



BTP Security Overview

Best Practices for Secure Development on SAP BTP

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Agenda

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SAP BTP Adoption Framework

Platform overview and guidance layers

02

SAP BTP Developer's Guide

Guided path for cloud-native development

03

Phases of Secure Development

Explore · Discover · Design · Deliver · Run

04

Summary & Key Takeaways

Resources and next steps

01

SAP BTP Adoption Framework

Your compass for architecting, implementing, and operating solutions
on SAP BTP

What is the SAP BTP Adoption Framework?

A central hub for decision guides, reference architectures, methodologies, and security best practices



Architects

Integration &
Extension Architecture



Developers

SAP BTP
Developer's Guide



Administrators

SAP BTP
Administrator's Guide

Decision Guides

Reference Architectures

Security
Recommendations

DevOps Principles

Methodologies

Continuously evolving · integrates SAP Discovery Center, Learning & Community

02

SAP BTP Developer's Guide

Guided path for building secure, scalable applications on SAP BTP

SAP BTP Developer's Guide

What is it?

- Guided path for application development on SAP BTP
- Consolidated tools, services & best practices
- Step-by-step instructions for each development phase
- First point of entry for building scalable BTP apps

Key Principles



Principle of One

Consistency across service evolutions



Compliance by Default

Best practices & cloud qualities built-in



Continuous Evolution

Always aligned with latest SAP BTP changes



Low TCO

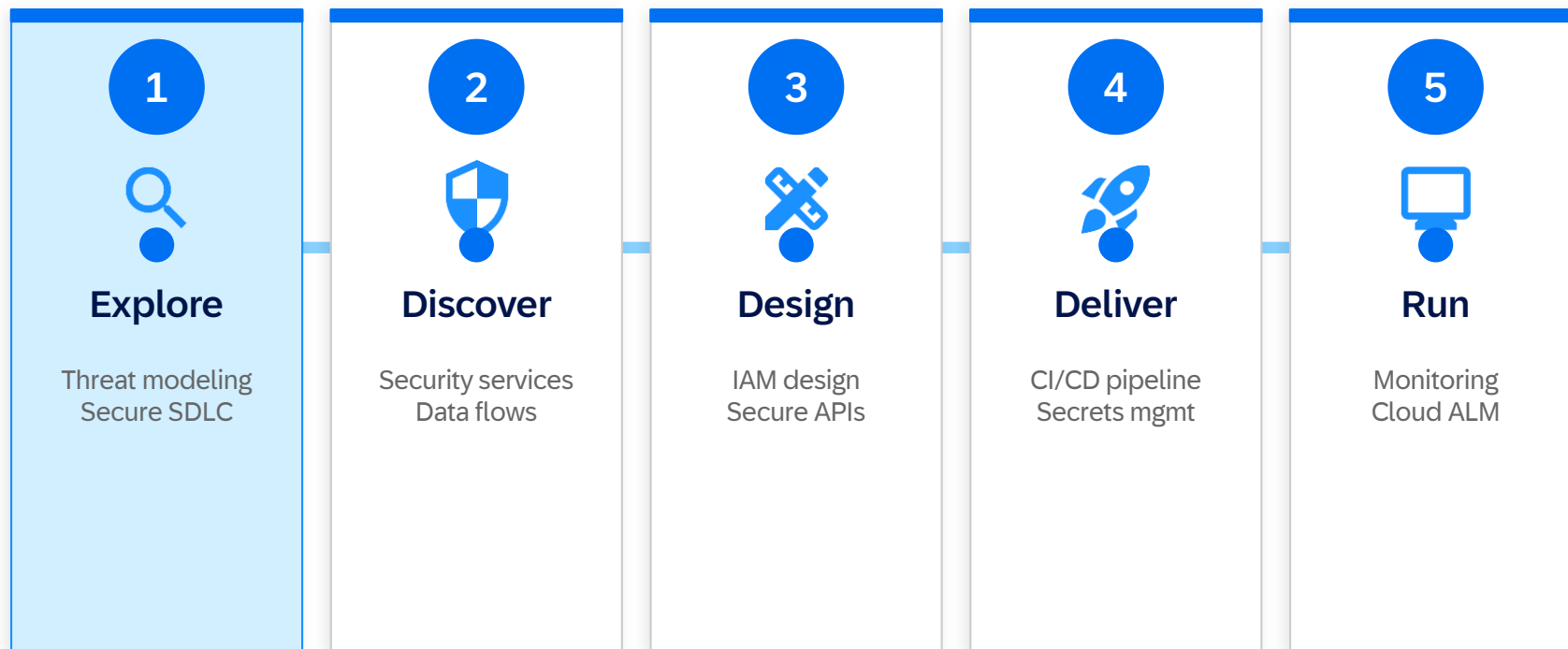
Plug & play integration approach

03

Phases of Secure Development

Security built into every phase — from design to production

Security Across the Full Development Lifecycle



SAP BTP Developer's Guide — security is embedded across all phases

Explore: Build Security In from Day One



Define Secure SDLC

Establish a secure software development and operations lifecycle framework



Threat Modeling

OWASP-based — mandatory at SAP since 2018
Identify risks before code is written



Plan for Compliance

Map applicable regulations (GDPR, ISO) and requirements upfront

OWASP Threat Modeling Steps

Mandatory at SAP since 2018

- 1 Identify Assets
- 2 Architecture Overview
- 3 Decompose Application
- 4 Identify & Document Threats
- 5 Assess Risks from Threats
- 6 Define Mitigation Steps

SAP Cloud Standards & Compliance

Security Standards

■ ISO 27001, 27017, 27018

■ ISO 22301

■ SOC 1 & SOC 2

■ BSI-C5 (ISAE 3000)

■ CSA STAR

Privacy & Regulation

■ EU GDPR

■ EU AI Act

■ BS 10012

■ EU Cloud Code of Conduct

■ DORA / NIS2

Market Specific

■ TISAX, PCI DSS

■ KRITIS, HDS

■ IRAP, CCSP

■ ENS, GxP

■ South Korea CSP

sap.com/about/trust-center/certification-compliance.html

Discover: Essential BTP Security Services



SAP Cloud Identity Services

Authentication, SSO,
user lifecycle management



Authorization & Trust Mgmt

App authorizations &
platform trust configuration



SAP Credential Store

Passwords, API keys,
certificates & keyrings



SAP Audit Log Service

Digitally signed,
tamper-proof audit logs



SAP Malware Scanning

Scan uploaded documents
for malicious content



SAP Connectivity Service

Secure on-premise
connectivity & destinations

Design: Five Principles for Secure Architecture



Defense in Depth

Layer security controls independently across network, application, and data layers



Least Privilege

Use RBAC & ABAC — grant only the minimum permissions required for each role



Secure API Design

Enforce OAuth 2.0 & OpenID Connect, encrypt all API traffic with TLS



Identity-First

SAP Cloud Identity Services for SSO, provisioning, and token-based authentication



Secure Extensibility

Isolate custom logic, validate domain models, prevent injection vulnerabilities

Identity & Access Management with SAP Cloud Identity Services



Authentication & SSO

- OpenID Connect & SAML 2.0
- Multi-Factor Authentication
- Corporate IdP federation
- Short-lived tokens (X.509)



Identity Lifecycle

- Centralized user provisioning
- SAP Identity Directory
- Automated on/off-boarding
- Cross-system synchronization

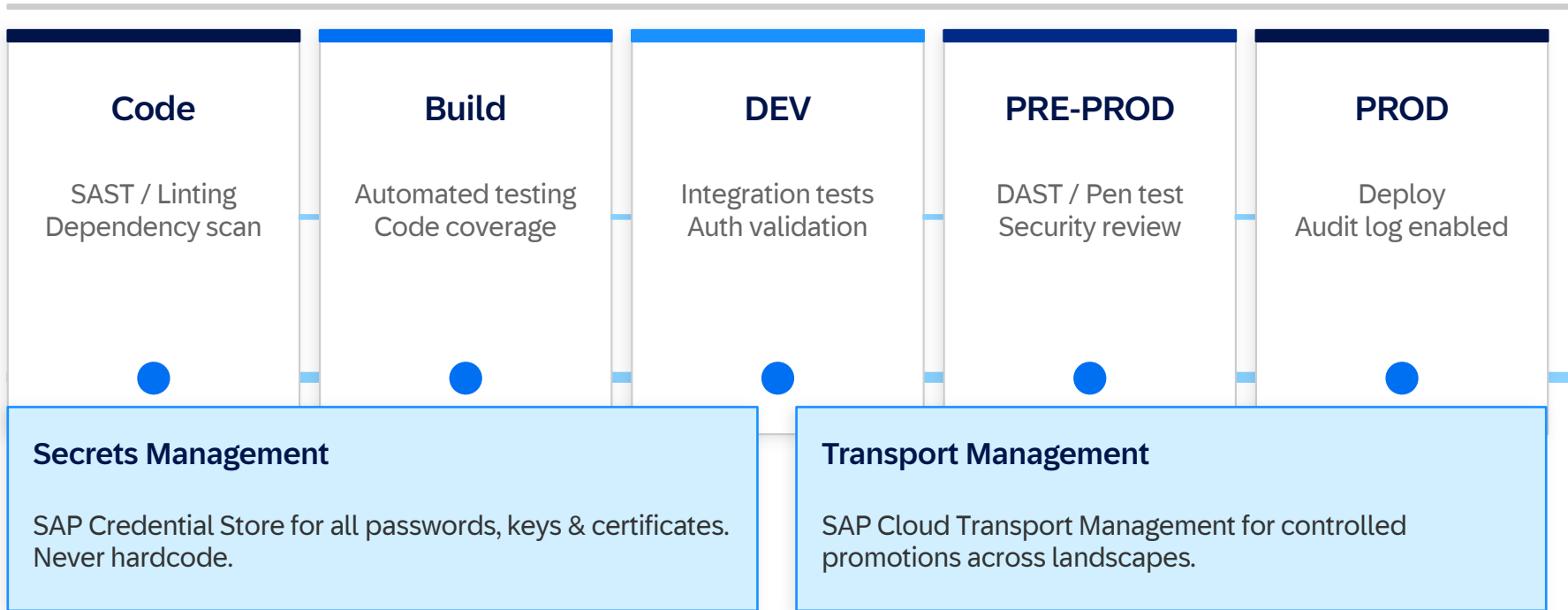


Authorization

- Role-based access control
- Attribute-based policies
- SAP Authorization Mgmt
- Segregation of duties

SAP Cloud Identity Services — one platform for all SAP applications

Deliver: Secure CI/CD Pipeline



Deliver: Security Assessment & Testing

< > SAST

Static Application Security Testing
Source code analysis before deployment

SAP BTP CI/CD integration supported



DAST

Dynamic Application Security Testing
Runtime analysis of deployed applications

SAP BTP CI/CD integration supported



Penetration Tests

Internal & external pen tests
APIs, web apps & authentication flows

SAP BTP CI/CD integration supported



Auth End-to-End

Authorization validation across roles
Scenario-based access control testing

SAP BTP CI/CD integration supported

Run & Scale: Continuous Security Operations

SAP Cloud ALM

Monitor security recommendations across your BTP landscape

- BTP pushes configuration status to Cloud ALM
- Align services with SAP security recommendations
- Shared responsibility — customer applies mitigations
- Continuously expanding service coverage



Runtime Monitoring

Detect anomalies & unauthorized access in real time



Patch Management

Regular updates to dependencies and client apps



Config Hardening

Periodic security audits of BTP configurations



Data Protection

Secure user-generated content & privacy compliance

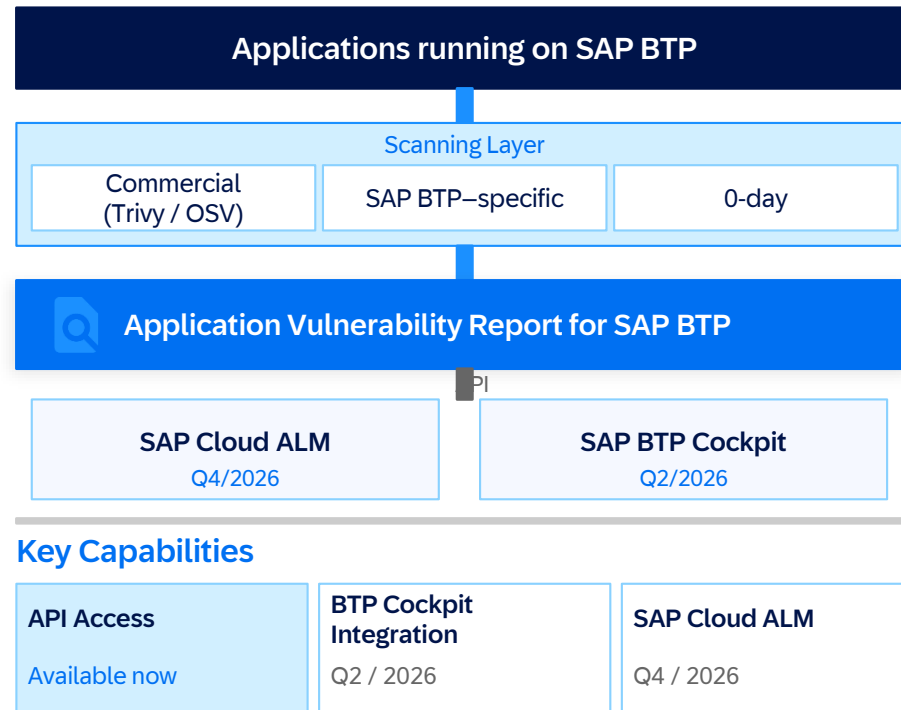
Application Vulnerability Report

Continuous open-source vulnerability scanning for deployed BTP applications

Open-source components in deployed BTP apps carry real vulnerability risk — customers are responsible for their own patch management.

Benefits

- Comprehensive overview of all OSS vulnerabilities across your BTP landscape
- Act on criticality with mitigation recommendations included in the report
- Stay ahead with 0-day detections unavailable from commercial scanning tools
- Unique combination: Commercial + Open Source + SAP-developed MicroScanners



04

Summary & Key Takeaways

What to remember from today's session

Key Takeaways

-  1 The SAP BTP Adoption Framework provides architects, developers, and administrators with a proven path for secure cloud development
-  2 The SAP BTP Developer's Guide embeds security into every phase — from explore to run — via the 'principle of one' approach
-  3 Threat modeling early (OWASP-based) prevents costly rework and ensures compliance from day one
-  4 SAP BTP security services — Cloud Identity, Credential Store, Audit Logging, Malware Scanning — are your foundation for compliance
-  5 SAP Cloud ALM enables continuous monitoring of security recommendations across your full BTP landscape
-  6 The Application Vulnerability Report provides continuous open-source vulnerability scanning for deployed BTP apps — with Cloud ALM and BTP cockpit integration on the roadmap

Useful Resources & Next Steps

SAP BTP Developer's Guide

help.sap.com/docs/btp/sap-btp-developers-guide

SAP BTP Security Recommendations

help.sap.com/docs/btp/sap-btp-security-recommendations

SAP Cloud Identity Services

help.sap.com/docs/cloud-identity-services

SAP Trust Center & Certifications

sap.com/about/trust-center/certification-compliance

SAP Discovery Center

discovery-center.cloud.sap

SAP Credential Store

help.sap.com/docs/credential-store

Application Vulnerability Report

Contact: fabian.richter@sap.com



Further Reading & Links

Platform & Framework

[BTP Adoption Framework](#)

[BTP Developer's Guide](#)

[BTP Security Recommendations](#)

Explore Phase

[SAP Secure SDLC \(SDOL\)](#)

[OWASP Threat Modeling Builder](#)

[Trust Center & Certifications](#)

Design Phase

[SAP Architecture Center](#)

[Ref Arch: Secure Hyperscaler Access](#)

[Ref Arch: IAM & Identity](#)

[BTP APIs \(Business Accelerator Hub\)](#)

[SAP Cloud Identity Services API](#)

Deliver Phase

[SAP CI/CD Service](#)

[SAP Credential Store](#)

Run & Scale Phase

[Monitor Security Recs. with Cloud ALM](#)

Hands-On Missions

[Mission: CAP-Based Extension App](#)

[Mission: Observability in BTP](#)

[GitHub: Incident Mgmt Code Sample](#)



Thank you.

Questions & Discussion

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