



## **SANTANDER ONEAPP UK**

**Cornerback. A Swift HTTP/S network traffic interception package**

FEB 2024

# AGENDA

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- 01. What is Cornerback?
- 02. Main concepts
- 03. Constraints
- 04. The WKWebView affaire
- 05. CornerbackWebView
- 06. Demo





*Cornerback*



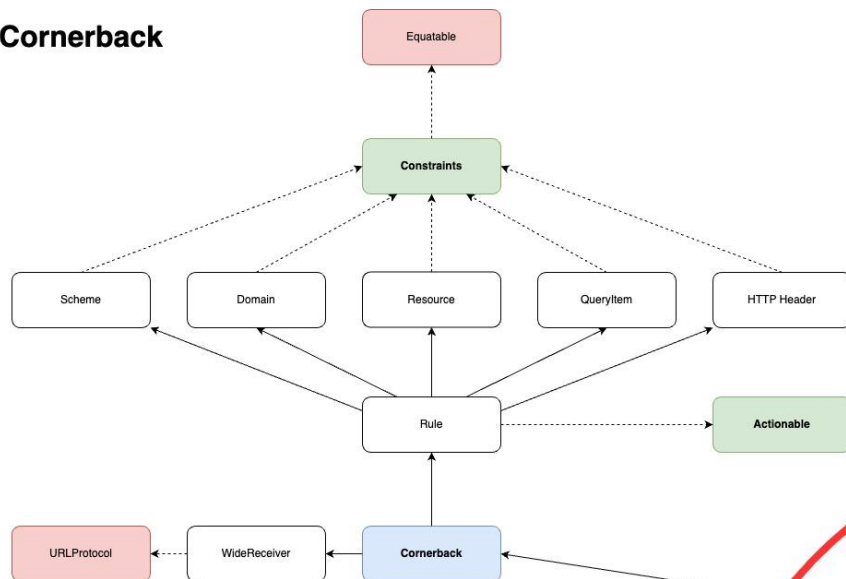
*Wide Receiver*

## WHAT IS CORNERBACK?

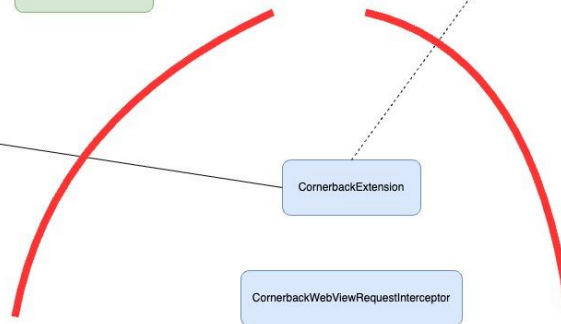
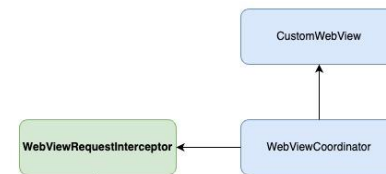
*Cornerback is a library developed 100% in Swift that*  
***captures outgoing network traffic*** *from an*  
*application* ***based on rules*** *defined by the developer*  
*and is* ***capable of modifying those requests.***

# WHAT IS CORNERBACK?

## Cornerback



## CustomWebView



## CornerbackWebView

## CORNERBACK. MAIN CONCEPTS

Cornerback functionality is based on two main concepts

- **Rule.** A set of constraints that could be enabled or disabled during the application execution.
- **Constraints.** A equality constraint for one of the request components

## CORNERBACK. CONSTRAINTS

Cornerback provides the following constraints

- Scheme
- Domain
- Resource
- Query item
- Headers

Developers can add new constraints thanks to the [Constraint](#) protocol.

## CORNERBACK. THE WKWEBVIEW AFFAIRE

The current web view component recommended by Apple presents a problem.

The security policy allows WKWebView to *bypass* the request catching from inside the application.

**But we got the solution** 



## CORNERBACKWEBVIEW

And what happened if we got our webview component in an independent package? Design patterns comes to the rescue.

1. **Custom WKWebView component.** Declares a protocol for an external request interceptor that is invoke in the navigation WKNavigationDelegate protocol using a (simple) state machine.
2. **CornerbackWebView.** Following the Adapter Pattern implements a Cornerback extension for the custom WKWebView component interceptor definition

## CORNERBACKWEBVIEW

Cornerback and Custom WKWebView  
component packages remains independent.

**No dependencies between them.**

**IT'S...**

# Demotime



## CORNERBACK. MAIN CONCEPTS

*The safest way to protect information traffic is*  
***not to send information.***

# Thanks!

