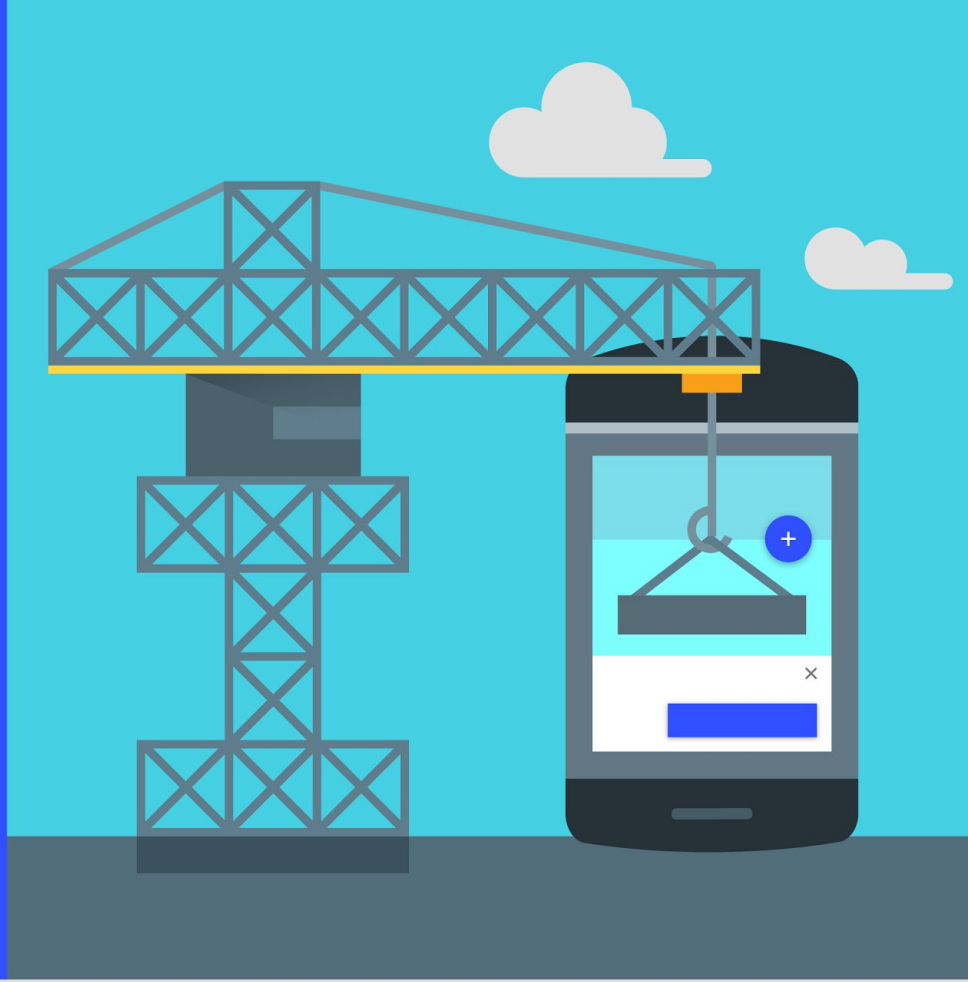
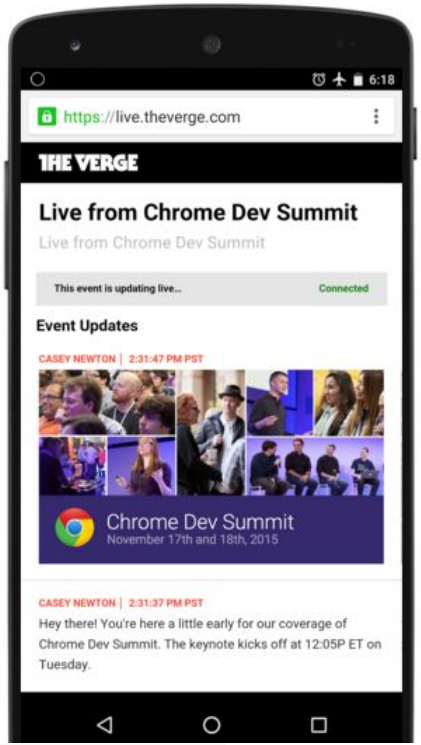
Introduction to service workers

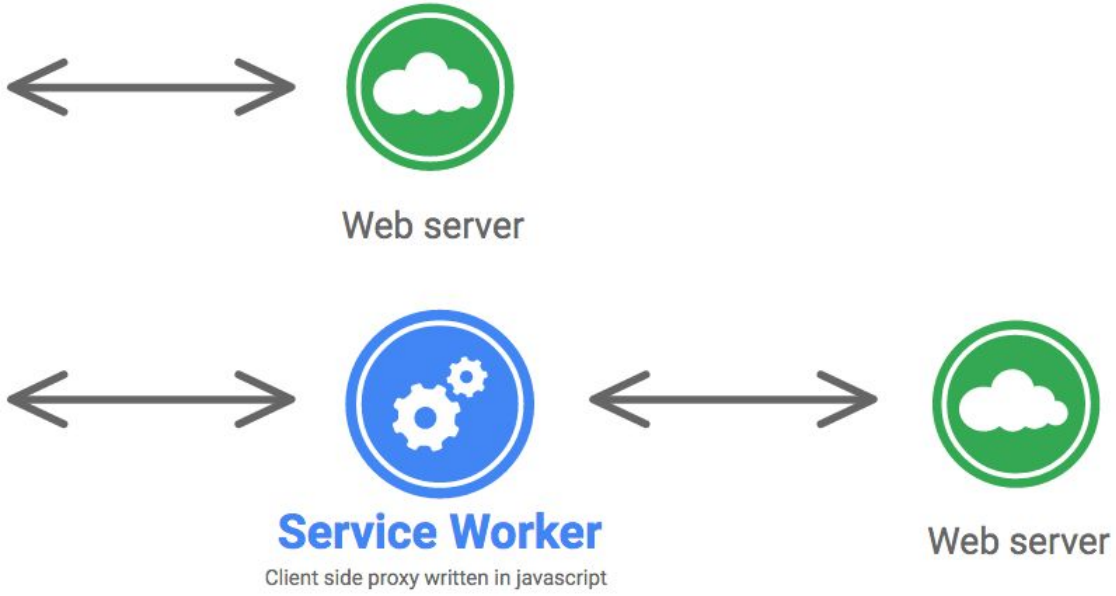


Agenda

1. What Is a Service Worker?
2. What Can Service Workers Do?
3. Service Worker Lifecycle
4. Service Worker Events

What is a service worker?





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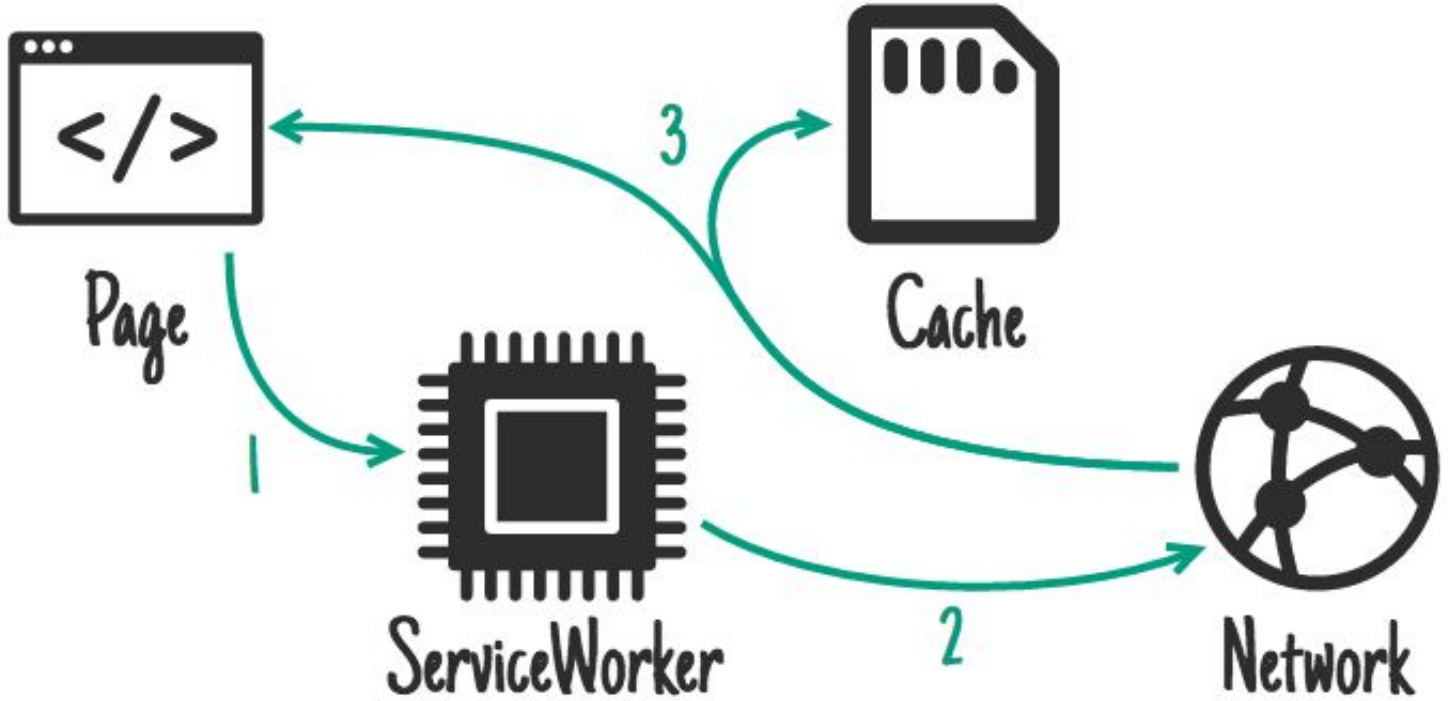
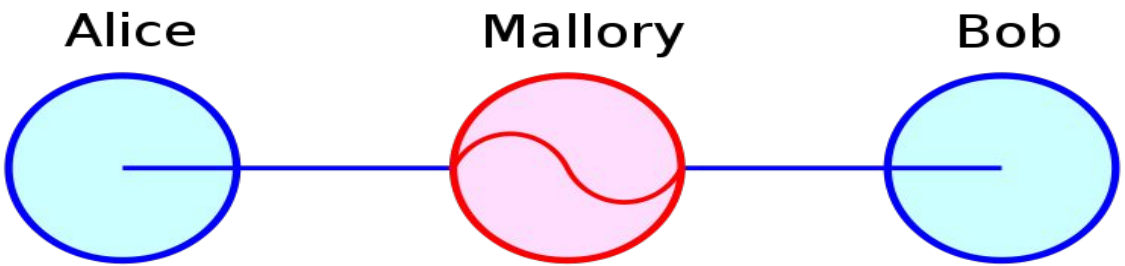
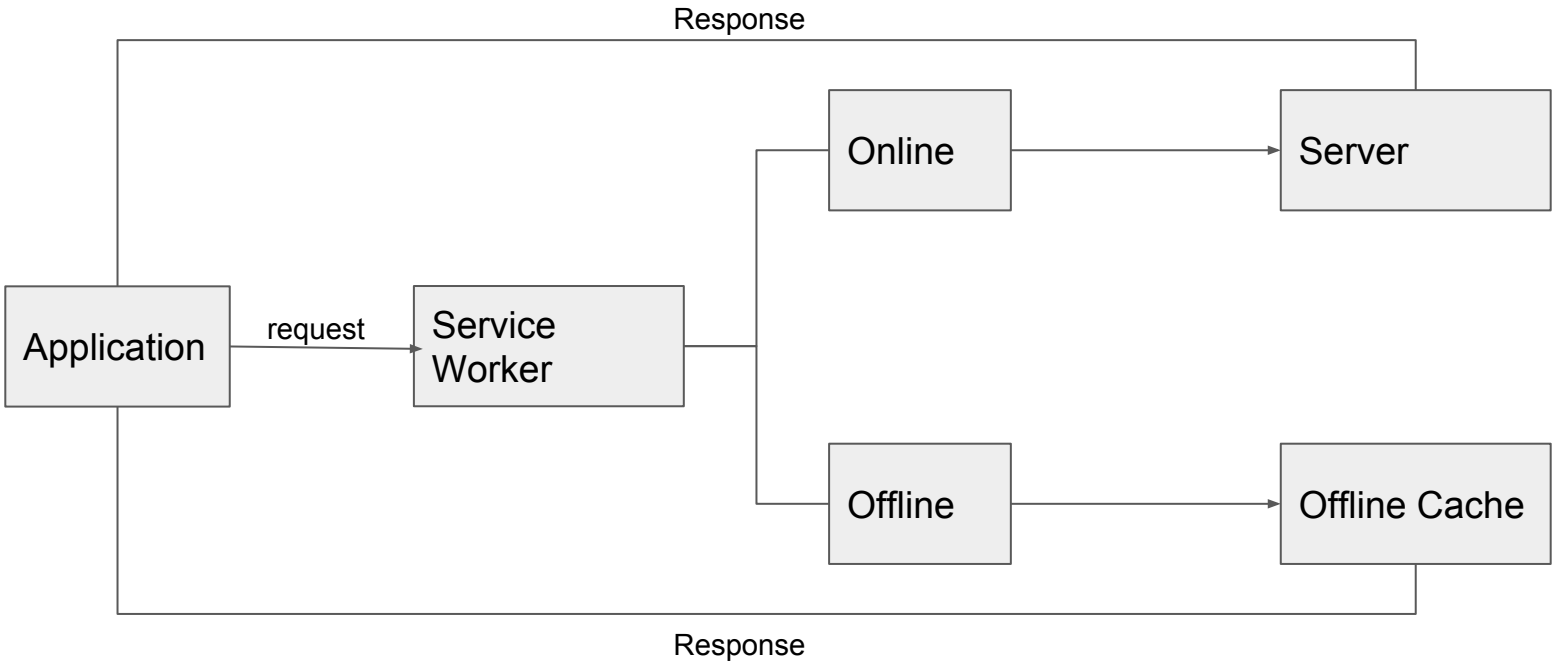


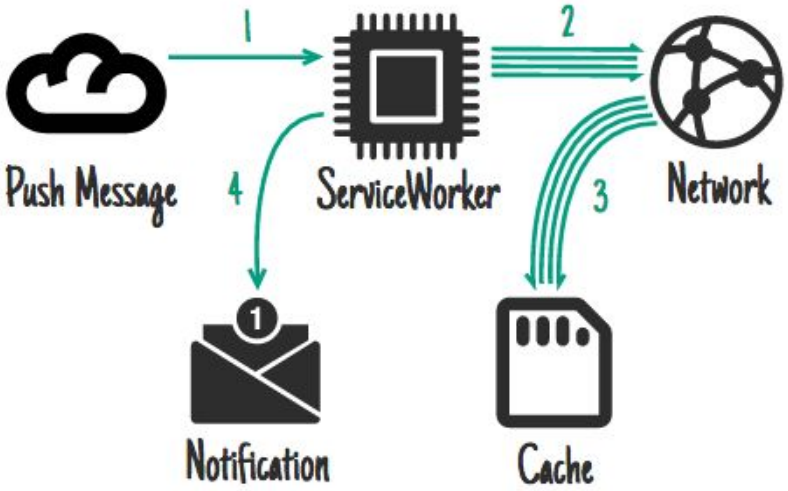
Service Worker Limitation

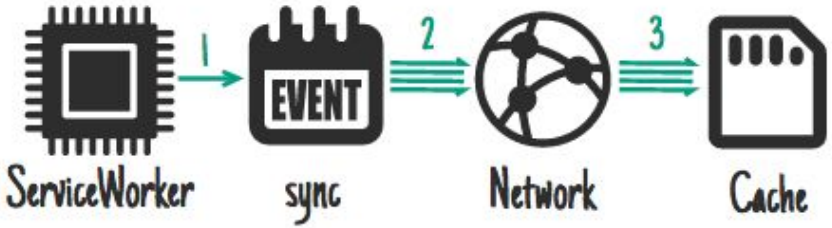


What can service workers do?

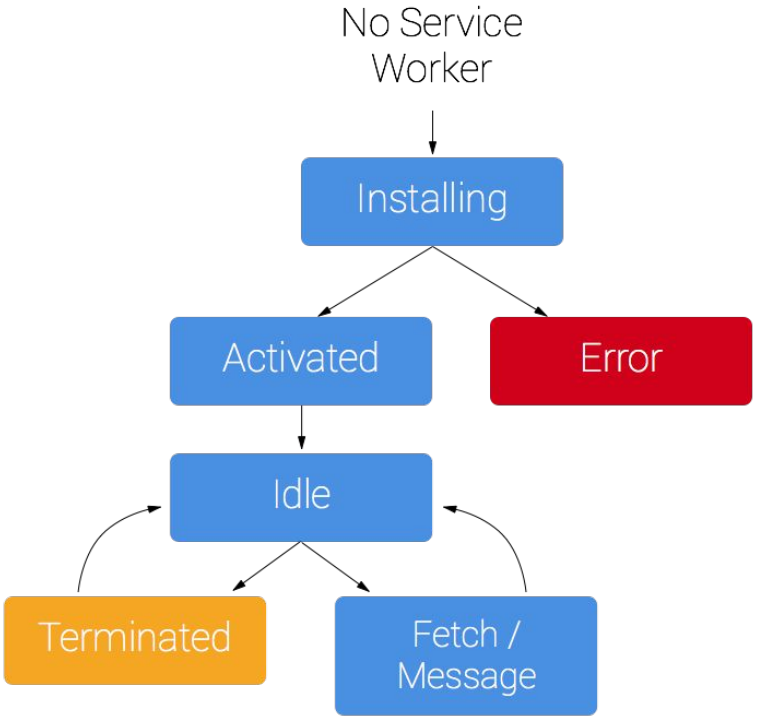


What can service workers do?





Service worker lifecycle



Service worker lifecycle: Registration

```
if (!('serviceWorker' in navigator)) {
  console.log('Service Worker not supported');
  return;
}
navigator.serviceWorker.register('/service-worker.js')
.then(function(registration) {
  console.log('SW registered! Scope is:', registration.scope);
})
.catch(function(error) {
  console.log('Service Worker registration error:', error);
});
```

Service worker scope

```
navigator.serviceWorker.register('/service-worker.js', {
  scope: '/app/'
});
```

Service worker lifecycle: Installation

```
self.addEventListener('install', function(event) {
  // Perform installation
});
```

```
this.addEventListener('install', function(event) {
  event.waitUntil(
    caches.open('v1').then(function(cache) {
      return cache.addAll([
        '/app/index.html',
        '/app/css/main.css',
        '/app/js/main.js',
        '/app/images/logo.png'
      ]);
    })
  );
});
```

Service worker lifecycle: Activate

```
self.addEventListener('activate', function(event) {
  // Perform activation or update
});
```

Service worker events

Events	Functional Events
install	fetch
activate	sync
message	push

Service worker responds to fetch

```
this.addEventListener('fetch', function(event) {
  event.respondWith(
    caches.match(event.request)
  );
});
```

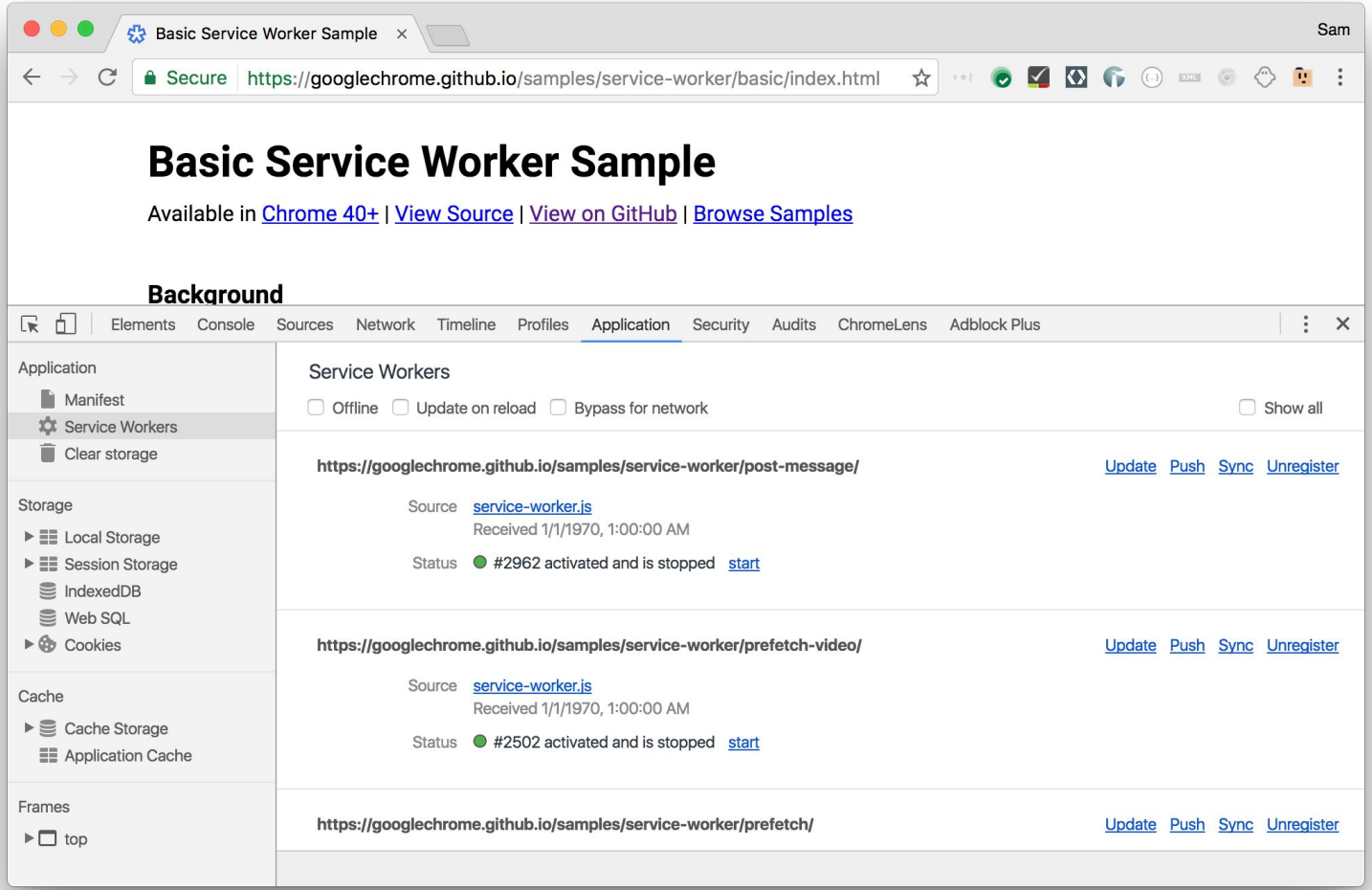
```
this.addEventListener('fetch', function(event) {
  event.respondWith(
    caches.match(event.request).then(function(resp) {
      return resp || fetch(event.request).then(function(response)
{
        return caches.open('v1').then(function(cache) {
          cache.put(event.request, response.clone());
          return response;
        });
      });
    });
  );
});
```

Service worker and background synch

```
navigator.serviceWorker.register('/sw.js');

// Later request a one-off sync:
navigator.serviceWorker.ready.then(function(swRegistration) {
  return swRegistration.sync.register('foo');
});
```

```
self.addEventListener('sync', function(event) {
  if (event.tag == 'foo') {
    event.waitUntil(doSomething());
  }
});
```


Basic Service Worker Sample
Sam
Secure
https://googlechrome.github.io/samples/service-worker/basic/index.html
Basic Service Worker Sample
Available in Chrome 40+ | View Source | View on GitHub | Browse Samples
Background
Elements
Console
Sources
Network
Timeline
Profiles
Application
Security
Audits
ChromeLens
Adblock Plus
Application
Manifest
Service Workers
Clear storage
Storage
Local Storage
Session Storage
IndexedDB
Web SQL
Cookies
Cache
Cache Storage
Application Cache
Frames
top
Service Workers
Offline
Update on reload
Bypass for network
Show all
https://googlechrome.github.io/samples/service-worker/post-message/
Update
Push
Sync
Unregister
Source
service-worker.js
Received 1/1/1970, 1:00:00 AM
Status
#2962 activated and is stopped
start
https://googlechrome.github.io/samples/service-worker/prefetch-video/
Update
Push
Sync
Unregister
Source
service-worker.js
Received 1/1/1970, 1:00:00 AM
Status
#2502 activated and is stopped
start
https://googlechrome.github.io/samples/service-worker/prefetch/
Update
Push
Sync
Unregister