Removal of Image Pasting from the VTBE due to Performance Issues

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Product: Blackboard Learn
Release: 9.1; SaaS
Service Pack(s): Learn 9.1, 3900.0.0, Learn 9.1, 3900.2.0, Learn 9.1, 3900.4.0, Learn 9.1, 3900.6.0, SaaS

Steps to Replicate: Prerequisite:
The site must have been upgraded to at least 3900.0.0 to take advantage of the "new" TinyMCE5 component.

Note: The ability to paste image data was removed in a re-push of 3900.6.0 to SaaS and this issue can no longer be reproduced.

1. Log into Blackboard Learn as System Administrator
2. Create or reuse an Original Experience Course
3. In a separate application such as Word, or an Image Editing application, copy a large amount of image data
4. Create an Item in the Course
5. In the Content Editor paste the image data
6. The image appears in the editor
7. Save the Item

Expected Behavior:
A performance issue does not occur.

Observed Behavior:
Eventually, heap exhaustion occurs.

 Symptoms: Heap Exhaustion can occur when large image data is pasted into the VTBE. If the pasted image data is very large it may happen immediately. Or it may happen later when data is recalled from storage due to user interaction or notification processing.

The following message is displayed in the logs:


It may occur in conjunction with any operation and the failing operation may not necessarily be relevant to content editing.
If the JVM successfully saves a heap dump, inspection of the dump dominator tree will reveal excessive heap consumption from HTML text that contains image (<img>) tags with embedded base-64 encoded data.

**Cause:** The loading of this base64 coded data into application heap memory is not space-efficient.

**Resolution/Workaround:**

**SaaS hosting**
The ability to paste images into the VTBE was removed on a re-Push of 3900.6 on February 25, 2021. The following message will appear.

```
Local image paste has been disabled. Local images have been removed from pasted content.
```

The exact build version for the re-release is 3900.6.0-rel.32+4fc1198 or higher.

**Self and Managed Hosting**
Avoid pasting large amounts of image data into the VTBE. Upgrade your Learn installation to the fix version or higher.
All Hosting Options
Upload images as attachments and embed them as links using the "+" option of the VTBE.

In Assessments, it is not possible to attach files to questions such as Short Answer or Essay. The "+" button does not have the option for selecting files on those editors. The questions have always functioned this way even prior to the TinyMCE5 upload. To upload files in a test or survey, use the File Response question type.

Until Learn 3900.19 there were certain question types to which Instructors could not attach files or images. From learn 3900.19.0 this was changed. Students cannot attach files to additional question types as part of this change. For more information refer to KB 000057960 Cannot Upload Images for Calculated Formula and Certain Other Question Types

Information: The Target Release version is the one in which the pasting capability was removed. The Fix for the performance issue was to remove this capability.
Target Release: Learn 9.1, 3900.8.0 SaaS - Fixed (v3900.6.0)
Patch Available: No