

PARAKEET Polyfill

Privacy-Preserving Ads V0 Testing

PARAKEET Polyfill - v0

[PARAKEET/Polyfill](#)

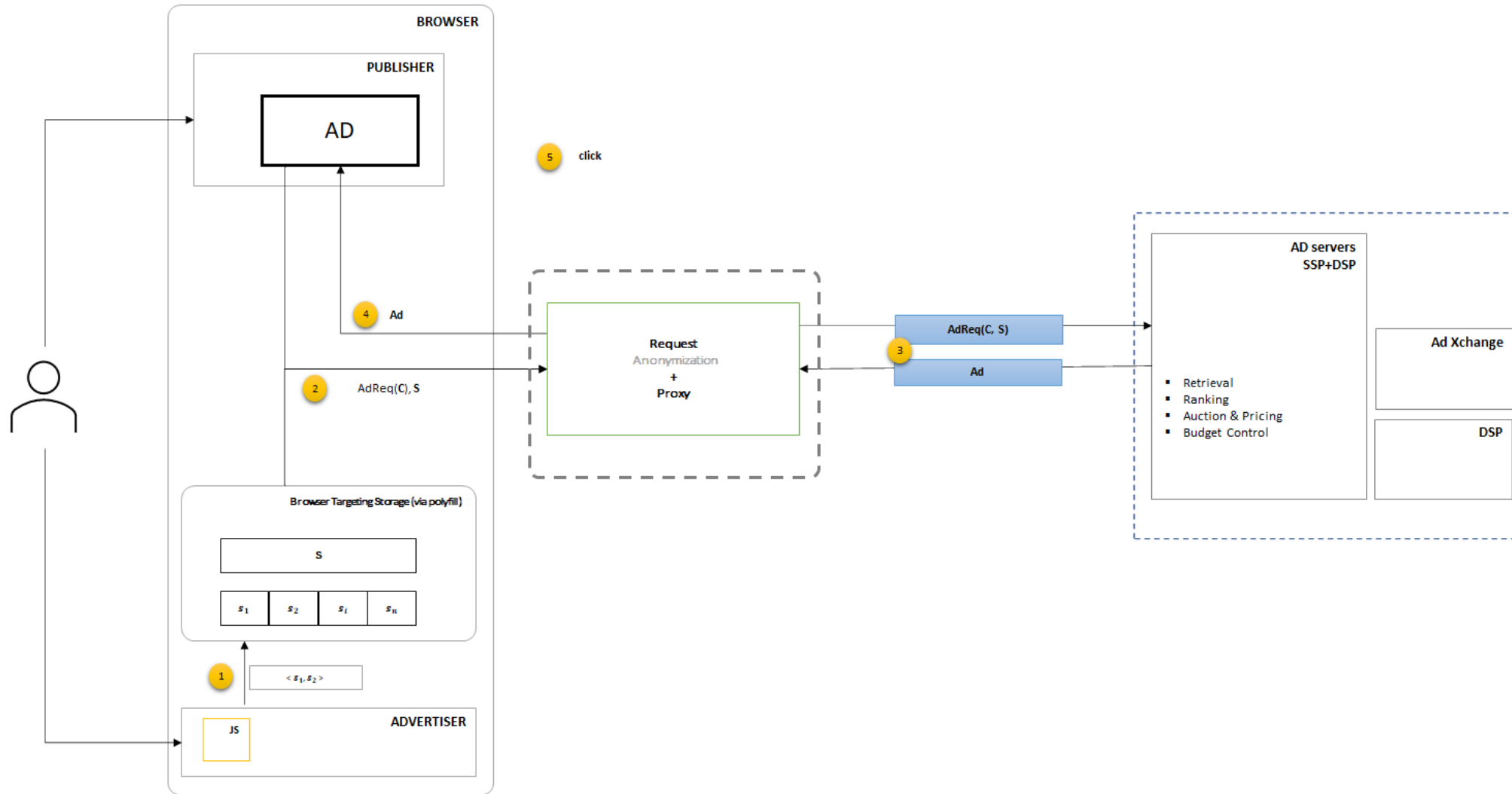
GOAL:

- Give developers early access to test the latest API shape and ergonomics for PARAKEET with test data traffic while also allowing us to iterate quickly and address any changes needed prior to making this a part of the web platform natively.
- Determine a baseline for targeted advertising utilizing browser-side user interests.

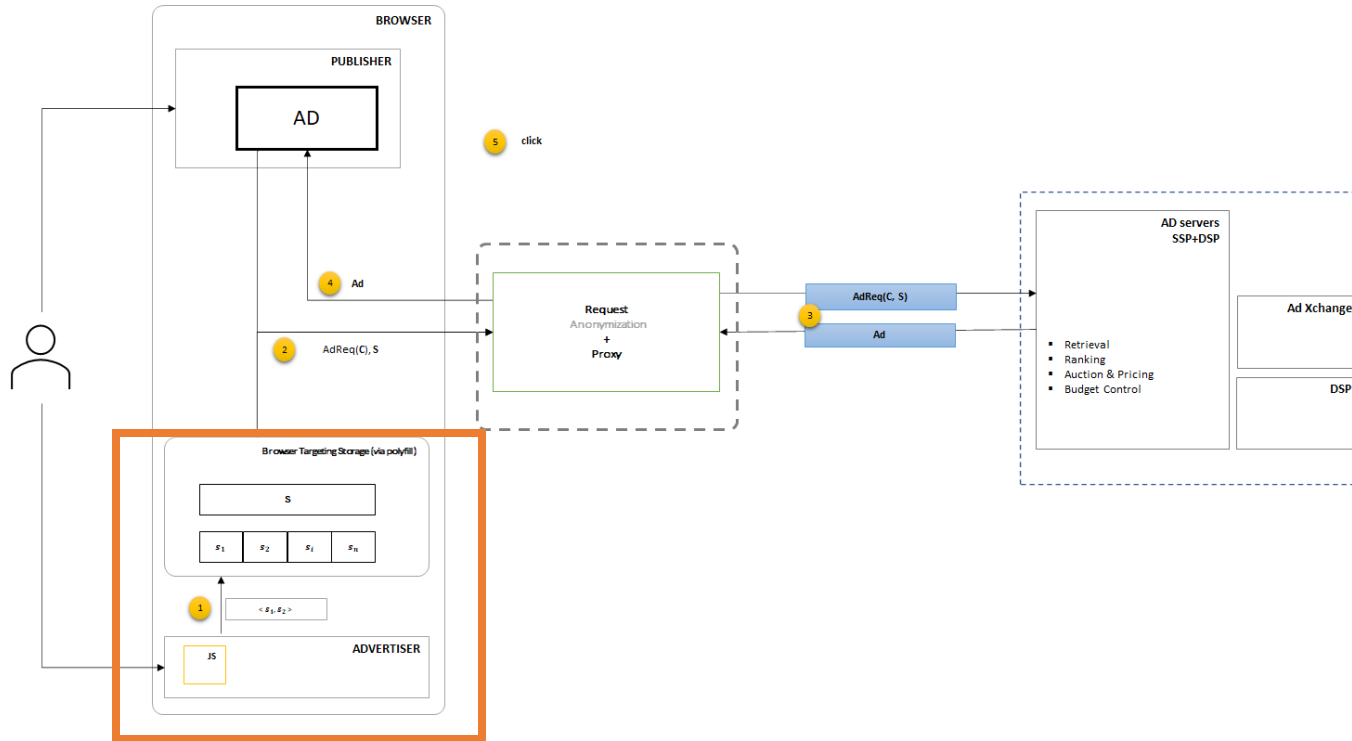
Overview:

- This V0 Polyfill enables the advertiser to store user segments in the browser store.
- Instead of relying on a third-party cookie for targeting, user ad interests will be passed along with contextual information in each request.

Parakeet v0 – First step



Advertiser Page changes



1. Include the PARAKEET polyfill either directly on a page or with other scripts/ad-tech (DSP)
2. Use existing 1st party knowledge to select relevant interest groups or identify user features.
3. Execute new Javascript APIs to join the relevant interest groups with an appropriate duration.
 - Set **readers** to list DSP and SSP partners you want to be able to read your interest groups.
 - Set a **duration** that is appropriate. Interests will automatically expire and be excluded after this.

As an alternative, DSP can enable PARAKEET polyfill and ad interest flow on behalf of the advertiser. DSP(s) needs to work with the advertiser to setup correct readers.

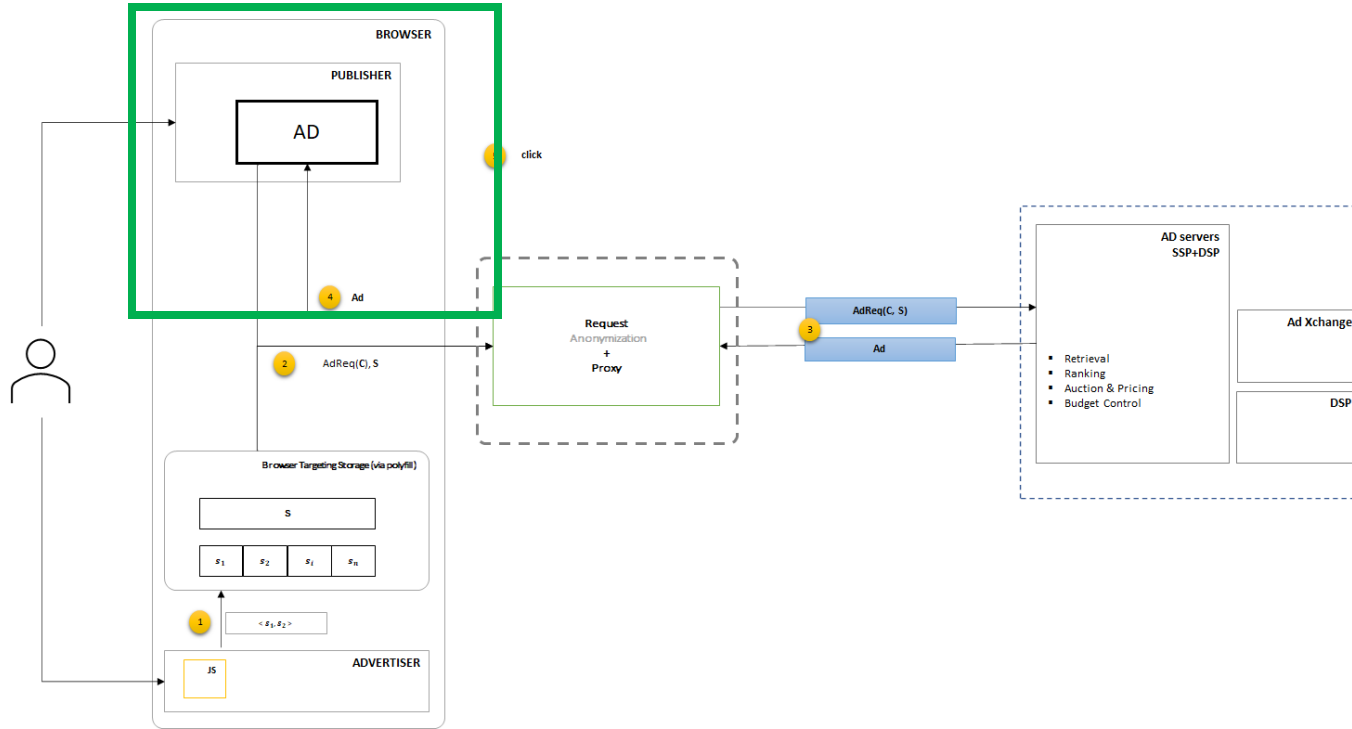
Include JS on a webpage

```
<script src='https://somecontentsite.example/libs/parakeet.min.js' type='text/script'/> <script>Parakeet.SetStorageOrigin(new URL("https://edge.microsoft.com/parakeet/frame.html"));</script> <!-- You're now ready to use PARAKEET! -->
```

Add JS through DSP

```
let scriptTag = document.createElement('script'); scriptTag.src = 'https://somecontentsite.example/libs/parakeet.min.js'; document.body.appendChild(scriptTag); // You're now ready to use Parakeet!
```

Publisher Page changes



1. Include the PARAKEET polyfill either directly on a page or with other scripts/ad-tech (SSP)
2. Execute new Javascript API to request an ad with any contextual information or interests available. See: Create an AdRequest and serve an ad
 - I. **On success**, create an iFrame, set the src to the provided URL and insert into the Document to display the ad.
 - II. **On failure**, be sure to use sendBeacon or other mechanisms to log and track failures.

As an alternative, programmatic SSP can enable PARAKEET ad request on behalf of publisher. SSP needs to create and support service at endpoint specified in proxiedAnonymizingOrigin

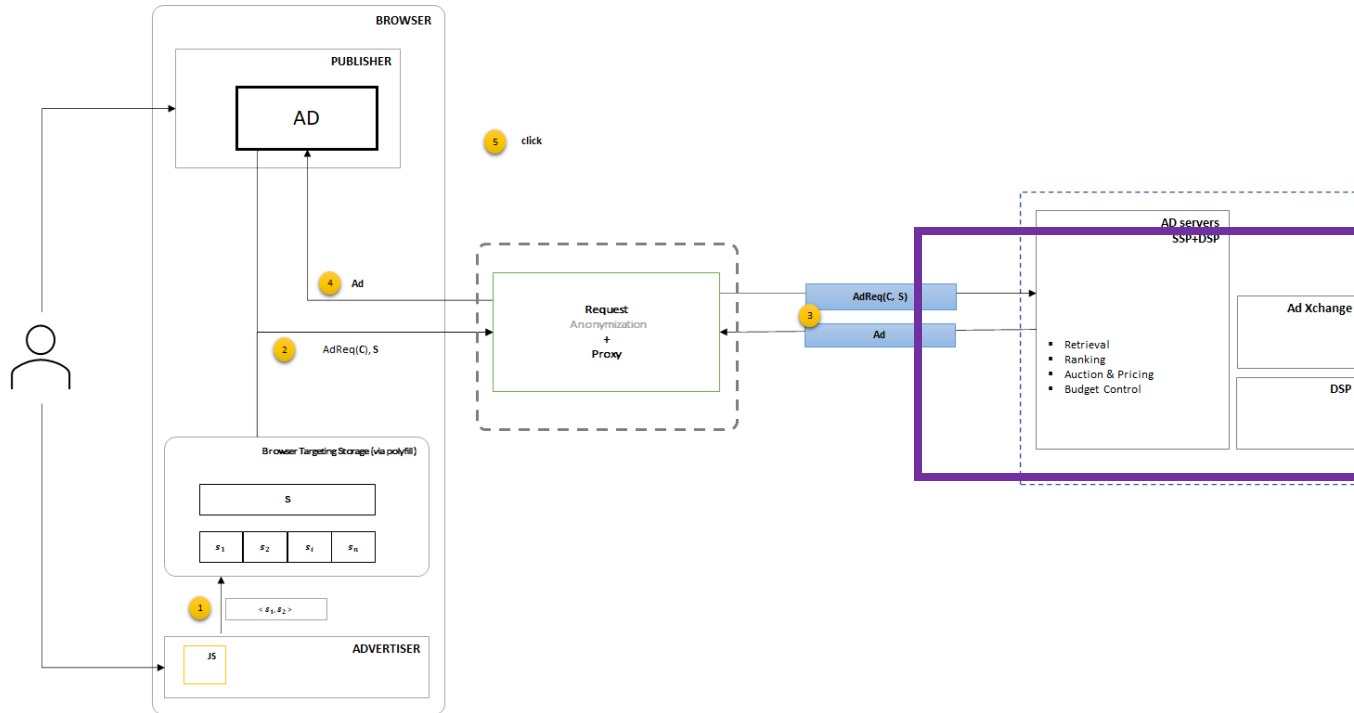
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DSP Server changes



1. Read user interest groups s (based on namespace) and publisher context c .
2. Retrieve the best **ad** for *context* c and s .
3. Respond with **optimal bid and creative** to SSP/programmatic exchange.
4. To support **encryption for s** : Publish your public keys at well known PARAKEET location. **See [.well-known/parakeet.jwk](#)**
5. COMING SOON: Decrypt the interest groups that are encrypted with your public key for step 1-3.

Next Steps

Please express interest & signing up in GitHub: [Polyfill Sign-up](#)

Encryption steps will be coming soon; please prepare to share your domain well-known URL for validation of data encryption

Additional development for polyfill capabilities – participate in development

- Support **s** in ad request with standard RTB format (**\$user.data** or **\$user.ext**)
- Ad Response validation and register flows
- Capabilities for Trust Token and additional fraud detection
- Publisher JS for direct-sold decision

Ask questions and provide feedback by opening [Polyfill Github Issues](#)