

LIBREOFFICE ONLINE

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LibreOffice Online

- LibreOffice Desktop vs Online
 - PC, Mobile, Cloud
- UNO, LibreOfficeKit, WebSocket
- Cloud
 - Arquitectura
 - Seguridad
 - Integración
- Mobile Android, iOS

LibreOffice Desktop



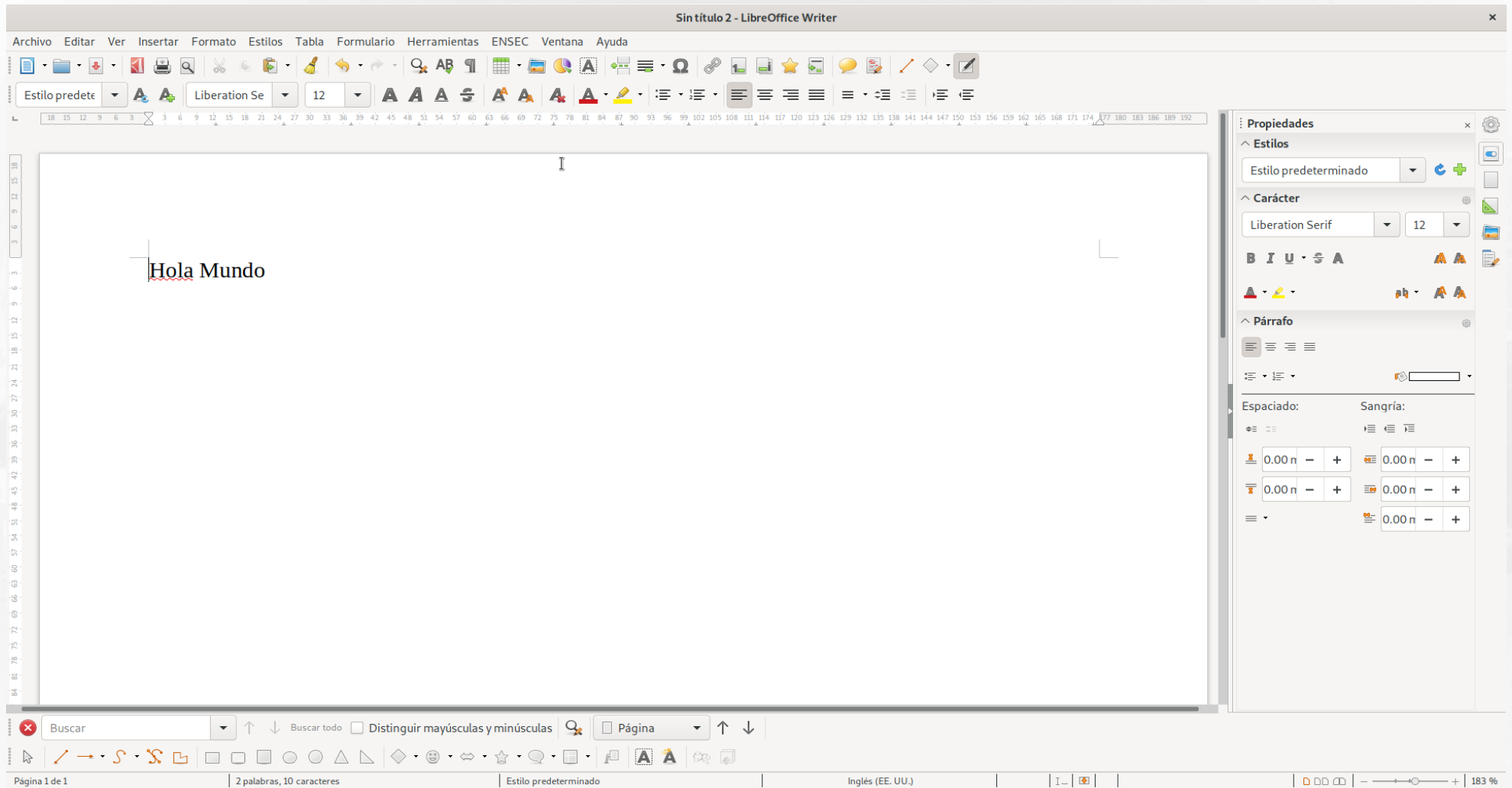
UNO (Universal Network Object)

- Component Context
 - Servicios
- UNO objetos
 - Interfaces
- Implementación de Objetos
 - Lenguajes de programación

LibreOffice Source Code

- <https://docs.libreoffice.org/Servicios>
 - Funcionalidad auxiliar para implementar componentes UNO
 - Herramientas de acceso a bases de datos, para aplicación de base de datos "base"
 - Código fuente de la aplicación Writer
 - Código fuente de la aplicación Calc
 - Código fuente de la aplicación Impress

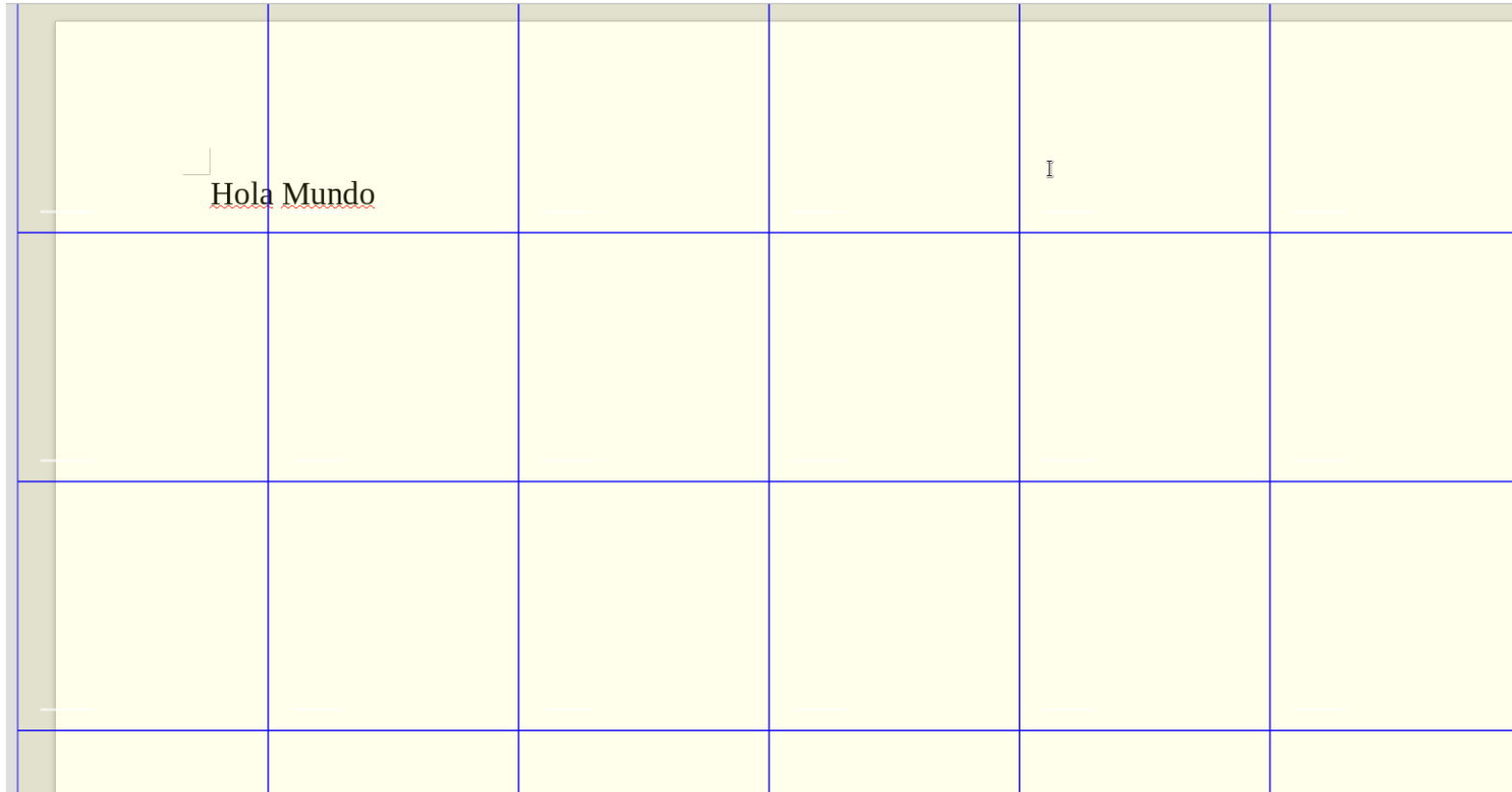
LibreOffice Writer



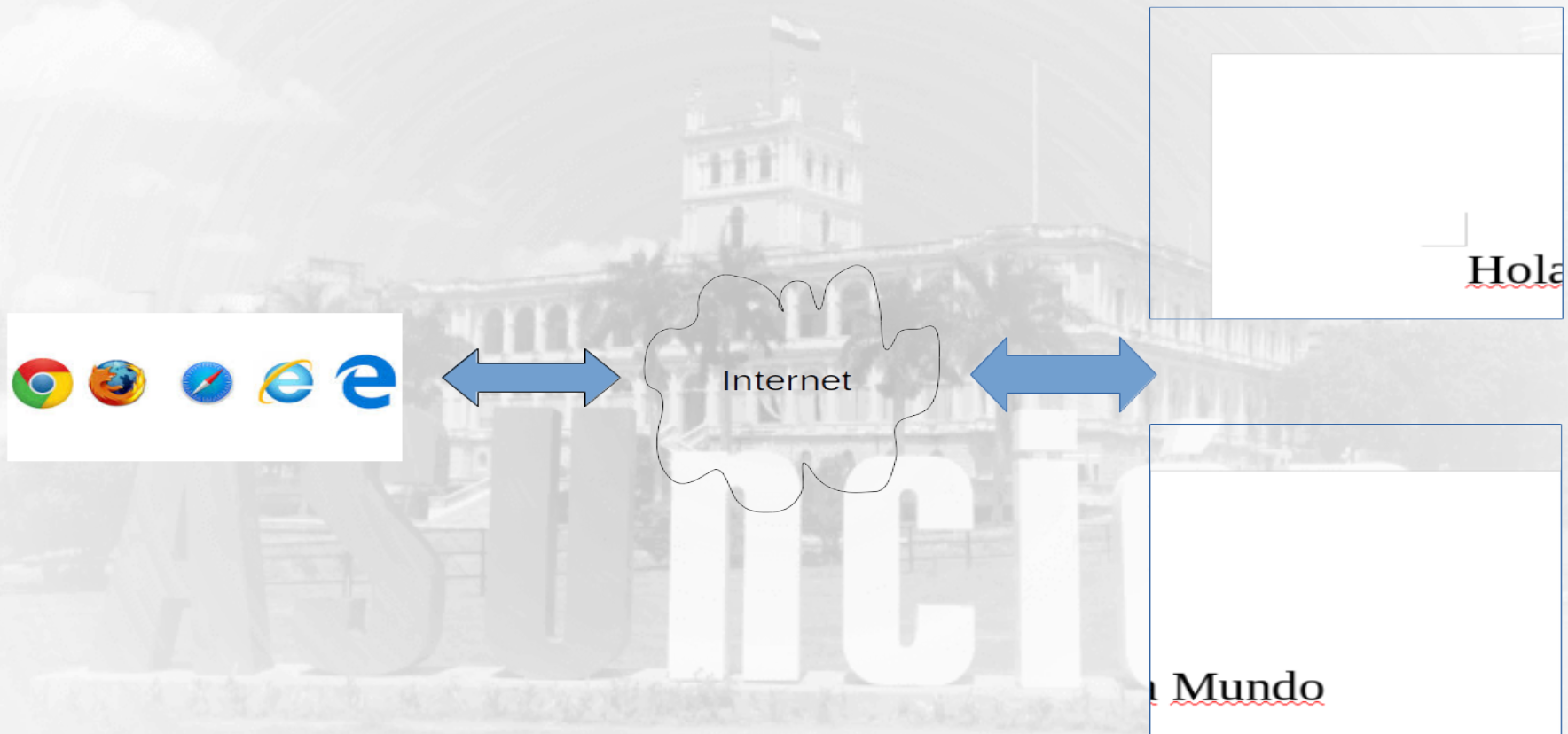
LibreOffice Writer Headless



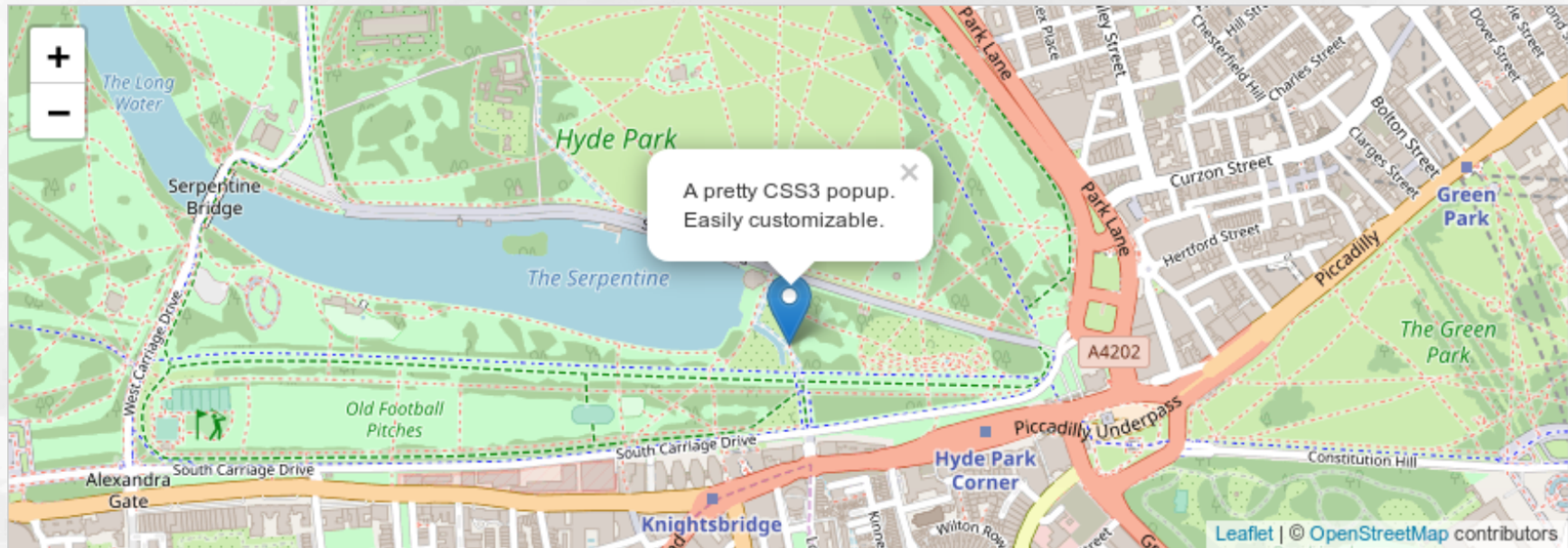
Tiled Rendering



Cliente (Navegador)



Leaflet, JavaScript librería

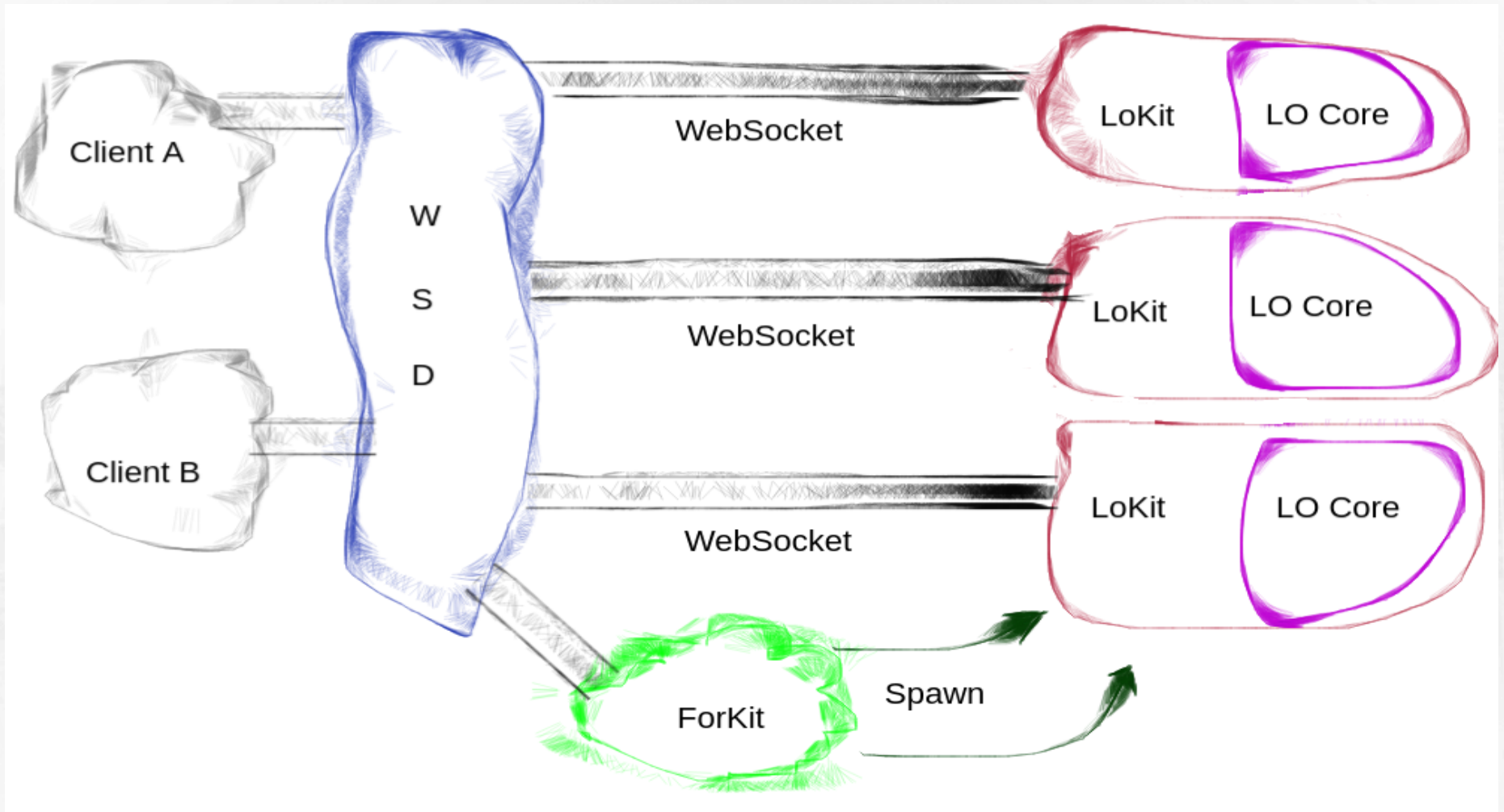


<https://{s}.tile.openstreetmap.org/{z}/{x}/{y}.png>

LibreOffice Online

The screenshot displays the LibreOffice Online web editor interface. At the top, a browser tab is labeled "Online Editor". The address bar shows the URL: `localhost:9980/loleaflet/babef8af7/loleaflet.html?file_path=file:///tmp/hello-world.odt`. Below the address bar, there are navigation links for "Apps", "Debian.org", "Latest News", "Help", and "Online Editor". The main interface features a menu bar with "File", "Edit", "View", "Insert", "Format", "Table", "Tools", and "Help". A status bar below the menu indicates "Last modification: 8 months ago". The toolbar includes icons for undo, redo, print, zoom (set to 200%), font style (Default Style), font family (Liberation Serif), font size (12), and various text formatting options like bold (B), italic (I), underline (U), strikethrough (ABC), text color, background color, bulleted list, numbered list, link, unlink, table, insert image, insert link, insert comment, and help. The main editing area contains the text "Hola Mundo" with a red underline. A vertical ruler on the right side of the editing area shows line numbers from 1 to 19. At the bottom, a search bar and a status bar provide additional information: "Page 1 of 1 | 2 words, 10 characters | Insert | Standard selection | English (USA)".

LibreOffice OnLine WebSocket Daemon)

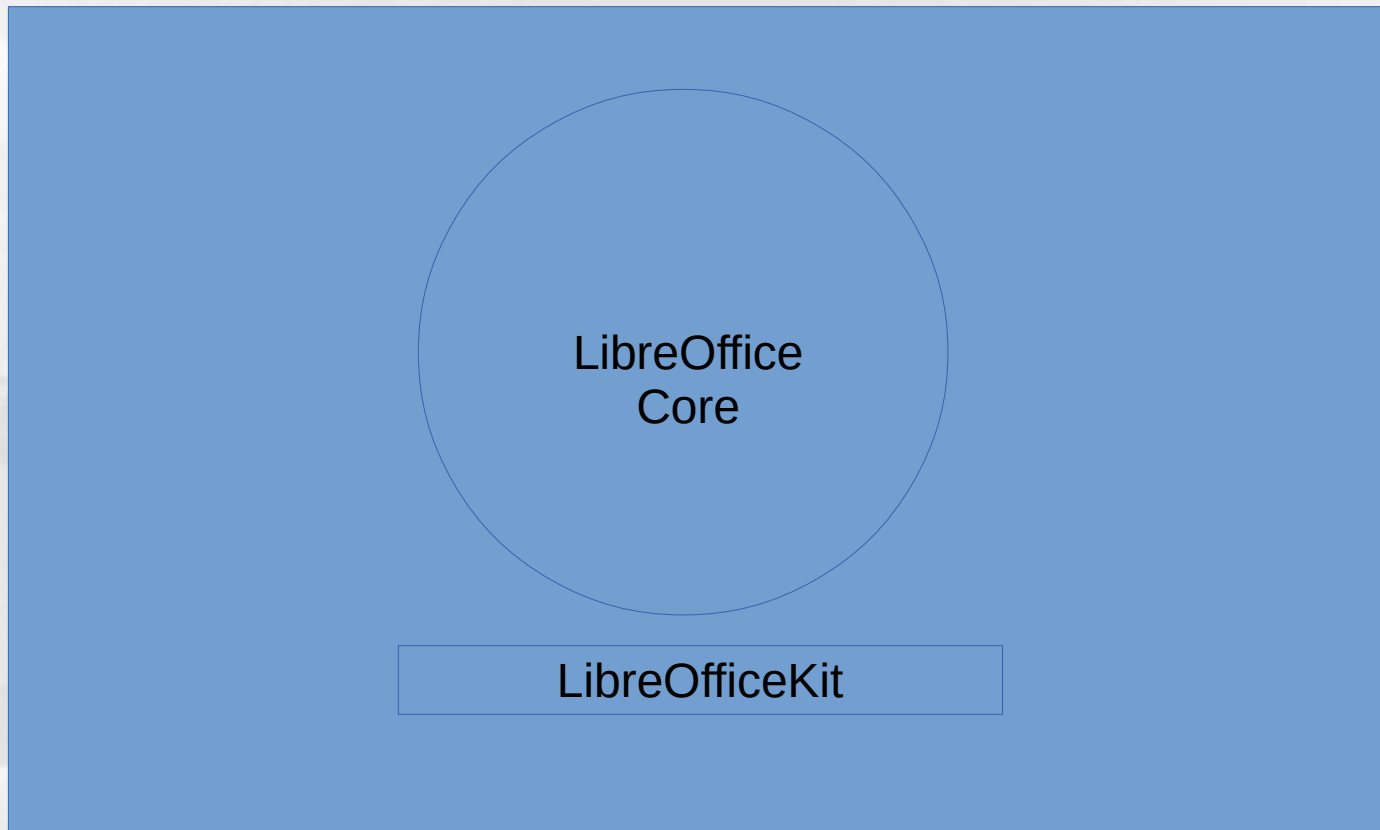


LibreOffice OnLine



LibreOfficeKit

Jaula (Chroot)



LibreOfficeKit API

- C and C++, in-process (fácil depuración)
- Operaciones de archivo
 - loadDocument(), saveAs()
- Operaciones de renderización
 - paintTile(), setPart(), getDocumentSize(), ...
- Operaciones de interacciones
 - postKeyEvent(), postMouseEvent(), postUnoCommand(), paste(), setTextSelection(), ...

Demostración

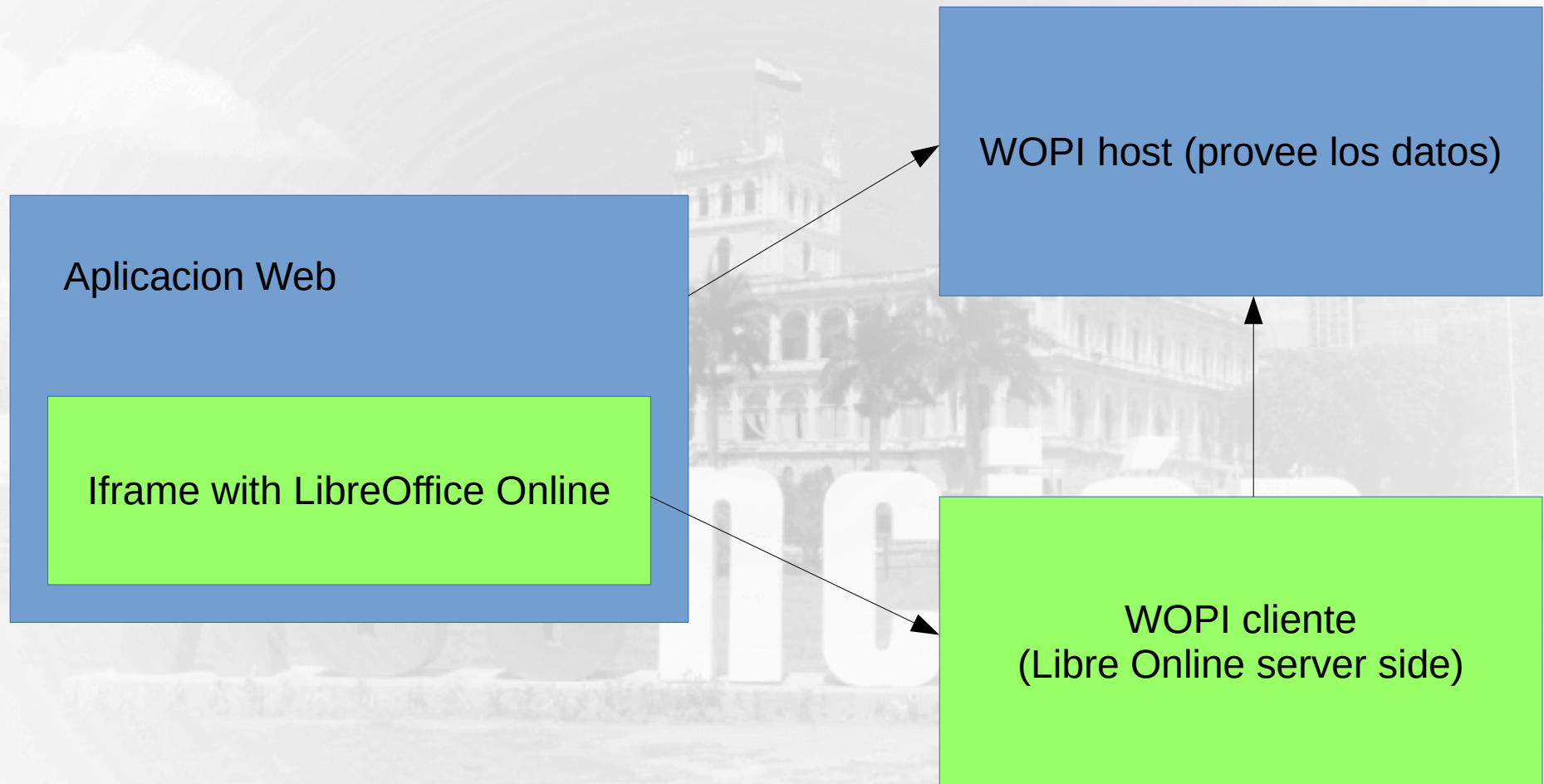


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Usando el protocolo WOPI para integrar con LibreOffice Online

- Uno o mas instancias de servidor loolwsd
- Un aplicación web (HTML) donde anidará el iframe de LibreOffice
- Implementar REST endpoints del protocolo WOPI
- Personalizar los elementos de Interfaz

WOPI (Web Application Open Platform Interface)



Iframe src

https://<client>:<port>/loleaflet/
<hash>/loleaflet.html?

WOPISrc=https://<WOPI host URL>/
<...>/wopi*/files/<id> ?
access_token=<number>

REST endpoints

Descargar el documento

GET `https://<WOPI host URL>/<...>/wopi*/files/<id>/contents?access_token=<token>`

<https://wopi.readthedocs.io/projects/wopirest/en/latest/files/GetFile.html>

REST endpoints

Subir el documento

POST `https://<WOPI host URL>/<...>/wopi*/files/<id>/contents?access_token=<token>`

<https://wopi.readthedocs.io/projects/wopirest/en/latest/files/PutFile.html>

REST endpoints

Propiedades del documento

Https://<WOPI host
URL>/<...>/wopi*/files/<id>?
access_token=<token>

<https://wopi.readthedocs.io/projects/wopirest/en/latest/files/CheckFileInfo.html>

Discovery service

Obtener informacion de como iniciar el iframe

`https://<wopIClient>/hosting/
discovery`

<https://wopi.readthedocs.io/projects/wopirest/en/latest/files/CheckFileInfo.html>

Ejemplo de implementación

- <https://github.com/nextcloud/richdocuments>
- PHP y Javascript

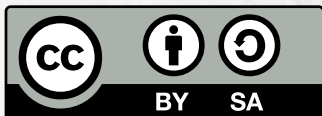
Demostración



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Agradecimientos / Cierre

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