

DEV208

DevOps for ABAP? Try Git-Enabled Change and Transport System

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PUBLIC

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Agenda

Basics

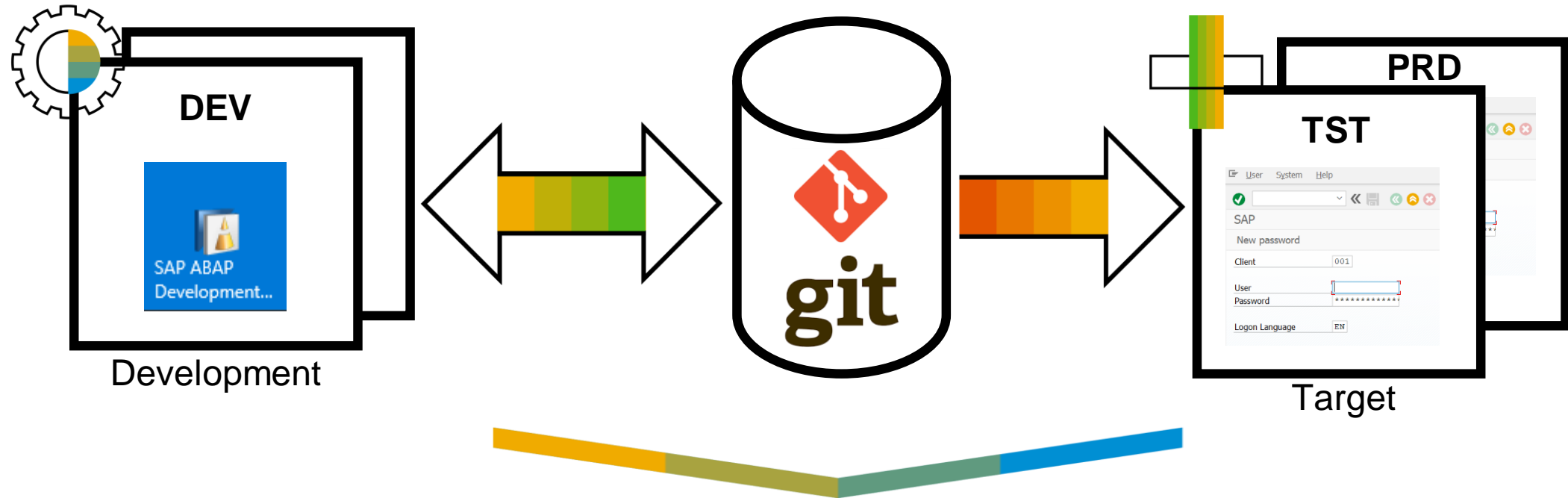
News

Demo

Basics



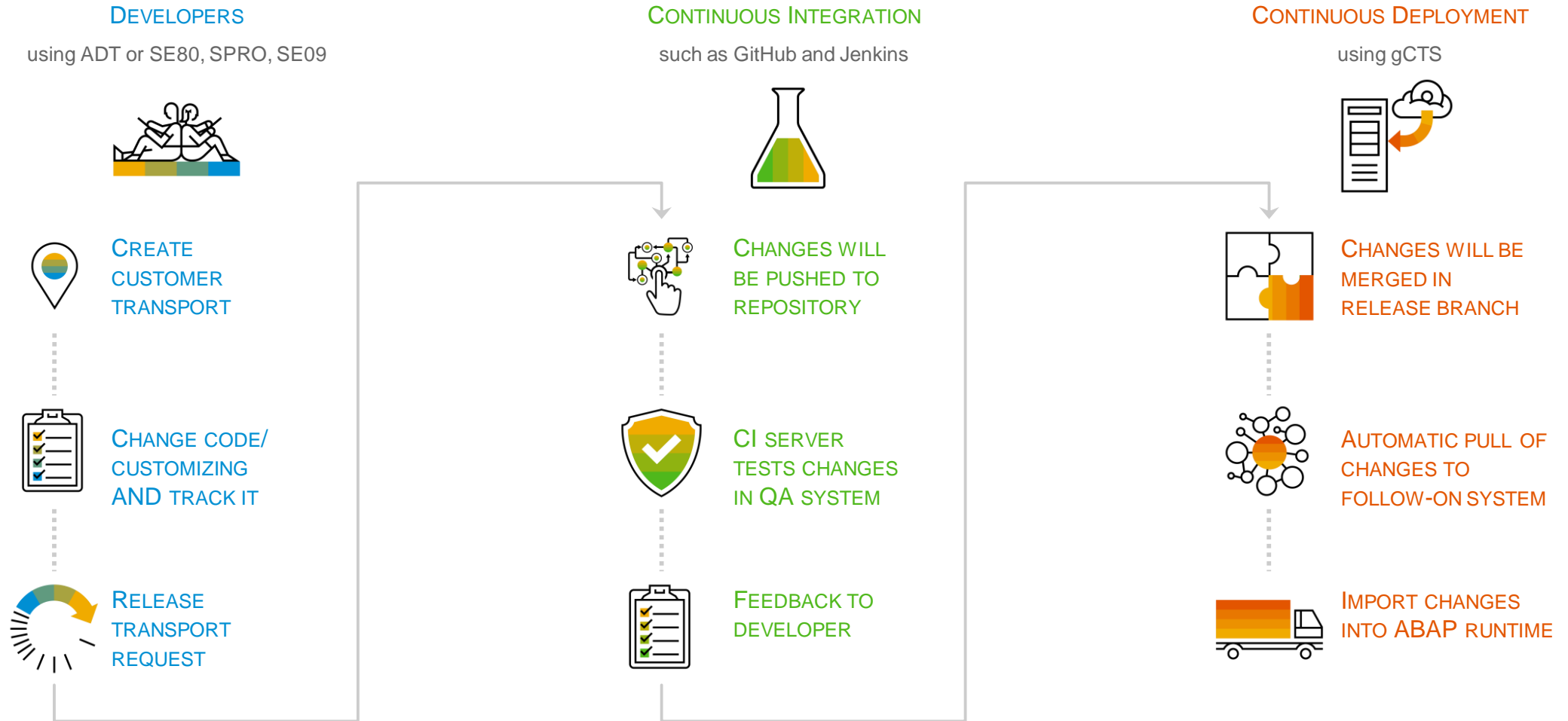
Our idea...



$$\text{CTS}^* + \text{git} = \text{gCTS}$$

* Change and transport system

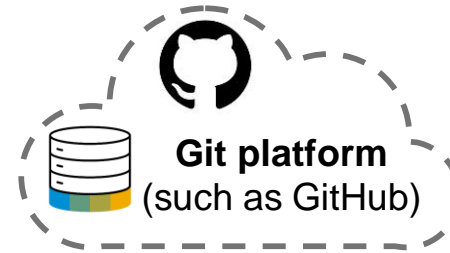
New ABAP software lifecycle process



Which systems do I need?

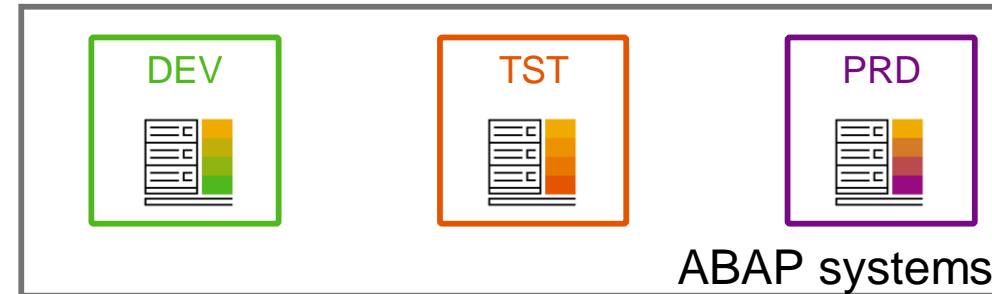
Git platform

- To host your repositories



ABAP systems

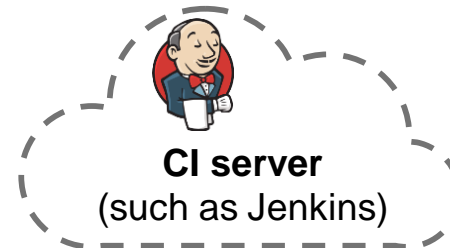
- For example: development, test and production system



MUST

CI server

- To host your pipelines

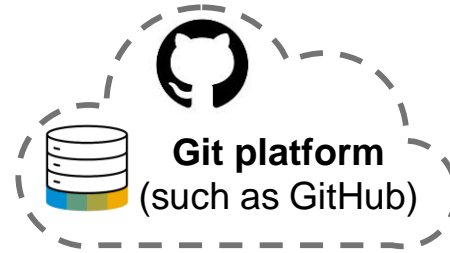


optional

What do I need to install on these systems?

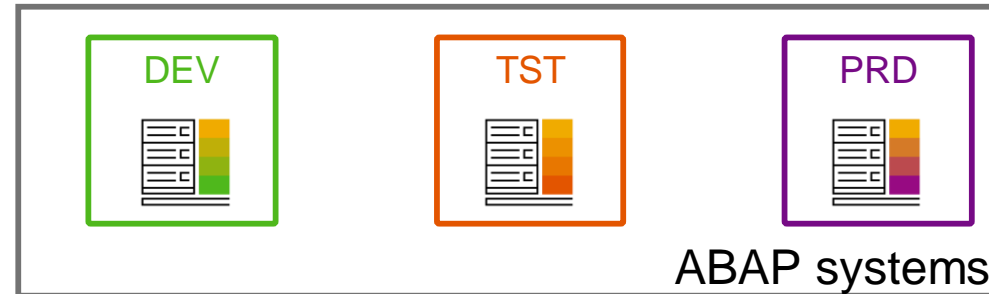
Git platform

- (Nothing special)
- Can be, for example, GitHub, GitLab, CodeBucket, AWS Code Commit



ABAP systems

- SAP S/4HANA 1909 (2020 for customizing support)
- [SapMachine](#) Version 11 or comparable JRE
- Some notes (depending on SP)

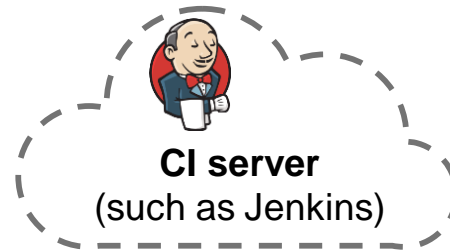


MUST

optional

CI server

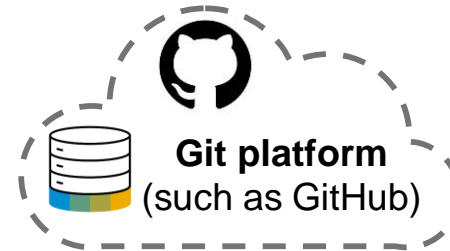
- (Nothing special – you can use pipeline steps provided in project “Piper”)



What do I have to configure on these systems?

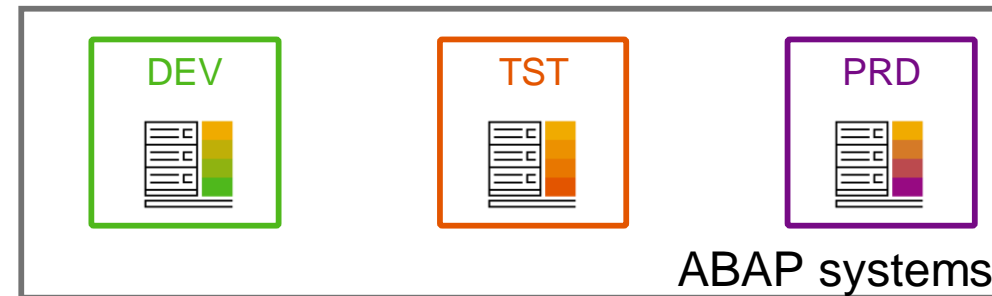
Git platform

- Create repository (with initial commit)



ABAP systems

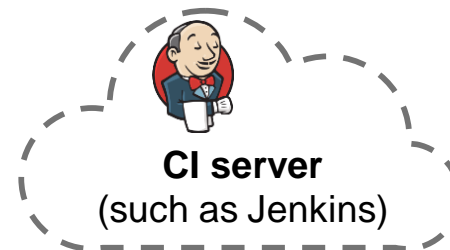
- [gCTS SAP Fiori UI](#)
- [Authorizations](#)
- [Set parameters, initialize systems](#)
- [Clone repository](#)
- [Create branches](#)



MUST
optional

CI server

- Define pipeline

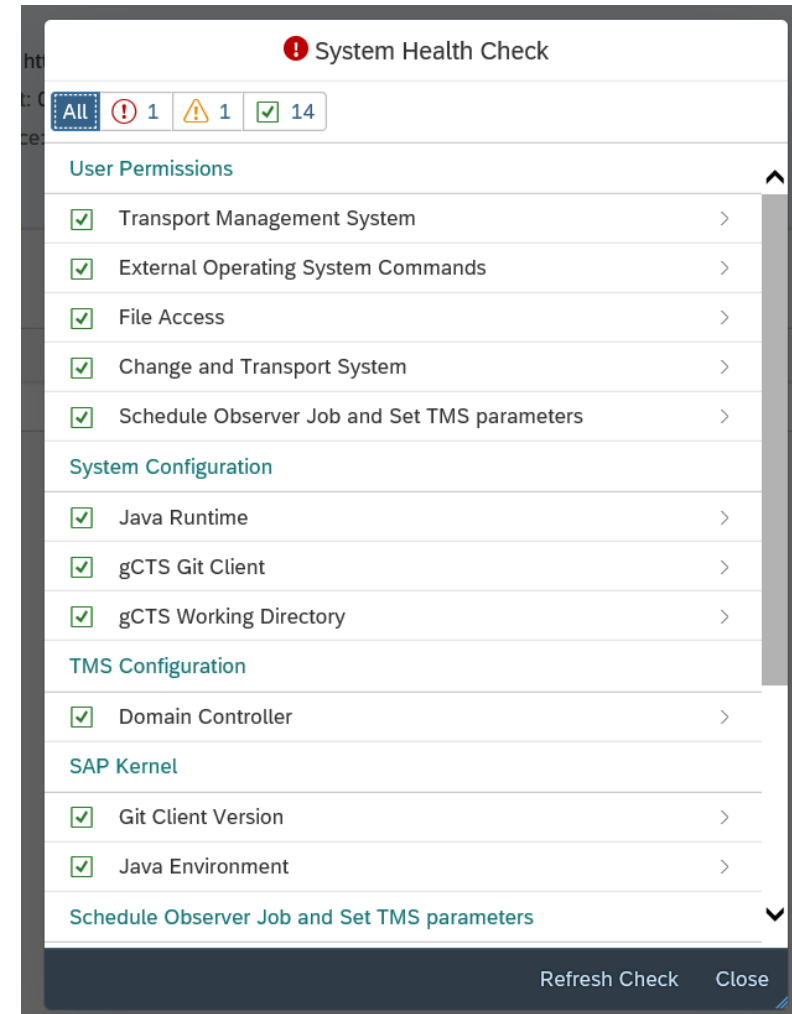


News



Health check

- Shows information about gCTS configuration, permissions,...
- Can be filtered by level
- Available with SAP S/4HANA 2020, requires implementation of SAP Notes in SAP S/4HANA 1909 – check [SAP Note 2821718](#)



Wizard to support you with the initial setup

- Guides through main configuration steps to enable a system for gCTS
- Executes health check at the end
- Available with S/4HANA 2020, requires implementation of SAP Notes in SAP S/4HANA 1909 – check SAP Note [2821718](#)

Wizard to Enable gCTS in Current System

1 Set Working Directory for Repositories — 2 Set Java Runtime — 3 Set Path to Git client — 4 Schedule Observer Job and Set TMS parameters — 5

1. Set Working Directory for Repositories

gCTS requires a working directory to store files in local repositories in the file system of the application server. Enter the path to the working directory. The path must exist and end with 'gcts'. The value you enter here will be saved as the value of the configuration parameter VCS_PATH.

Save

Close

Adding customizing to gCTS

- Choose the vSID that you created as target for the transport request

Technical background

- TDAT and VDAT are enabled
- TABU: Deletion of single entries is enabled

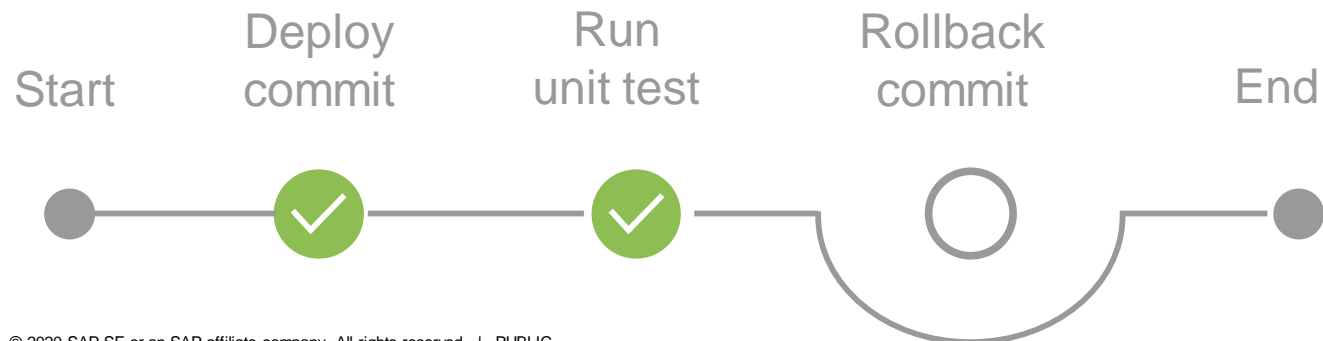
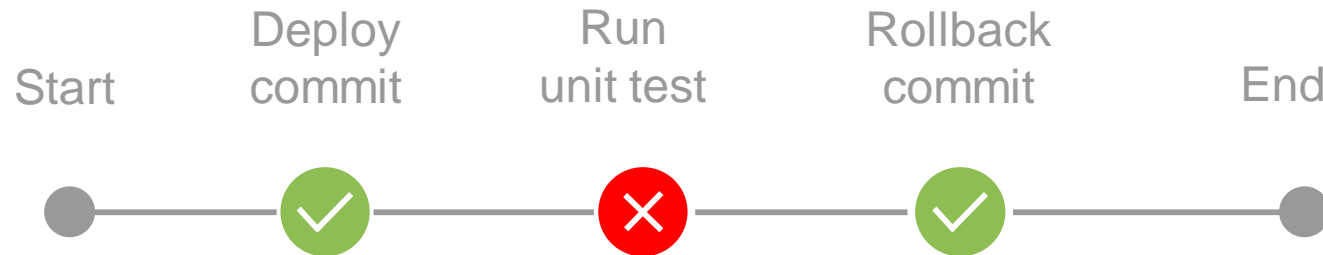
The screenshot shows the 'Create Request' dialog box in SAP. The 'Request' field is set to 'Customizing request'. The 'Short Description' field is highlighted in yellow and contains the text 'Customizing to gCTS'. The 'Project' field is empty. The 'Owner' field is empty. The 'Status' field is set to 'New'. The 'Last changed' field shows the date '23.06.2020' and time '09:31:18'. The 'Source client' field is set to '000'. The 'Target' field is highlighted in orange and contains the text 'GIT'. The 'Tasks' field is empty. The 'User' field is empty. The dialog box has tabs for 'Request Type', 'Global Information', and 'Transport Proposals'. The 'Create Request' button is visible in the top left corner. The bottom right corner contains icons for 'Save', 'Cancel', and 'Close'.

Format of repositories

- In SAP S/4HANA 2020 data will be stored in Json-Format for newly created repositories
- XML format is still supported
- Why? To improve readability

The screenshot shows the 'Properties' tab of a repository configuration window. The top navigation bar includes 'Configuration', 'Activities', 'Objects', 'Branches', 'Log', 'Registry', and 'Properties'. Below the navigation bar, a message box says 'No data'. The main area is titled 'Layout' and contains a 'Save' button. Below the 'Layout' section, there are three input fields: 'Version' with the value '3', 'File format' with a dropdown menu showing 'JSON', and 'Meta Information Path' with the value '.gctsmetadata/'. At the bottom, there is a 'Table Content Support' toggle switch set to 'ON'.

Using gCTS in pipelines: Library steps in project “Piper”



Library ,steps offered in project [“Piper”](#)

[gctsCloneRepository](#)

[gctsCreateRepository](#)

[gctsDeploy](#)

[gctsExecuteABAPUnitTests](#)

[gctsRollback](#)

Demo



Releases and their features

SAP S/4HANA 1909

- Git-based distribution of custom development
- Support for workbench objects
- Option to set up continuous integration (CI) process
- Option to automate continuous deployment

SAP S/4HANA 2020

- Support for customizing objects
- Basic support for conflict resolution when merging branches

Future direction

- Enhanced support for distributed development and maintenance/development use cases
- GitHub functionality leveraged for code reviews (such as pull requests)
- Integration in transport organizer
- Improved exception handling and logging
- Integration of gCTS with ChaRM
- Convenience functionalities to use gCTS for business processes on CI platforms

More information



Related SAP TechEd sessions

- DEV100 – DevOps with SAP: Holistic Overview and Latest News
 - DEV104 – Change Control Management: Building a Bridge for CI/CD in a Hybrid Solution
 - DEV931 – Expert Q&A on the SAP Cloud Platform DevOps Portfolio
-

Public SAP Web sites

- SAP Community: <https://blogs.sap.com/2019/11/14/gcts-is-here/>
- SAP Support Portal: https://support.sap.com/en/tools/software-logistics-tools/change-and-transport-system.html#section_1079943272
- SAP Help Portal: <https://help.sap.com/viewer/4a368c163b08418890a406d413933ba7/latest/en-US/f319b168e87e42149e25e13c08d002b9.html>
- Guided answer: <https://ga.support.sap.com/dtp/viewer/index.html#/tree/2504/actions/34024>
- SAP Note: <https://launchpad.support.sap.com/#/notes/2821718>

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