# **#SafeSAPUI5**Keeping SAP customers safe

José Sequeira June 16<sup>th</sup>, 2021



UI5con AIR

## Agenda

#### What is #SafeSAPUI5

Definition and Background

#### **#SafeSAPUI5 Objectives**

 What's the GOAL of the movement + the "needed" security upskill

#### Cybersecurity

 Bringing the subject more to the "SAP World", for developers and everyone involved. Demystifying the "Hacker" role.

#### The Blog Series

 10 episodes of real vulnerable customers and attack simulations.

#### Dos and Don'ts

 Discussing what to do and not to do on custom UI5/Gateway applications (from real life examples).

#### **UI5 Hacker**

The "final" output



## What is #SafeSAPUI5

## Definition and Background

#### Overall

- How it all started;
- Definition;
- The current "scenario";
- The "upskill challenge" for regular ABAP developers.





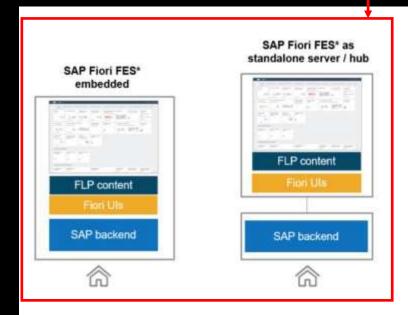


## What is #SafeSAPUI5

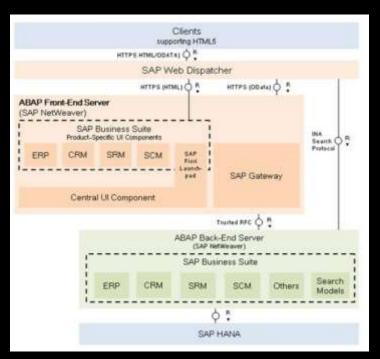
## Definition and Background

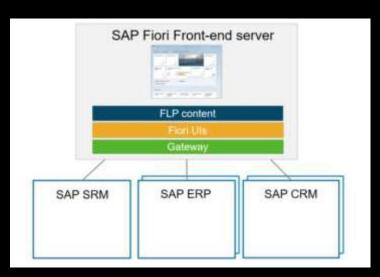
#### Landscapes

- Most common vulnerable Implementations;
- Internet facing applications











## **#SafeSAPUI5 Objectives**

#### The Goals

#### **Overall**

- Upskill for SAP developers (with real examples);
- Security Perspective on all SAP "roles" (analysts, QA, Managers, etc);
- Security and QA steps on internet facing developments (Web Apps, Mobile Aps, etc) and interfaces;
- If it's too complex, get external help (security researches, etc).

#### Keep in mind...

- Remember, your code/solution will probably be "scanned" for vulnerabilities!
- Hackers "love" developers mistakes...



# Cybersecurity in the "SAP World"

#### **Overall**

- SAP Product Security Response Team (<u>secure@sap.com</u>);
- Security Notes and Patch Days;
- Acknowledgment's;
- "Product" Vulnerability X "Customer Implementation" Vulnerability (the challenge);
- Demystifying the "Hacker";
- Ethical Hacker;
- Bug Bounties.

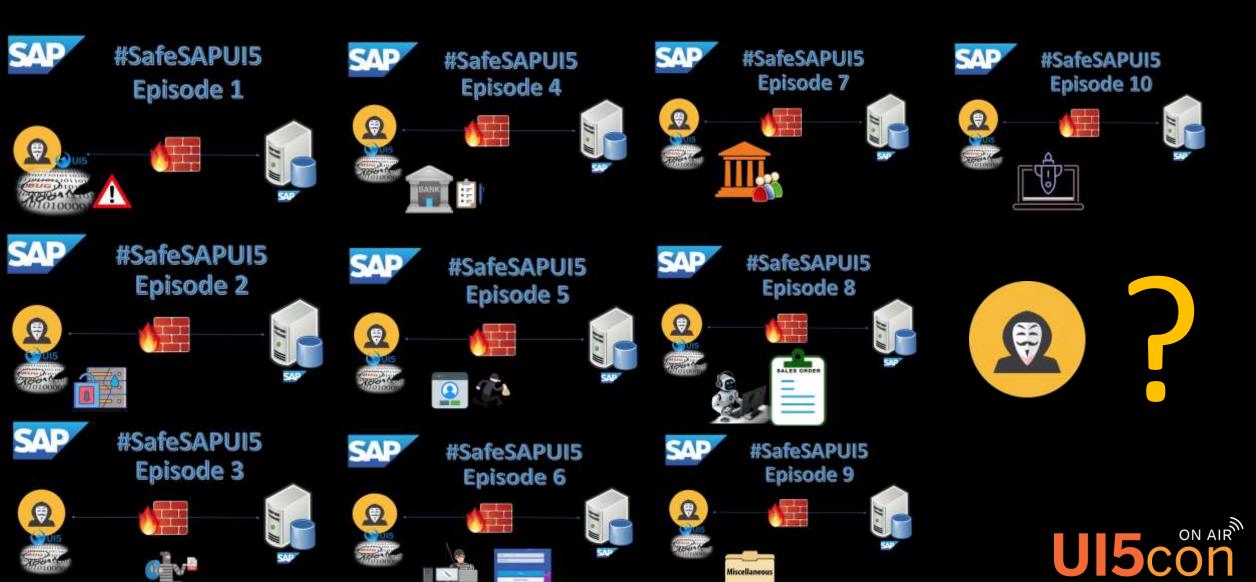
https://wiki.scn.sap.com/wiki/display/PSR/The+Official+SAP+Product+Security+Response+Space



## Let's see some code!

## The Blog Series

### Hosted on the SAP Community – "Season" 01:



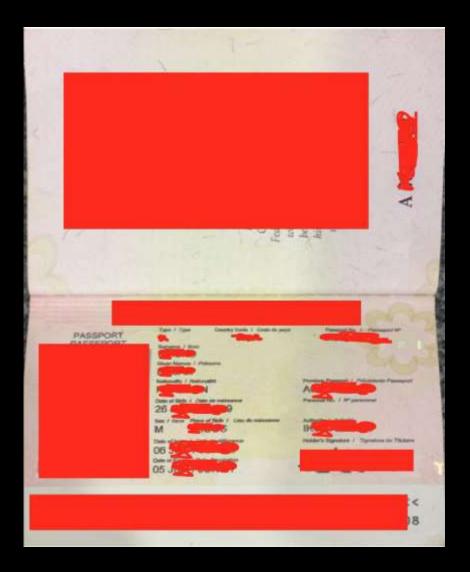
## The Blog Series - Global View

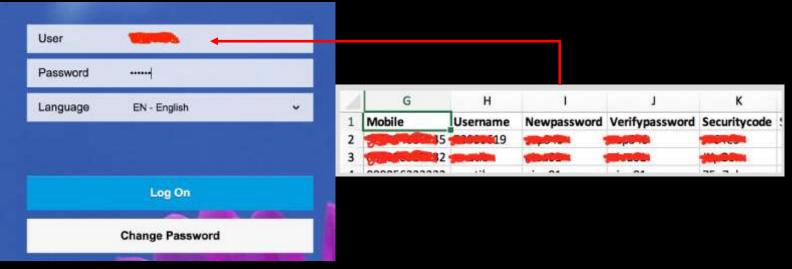
### Same mistakes



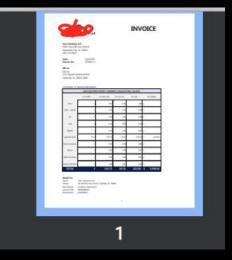


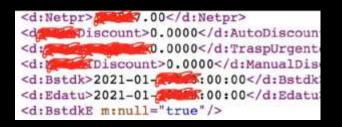
# Real Examples with responsible disclosure













#### Dos and Don'ts

### Let's get technical!

#### Dos

- Security Testing phases;
- Help to promote the security awareness on your SAP customers;
- Solid Captchas (front and back);
- OData services filters;
- Security Layers to protect against attacks like Dos/DDos;
- Promote the Cloud;
- Use standard login and user roles functionalities;

#### Don'ts

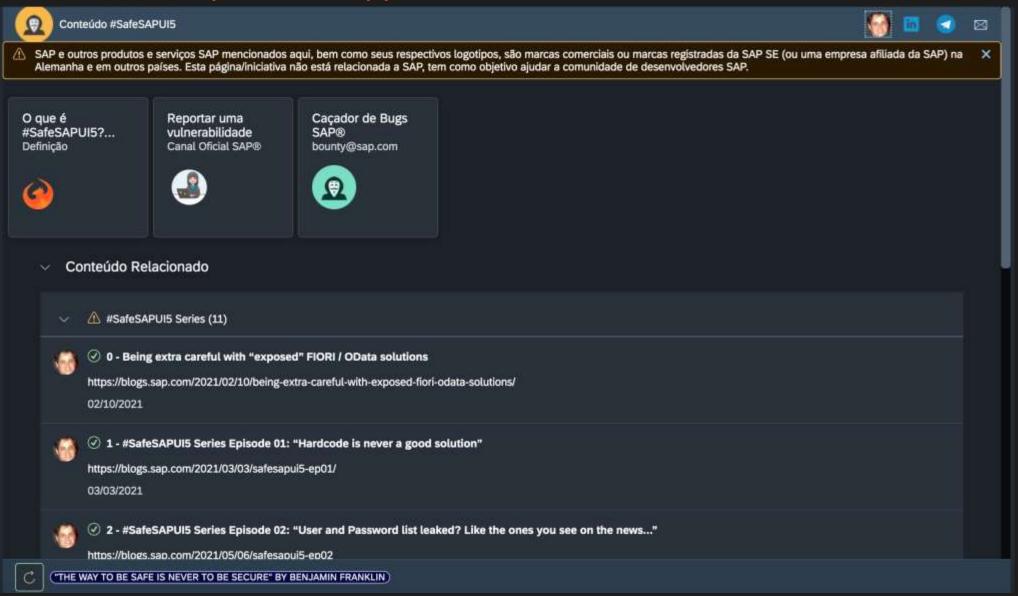
- Leave hardcoded credentials and "sensitive" comments on your code;
- "Open" OData services entities, and reusable services (remember your \$metadata will get scanned!).
   SAPU5 + OData services is not the only way to go...;
- Forget to implement filters on your entities;
- Create "Custom Login" screens/functionalities (trying to avoid licensing costs) or as I call, the "fake login";
- Return sensitive information on internet facing OData services (like user names, addresses, hashed passwords, etc). Most of the time the cause are the Search Help entities.



## Let's see some code!

## **#SafeSAPUI5 Main Page**

### www.safesapui5.web.app







## What was the "final" output?

### The UI5 Hacker Ebook!

It's free! No registration needed...

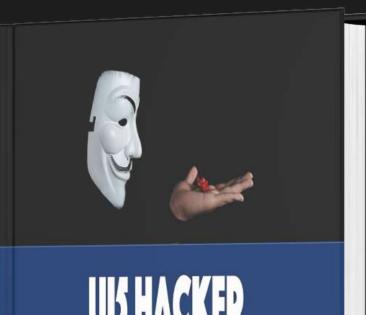


## **UIS HACKER**

- UI5 (SAPUI5/OpenUI5) & SAP Gateway
- SAP FIORI
- SAP Cloud (BTP)
- Cyber Security
- Real Vulnerabilities fixed and more...

JOSÉ AUGUSTO DE MELLO SEQUEIRA





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#### What's in here?

- Extra history and background;
- 4 extra "episodes";
- Extra recommendations;
- And it's only 90 pages long!



## Download it here (in Portuguese and English):



www.ui5hacker.web.app







# Thank you!

José Sequeira
As the SAP "Hacker"
www.safesapui5.web.app
www.ui5hacker.web.app





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