

#WWDC19

What's New in Safari Extensions

Brian Weinstein, Safari Engineer

Distributing Safari Extensions

Content blocking notifications

Window, tab, and page management

Showing and hiding popovers

Communicating with your app

Choose a template for your new target:

iOS watchOS tvOS **macOS** Cross-platform

Filter

Application Extension



Action Extension



Audio Unit Extension



Authentication Services



Content Blocker Extension



Finder Sync Extension



Network Extension



Notification Service Extension

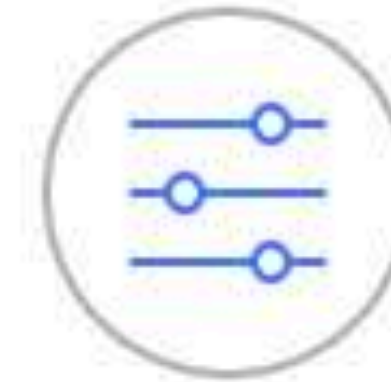


Photo Editing Extension



Photo Project Extension



Quick Look Preview Extension



Safari Extension



Share Extension



Smart Card Token Extension



Spotlight Index Extension



Thumbnail Extension



Cancel

Previous

Next

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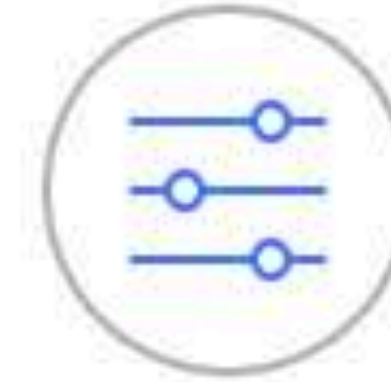


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Next







Safari Extensions allow Mac users to explore the web exactly the way you want. Find helpful information about a web page, display news headlines, or quickly access and share content to your favorite app and services. To get started, choose Preferences from the Safari menu, select the Extensions tab, and click the checkbox to turn on the extension.

- | | | |
|--|---|--|
|  <p>Todoist: Organize your life
Assign errands & achiev...</p> <p>GET <small>In-App Purchases</small></p> |  <p>1Password 7 - Password Manager
Generate & keep passw...</p> <p>GET <small>In-App Purchases</small></p> |  <p>Ghostery Lite
Fast, simple, safe browsing</p> <p>GET</p> |
|  <p>Mate: Universal Tab Translator
Translate in Safari & me...</p> <p>\$29.99</p> |  <p>Ebates Rakuten Cash Back
Lifestyle</p> <p>GET</p> |  <p>NewsGuard News</p> <p>GET</p> |
|  <p>Inboard - Image Organizer
Graphics & Design</p> <p>\$19.99</p> |  <p>MarsEdit 4
Streamlined blog publishing</p> <p>GET <small>In-App Purchases</small></p> |  <p>Blogo - Powerful blog editor
Powerful blog editor</p> <p>GET <small>In-App Purchases</small></p> |
|  <p>1Blocker: Faster & Safer Web
Privacy protection, ad b...</p> <p>\$9.99</p> |  <p>Adblock for Safari
Productivity</p> <p>GET <small>In-App Purchases</small></p> |  <p>Raindrop.io for Safari
All in One Bookmark Manager</p> <p>GET <small>In-App Purchases</small></p> |

Distributing Safari Extensions

Content blocking notifications

Window, tab, and page management

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Communicating with your app

Distributing Safari Extensions

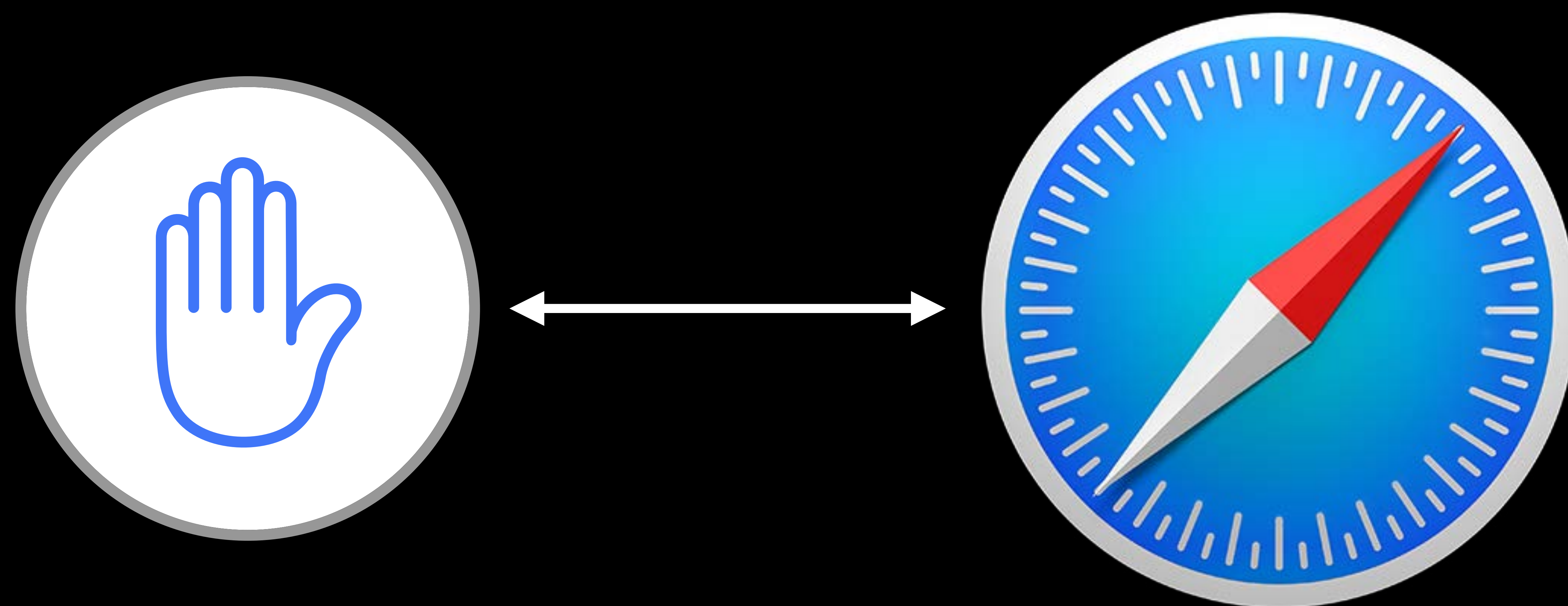
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Content Blocking Notifications

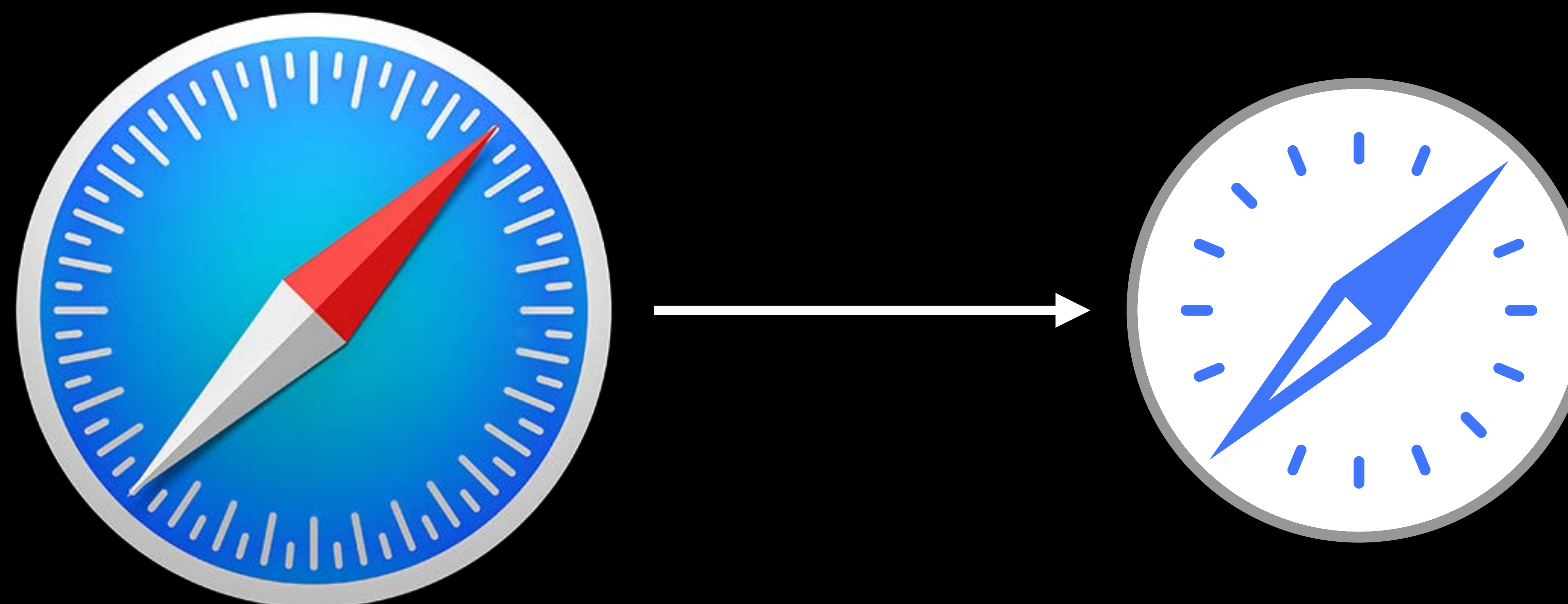


Content Blocking Notifications



Content Blocking Notifications

NEW



Content Blocking Notifications

Info.plist



NEW

Safari App Extension and Content Blocker must be in the same containing app

```
<key>NSExtension</key>
<dict>
  <key>SFSafariAssociatedContentBlockers</key>
  <array>
    <string>com.example.content-blocker</string>
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Content Blocking Notifications

Principal Object



NEW

Batched notifications

Only URLs with permission

```
func contentBlocker(withIdentifier contentBlockerIdentifier: String,  
    blockedResourcesWithURLs urls: [URL], on page: SFSafariPage) {  
    // Handle the content blocker notification.  
}
```


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Page Navigation Notifications

NEW

Can be used to follow redirect chain

URL can be nil for some navigations

```
func page(_ page: SFSafariPage, willNavigateTo url: URL?) {  
    // Handle the page navigation.  
}
```

Demo

Screenshots



NEW

Get the visible contents of a page

```
page.getScreenshotOfVisibleArea { image in
    // Image is the visible contents of the page.
}
```

Windows and Tabs

Opening full page web content



NEW

Navigate directly from the app extension process

Access to the baseURI in the app extension process

```
SFSafariExtension.getBaseURI { baseURI in
    guard let baseURI = baseURI else { return }
    tab.navigate(to: baseURI.appendingPathComponent("full_page_content.html"))
}
```


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Windows and Tabs

Accessing all windows and tabs



NEW

Iterate through all open windows and tabs

```
SFSafariApplication.getAllWindows { windows in
    for window in windows {
        window.getAllTabs { tabs in /* ... */ }
    }
}
page.getContainingTab { tab in
    tab.getContainingWindow { window in /* ... */ }
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Windows and Tabs

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Access containing windows and tabs

Pinned tabs have a nil window

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SFSafariApplication.getAllWindows { windows in
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page.getContainingTab { tab in
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Communicating with your app

Popovers

NEW

Programmatically show and dismiss

```
window.getToolbarItem { toolbarItem in
    toolbarItem?.showPopover()
}

// From within SFSafariExtensionViewController
self.dismissPopover()
```

Demo

Distributing Safari Extensions

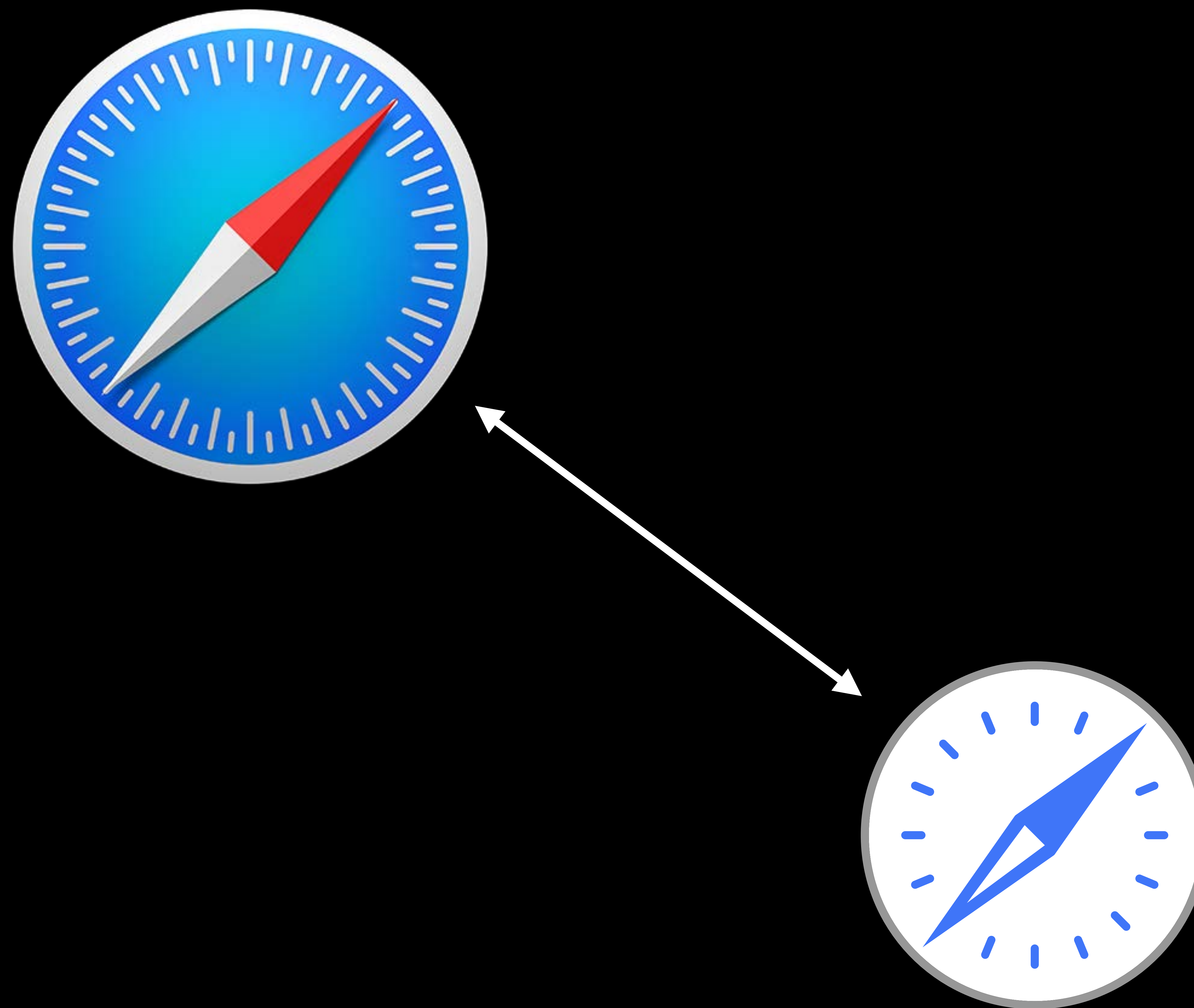
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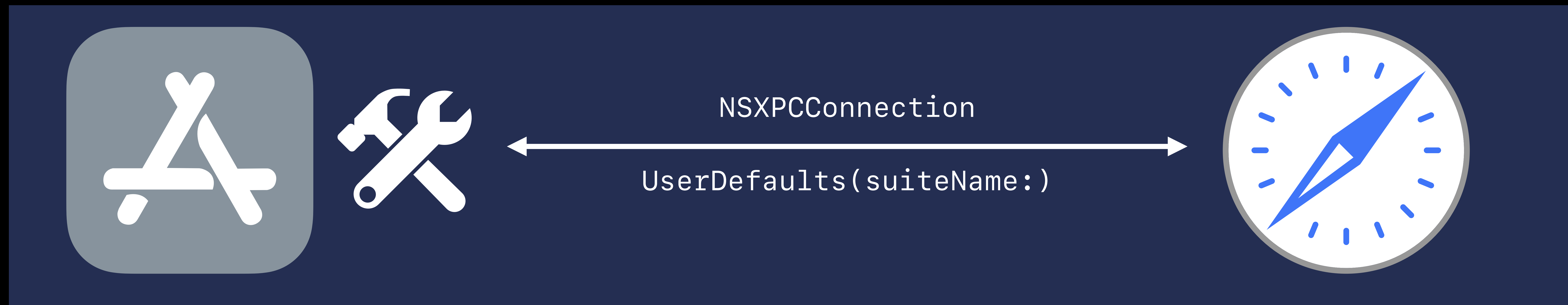
Communicating with Your App



Communicating with Your App



App Group



Communicating with Your App

Sending a message to your extension

Extension must be enabled

```
SFSafariApplication.dispatchMessage(withName: "message",  
    toExtensionWithIdentifier: "com.extension.identifier",  
    userInfo: ["key": "value"],  
    completionHandler: { error in /* ... */ })
```


Communicating with Your App

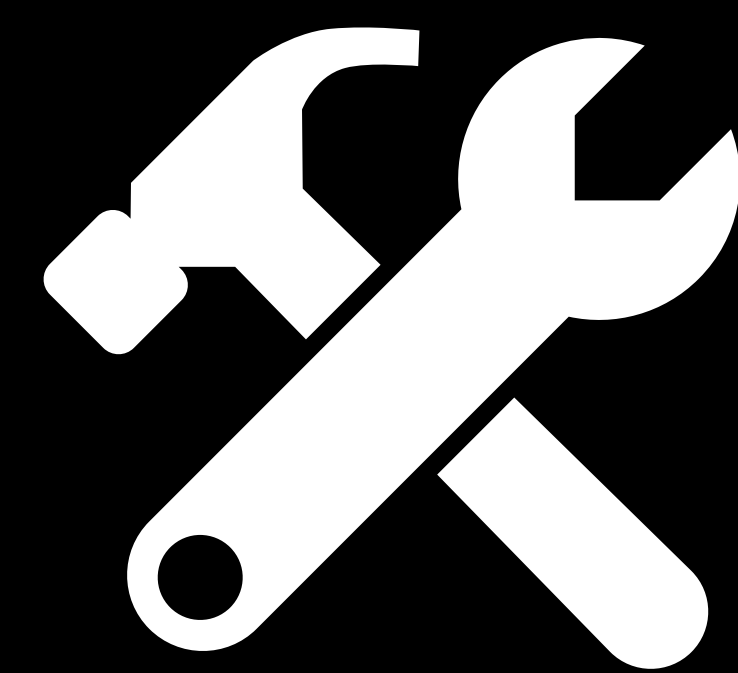
`SFSafariApplication.dispatchMessage`



Communicating with Your App



`SFSafariExtensionHandling
.messageReceivedFromContainingApp`

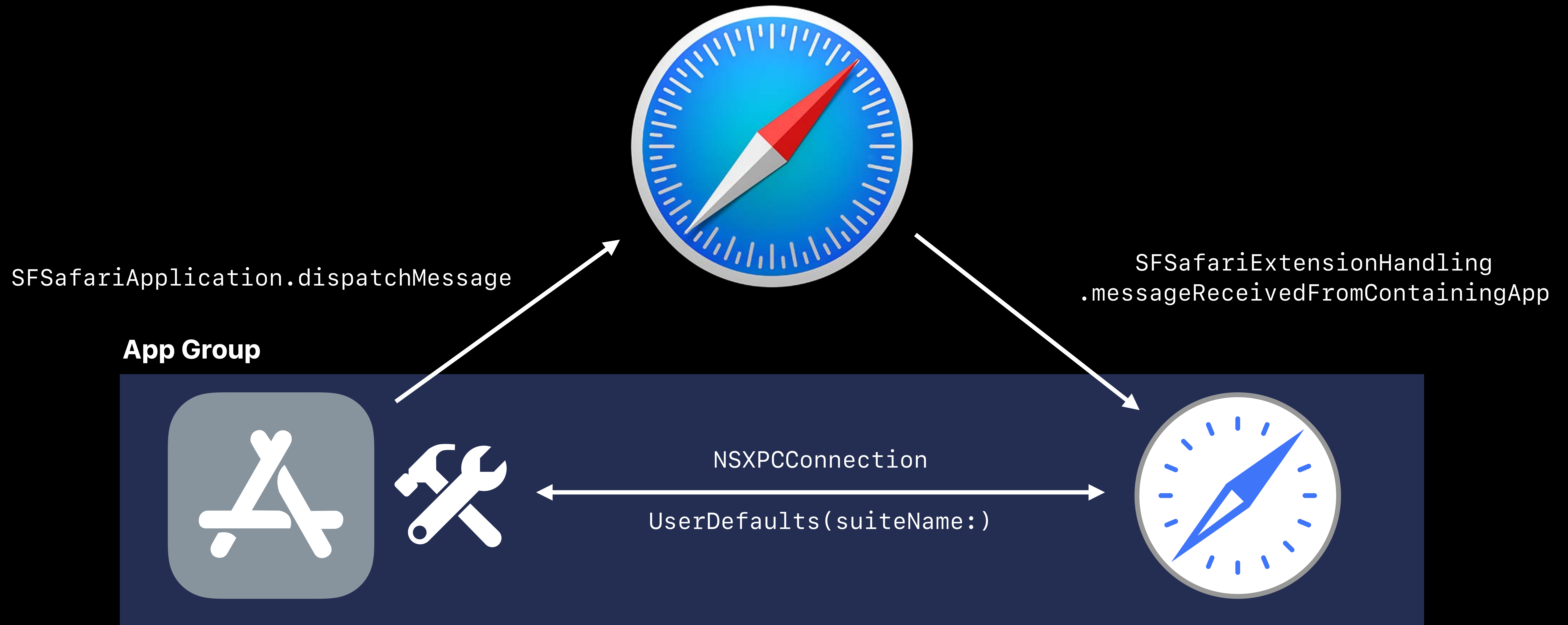


Communicating with Your App

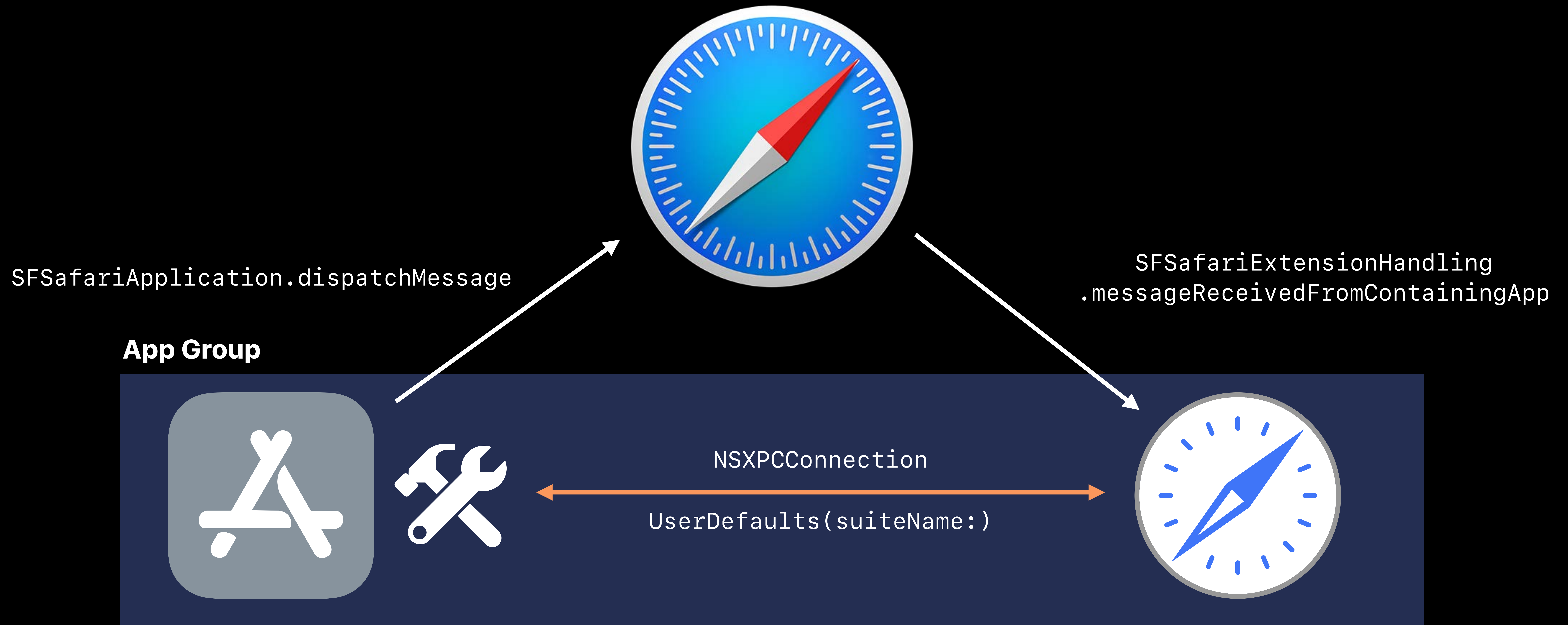
Receiving a message from your app

```
func messageReceivedFromContainingApp(withName messageName: String,  
    userInfo: [String: Any]? = nil) {  
    // Handle the message from your containing app.  
}
```

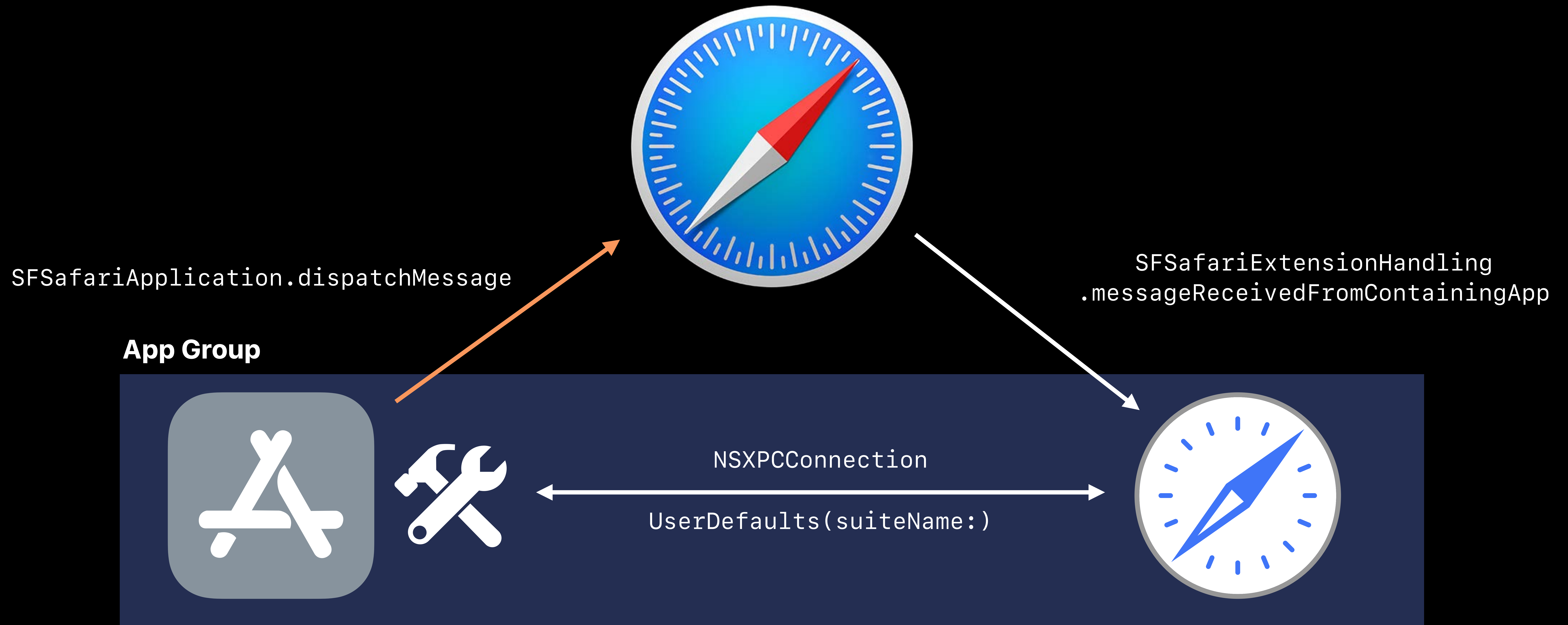

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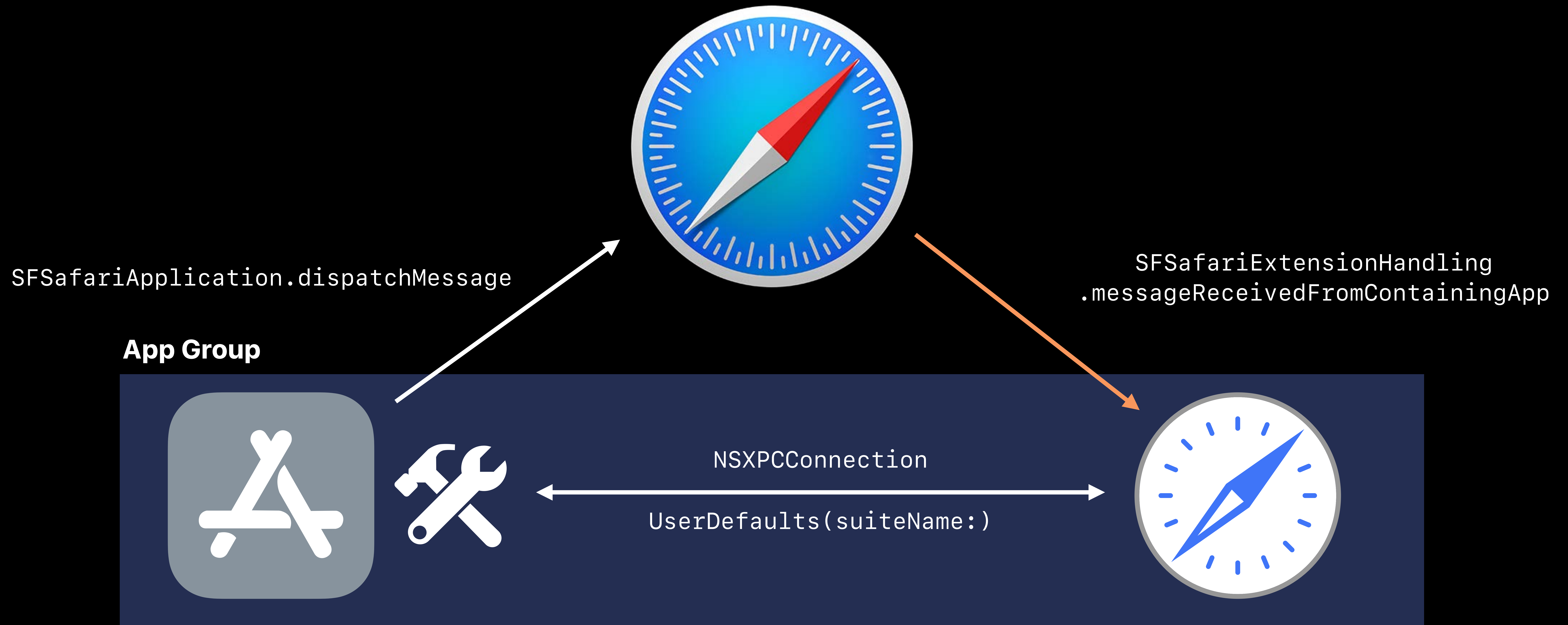
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Summary

Distribute through the Mac App Store or as a notarized app

Associate your Content Blocker with your Safari App Extension

Adopt App Groups to communicate between your Safari Extension and app

Feedback

