



SAP Solutions for **Continuous Integration and Delivery**

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PUBLIC

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Agenda

Overview of SAP Solutions for Continuous Integration and Delivery

SAP Cloud Platform Continuous Integration and Delivery

- Demo

Project “Piper”

Best Practices Guide

Q&A

SAP Solutions for Continuous Integration and Delivery

Overview of CI/CD solutions by SAP

CI/CD Service

SAP Cloud Platform
Continuous Integration and
Delivery

Project “Piper”

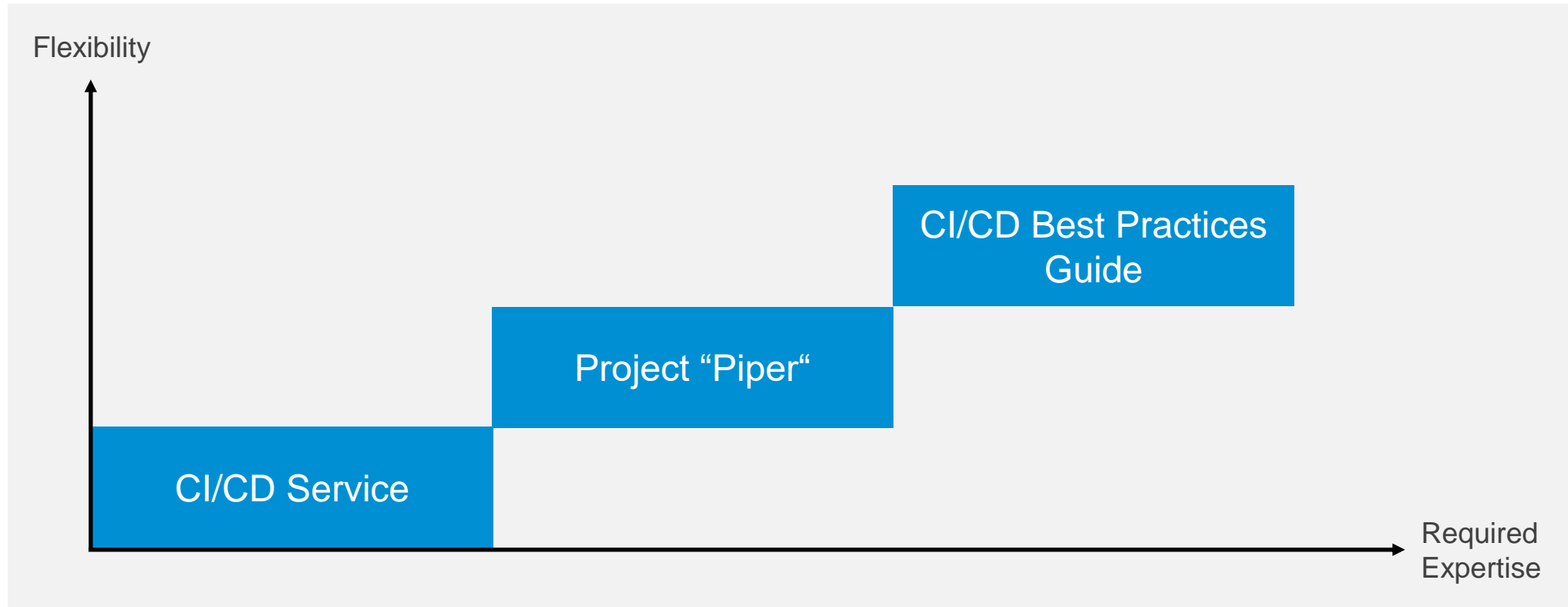
Project “Piper”

CI/CD Best
Practices Guide

Continuous Integration and
Delivery
Best Practices Guide

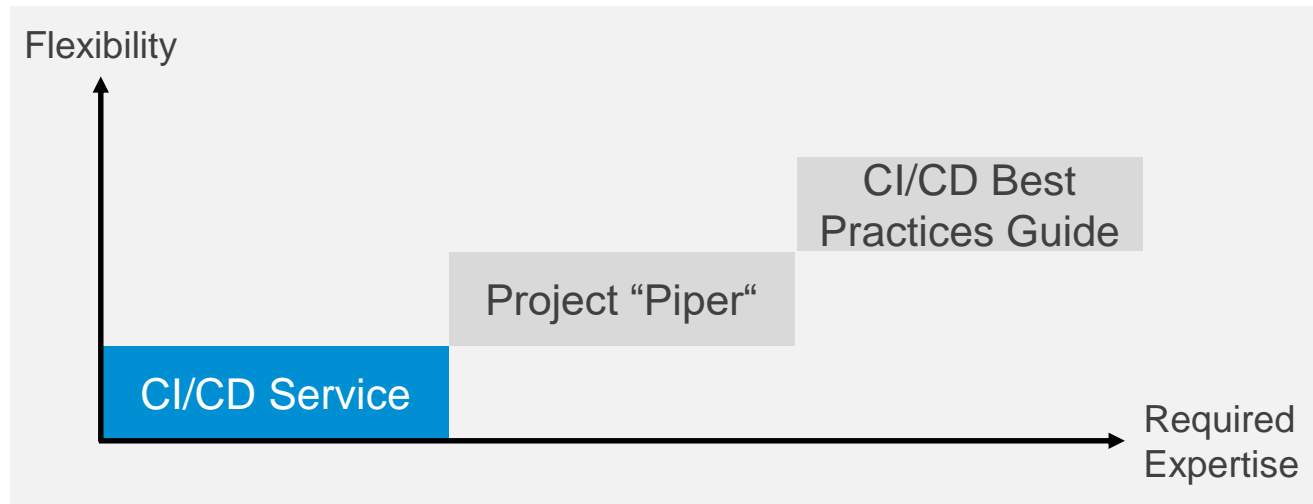
SAP Solutions for Continuous Integration and Delivery

Overview of CI/CD solutions by SAP



SAP Solutions for Continuous Integration and Delivery

Overview of CI/CD solutions by SAP

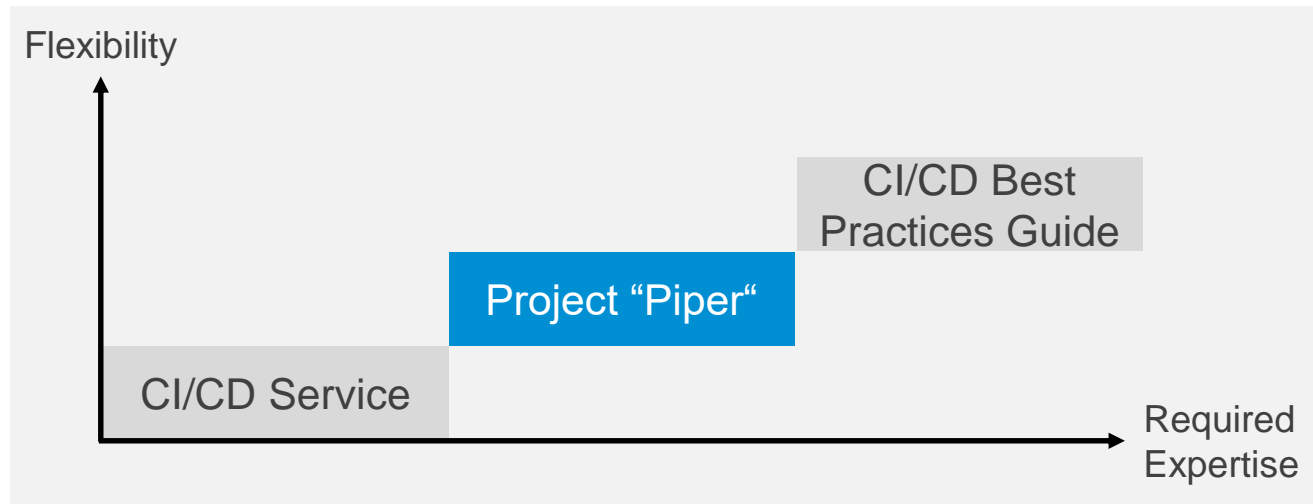


SAP Cloud Platform Continuous Integration and Delivery

- Simplifies your CI/CD setup through predefined pipelines that are ready to use
- Reduces the complexity as you don't need to set up any additional CI/CD infrastructure

SAP Solutions for Continuous Integration and Delivery

Overview of CI/CD solutions by SAP

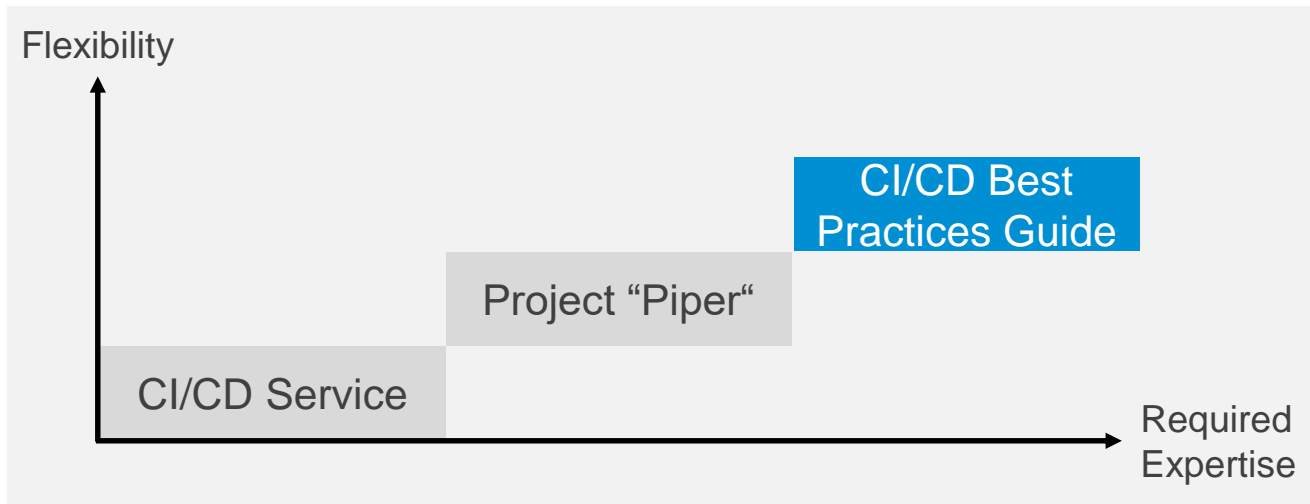


Project "Piper"

- Provides preconfigured Jenkins pipelines for your own Jenkins infrastructure
- Comes with a toolbox to build and enhance your own Jenkins pipelines
- Offers ready-to-use Docker images

SAP Solutions for Continuous Integration and Delivery

Overview of CI/CD solutions by SAP



Continuous Integration and Delivery Best Practices Guide

- Provides procedures to implement CI/CD pipelines on any CI/CD stack
- Demonstrates how to apply the principles of CI/CD to SAP-specific technologies.

SAP Solutions for Continuous Integration and Delivery

Overview of CI/CD solutions by SAP

CI/CD Service

SAP Cloud Platform
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Project “Piper”

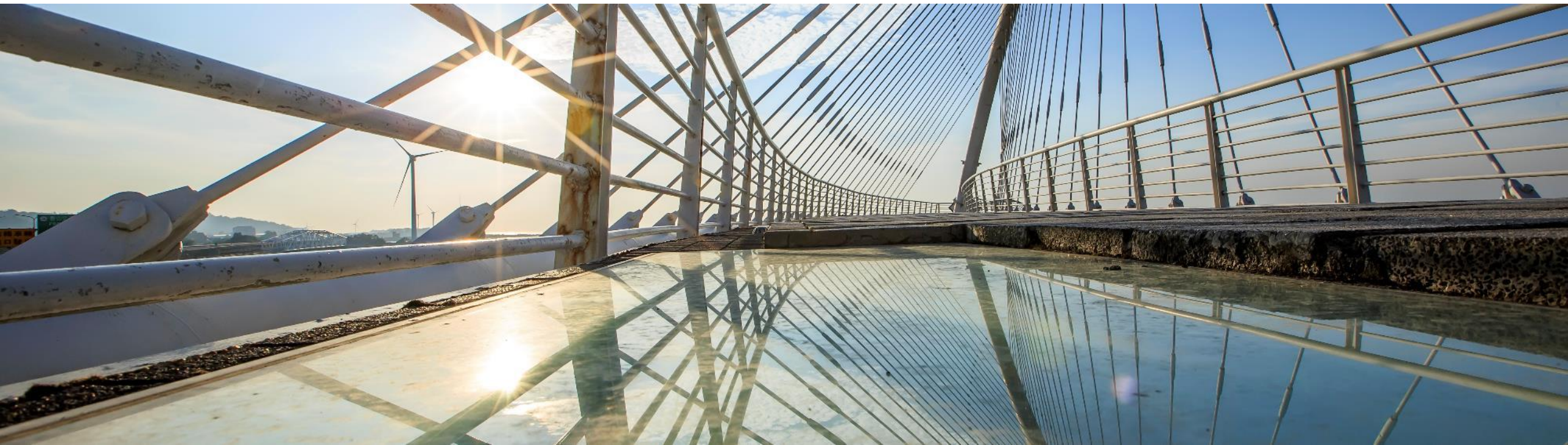
Project “Piper”

CI/CD Best
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SAP Cloud Platform

Continuous Integration and Delivery



SAP Cloud Platform Continuous Integration and Delivery

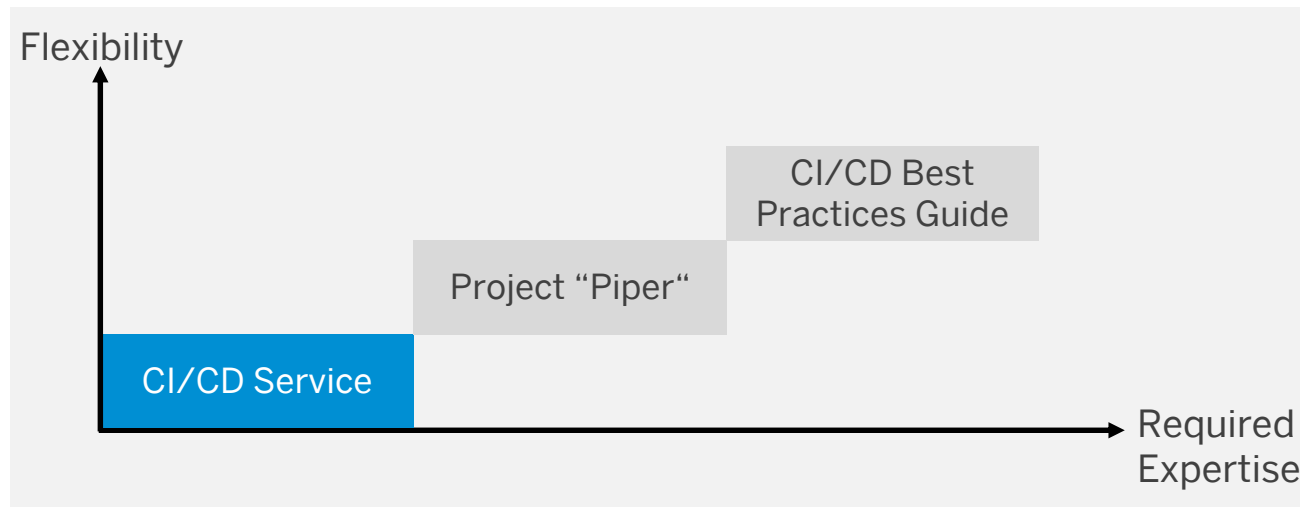
Our value proposition



Configure and run predefined pipelines for continuous integration and delivery.

SAP Cloud Platform Continuous Integration and Delivery

Our value proposition



- Simple onboarding for SAPUI5 projects and projects with the SAP Cloud Application Programming Model (CAP)
- No need to bring your own CI/CD infrastructure
- No in-depth knowledge about CI/CD required

SAP Cloud Platform Continuous Integration and Delivery

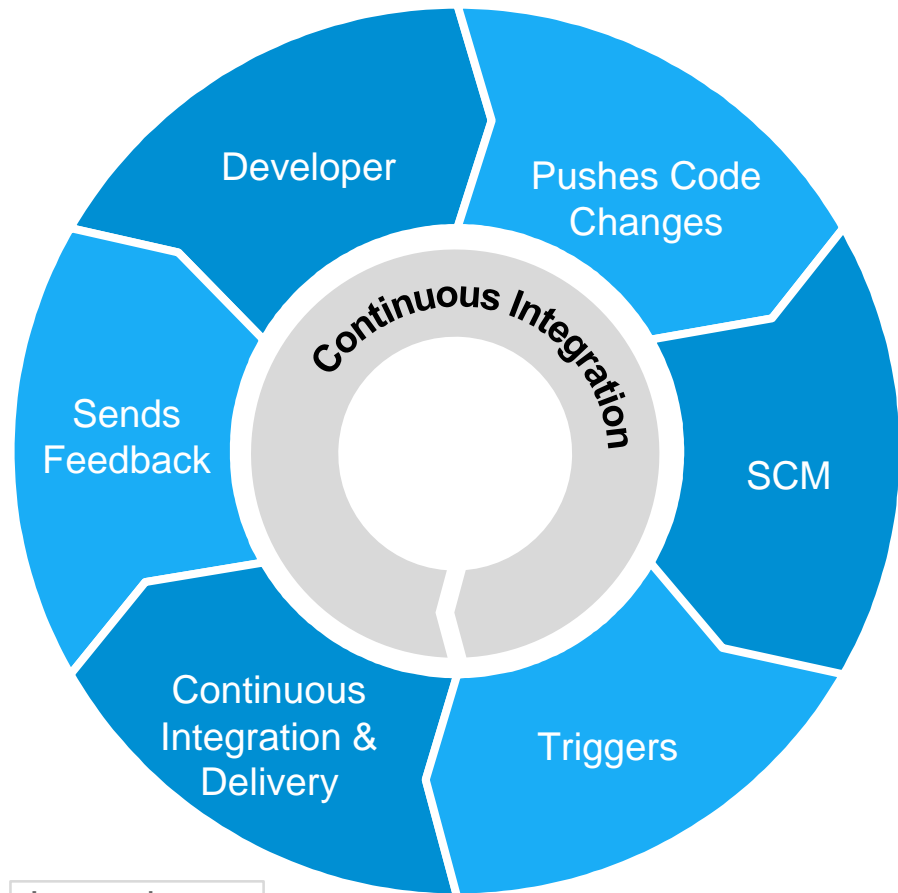
Our value proposition



- Configure predefined CI/CD pipelines
- Run predefined CI/CD pipelines
- Connect your GitHub.com repository
- Create and store credentials
- Monitor the build status

SAP Cloud Platform Continuous Integration and Delivery

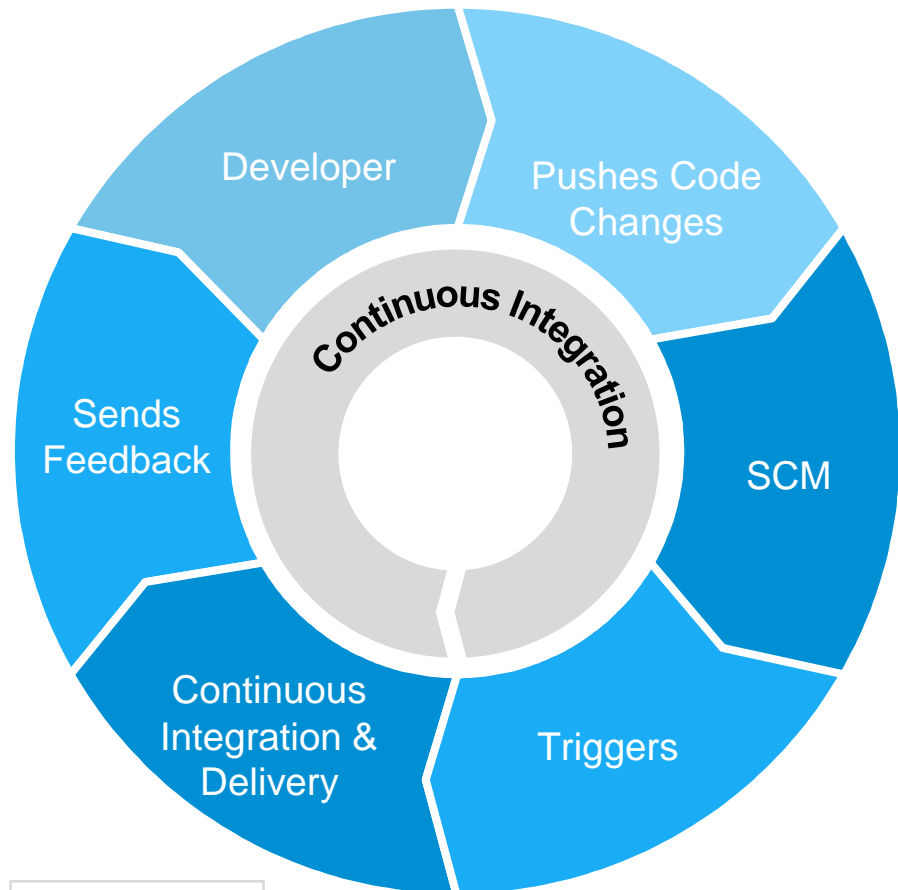
Basic flow of the Continuous Integration & Delivery service



Legend
■ Actor
■ Action

SAP Cloud Platform Continuous Integration and Delivery

Basic flow of the Continuous Integration & Delivery service

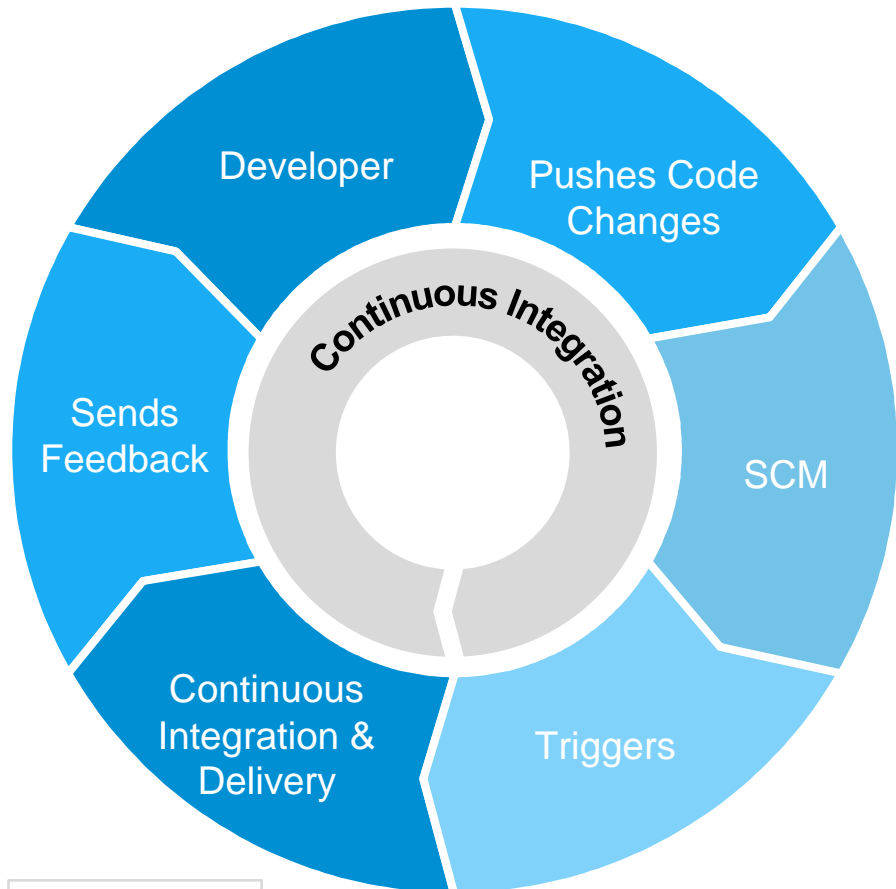


1. A developer pushes code changes into a central source code management (SCM).

Legend
■ Actor
■ Action

SAP Cloud Platform Continuous Integration and Delivery

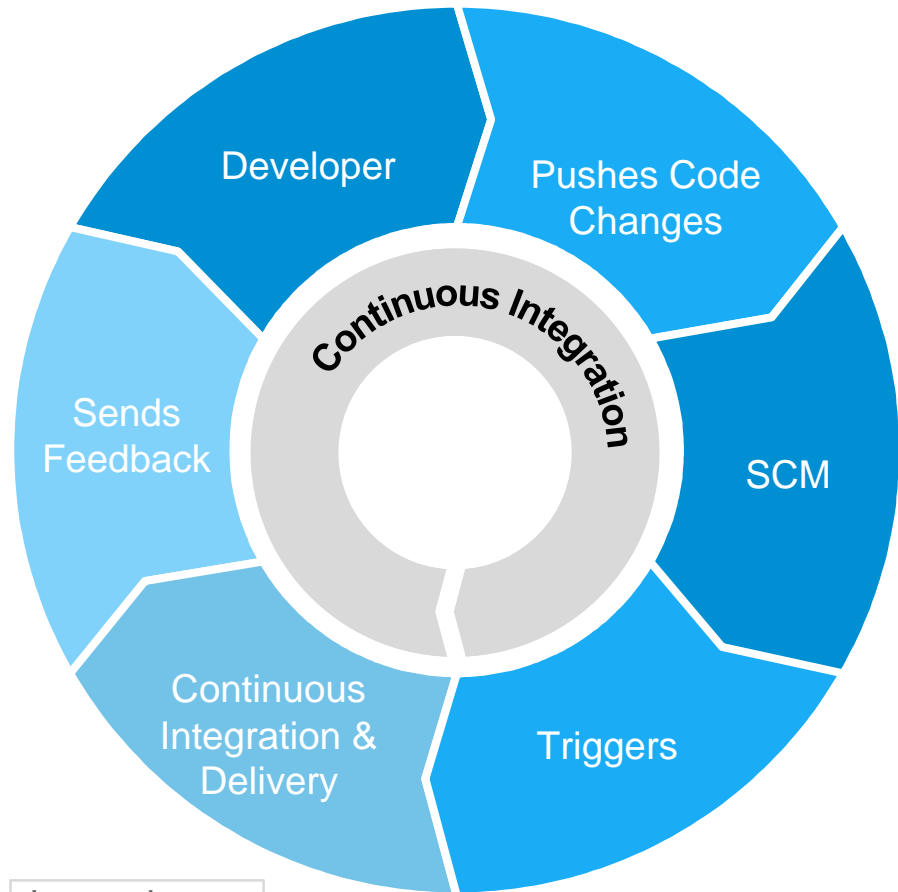
Basic flow of the Continuous Integration & Delivery service



1. A developer pushes code changes into a central source code management system (SCM).
2. The SCM triggers an event to which SAP Cloud Platform Continuous Integration and Delivery reacts.

SAP Cloud Platform Continuous Integration and Delivery

Basic flow of the Continuous Integration & Delivery service

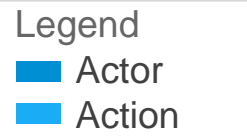
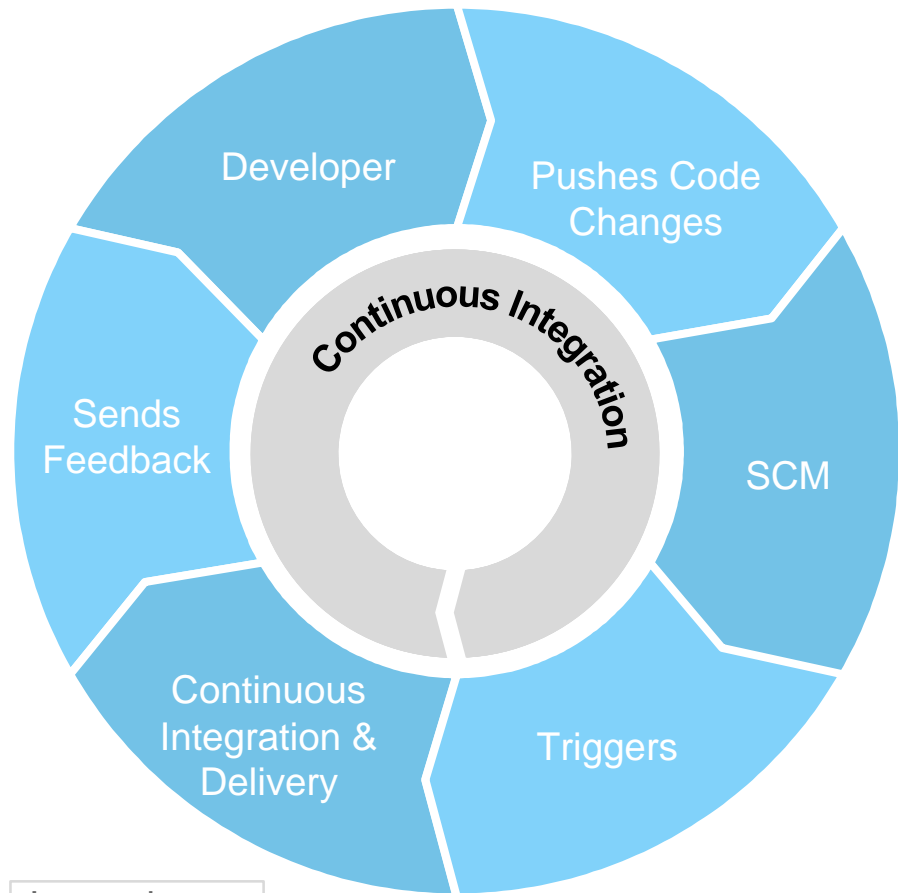


1. A developer pushes code changes into a central source code management system (SCM).
2. The SCM triggers an event to which SAP Cloud Platform Continuous Integration and Delivery reacts.
3. The Continuous Integration & Delivery service tests, builds, and deploys the code changes and provides feedback.

Legend
■ Actor
■ Action

SAP Cloud Platform Continuous Integration and Delivery

Basic flow of the Continuous Integration & Delivery service



DEMO



SAP Cloud Platform Continuous Integration and Delivery

Commercialization Information



- Runs in the following regions:
 - Europe (Frankfurt/EU10)
 - US East (VA/US10)

SAP Cloud Platform Continuous Integration and Delivery

Commercialization Information



- Follows the consumption-based license model CPEA (Cloud Platform Enterprise Agreement)
- 1€ per compute hour

SAP Cloud Platform Continuous Integration and Delivery Outlook



- Support further extension scenarios:
 - Functions deployed on SAP Cloud Platform with a serverless runtime
 - ABAP extensions on SAP Cloud Platform, ABAP environment
- Support on-premise SCM systems
- Integrate into the SAP Business Application Studio
- Subscription-based consumption through SAP Store

SAP Solutions for Continuous Integration and Delivery

Overview of CI/CD solutions by SAP

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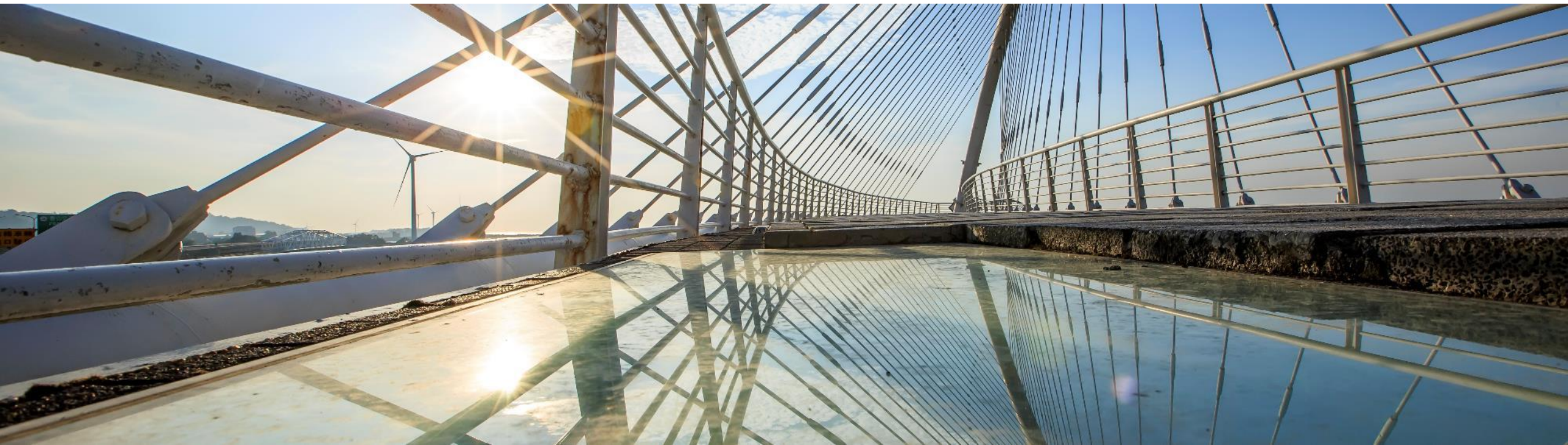
Project “Piper”

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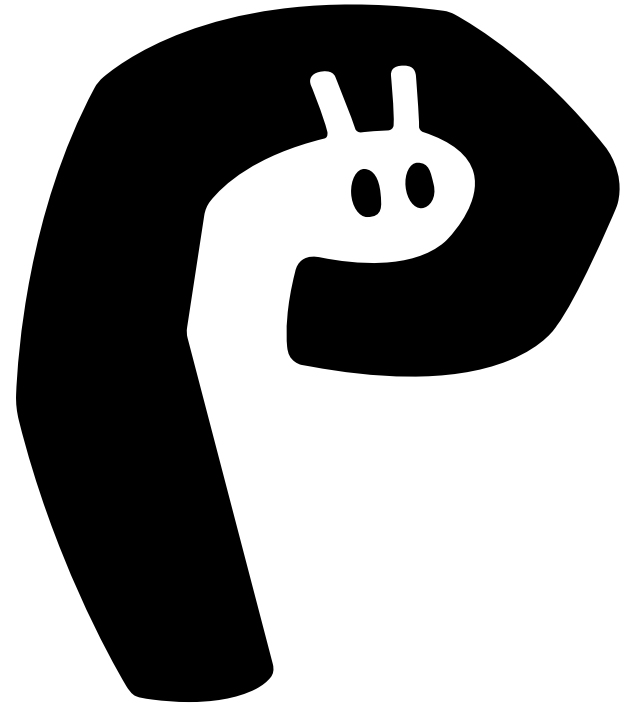
Project “Piper”



SAP Solutions for Continuous Integration and Delivery

Project “Piper”

- Open source project
- Lets you use and adapt preconfigured Jenkins pipelines
- Consists of two components:
 - A **shared library**, which contains preconfigured pipelines, steps, scenarios, and utilities
 - A **set of Docker images** that can be used to implement best practice processes



SAP Solutions for Continuous Integration and Delivery

Project “Piper”

The **shared library** is a toolbox that helps you to:

- Use preconfigured Jenkins pipelines
- Enhance and adapt existing pipelines
- Build your own Jenkins pipeline for CI/CD

The screenshot shows the GitHub repository page for "Project 'Piper': Continuous Delivery for the SAP Ecosystem". The page title is "Project 'Piper' User Documentation". The main content area is titled "What you get" and contains the following text: "Continuous delivery is a method to develop software with short feedback cycles. It is applicable to projects both for SAP Cloud Platform and SAP on-premise platforms. SAP implements tooling for continuous delivery in project 'Piper'. The goal of project 'Piper' is to substantially ease setting up continuous delivery in your project using SAP technologies." Below this, there is a section "What you get" with the text: "To get you started quickly, project 'Piper' offers you the following artifacts:" followed by a list of artifacts: "A set of ready-made Continuous Delivery pipelines for direct use in your project" (with sub-items: "ABAP Environment Pipeline", "General Purpose Pipeline", "SAP Cloud SDK Pipeline"), "A shared library that contains reusable step implementations, which enable you to customize our preconfigured pipelines, or to even build your own customized ones", and "A standalone command line utility for Linux and a GitHub Action" (with a note: "Note: This version is still in early development. Feel free to use it and provide feedback,"). On the right side, there is a "Table of contents" section with links to "What you get", "The best-practice way: Ready-made pipelines", "The do-it-yourself way: Build with Library", "Extensibility", and "API". On the left side, there is a navigation menu with links to "Home", "Getting Started With Project 'Piper'", "Configuration", "Infrastructure", "Pipelines" (with sub-items: "ABAP Environment pipeline", "General purpose pipeline", "SAP Cloud SDK pipeline"), "Scenarios", "Extensibility", and "Library steps" (with a list of steps like "abapAddOnAssemblyKitCheck...", "abapAddOnAssemblyKitCreat...", etc.).

SAP Solutions for Continuous Integration and Delivery

Project “Piper”

Docker Images

The following images are published on hub.docker.com:

Name	Description	Docker Image
Jenkins	Use a preconfigured Jenkins to run project “Piper” pipelines.	ppiper/jenkins-master
Cloud MTA Build Tool	Build multitarget applications with the Cloud MTA Build Tool .	devxci/mbtci
CM Client	Interact with SAP Solution Manager or CTS using the command line.	ppiper/cm-client
CloudFoundry CLI	Use command line tools for Cloud Foundry with plugins for blue-green deployment and MTA.	ppiper/cf-cli
Neo CLI	Use SAP Cloud Platform tools for Neo.	neo-cli/
Jenkinsfile Runner	Run a Jenkinsfile without a long-running, stateful Jenkins master. The Jenkinsfile Runner is based on ppiper/jenkins-master .	ppiper/jenkinsfile-runner
Life Cycle Container	Improve life-cycle management of the cx-server by using a sidecar image.	ppiper/cx-server-companion
Container Structure Test	Run container structure tests with a shell for ppiper/jenkins-master .	ppiper/container-structure-test
Node Browsers	Use web browsers for end-to-end tests of web applications in Jenkins pipelines.	node-browsers/
SAP HANA XS Advanced CLI	Use command line tools to deploy to SAP HANA XS Advanced.	Dockerfile

The **set of Docker images** provides you with required tools and environments.

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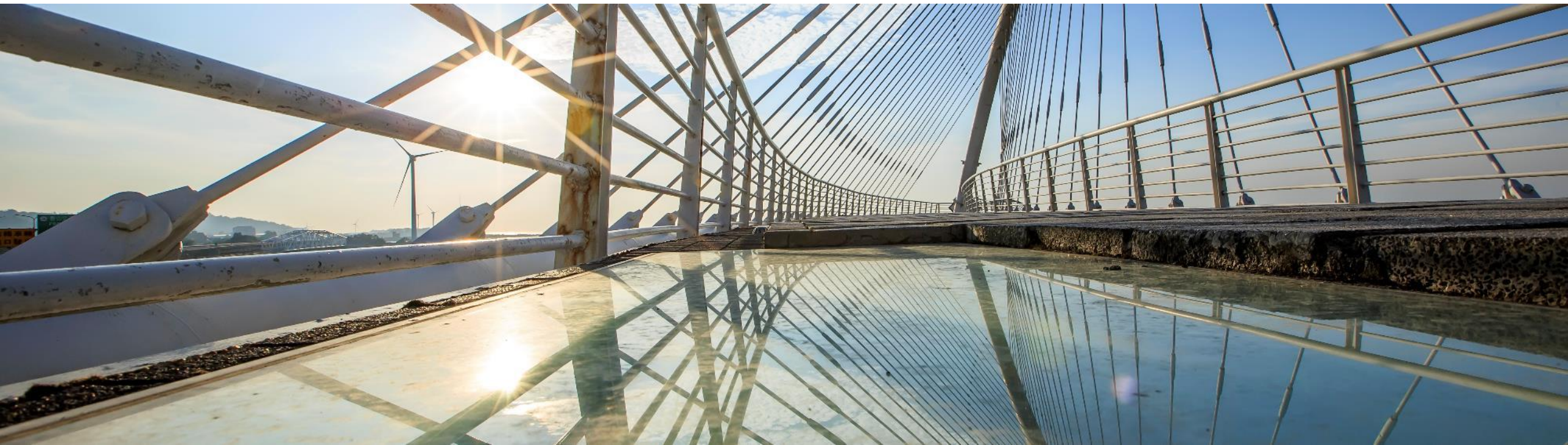
Project “Piper”

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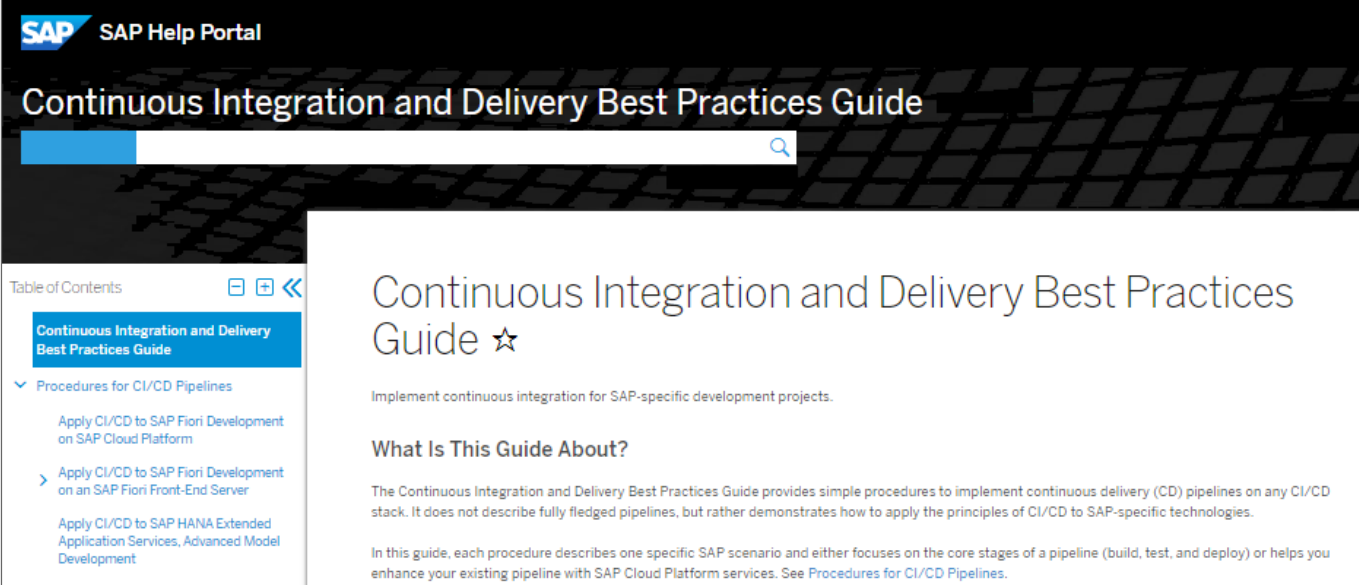
Continuous Integration and Delivery Best Practices Guide



SAP Solutions for Continuous Integration and Delivery

Continuous Integration and Delivery Best Practices Guide

- Guide on the SAP Help Portal
- No step-by-step tutorial
- Shows how to apply the principles of CI/CD to SAP-specific technologies
- Each procedure describes one specific SAP scenario



The screenshot shows the SAP Help Portal interface. At the top, the SAP logo and 'SAP Help Portal' are visible. Below that, the title 'Continuous Integration and Delivery Best Practices Guide' is displayed in a large font. A search bar is located below the title. On the left side, there is a 'Table of Contents' section with a blue header. The main content area on the right features the title 'Continuous Integration and Delivery Best Practices Guide ☆' and a sub-header 'What Is This Guide About?'. The text below the sub-header explains that the guide provides simple procedures to implement continuous delivery (CD) pipelines on any CI/CD stack and describes one specific SAP scenario for each procedure.

SAP Help Portal

Continuous Integration and Delivery Best Practices Guide

Table of Contents

- Continuous Integration and Delivery Best Practices Guide
- Procedures for CI/CD Pipelines
 - Apply CI/CD to SAP Fiori Development on SAP Cloud Platform
 - Apply CI/CD to SAP Fiori Development on an SAP Fiori Front-End Server
 - Apply CI/CD to SAP HANA Extended Application Services, Advanced Model Development

Continuous Integration and Delivery Best Practices Guide ☆

Implement continuous integration for SAP-specific development projects.

What Is This Guide About?

The Continuous Integration and Delivery Best Practices Guide provides simple procedures to implement continuous delivery (CD) pipelines on any CI/CD stack. It does not describe fully fledged pipelines, but rather demonstrates how to apply the principles of CI/CD to SAP-specific technologies.

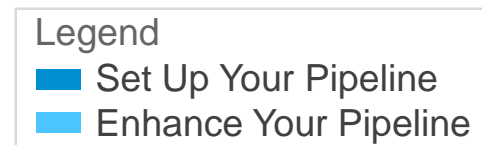
In this guide, each procedure describes one specific SAP scenario and either focuses on the core stages of a pipeline (build, test, and deploy) or helps you enhance your existing pipeline with SAP Cloud Platform services. See [Procedures for CI/CD Pipelines](#).

SAP Solutions for Continuous Integration and Delivery

Continuous Integration and Delivery Best Practices Guide

Two kinds of procedures:

- Set up your pipeline
- Enhance your pipeline



Have you found your **ideal SAP solution for CI/CD,**
yet?

SAP Solutions for Continuous Integration and Delivery

Which SAP solution for CI/CD meets your needs?

We've created **decision support** on the SAP Help Portal that comprises:

- An overview and comparison of our CI/CD solutions
- A table that matches development scenarios with our corresponding offerings

Which SAP Solution for CI/CD Meets Your Needs?

Find your appropriate SAP solution for continuous integration and delivery.

The following table shows which development scenarios are covered by which SAP solutions for CI/CD. Look for your specific use case to get a link to our appropriate solution.

→ Tip
In the table, use the search options to quickly find what you are looking for.

CI/CD Scenarios and Matching Offerings by SAP

Show entries. Previous 1 Next Search:

Development Scenario	Environment	SAP Cloud Platform Continuous Integration and Delivery	Project "Piper"	Continuous Integration and Delivery Best Practices Guide
<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Developing applications with the SAP Cloud Application Programming Model	Cloud Foundry	See sap-cloud-sdk .	See Build and Deploy SAP Cloud Application Programming Model Applications # .	-
Developing hybrid SAP Fiori and Android/iOS applications with the	-	-	-	See SAP Fiori Hybrid Apps with SAP Mobile Platform # .

SAP Solutions for Continuous Integration and Delivery

Further reading

- [SAP Cloud Platform Continuous Integration and Delivery](#)
- [Discovery Center: SAP Cloud Platform Continuous Integration and Delivery](#)
- [Continuous Integration and Delivery by SAP](#)
- [SAP Solutions for Continuous Integration and Delivery](#)
- [Project “Piper”](#)
- [Continuous Integration and Delivery Best Practices Guide](#)

Thank you.

Contact information:

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Partner logo

THE BEST RUN 