



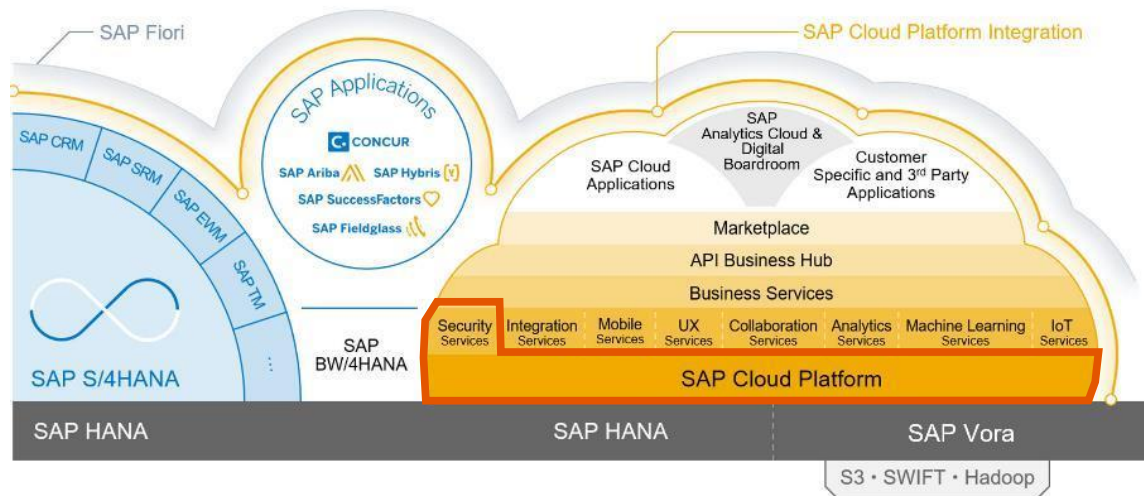
Week 6: Additional Topics

Unit 3: Cloud-Native Operations with SAP Cloud Platform

Cloud-Native Operations with SAP Cloud Platform

SAP Cloud Platform Identity Authentication

SAP Cloud Platform offers an end-to-end identity and access management (IAM) solution as a service that helps companies improve the security of their cloud business processes



SAP Cloud Platform Identity Authentication

- Simple and secure access to web-based applications
- Enterprise features such as password policies and multi-factor and risk-based authentication
- On-premise user store integration
- Easy consumer and partner on-boarding via self-services



SAP Cloud Platform core security services

- Federated authorization & trust management
- Secure password and keystore services
- Application and platform identity provider management
- Custom platform roles



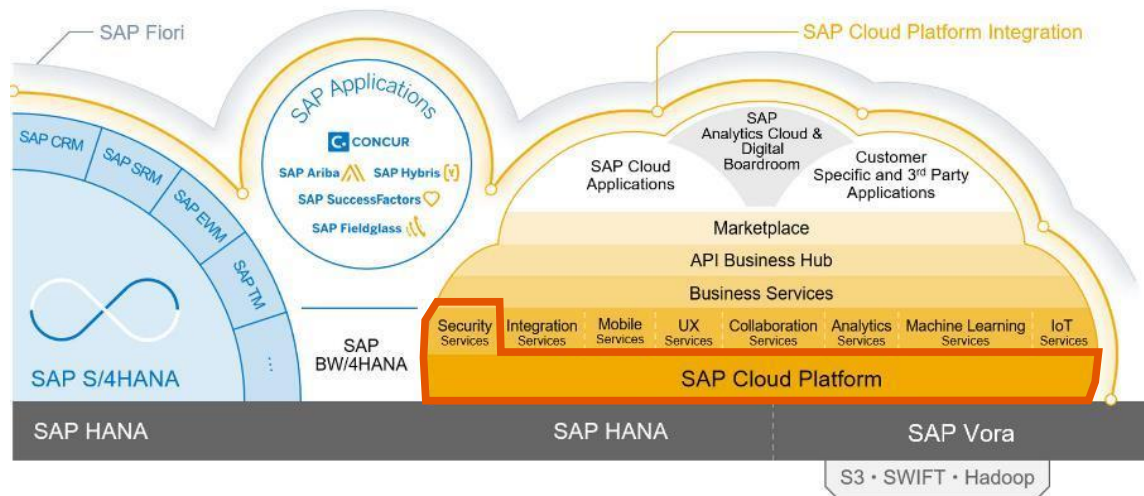
SAP Cloud Platform Identity Provisioning

- Automatically sets up and manages user accounts and authorizations in an end-to-end identity lifecycle
- Re-uses existing on-premise and cloud user stores
- Integrates with SAP Identity Management

Cloud-Native Operations with SAP Cloud Platform

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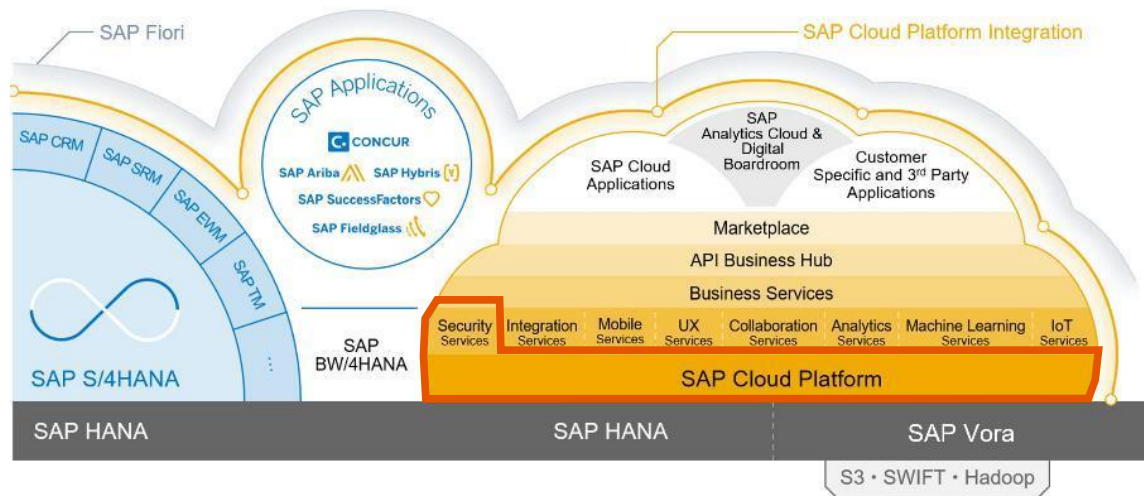
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Cloud-Native Operations with SAP Cloud Platform

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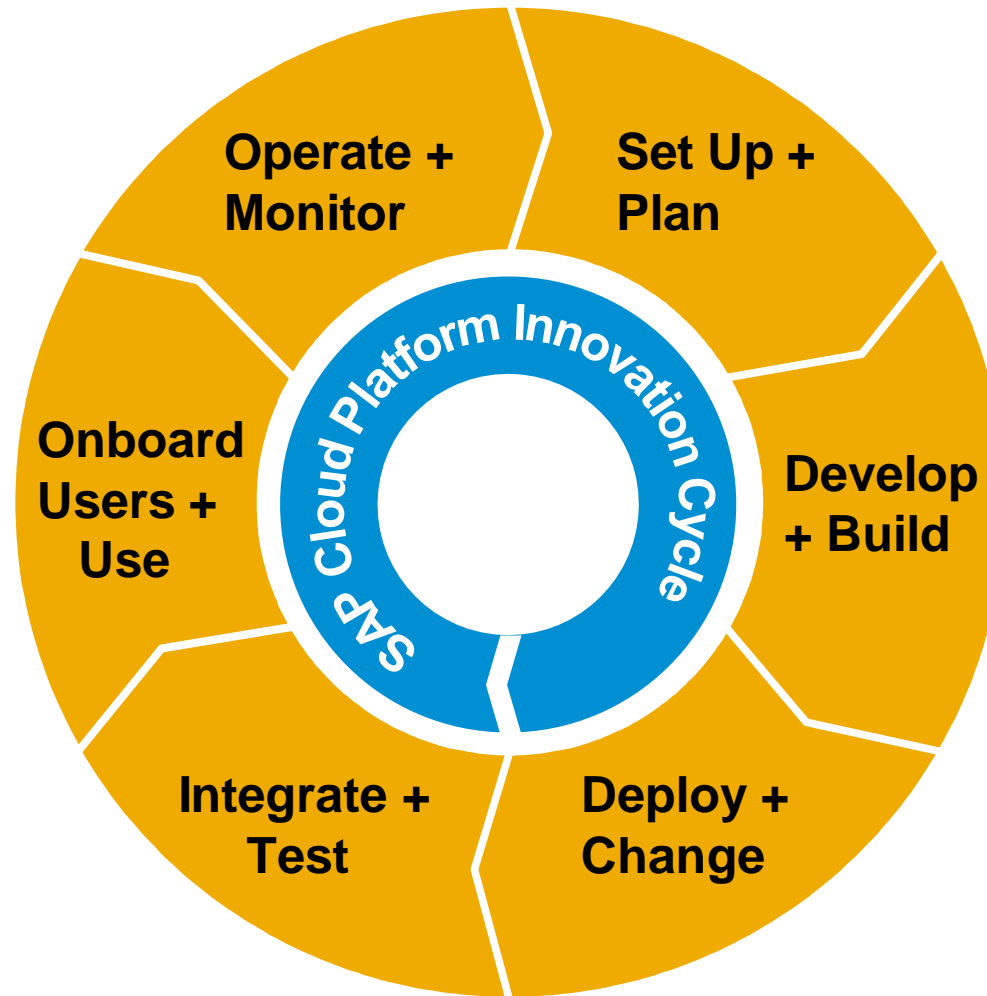


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Cloud-Native Operations with SAP Cloud Platform

Typical lifecycle phases for SAP Cloud Platform applications



Cloud-Native Operations with SAP Cloud Platform

Lifecycle Management and Continuous Integration and Delivery topic overview

Lifecycle Management Basics

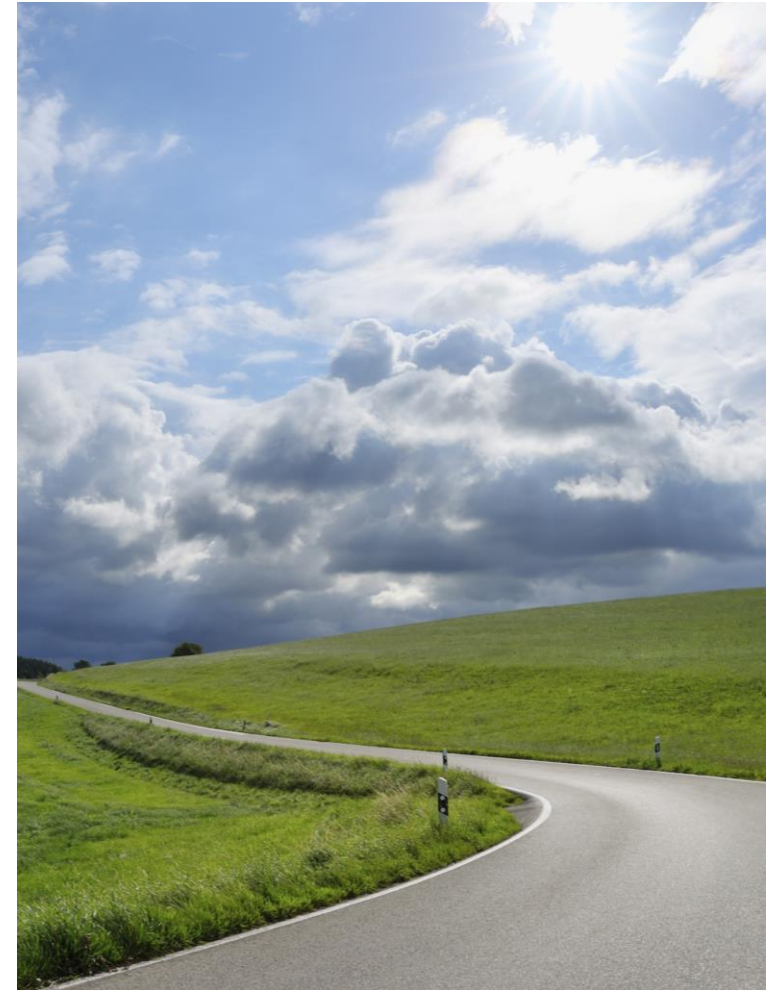
- Change management options
- Account setup
- Multitarget applications

Lifecycle Management Hybrid Scenarios

- Enhanced Change and Transport System (CTS+)
- Integration into higher-level change management tools
- Hybrid supportability

Continuous Integration and Delivery

- CI components
- CI setup
- Combining CI and change management



Cloud-Native Operations with SAP Cloud Platform

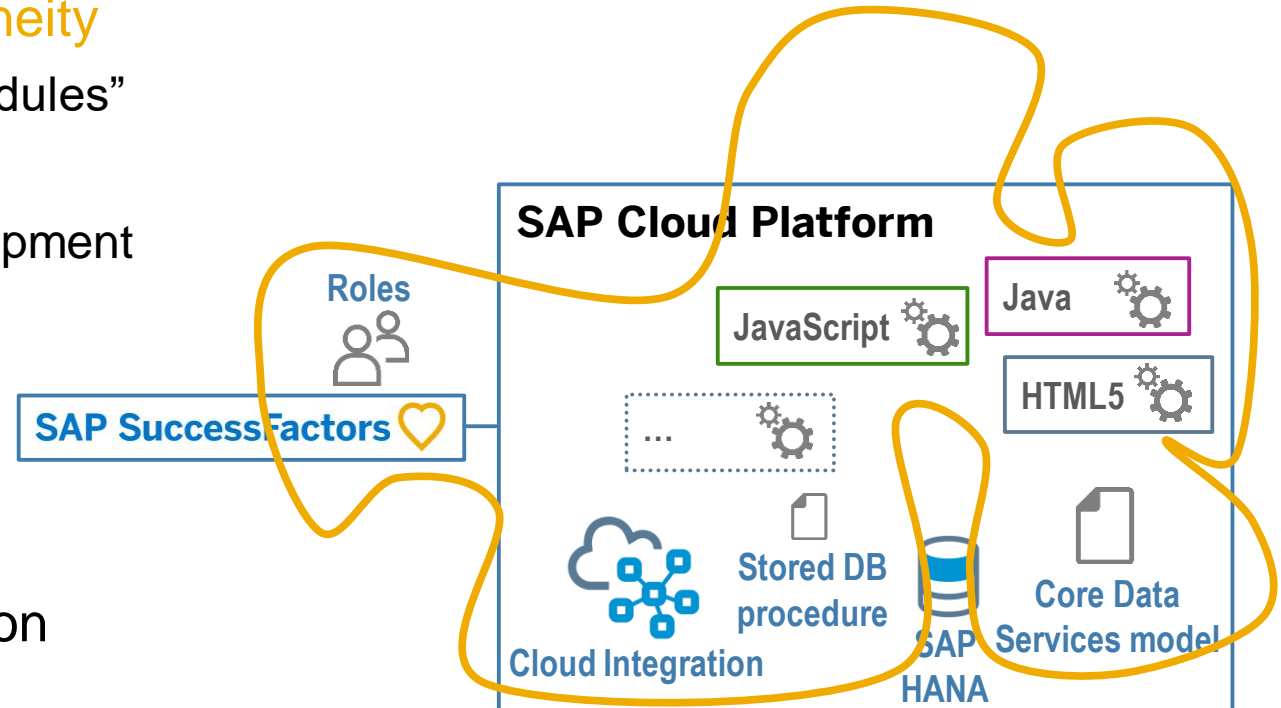
Multitarget application (MTA) concept: motivation – Heterogeneity of cloud software...

Cloud applications often show a **high heterogeneity**

- consisting of multiple interdependent software “modules”
- written in different languages (polyglot)
- using multiple programming paradigms and development tools
- deployed to multiple target runtimes
- involving different products

As modules provide a single coherent application purpose, shared **single lifecycle** is desired

- to deploy all parts together, in the right order, automatically
- to manage configuration of complete solution

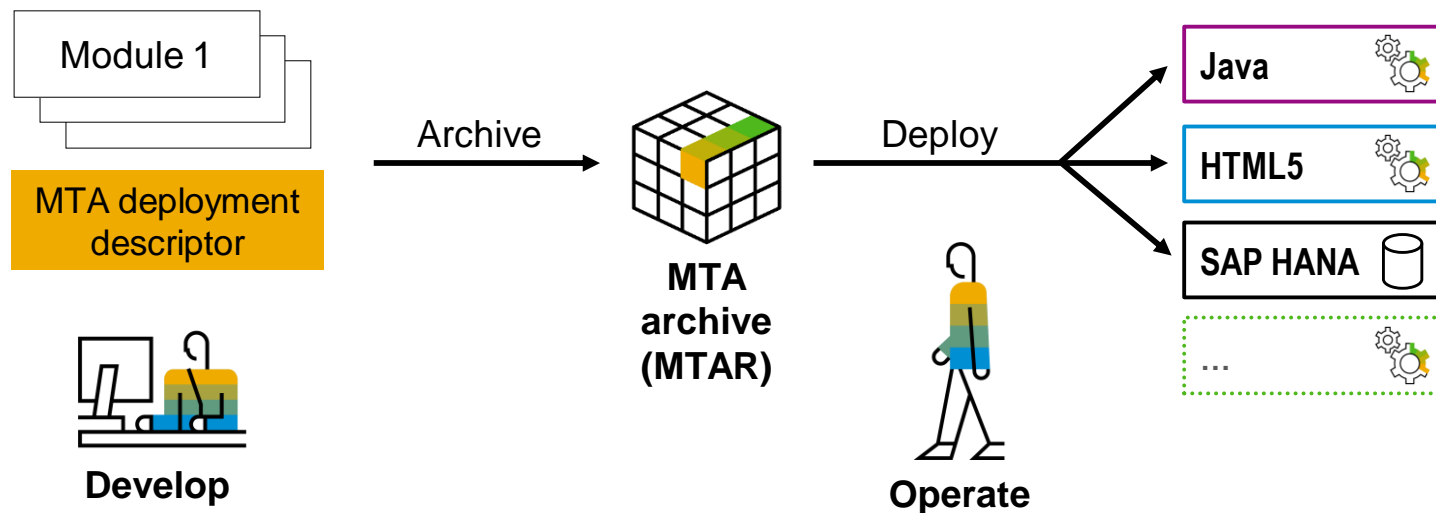


Cloud-Native Operations with SAP Cloud Platform

Multitarget application (MTA) concept and our approach to tackling it

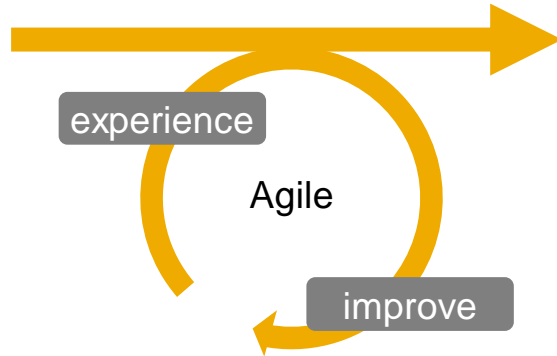
To ease handling of such a combined single lifecycle, SAP introduced **multitarget applications** (MTAs)

- Hand-over artifact between development and operation + delivery construct for partners
- Can be delivered, transported, linked to SAP software components, and deployed
- Process can be automated in a *continuous integration* pipeline
- For more information about MTAs, see [SAP Help Portal](#)



Cloud-Native Operations with SAP Cloud Platform

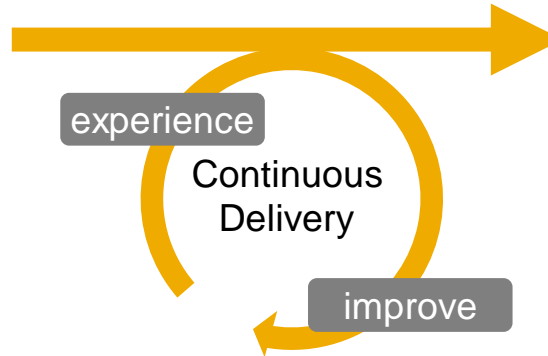
Continuous integration and delivery – It's not just a technical transformation



Foundation

for continuous delivery

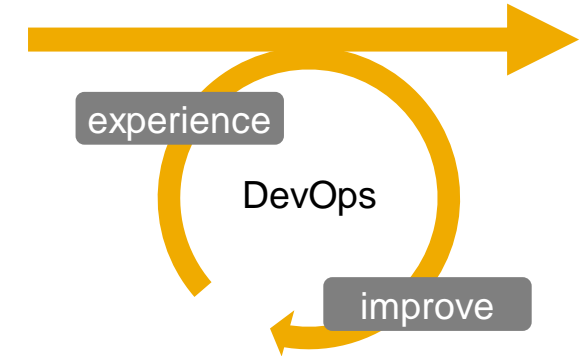
Skills and methods to do
the right things
and do things right



Process

for continuous delivery

Process to get changes into
production – fast – safely –
sustainably



Accelerator

for continuous delivery

Close cross-function
collaboration
to gain speed

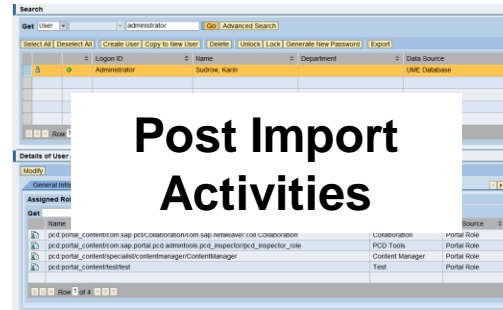
Cloud-Native Operations with SAP Cloud Platform

Enhanced Change and Transport System (CTS+) basics: sample landscape

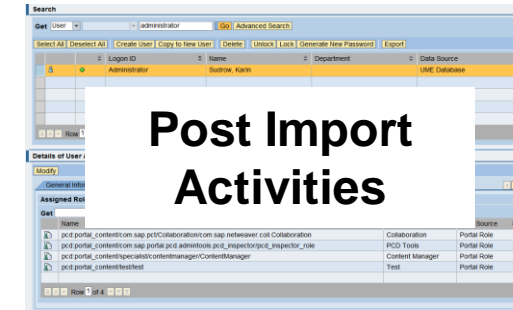
D-System



Q-System



P-System



Application Landscape

Create transport request

Automatic import

Automatic import

Transport Request

Transport

Start Import

Transport

Start Import

CTS+

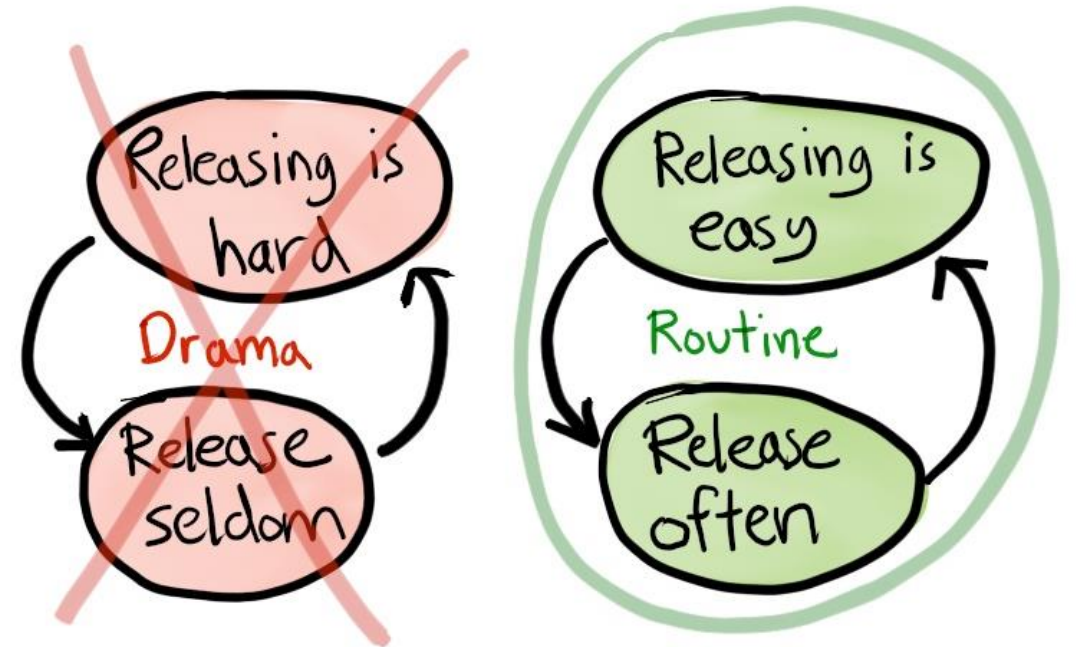
One central transport tool

Cloud-Native Operations with SAP Cloud Platform

Continuous integration and delivery – Necessary steps

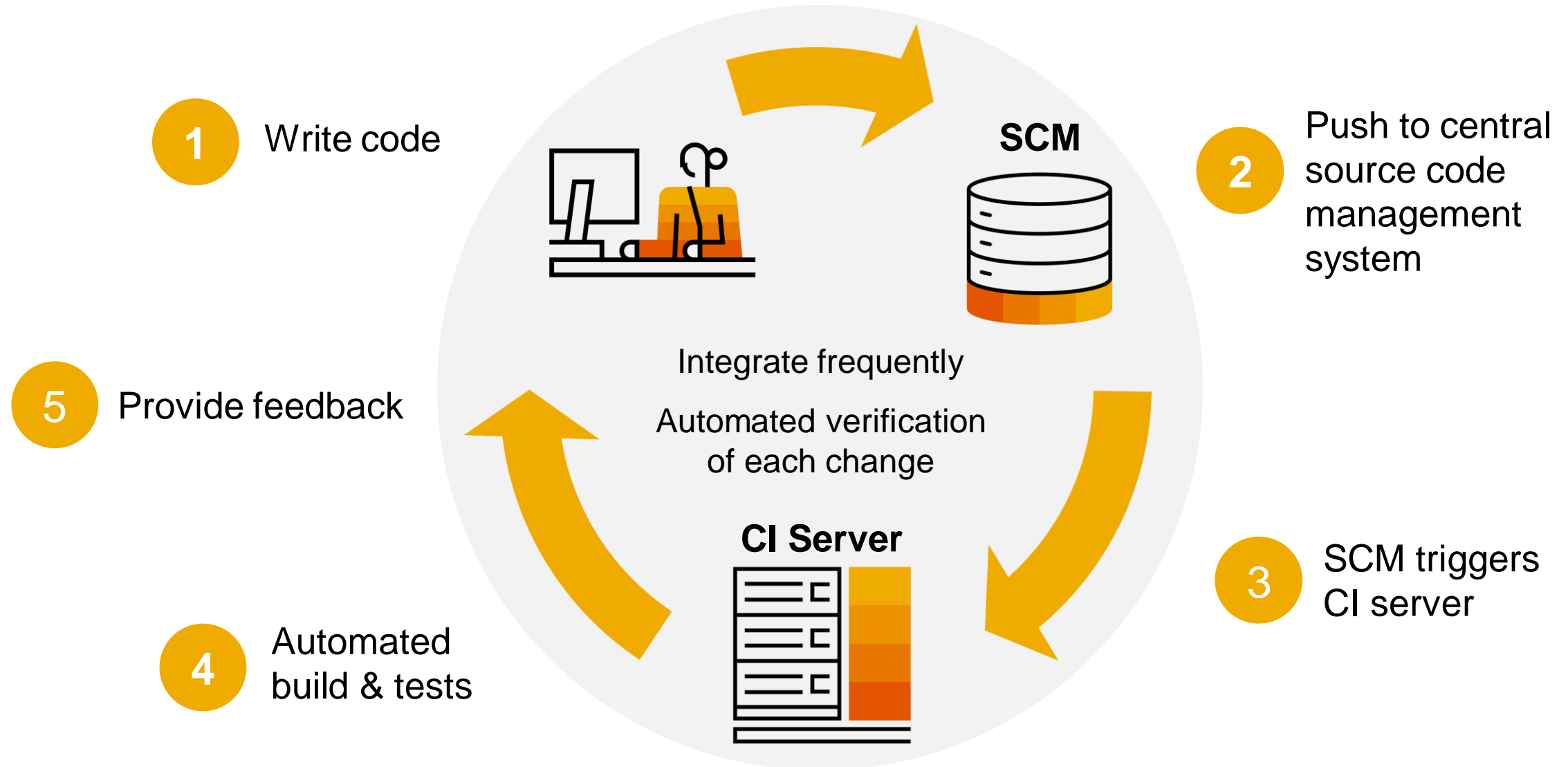
If you want to run in DevOps mode, it's advisable to implement a highly-automated agile development process to ensure speed and quality

- Maintain a code repository
- Automate the build (scriptable MTA archive builder available)
- Make the build self-testing
- Every commit (to baseline) should be built
- Everyone can see the results of the latest build
- Automate the deployment



Cloud-Native Operations with SAP Cloud Platform

Continuous integration: basic flow

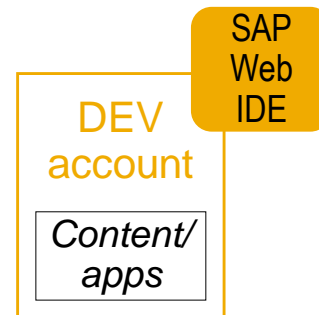
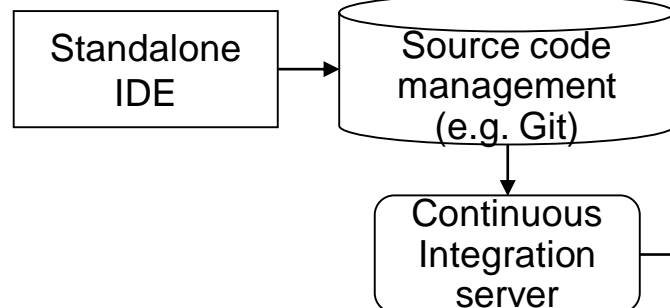
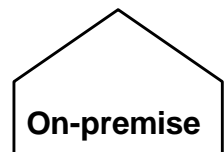


Cloud-Native Operations with SAP Cloud Platform

Combining continuous integration and change management

Development

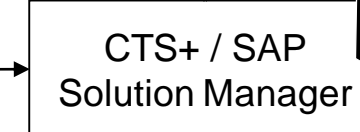
- Based on *continuous integration* principles
- Verification of single developer change
- Typically fully automated (incl. attachment of MTA to transport request)



MTA
archive

Production deployment

- Based on strict *change management* rules
- Verification of release candidate version
- Typically done with manual confirmation



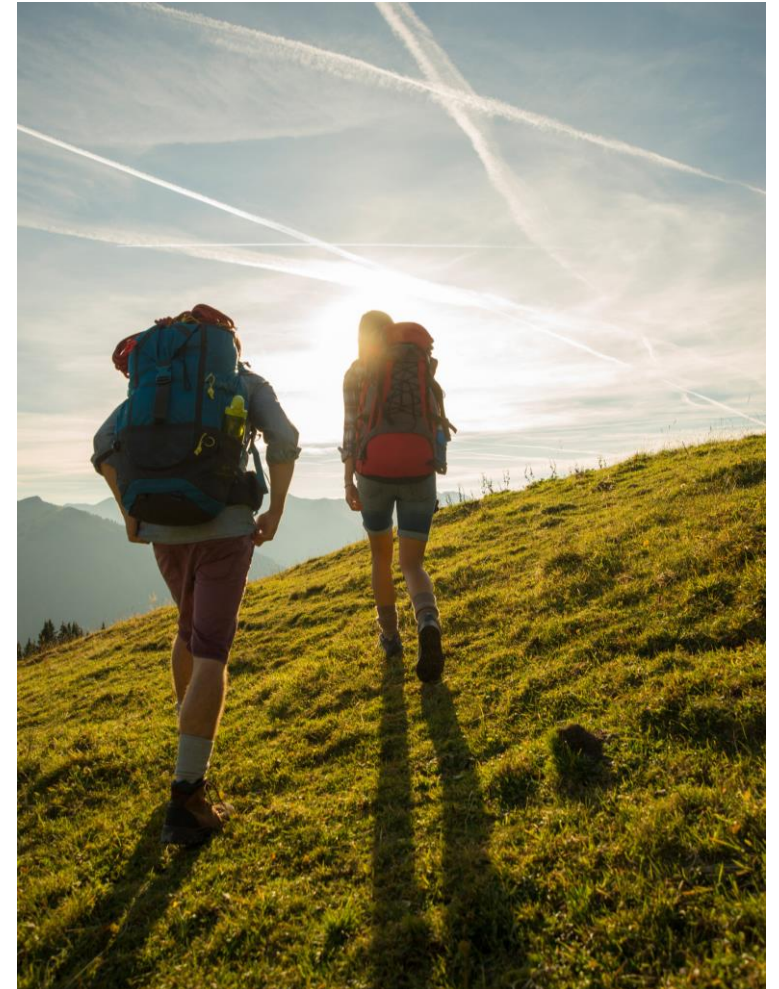
Cloud-Native Operations with SAP Cloud Platform

Further reading



Additional Material

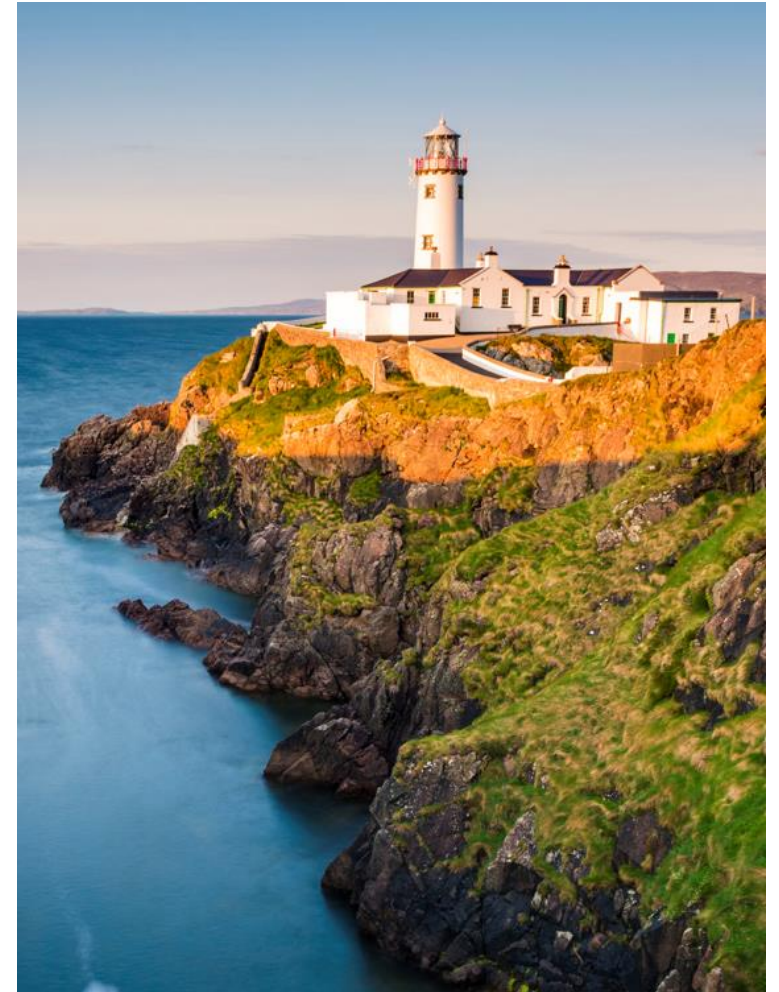
- [openSAP course: Cloud-Native Operations with SAP Cloud Platform](#)
- [SAP Cloud Platform Identity Authentication](#)
- [SAP Cloud Platform Identity Provisioning](#)
- [The Multi-Target Application Model](#)
- [Deploying SHINE on the Cloud Foundry Environment within SAP Cloud Platform](#)
- [How To... Configure HCP for CTS](#)
- [Continuous Integration \(CI\) Best Practices with SAP – Introduction and Navigator](#)



Cloud-Native Operations with SAP Cloud Platform

What you've learned in this unit

- What the openSAP course Cloud-Native Operations with SAP Cloud Platform is all about
- SAP Cloud Platform identity and access management services
- Typical lifecycle phases for SAP Cloud Platform applications
- Multitarget application (MTA) concept
- Enhanced Change and Transport System (CTS+)
- Continuous integration (CI)
- Combination of CI and CTS+



Thank you.

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