Blackboard Learn 9.1 Q4 2019

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**Product:** Blackboard Learn  
**Release Date:** 

**Upgrade Paths:**

### Upgrade Paths for Clients Already on Blackboard Learn, 9.1

Existing Blackboard Learn, Release 9.1 clients can upgrade from the following versions to 9.1 Q4 2019 (Build: 3800.0.0-rel.32+f2f0da9):

- Blackboard Learn, 9.1 Q2 2019 (Build: 3700.0)  
- Blackboard Learn, 9.1 Q4 2018 (Build: 3500.0)

If you are a self-hosted client on a Blackboard Learn 9.1 release prior to 9.1 Q4 2018, you will need to upgrade to at least 9.1 Q4 2018 before you can upgrade to Learn 9.1 Q4 2019.

Note that for 9.1 installers, the build number 3600.0 was skipped--Q4 2018 was 3500.0 and Q2 2019 was 3700.0. 3600.0 was shipped for SaaS, but skipped for 9.1 installers due to changes in included features for the release.

### Upgrade Paths for Clients New to Blackboard Learn, Release 9.1

If you are upgrading from one of the releases listed below, please refer to [Install or Upgrade Learn](#) for information to help you plan for this move. There are planning, training, and communication materials available to make this upgrade as smooth as possible. Please reference next steps based on your current release. For those migrating from Blackboard Learn, Release 9.0 or Blackboard Academic Suite, Release 8.0, please ensure you include migrating to a 64-bit environment in your upgrade plans.

- **Blackboard Learn, Release 9.0:** The following paths are supported when upgrading from Blackboard Learn, Release 9.0, Service Pack 7 (Build: 9.0.692.0)  
  - Release 9.1, Service Pack 9 (Build: 9.1.90132.0) > Service Pack 12 (Build: 9.1.120113.0) > April 2014 (9.1.201404.160205) > Q4 2015 (Build:9.1.201510) > Q4 2016 (Build:3100.0) > Q4 2017 (Build:3300.0) > Q4 2018 (Build: 3500.0) > Q4 2019

- **Blackboard Academic Suite, Release 8.0 or lower:** The following paths are supported when upgrading from Release 8.0, Service Pack 7 Hotfix 2 (Build: 8.0.494.35) without needing to upgrade to Release 9.0 first.  
  - Blackboard Learn, Release 9.1, Service Pack 9 (Build: 9.1.90132.0) > Service Pack 12 (Build: 9.1.120113.0) > April 2014 (9.1.201404.160205) > Q4 2015 (Build:9.1.201510) > Q4 2016 (Build:3100.0) > Q4 2017 (Build:3300.0) > Q4 2018 (Build: 3500.0) > Q4 2019

- **Blackboard Learning System CE 8.0 and Vista 8.0 Licenses:** You must be on Service Pack 6 (Build: 18.0.6.116) to effectively use course conversion capabilities.
- **Blackboard Learn, ANGEL Edition:** You must be on any ANGEL 8.0 or ANGEL 7.4 release to effectively use course conversion capabilities.
If you are a self-hosted client on a release that is earlier than Blackboard Learn 9.1 Service Pack 6, and you also use Oracle, there is a pre-upgrade utility that will minimize your downtime during this upgrade. Please consult the 9.1 Service Pack 6 Release Notes and the Readme for the Pre-Upgrade Utility for Oracle for more information on this utility.

Announcing:
Blackboard is pleased to announce the General Availability of Blackboard Learn™, Release 9.1 Q4 2019 (Build: 3800.0.0-rel.32+f2f0da9). This notification contains important details of this release, so please review the entire message.

Blackboard continues our commitment and investment in the Learn Original Experience (Learn 9.1). We continue with our semi-annual releases and regular Cumulative Updates, and we’re focusing a lot of effort on quality improvements and updated technologies to make sure that Learn 9.1 continues to be viable for the long term. There are six categories of development focus for the Original Experience:

- **Enhancements through platform features.** Enhancements are delivered in the Original Experience through enhancements to platform features, capabilities not specific to the Original Experience. In some cases, these features can also be enhanced without requiring a Learn release upgrade. These features sometimes have differing timelines for global availability due to regional requirements for data storage and handling.
- **Iterative feature improvements.** Enhancements to existing features in the Original Experience that are implemented as part of work happening in that feature area for the Ultra Experience.
- **Mobile optimization and responsiveness.** Improving the responsiveness of the Original Experience and its use on smaller devices.
- **Standards and Interoperability.** As a leader in openness, Blackboard continues to invest in expanding support for standards and interoperability within Learn in order to give institutions increasing options for expanding and defining their unique EdTech platforms.
- **Quality and Maintenance.** Blackboard continues to make changes to technologies and processes to further improve quality. This includes improvements to security frameworks and processes to achieve various security certifications, performance improvements, changes to address compliance with ever-evolving global regulations, and updating technologies and libraries used within the application.

For more details, please see the full release notes on our Help site under Release Notes for Learn Self- and Managed Hosting or SaaS Flexible Deployment Option.

**Release Highlights:**

**Highlights of New Features and Enhancements**
Platform Features

Grades Journey
A cloud-based implementation of Grades Journey is enabled in this release—an enhancement through platform feature. This continuous delivery approach to the Grades Journey capability will support grade extraction and gradable content provisioning capabilities for Ultra courses. Moreover, it will provide a more rapid response to the continuously evolving and changing behaviors of student information systems (SIS). This capability will become available in the future and isn’t available at the time of this release. The existing Grades Journey capability can continue to be used as-is, even after the introduction of the cloud-based capabilities.

Iterative Feature Improvements

Authentication Lockout
Too many failed attempts to log in to a user account could be a security risk. To help protect from brute force attacks, administrators can decide when Blackboard Learn locks user accounts to protect them from unauthorized access.

Open File Upload Warning for Edge Browser Users
Users of Microsoft Edge on Windows are warned on file upload pages that they must close files before uploading.

Course Availability Controls in More Places
Improving a previously-released feature, instructors will see the “padlock” course availability control toggle consistently across content, tool, and management pages.

Administrator Tools List Sorts Alphabetically
The contents that present in the Administrator Panel Tools and Utilities area will display alphabetically.

Sticky Needs Grading Filter Selection
The filter setting to display or hide student submissions that won’t be used for calculation in Needs Grading will be remembered and default to the last setting used.

Mobile optimization and responsiveness

Learn 2016 Theme: Grade Center Improvements for Desktop Users
Cell padding has been lessened in the Grade Center when using the Learn 2016 Theme so that more Grade Center data will display.

Learn 2016 Theme: Grade Center Improvements for Mobile Users
Instructors viewing the Grade Center on smaller devices seeing the card view—one student record at-a-time in a stack—will have more consistency with the grid view in terms of behavior, display, and actions.

Learn 2016 Theme: Usability improvements
Several improvements for the Learn 2016 Theme appear in this release including improvements to color handling, context menus, and mobile navigation.

Standards and Interoperability

LTI Advantage improvements
LTI Advantage, the latest in open standards for integrating tools into learning platforms, has been improved in this release. Tools can communicate submission and grading
states and can request group membership information, creating a better and more consistent experience for students and instructors. The security capabilities have been expanded to allow tools to completely own their own OAuth2 key set.

**New and updated REST APIs**
Blackboard continues to make it even easier to integrate custom solutions into Learn using REST APIs.

**Java 11 Compatibility Scanner**
Administrator efficiency to more quickly identify Building Blocks that may have incompatibilities with a newer version of Java. Because the tool can be resource-intensive, it should only be run on a staging or test environment.

**Quality and Maintenance**

**Removal of legacy authentication type**
The “Legacy” authentication is no longer visible or configurable in the Administrator Panel Authentication management area.

**Hostname configuration management**
Hostname information can now be managed in the Administrator Panel instead of managing the server-level bbconfig.properties file, allowing for self-service for Managed Hosting and SaaS clients.

**Other Improvements and changes**
Additional changes and improvements found in this release:

- Course Copy performance has been improved. The time to create copies, exports, and archives are all improved.
- Course Copy handling for links has been improved. Previously, if link URLs were manually copied from the details page for a resource in the Content Collection and added to the Content Editor, these links would break on course copy. This is because the expected workflow to link to a resource in the Content Collection from the Content Editor wasn't followed. The course copy procedure now attempts to identify common scenarios of bypassing the linking process with a URL cut-and-paste, processing the necessary resource and entitlements settings necessary to allow access for users in the new course.
- The 360 view for a resource in the Content Collection has been improved to more accurately display the various ways the resource can be used.
- Empty searches in Content Collection are now restricted to prevent accidental long-running searches that have negative performance impact.
- Numerous libraries have been updated to improve security and performance; for example, a number of Spring libraries were updated.
- Pearson MyMath and Pearson Mastering are now supported in Partner Cloud (Content Market). The Building Blocks can continue to be used for existing links but aren’t necessary for new uses.
- Accessibility improvements
- For users of Analytics for Learn, the standalone Building Block to enable Analytics for Learn is no longer necessary with this release.
- Less-secure LDAP configurations using IP address configurations or outdated ciphers are no longer supported and would prevent user access. LDAP should use an SSL certificate associated with a defined domain and more recent cipher types. For details, see support articles 50467 and 50540.
- Previously, when an unauthenticated user accessed Blackboard Learn and the "Enable Guest" property was enabled they were associated with the "Guest" account. Instructors were able to enroll this "Guest" account in courses and organizations, circumventing application entitlement handling. This account is a unique Blackboard System-Level account that was never intended to be enrolled. Allowing this account to be enrolled meant possible data exposure to unauthenticated users as multiple un-authenticated users could be associated with the account. Therefore, in this release we removed the ability for the "Guest" account to be enrolled in courses stopping potential data exposure concerns between unauthenticated users. Existing "Guest" account enrollments will remain and be visible to instructors and administrators so they can clean up these existing enrollments through the user interface.

**Bug Fixes**
There are over 200 client-reported issues fixed in the release. The top 50 resolved issues list is available for review in Learn 9.1 Q4 2019 Release - Top 50 Bugs Fixed, Article #51760. To see the complete list on Behind the Blackboard, go to Self Service > Known Issues and then under Planned First Fix search by Learn 9.1 Q4 2019 Release. The list can be printed or exported to PDF or Excel.

**Accessing the Build:**

**Change Management Resources**

Self-hosted clients may download the latest build on the Download Files page. Managed Hosting clients may submit a case on Behind the Blackboard to schedule implementation of this release.

For a more detailed explanation of the changes and new features of this release, please reference the Release Notes and the Download Files page.

<table>
<thead>
<tr>
<th>Article Number</th>
<th>Component</th>
<th>Service Pack(s)</th>
<th>Issue Description</th>
<th>Target Fix Release</th>
<th>Patch Available</th>
</tr>
</thead>
<tbody>
<tr>
<td>000051526</td>
<td>Content Management, Course Tools</td>
<td>Learn 9.1 Q2 2020, Learn 9.1 Q4 2019 (3800.0.0), Learn 9.1 Q4 2017 (3300.0.0), Learn 9.1 Q2 2018 (3400.0.0), Learn 9.1 Q4 2018 (3500.0.0), Learn 9.1 Q2 2019 (3700.0.0), SaaS</td>
<td>Non-enrolled users can access documents and attached files in a course.</td>
<td>Future Reference</td>
<td>No</td>
</tr>
<tr>
<td>000051506</td>
<td>Course Tools</td>
<td>Learn 9.1 Q2 2020, Learn 9.1 Q4 2019 (3800.0.0), Learn 9.1 Q2 2019 (3700.0.0), SaaS</td>
<td>When a user who is not enrolled in a course attempts to change the availability of a test, the user receives an error.</td>
<td>Future Reference</td>
<td>No</td>
</tr>
<tr>
<td>000050491</td>
<td>Authentication &amp; Security, Extensions</td>
<td>Learn 9.1 Q2 2020, Learn 9.1 Q4 2019 (3800.0.0), Learn 9.1 Q2 2018 (3400.0.0), Learn 9.1 Q4 2018 (3500.0.0), Learn 9.1 Q2 2019 (3700.0.0), SaaS</td>
<td>The SAML Building Block throws a metadata error if the Provider was inactive when the B2 was initialized.</td>
<td>Will Not Fix</td>
<td>No</td>
</tr>
<tr>
<td>000042071</td>
<td>Content Management, Course Tools</td>
<td>Learn 9.1 Q2 2020, Learn 9.1 Q4 2019 (3800.0.0), Learn 9.1 Q2 2017 (3200.0.0), Learn 9.1 Q4 2017 (3300.0.0), Learn 9.1 Q2 2018 (3400.0.0), Learn 9.1 Q4 2018 (3500.0.0), Learn 9.1 Q2 2019 (3700.0.0), SaaS</td>
<td>When a LaTex formula is created using the MathML plugin of the content editor it is attached as a picture, however the formula appears distorted.</td>
<td>Future Reference</td>
<td>No</td>
</tr>
<tr>
<td>000038465</td>
<td>Course Tools, Database</td>
<td>Learn 9.1 Q2 2020, Learn 9.1 Q4 2019 (3800.0.0), Learn 9.1 Q2 2017 (3200.0.0), Learn 9.1 Q4 2017 (3300.0.0), Learn 9.1 Q2 2018 (3400.0.0), Learn 9.1 Q4 2018 (3500.0.0), Learn 9.1 Q2 2019 (3700.0.0), Learn 9.1 Q4 2016 (3100.0.0-rel.107+401e, Learn October 2014 (9.1.201410.160373), SaaS, Learn 9.1 Q4 2015 (9.1.201510.1171621), Learn 9.1 Q2 2016 (3000.1.0-rel.52+991d)</td>
<td>A Database error occurs when the LTI Tool is used.</td>
<td>Future Reference</td>
<td>No</td>
</tr>
<tr>
<td></td>
<td>Application</td>
<td>Learn 9.1 Q4 2019 (3800.0.0), Learn 9.1 Q4 2017 (3300.0.0), Learn 9.1 Q2 2018 (3400.0.0), Learn 9.1 Q4 2018 (3500.0.0), Learn 9.1 Q2 2019 (3700.0.0), Learn 9.1 Q4 2016 (3100.0.0-rel.107+401e, SaaS, Learn 9.1 Q4 2015 (9.1.201510.1171621), Learn 9.1 Q2 2016 (3000.1.0-rel.52+991d)</td>
<td>On February 4, 2020 Google released Chrome 80. Testing has shown Chrome 80 affects Learn 9.1 Q2 2020 Release</td>
<td>Future Reference</td>
<td>No</td>
</tr>
<tr>
<td>Issue ID</td>
<td>Component</td>
<td>Environment</td>
<td>Issue Description</td>
<td>Fix Details</td>
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<tr>
<td>000051926</td>
<td>Webserver</td>
<td>Learn 9.1 Q2 2019 (3700.0.0), SaaS</td>
<td>SAML authentication, causing user login to fail.</td>
<td>&lt;p&gt;Yes&lt;/p&gt;</td>
<td></td>
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<tr>
<td>000051950</td>
<td>Course Tools, Extensions</td>
<td>Learn 9.1 Q4 2019 (3800.0.0), SaaS</td>
<td>The SafeAssign report remains in an &quot;In Progress&quot; status for some students. No assignments are generating SafeAssign results. When a student attempts to resubmit the assignment, it fails.</td>
<td>Learn 9.1 Q2 2020 Release &lt;p&gt;SaaS - Fixed v3800.2.0&lt;/p&gt;</td>
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</tr>
<tr>
<td>000051948</td>
<td>Course Tools</td>
<td>Learn 9.1 Q4 2019 (3800.0.0), SaaS</td>
<td>After upgrading to 3800.0.0, users are unable to access the glossary on current courses. On other courses without a pre-existing glossary, users are able to navigate to the tool without issue, and are able to add content. The issue is only occurs when there is a pre-existing glossary.</td>
<td>&lt;p&gt;Yes&lt;/p&gt;</td>
<td></td>
</tr>
<tr>
<td>000051840</td>
<td>Content Management, Course Tools, Extensions</td>
<td>Learn 9.1 Q4 2019 (3800.0.0), SaaS</td>
<td>This issue occurs for new and existing Ultra courses and assignments. Original view courses on Ultra environment do not have this issue. SafeAssign can be enabled for those.</td>
<td>Learn 9.1 Q2 2020 Release &lt;p&gt;SaaS - Fixed v3800.2.0&lt;/p&gt;</td>
<td></td>
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<tr>
<td>000051804</td>
<td>Course Tools</td>
<td>Learn 9.1 Q4 2019 (3800.0.0), SaaS</td>
<td>Row Options (&quot;Questions&quot;) do not appear on &quot;Analyze Results&quot; for Matrix Questions on Enterprise Surveys.</td>
<td>Learn 9.1 Q2 2020 Release &lt;p&gt;SaaS - Fixed v3800.4.0&lt;/p&gt;</td>
<td></td>
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