Emulation

Introduction

With Playwright you can test your app on any browser as well as emulate a real device such as a mobile phone or tablet. Simply configure the devices you would like to emulate and Playwright will simulate the browser behavior such as `"userAgent"`, `"screenSize"`, `"viewport"` and if it `"hasTouch"` enabled. You can also emulate the `"geolocation"`, `"locale"` and `"timezone"` for all tests or for a specific test as well as set the `"permissions"` to show notifications or change the `"colorScheme"`.

Devices

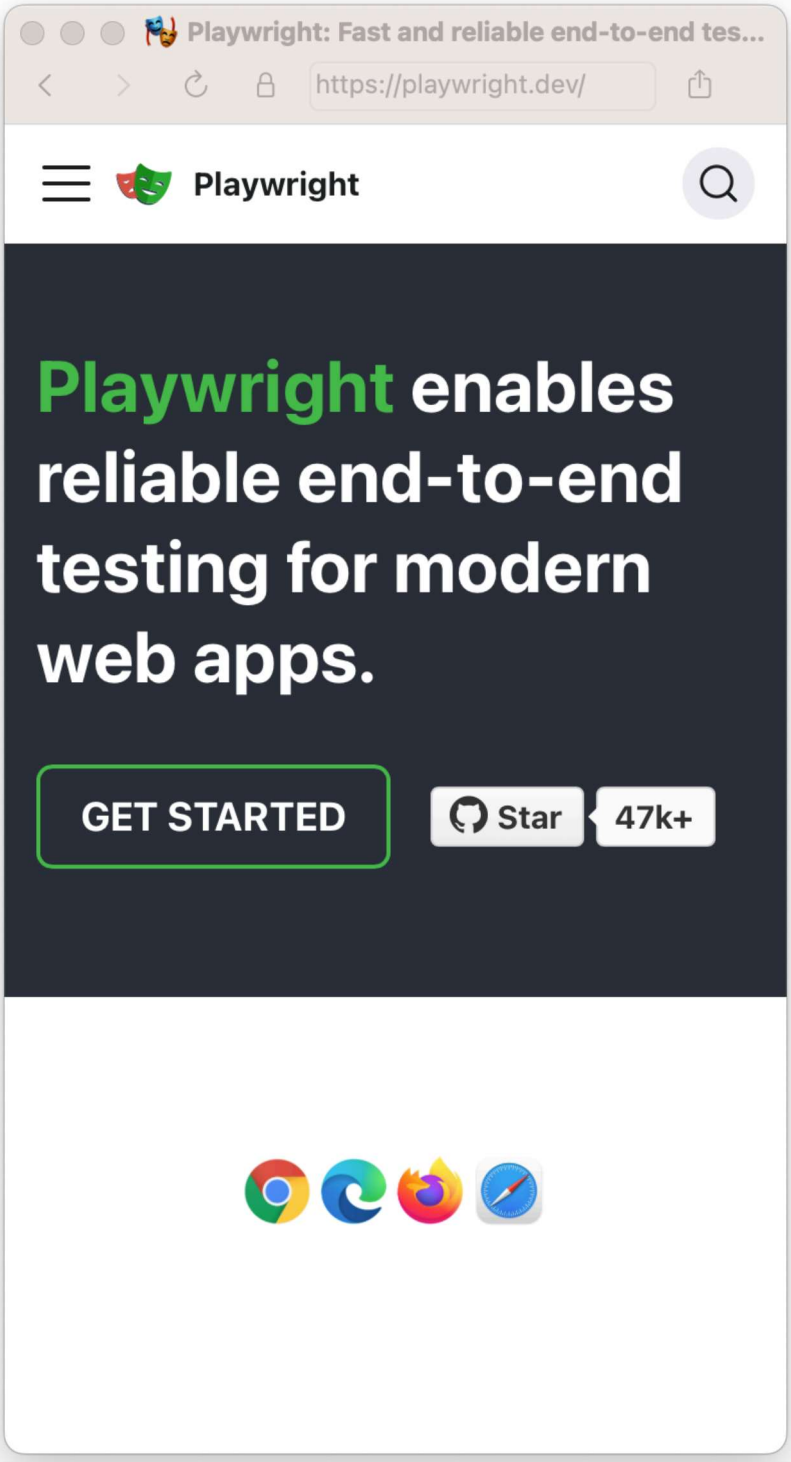
Playwright comes with a registry of device parameters using playwright.devices for selected desktop, tablet and mobile devices. It can be used to simulate browser behavior for a specific device such as user agent, screen size, viewport and if it has touch enabled. All tests will run with the specified device parameters.

Sync Async

```
from playwright.sync_api import sync_playwright, Playwright

def run(playwright: Playwright):
    iphone_13 = playwright.devices['iPhone 13']
    browser = playwright.webkit.launch(headless=False)
    context = browser.new_context(
        **iphone_13,
    )

with sync_playwright() as playwright:
    run(playwright)
```



Viewport

The viewport is included in the device but you can override it for some tests with page.set_viewport_size().

Test file:

The same works inside a test file.

Sync Async

```
# Create context with given viewport
context = browser.new_context(
  viewport={ 'width': 1280, 'height': 1024 }
)

# Resize viewport for individual page
page.set_viewport_size({"width": 1600, "height": 1200})

# Emulate high-DPI
context = browser.new_context(
  viewport={ 'width': 2560, 'height': 1440 },
  device_scale_factor=2,
)
```

isMobile

Whether the meta viewport tag is taken into account and touch events are enabled.

Sync Async

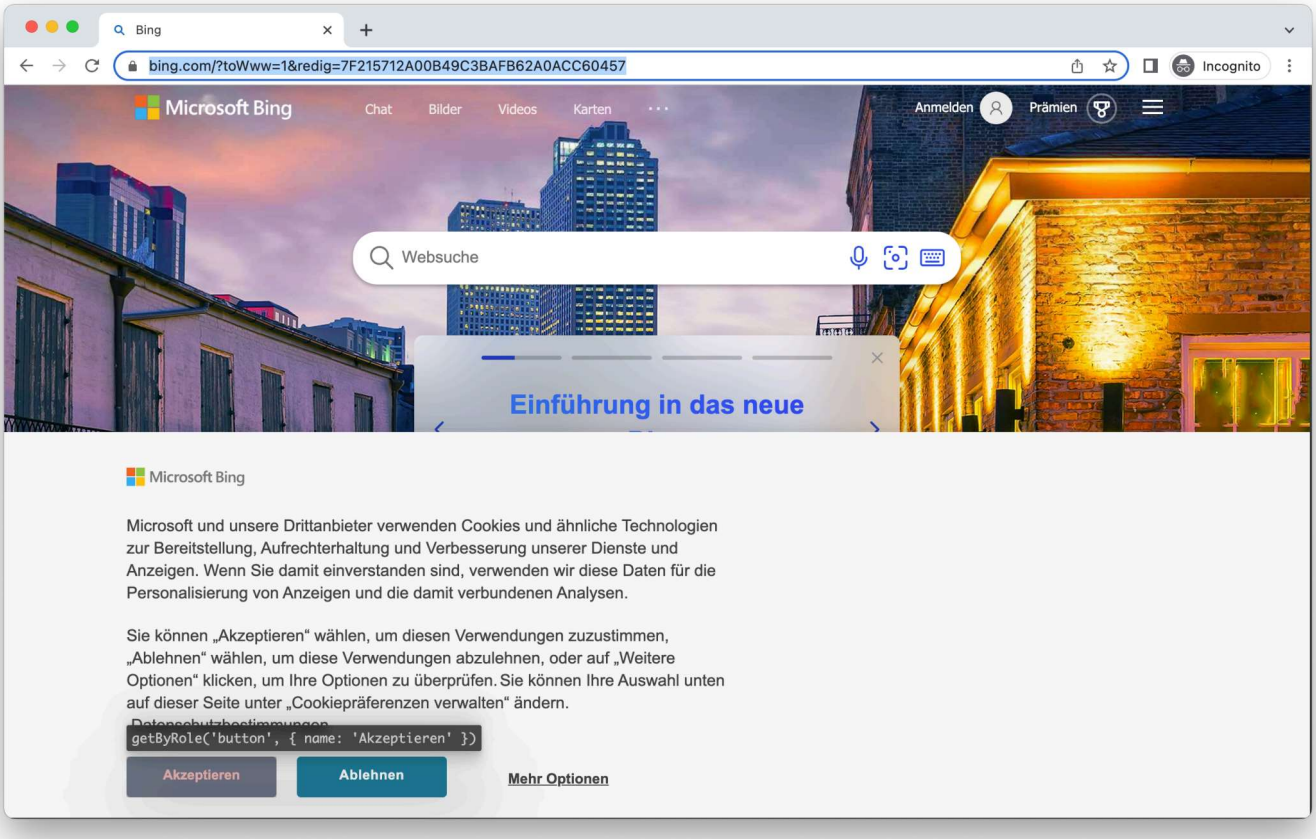
```
context = browser.new_context(
  isMobile=false
)
```

Locale & Timezone

Emulate the user Locale and Timezone which can be set globally for all tests in the config and then overridden for particular tests.

Sync Async

```
context = browser.new_context(
  locale='de-DE',
  timezone_id='Europe/Berlin',
)
```



Permissions

Allow app to show system notifications.

Sync Async

```
context = browser.new_context(
  permissions=['notifications'],
```

```
)
```

Allow notifications for a specific domain.

Sync **Async**

```
context.grant_permissions(['notifications'], origin='https://skype.com')
```

Revoke all permissions with browser_context.clear_permissions().

Sync **Async**

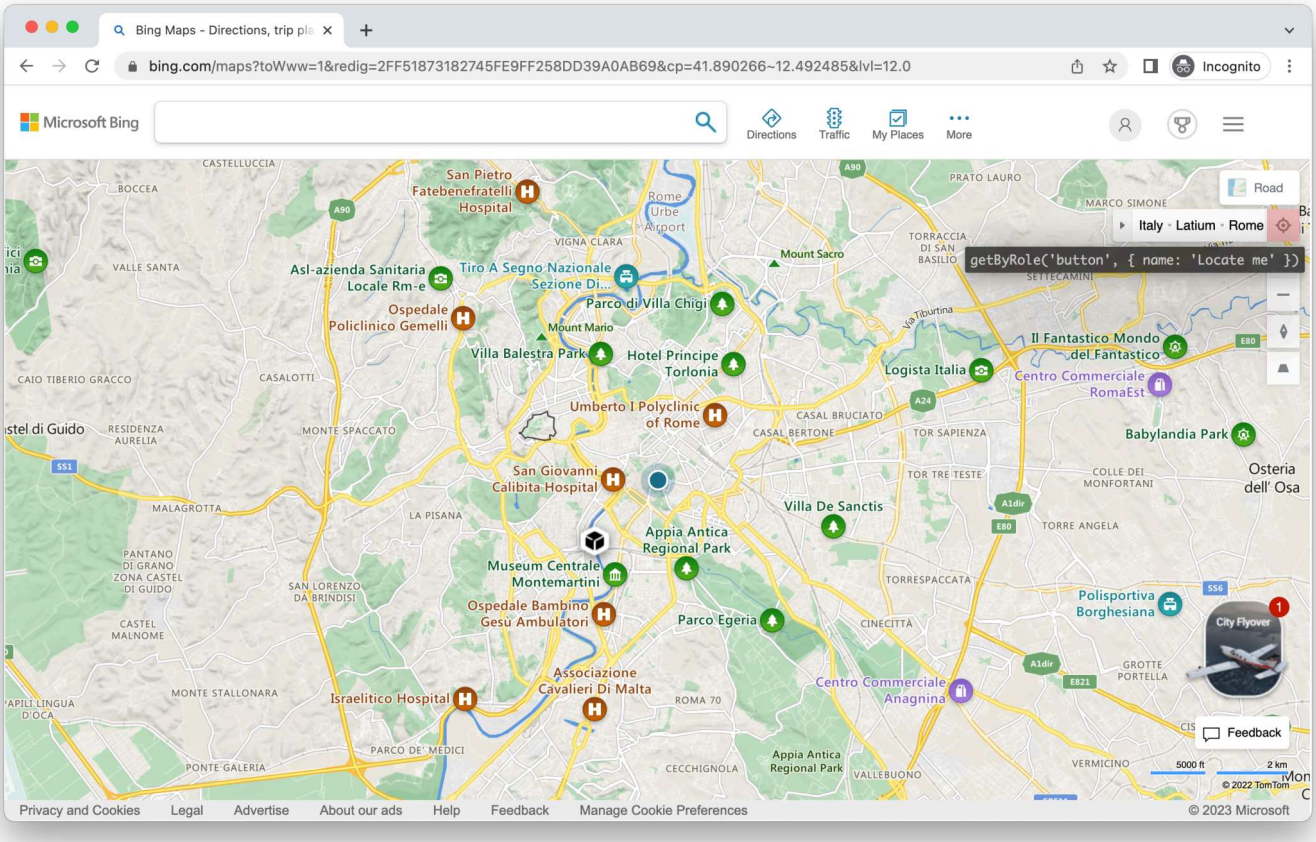
```
context.clear_permissions()
```

Geolocation

Grant `"geolocation"` permissions and set geolocation to a specific area.

Sync **Async**

```
context = browser.new_context(
  geolocation={"longitude": 41.890221, "latitude": 12.492348},
  permissions=["geolocation"]
)
```



Change the location later:

Sync Async

```
context.set_geolocation({"longitude": 48.858455, "latitude": 2.294474})
```

Note you can only change geolocation for all pages in the context.

Color Scheme and Media

Emulate the users `"colorScheme"`. Supported values are 'light', 'dark', 'no-preference'. You can also emulate the media type with page.emulate_media().

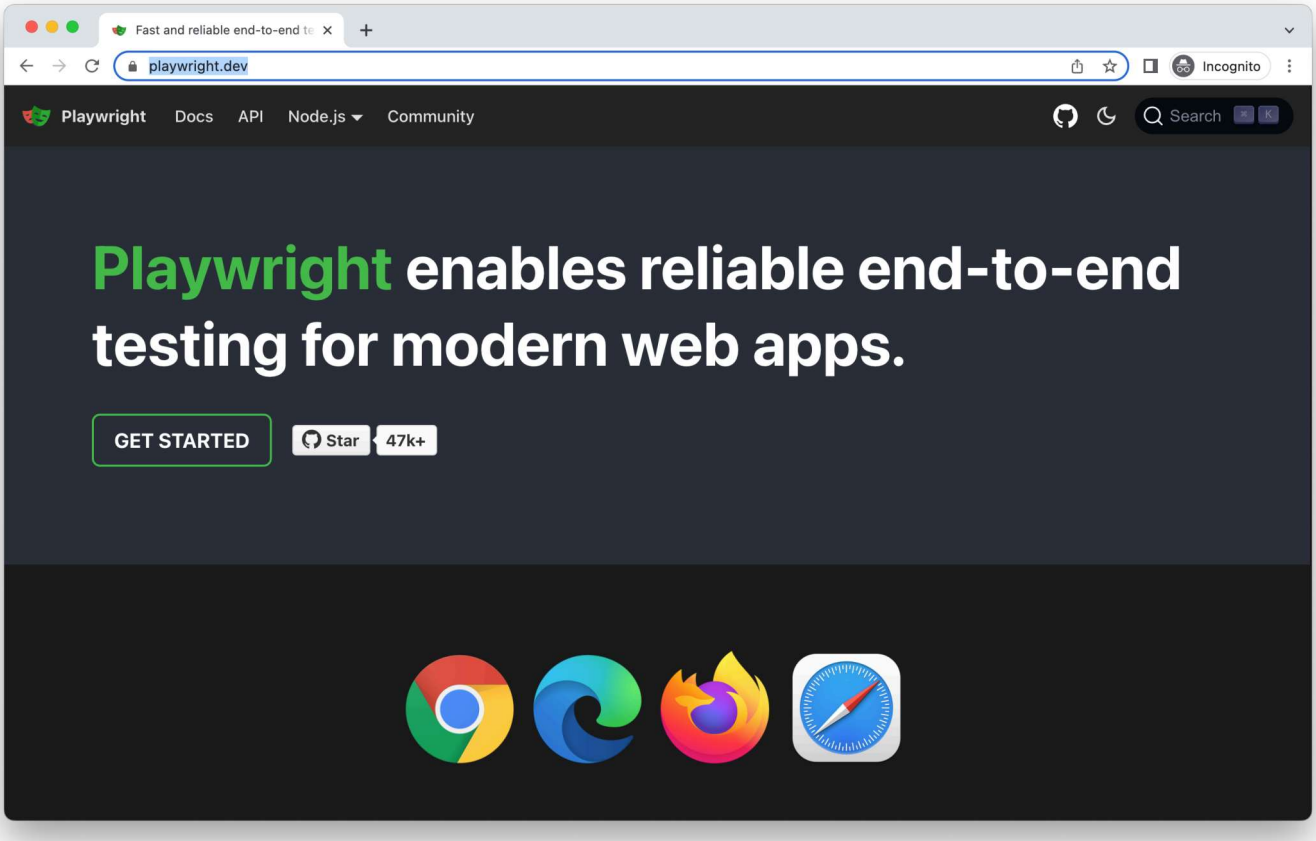
Sync Async

```
# Create context with dark mode
context = browser.new_context(
  color_scheme='dark' # or 'light'
)

# Create page with dark mode
page = browser.new_page(
  color_scheme='dark' # or 'light'
)

# Change color scheme for the page
page.emulate_media(color_scheme='dark')

# Change media for page
page.emulate_media(media='print')
```



User Agent

The User Agent is included in the device and therefore you will rarely need to change it however if you do need to test a different user agent you can override it with the `userAgent` property.

Sync Async

```
context = browser.new_context(
  user_agent='My user agent'
)
```

Offline

Emulate the network being offline.

Sync Async

```
context = browser.new_context(
  offline=True
)
```

JavaScript Enabled

Emulate a user scenario where JavaScript is disabled.

Sync Async

```
context = browser.new_context(
  java_script_enabled=False
)
```