blackboard/logs/install/db-install-errors-log-bb_bbadmin.txt
```

```
/blackboard/logs/install/db-install-info-log-bb_bb60.txt
```

```
/blackboard/logs/install/db-install-info-log-bb_bbadmin.txt
```

Language Pack Changes

To ensure consistency across releases, the Blackboard Learn Updater will compare the existing en_US language pack against the version that is being installed. The differences are noted and output in a file called `bundle_diff.txt`. This file is added to the `blackboard/backups/<updater_time_stamp>` directory. Use this file to review the text differences between releases and make upgrades to any custom Language Packs.