Bug Bounty for SAP Applications

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Agenda

What is bug bounty?

Bug bounty at SAP

Where to report security issues to SAP?

SAP’s Secure Software Development and Operations Lifecycle

What is bug bounty?

What is bug bounty?

Software provider

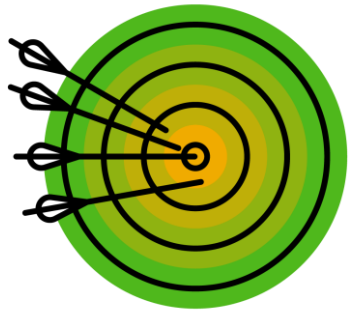
Security researcher

A means to expose software in a controlled way to security researchers

A vulnerability reward program

Bug bounty goals

- Improve software security by leveraging the knowledge and experience of the worldwide hacker community
- Improve relationship between hackers and software vendors
- Compensate hackers for their continuous effort to improve software security
- Learn about new attack vectors, scenarios, impact of combination of vulnerabilities
- Add new defensive measure and mitigate entire classes of bugs



Bug bounty history and basics

Bug bounty history and basics

Netscape (1995), Mozilla (2004), subsequently Google, Facebook, PayPal, Microsoft, SAP

Ethical hackers are rewarded for finding vulnerabilities

- Strict rules for what is in scope and what is out
- Responsible disclosure of findings
- Rewards (bounties) are paid according to criticality of the finding based on CVSS (Common Vulnerability Scoring System)

Bug bounty platform provider

- Registered hackers are under NDA and vetted according to specific criteria
- Manage relationship with ethical hacker community
- Manage communication between business and hackers
- Do first triage to eliminate false positives

Bug bounty at SAP

SAP’s journey to bug bounty program

2016

Public “Hall of Fame” for security researchers submitting vulnerabilities to SAP Secure Inbox

2017 - 2021

Set up and continuous evolution of bug bounty programs at SAP

2022 onwards

General availability of bug bounty programs for all interested applications at SAP

SAP bug bounty program today

SAP Global Security provides

- Central budget for bug bounty platform service
- Support for setting up and running the bug bounties
  - Checklists
  - Legal and regulatory compliance
  - Compliance with internal security standards
  - Risk management
  - Coordinators that interface between bug bounty platform and development, create security incident tickets, consult on CVSS, and reward payouts

Findings are subject to SAP SLAs for fixing security vulnerabilities

Test systems are isolated systems with test data

Voluntary

Development provides

- Necessary staff
- Reward pool

SAP bug bounty program statistics

One of the main sources for vulnerability findings beside general vulnerability reports and customer disclosures

75% true positive rate

17% of disclosures rated with CVSS higher than 7.0

Reward range between $100 and $4000 to submissions with CVSS scores between 2.9 and 9.6

Average payout **$983** per vulnerability

Findings range from simple vulnerabilities to design flaws

Bug Bounty vs Conventional Security Testing

Bug Bounty

- After product release
- Defined scope (in / out of scope definition)
- Ongoing
- As many testers as you like
- Regular scope extensions
- Private and public programs

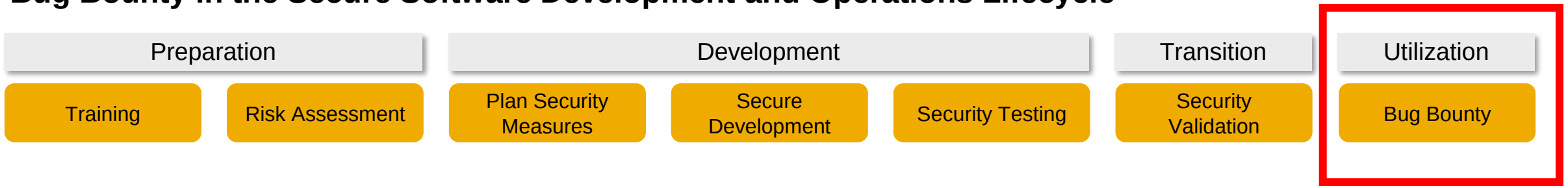
  Private: Invited hackers only

  Public: All hackers who are registered with the bug bounty platform service provider

Conventional security testing

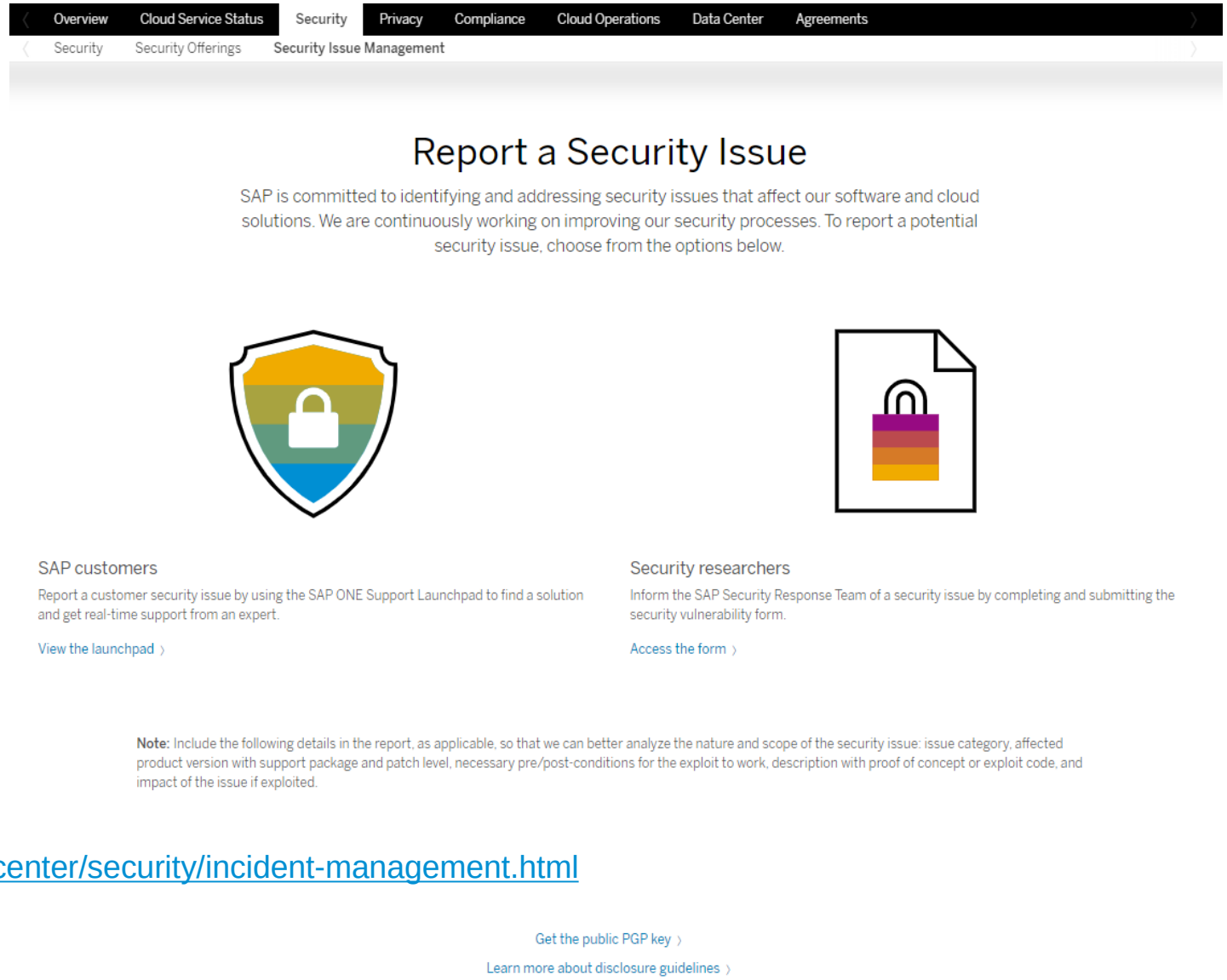
- During the development lifecycle of a product
- Narrow scope
- One time activity at a set point in time with limited pen testers

Bug Bounty in the Secure Software Development and Operations Lifecycle



Where to Report Security Issues to SAP?

Product Security Findings



https://www.sap.com/about/trust-center/security/incident-management.html

SAP Security Patch Day and Researcher Acknowledgement

SAP Trust Center – Security – Security Issue Management

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