Rev-Trac and SAP CTS+: Extending Change and Transport Management to the non-ABAP Java Environment.

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Introduction

This paper discusses the background behind the introduction of SAP CTS+ and its value to users with dual stack and single-stack SAP Java environments and explains several of its limitations. The paper also discusses the integration of CTS+ with Rev-Trac SAP change control functionality and considers an alternative approach using Rev-Trac Deployment Manager.

Overview of SAP CTS +

SAP NetWeaver2004 (NetWeaver7.0) SPS12 introduced the ability to incorporate the non-ABAP files of Java and Web elements into ABAP transport requests. This extended CTS feature has been termed CTS+ or One Transport Order (OTO). It allows users to:

- Include dual stack Java changes into an existing CTS+ ABAP object transport for synchronous deployment via TMS
- Incorporate single-stack Java changes into a transport request to be deployed to its target systems using TMS

In dual-stack environments like XI, CTS+ functionality allows users to combine ABAP and Java objects such as EPA files of the Portal Development Studio and the SCA archives of the SAP NetWeaver Development Infrastructure (NWDI) in one transport request.

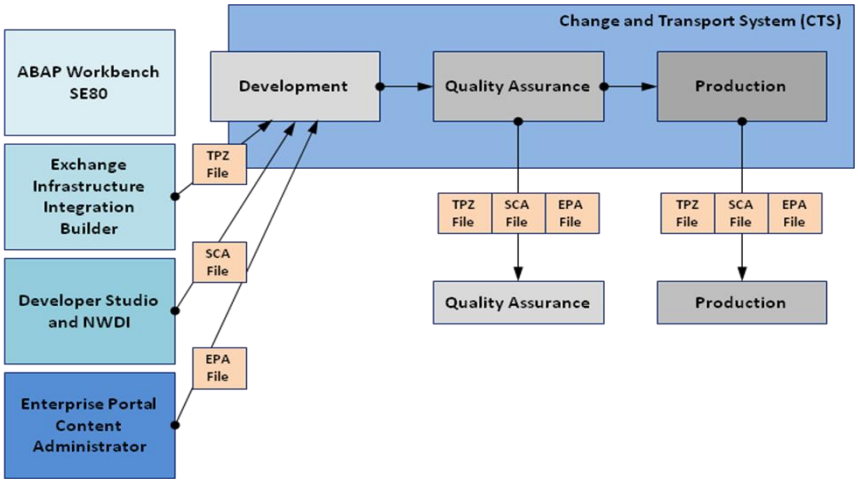

Figure 1 non-ABAP component deployment via CTS

Any dependencies between the ABAP objects in the Transport request and the attached Java packages will be honored, as both will be deployed to their respective target systems at the same time utilizing TMS. This will substantially reduce or eliminate serious production events resulting from an out-of-sequence deployment. For example, the web elements of an interface in XI will not be deployed to production without the ABAP component.

CTS+ Includes the ability to incorporate a single-stack Java package into a single transport request to be deployed to its target systems using TMS. In this scenario however, if an ECC or CRM ABAP component was not moved to production at the same time as, for example, web screen changes to the Portal, fields could exist on user screens for which no corresponding data table exists. Such oversights could be costly and significantly disruptive to business customers.

SAP CTS+ limitations

Extending CTS to CTS+ to enable embedding Java changes into TMS transports has come some way towards solving the problems of managing ABAP and Java changes synchronously. However, there are several user limitations:

- CTS+ is available only to users running NetWeaver 2004s SPS12 or above, making it unavailable to users who have not yet installed SPS12.
- There is no means to separate the packages/objects once the transport is released, which can result in complications if either object requires iterative changes.
- There is no method to tie single-stack Java package transports to associated and dependent ABAP transport requests in other systems, so another method must be utilized to ensure synchronous deployment in those cases.
- There is no way to check sequences or prerequisites, so a separate [or an additional] change control management methodology is required to ensure such checks occur.
- Care must be taken as to add Java packages to the transport in the correct sequence, as they will be delivered in the same sequence as added.
- Care must also be taken to ensure the sequence is correct when releasing the transports, as the release sequence will also be the default import sequence.

As with standard CTS, additional change control management methods and processes are still required to manage dependencies between dependent changes. An all-encompassing change control management policy is needed over and above TMS to ensure appropriate management of all SAP changes across all landscapes and environments.

SAP CTS+ and Rev-Trac

Rev-Trac, Revelation Software Concepts' SAP change control technology, can fully utilize CTS+ functionality while allowing for automatic deployment of dual-stack ABAP and Java package transports or single-stack Java package transports.

With Rev-Trac, users can:

- Associate both single and dual-stack Java package CTS+ transports and ABAP CTS+ transports using a single Rev-Trac change request, automatically deploying them to any combination of destinations following enforced approvals
- Specify and enforce sequence dependencies between single or dual-stack Java package CTS+ transports, or between these and ABAP CTS+ transports

ABAP transports and separate non-ABAP Java package transports can be managed as a linked 'unit' of work to guarantee synchronized deployment. There is no need to embed the Java changes into the same transport as the ABAP changes. Linking but not embedding the changes provides more flexibility and better control over how Java packages are managed and synchronized.

Additionally, Rev-Trac dependency management can enforce predetermined dependencies. These may be between any Rev-Trac change request incorporating a CTS+ transport containing Java packages, and any other change request with an ABAP transport. Enforcing dependencies ensures the packages are not deployed out of sequence.

All CTS+ transport movements are automatically monitored, meaning users can be certain at all times of all CTS+ transport locations, both, by system and by client.

An alternative approach: Rev-Trac Deployment Manager

With its Deployment Manager add-on, Rev-Trac can manage and deploy Java and other non-ABAP changes without requiring installation of CTS+. Deployment Manager allows any Java file from any SAP single or dual-stack system to be associated with and managed by Rev-Trac change requests without embedding them in CTS+ transports.

With Deployment Manager, users need not update to NW2004s SPS12, or greater in order to include automated Java change deployment into Rev-Trac change control.

With Rev-Trac and Deployment Manager, users can:

- Associate Java and other non-ABAP software packages and CTS transports with a Rev-Trac change request, and automatically deploy them in the correct sequence to any combination of destinations, following approvals
- Specify and enforce sequence dependencies between non-ABAP Java packages, or between these and CTS transports

- Track and manage the deployment of multiple versions of non-ABAP Java packages
- Specify, enforce and report on migration and deployment sequence dependencies between non-ABAP Java package transports, or between ABAP and non-ABAP Java package transports
- Display a range of deployment reports, including matrix-like views that represent visually what destinations each non-ABAP Java package has reached
- See the component list of each Java package
- Configure deployment methods for non-ABAP Java packages
- Choose to use with or without CTS+
- Deploy other types of non-ABAP packages

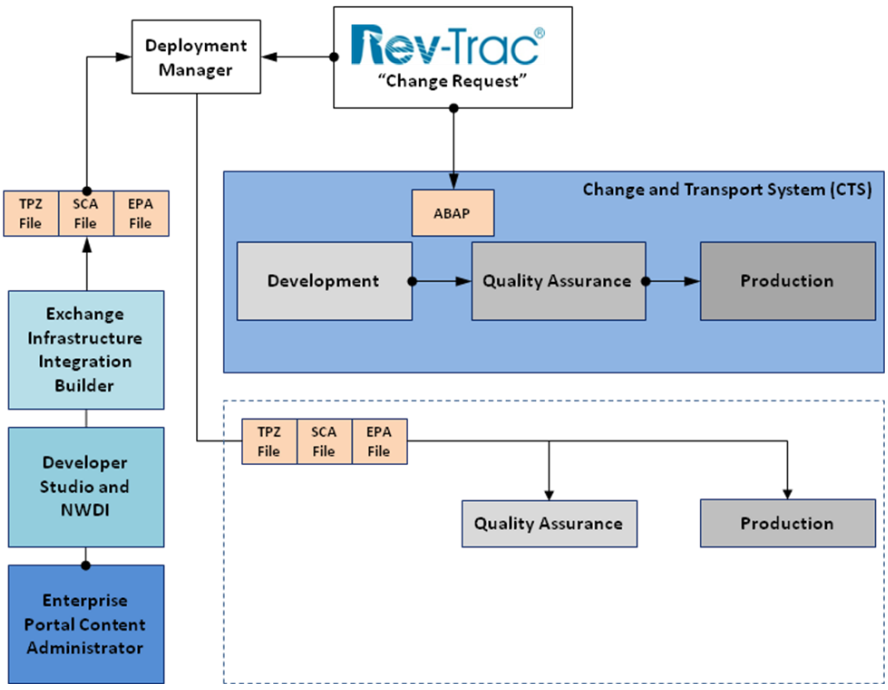

Figure 2 Non-ABAP component deployment via Deployment Manager

Conclusion

CTS+ has come some way towards solving the problems of managing ABAP and Java changes synchronously; however, there are several user limitations.

By integrating with CTS+, Rev-Trac overcomes most CTS+ limitations and extends the value of CTS+ by providing significant additional change control mechanism not provided by CTS+.

Rev-Trac's RT Deployment Manager eliminates the need to run NetWeaver at the required minimum SPS levels because its Java package and deployment features do not rely on CTS+.

About the writer

Rick Porter is Vice President Business Development at Revelation Software Concepts, specialist in reducing risk and minimizing costs associated with SAP system change.

A native of Australia, Rick has spent that last 7 years understanding the change control needs and requirements of SAP user organizations around the globe, including some of the largest companies in the world.

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About Revelation Software Concepts

Revelation Software Concepts (RSC) specializes in SAP change control management, developing market-leading technology to reduce the risks and lower the costs of delivering changes into SAP-based enterprise information systems. Since RSC was founded in 1997, some of the world's largest companies have come to rely upon its mature change control solutions. Its deep expertise and responsive support have made RSC the leading change-control specialist for SAP infrastructures around the globe. RSC is 100% SAP-focused and is an SAP software partner. Its flagship change control solution, Rev-Trac, is SAP-certified. Rev-Trac supports change control for both SAP ABAP and non-ABAP technologies, reflecting RSC's commitment to technologically innovative change control solutions that serve current market needs.

For information on how Rev-Trac can help manage software change control issues in use in SAP solution-based environments as outlined in this white paper, please contact us through the following:

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