

On-premise launchpad as PWA

Improve your launchpad with a service worker

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Introduction

- Hi my name is Jorg!
- Why I looked into deploying a service worker to a launchpad

Demonstration

- PWA running on iOS
- PWA running as an installed application on Chrome

Advantages

- Having a service worker cache libraries and preload files is better than relying on the browser because you can cache more, and more reliably
- With an online / offline strategy and a manifest, your launchpad can be installed as an app on your phone or desktop
- When a service worker installs itself, you can load additional files or services in advance
- A basic service worker is easy to implement

How does your launchpad do this?

- **Service worker lifecycle, relevant events**
 - Activate
 - Install
 - Fetch
- **Caching strategies**
 - Online first, then store in cache
 - Rule of thumb: oData calls, settings and configuration, the FLP itself
 - Offline first, or fetch from server if not available
 - Rule of thumb: use it for libraries, preload files, themes etcetera
 - Others
 - For instance, fetch live for 300ms, then fetch from cache if the call takes too long

DEMO

How does your SAP system do this

- The service worker and manifest are referenced in the index file by extending the FLP handler
- The service worker itself is loaded through a custom handler in SICF (IF_HTTP_EXTENSION)
 - The main advantage over doing this through ABAP first is the ability to flexibly control your preloads

DEMO

Caveat's and gotcha's

- Several core UI5 and launchpad libraries use synchronous XMLHttpRequests. They bypass the service worker entirely in almost all browsers except Firefox desktop
 - This prevents any installed launchpad PWA from being able to *start* while offline
- The BATCH functionality uses POST requests to GET data. POST or PUT requests cannot be cached. Preloading or caching oData calls can only be done with BATCH mode disabled. Looking at you, MyInbox!
- What to preload and when to invalidate can get tricky, depending how deep you want to venture into the rabbit hole



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Thank you.

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