

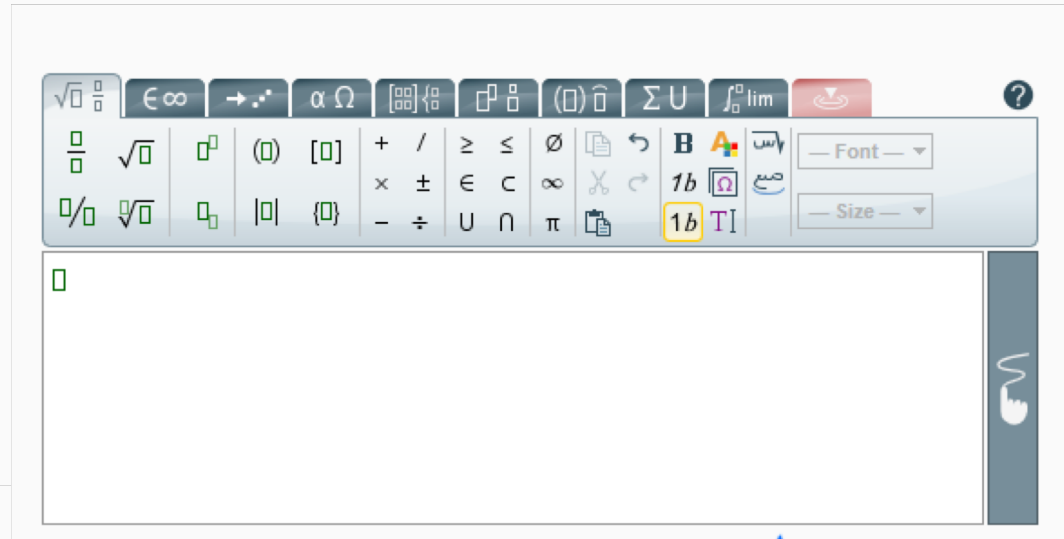
LTI integration of an assessment tool

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Makers of MathType

MathType ✓
by **wiris**



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Easily include **quality math equations** in your documents and digital content.

WirisQuizzes

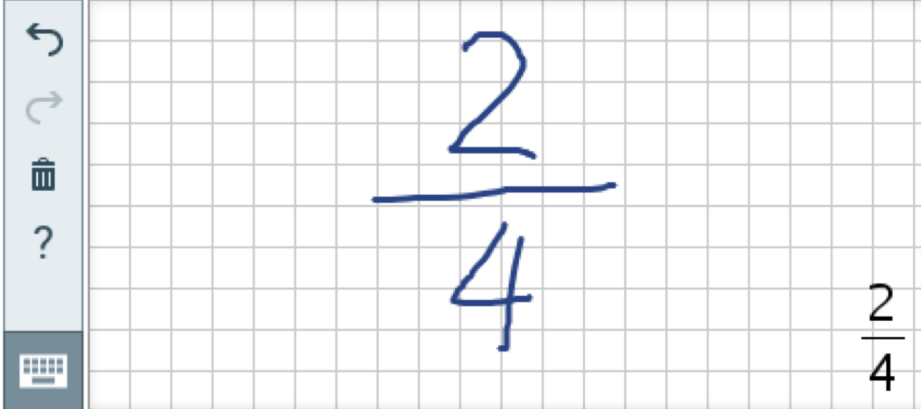
Enhance your LMS or your questionnaire with mathematical features.

- Open answers
- Automatic grading
- Random parameters
- Graphs
- Units of measure
- Personalized feedback


Question text


Compute and simplify $\frac{1}{4} + \frac{1}{4}$

Student answer



A grid-based input area for a student answer. On the left side of the grid is a vertical toolbar with icons for undo, redo, delete, help, and a keyboard icon. The grid contains a handwritten fraction $\frac{2}{4}$ in blue ink. To the right of the grid, the correct answer $\frac{2}{4}$ is displayed in a smaller font.

 The answer is mathematically equal to the correct one.

 The answer is simplified.

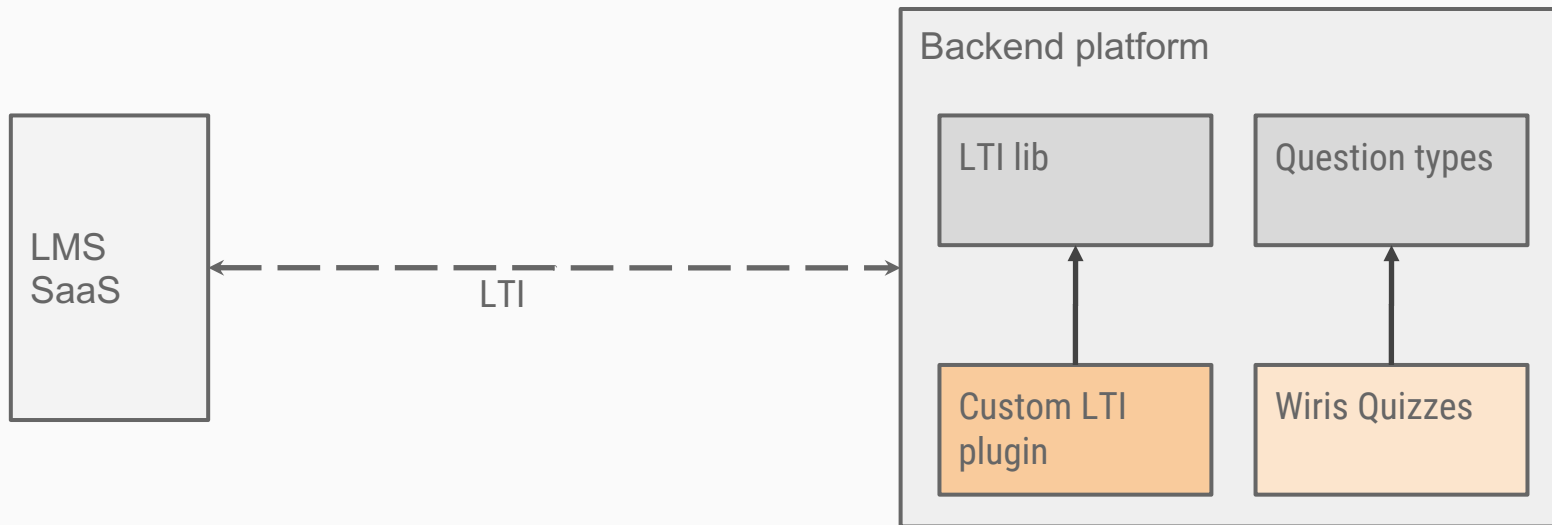
Problem statement

- Customer is migrating to a SaaS LMS in few months
- They want to use Wiris Quizzes but we're not integrated in the LMS



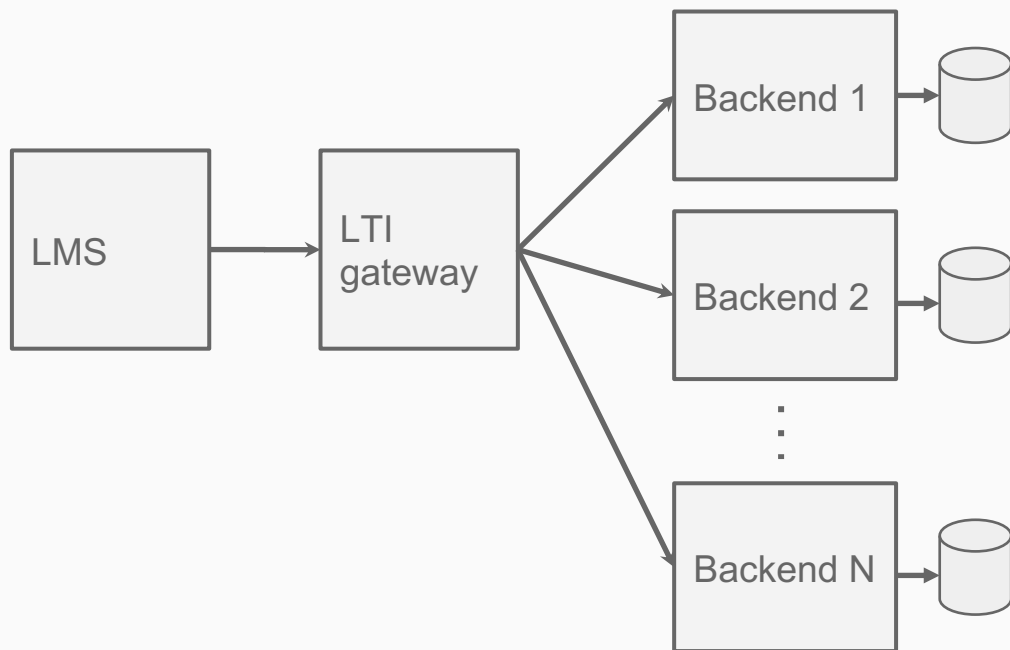
Develop a production-ready LTI integration of our math assessment tool **in two months**

DRY: Don't repeat yourself



We converted an already developed traditional integration into an LTI tool provider backend platform.

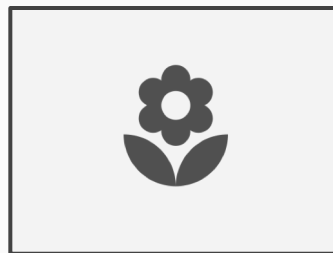
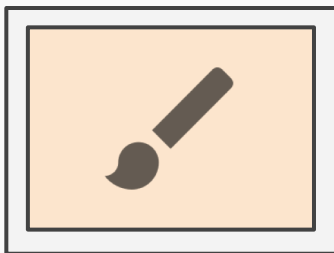
Security & privacy first: data isolation



- One completely isolated backend platform by institution.
- Scripted automatic stand-up backend platforms.
- Single LTI endpoint URL
- Launch redirect depending on the given credentials (consumer key)

LTI features

- Deep Linking: teachers **can create** & pick their questions through LTI



- Grading services: students and teachers immediately receive the grades in their usual gradebook.

Thanks LTI!

- We were really able to **deliver** the service before the deadline!
- LTI allows us to transparently recreate the **users, courses and permissions** from the source LMS to the backend platform.
- LTI allows us to deliver the service without accessing user **personal data**

Little difficulties

Network failures in grade services calls



Asynchronously repeat calls to grade services.

Tool space not enough for comfortable content creation



Add an *Open in new tab* link after login through LTI

Review workflow

LTI does not provide a way for the teacher to review the student work

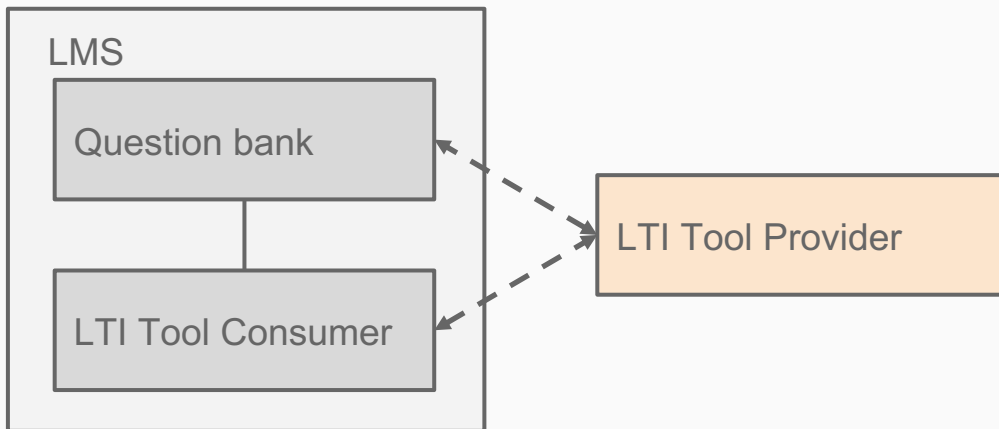


- **Coming [Gradebook Message](#) spec!**
- Canvas LMS has its own [extension](#) for that
- Give up anonymity and let the teacher navigate in the backend

LTI activity granularity



LTI at question level



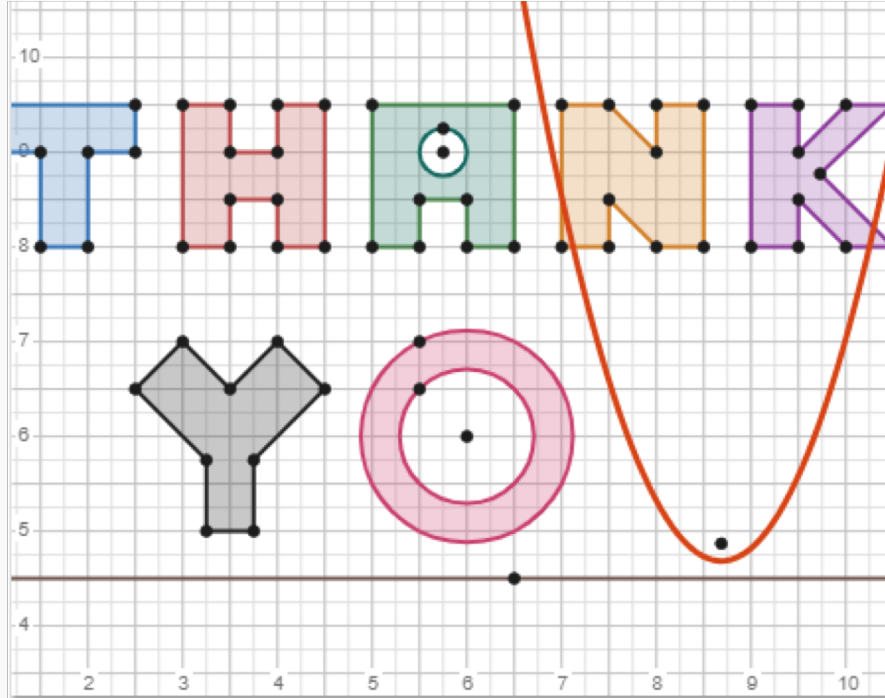
LTI opens your market

- Institutions can easily and **safely** use your LTI services
- Institutions fully **control the personal data** shared with LTI providers.
- Easy to integrate with **multiple LMS** (not 100% free, but almost)



Yale





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Thank you powered by online math calculator at calcme.com