

SimpleTeX: Architectural Overview

The SimpleTeX architecture has six components:

- **Web** – Stateless servers, running (J)Ruby on Rails, for managing application UI. Also handles file upload/download.
- **Database** – Handles user information, document structure, and permissions.
- **LaTeX Processors** – Stateless servers responsible for generating PDF documents from LaTeX source. As demand increases more servers can be brought online.
- **EtherPad Servers** – Hosts EtherPad instances. As demand increases more can be provisioned.
- **Load Listener** – Monitors load of LaTeX and EtherPad servers, and can provision additional servers if needed. Also able to remove servers as load decreases.
- **Message Bus** – Implemented via Simple Queue Service (SQS). All requests for LaTeX processing, EtherPad instances, and other as-yet-undetermined resources from the web servers will be mediated by the message bus.

Figure 1 shows the relationships between these components.

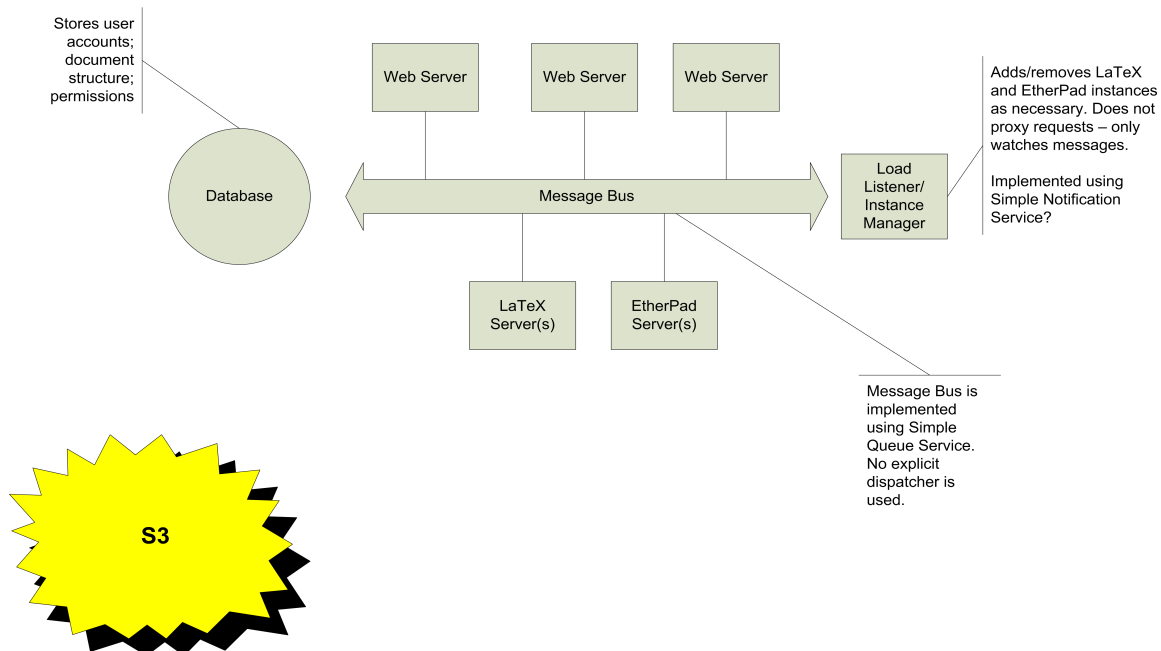


Figure 1: Initial sketch of the SimpleTeX architecture.