

Conflict Resolution – How to Analyze, Handle, and Avoid Integration Conflicts in the SAP NetWeaver Development Infrastructure

Applies to:

SAP NetWeaver 7.0

Summary

All steps of the Java development process are defined in NWDI-based development, and implemented in the UIs. However, as a developer you still have the responsibility to perform all steps of the development process or you may cause incompleteness of functionality or even conflicts in the system. Nevertheless, in case one step – such as releasing an activity is forgotten by its owner (who might for example be on vacation) or not accessible from the original PC (which might have crashed) – it can still be easily found and handled. Conflicts can be found by their owner or in central administration and handled like any other change in the NWDI – including being transported into another workspace with the same problem (e.g. in the maintenance track).

In this article I describe an error in my NWDI demo system, how I found the conflict that caused it and how it was solved, and, finally, how it could have been avoided.

Author(s): Wolf Hengevoss

Company: SAP AG

Created on: 17 September 2007

Author Bio



Wolf Hengevoss graduated in natural sciences at the University of Kaiserslautern. In 1999, he joined SAP as a member of the product management. He has worked in the Basis group focusing on topics such as Computer-Aided Test Tool and Business Address Services. Since the early stages of SAP Exchange Infrastructure, he has been working on the Java environment. Today, his focus is on SAP's Software Change Management of non-ABAP applications.

Table of Contents

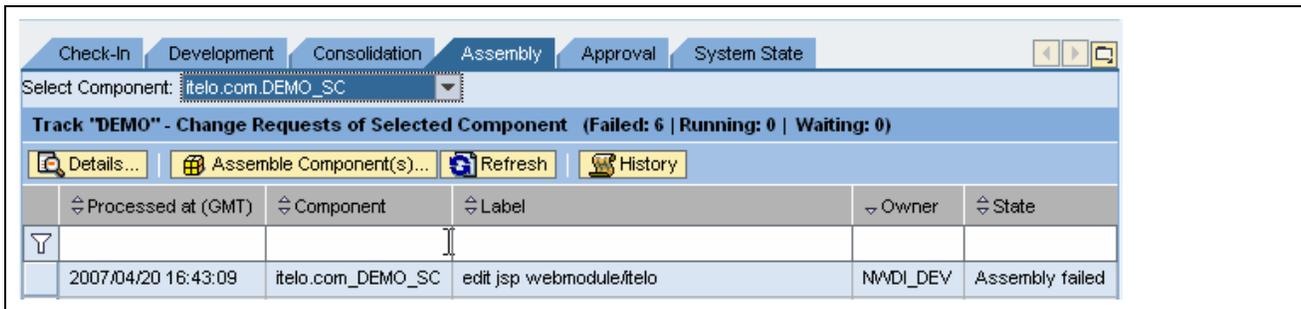
<u>A Pretty Common Problem?</u>	<u>3</u>
<u> Finding a Conflict.....</u>	<u>3</u>
<u> Solving a Conflict.....</u>	<u>6</u>
<u> Avoiding a Specific Reason for Conflicts</u>	<u>10</u>
<u>Related Content.....</u>	<u>12</u>

A Pretty Common Problem?

I was using my NWDI installation when I noticed that in the *CMS Transport Studio* the **assembly** failed; this is not a normal thing to happen, so I tried to find the reason. Later, when I had found it, I heard this two or three times to have happened elsewhere, so this might be interesting for other NWDI users as well, therefore I gathered the screenshots of my steps.

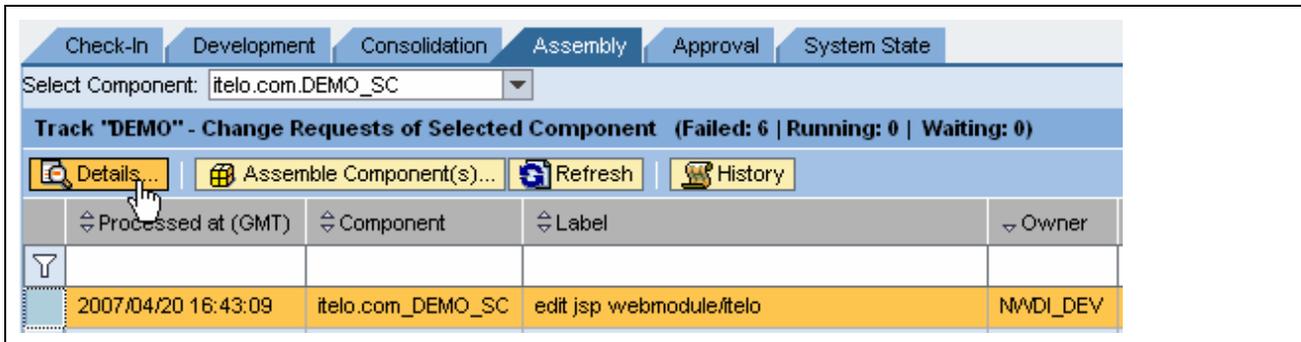
Finding a Conflict

1. It began in the CMS Transport Studio (release was SAP NetWeaver 7.0):



The assembly of an CMS Transport Studio

2. I opened the *Details* of the failed assembly to find out more about the problem in the logs:



Details and Logs

Close

Selected Queue Item

1

Processed at (GMT)	Component	Label	Owner	State
2007/04/20 16:43:09	itelo.com_DEMO_SC	edit jsp webmodule/itelo	MVMDI_DEV	Assembly failed

Details | **Logs** | Content

Logs of Selected Queue Item

Refresh

Step	Returncode	Log
Check-assembly	Finished with errors	View Log File
Repository-export	Not executed	View Log File
CBS-assembly	Not executed	View Log File
Export	Not executed	View Log File

SAP Change Management Service

Software Component	itelo.com/DEMO_SC
Version	J2E_DEMO_D.3
Label	edit jsp webmodule/itelo
System	DEMO-Assembly
Step	Check-assembly
Log	D:\usr\sap\Jtrans\CMS\log\DEMO_C@J2E\DEMO_C@J2E200704201643090165Check-assembly.log

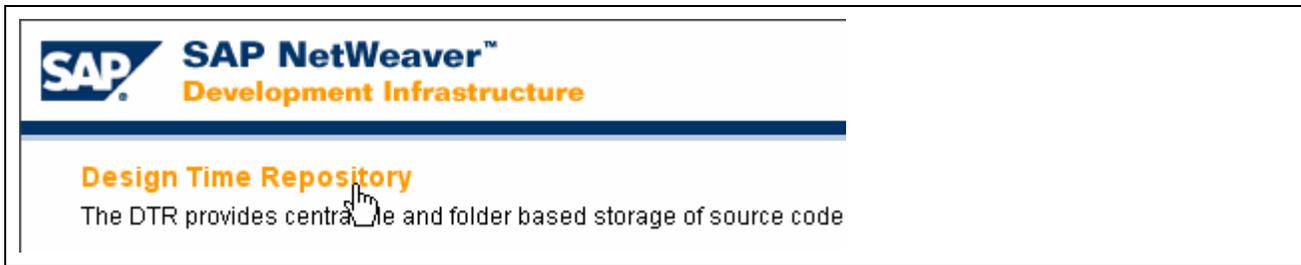
```

Info:Starting Step Check-assembly at 2007-04-20 18:43:09.0243 +1:00
Info:Checks for software component itelo.com,DEMO_SC are performed now:
Info:IDTR conflicts
Info:Step Check-assembly ended with result 'error' ,stopping execution at 2007-04-20 18:43:09.0446 +1:00

```

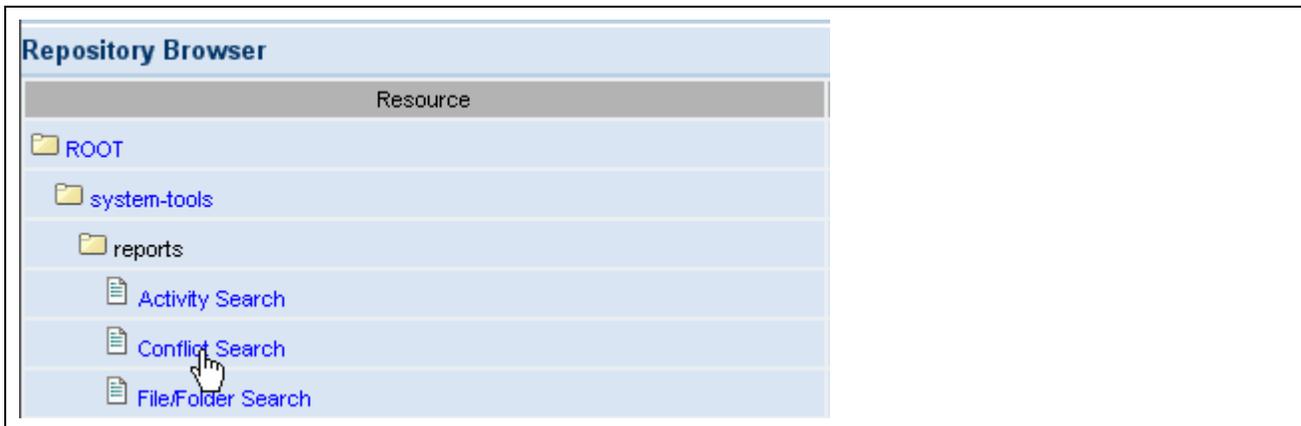
Displaying the details of a failed request

- I read there is a conflict in DTR. For a seasoned administrator, two things are momentarily clear (and I came to think of these after a while, too):
 - You do the assemble in the **Cons** system, **active** DTR workspace
 - You can simply use a DTR report to find out more
- So I navigated to the DTR system-tools:



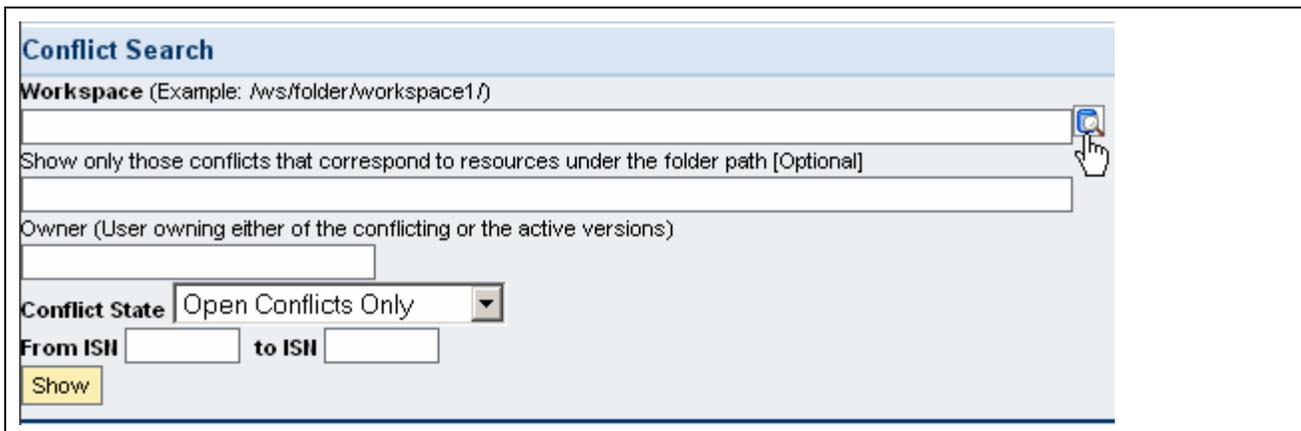
Opening the DTR Web UI for administration on the NWDI start page <http://<host:port>/devinf>

- In the DTR's Web UI I opened the Conflict Search under → **system-tools** → **reports** → **Conflict Search...**



Starting a Conflict Search in the DTR Web UI

- Started the browser tool to define the starting point for my conflict search...



Defining a search in DTR's Conflict Search report

- ...**browsed** to the DTR workspace **Cons/active** of the Demo company *iTelo's* DEMO SC, where the assembly processes failed:

Choose Folder			
Resource	Created	Last Modified	Select
ws			
DEMO			
itelo.com_DEMO_SC			
cons			
active	10.04.2006 17:50:07 GMT	10.04.2006 17:50:07 GMT	
inactive	10.04.2006 17:50:07 GMT	10.04.2006 17:50:07 GMT	

Choosing a workspace to run a report

- ... and chose the **active** workspace.
- Then I adjusted the settings – obviously at the moment *open* conflicts are of interest – and chose **Show** to get the result:

Conflict Search

Workspace (Example: /ws/folder/workspace1/)

Show only those conflicts that correspond to resources under the folder path [Optional]

Owner (User owning either of the conflicting or the active versions)

Conflict State

From ISII **to ISII**

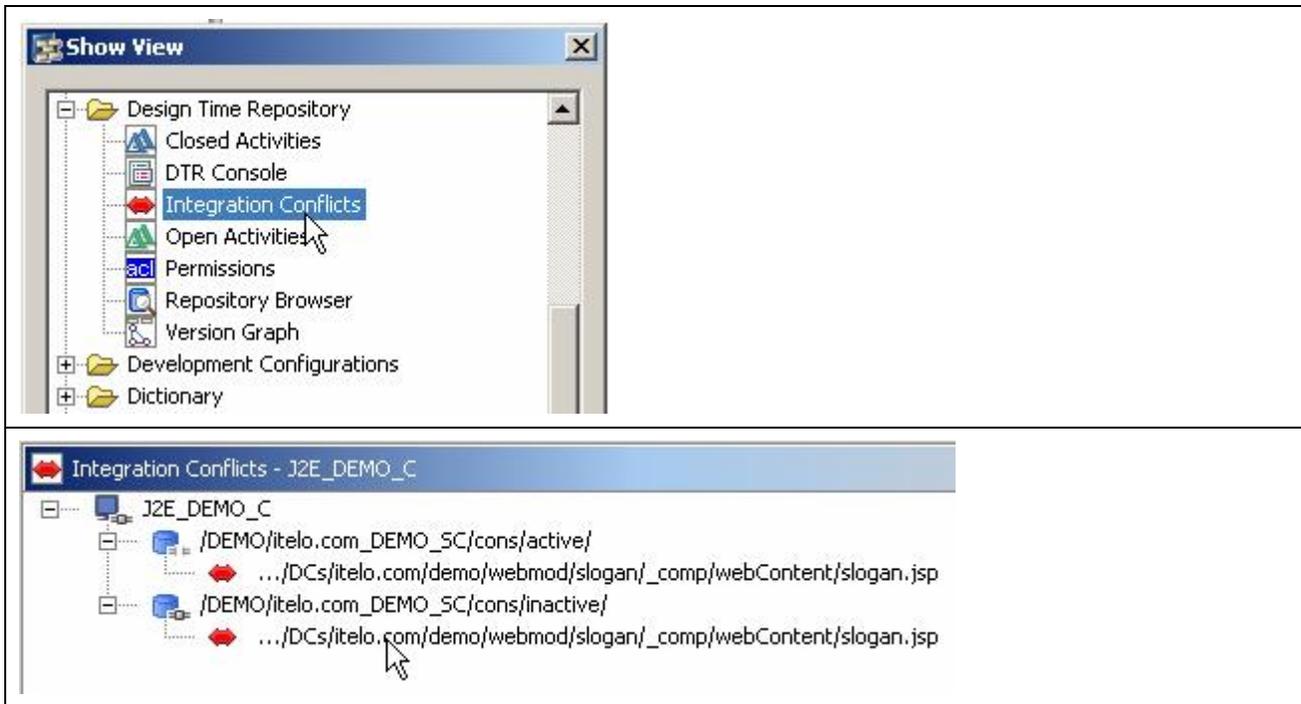
	Conflicting Version	Type	Caused By	Caused By ISN	Time	State	Conflict Details
/DCs/itelo.com/demo/webmod/slogan/_comp/webContent/slogan.jsp							
	Details...	Predecessor-Successor	D030...	22	18.04.2007 13:30:01 GMT	Open	Details...

Displaying details of a conflict

- I got displayed a predecessor/successor conflict in a JSP file. I also saw that it was *caused by D030...* – let's call him Jack – whom I know very well, so I just let him know.

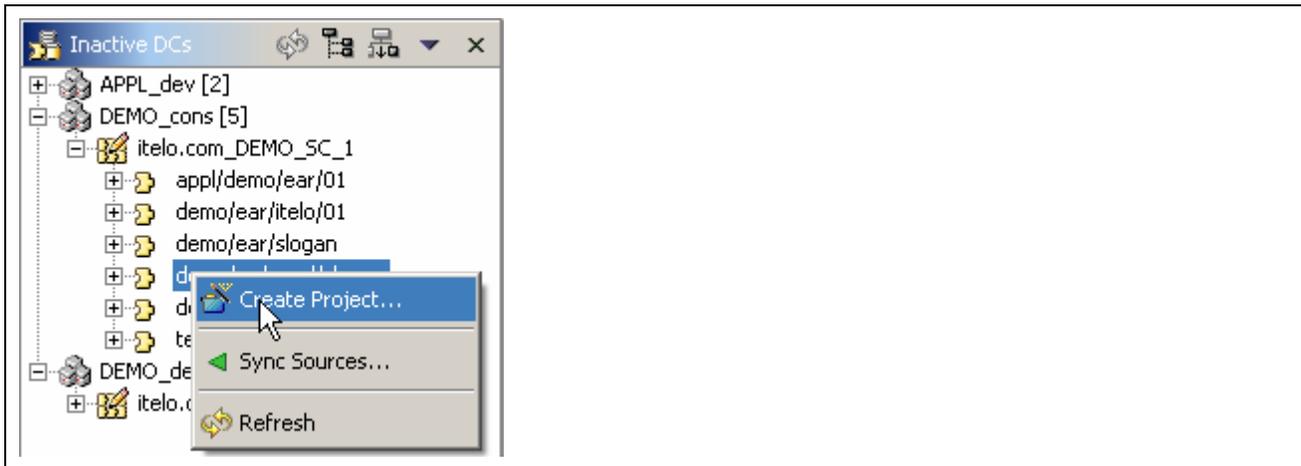
Solving a Conflict

- In the SAP NetWeaver Developer Studio, the owner of the conflicting file logs on to the *development configuration* of the *consolidation* phase, checks the conflict and creates a project containing the file in question:



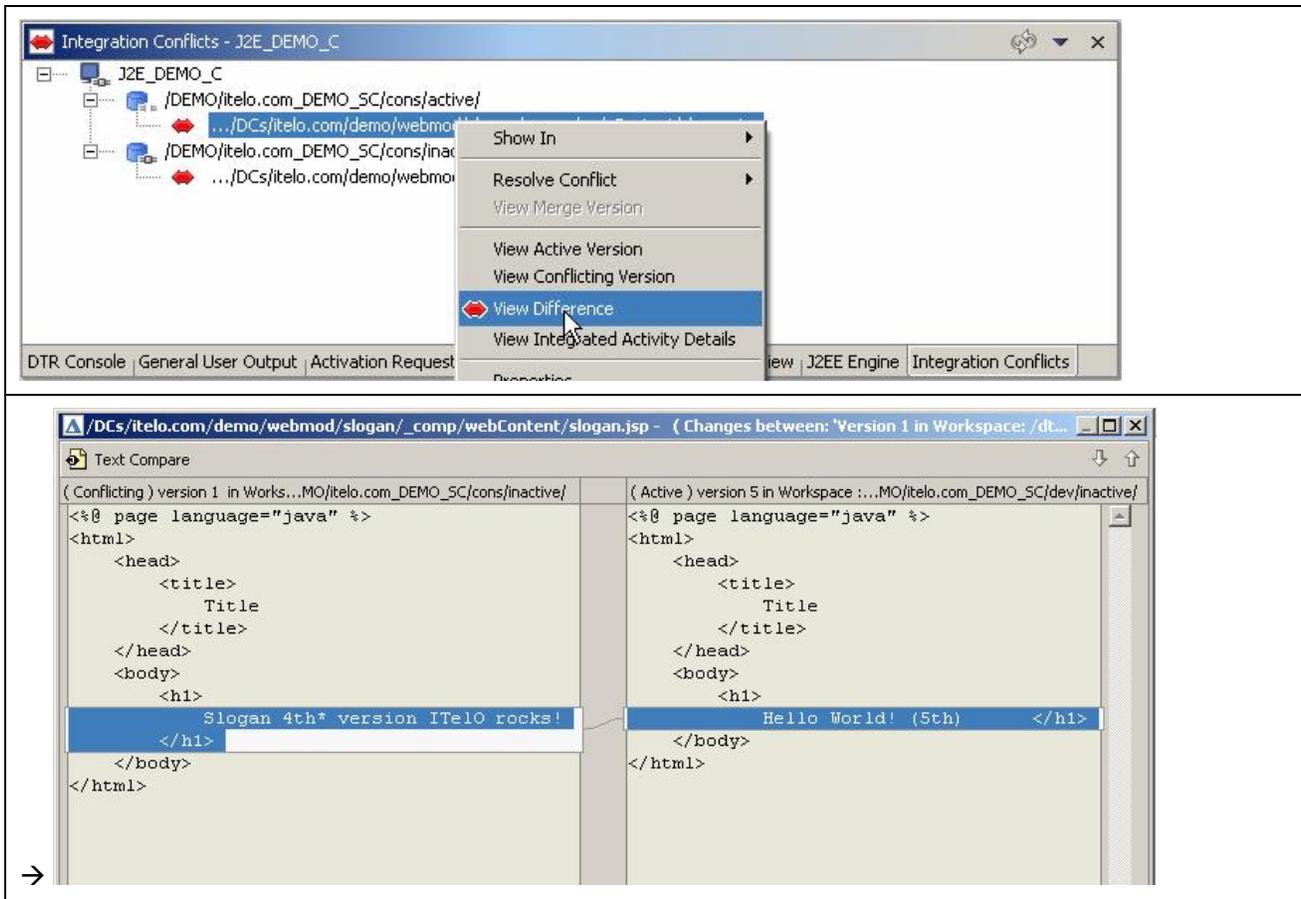
Integration Conflicts view in the SAP NetWeaver Developer Studio

2. Yes, no doubt, there is a conflict! To be able to do any changes, as you know, a project is needed:



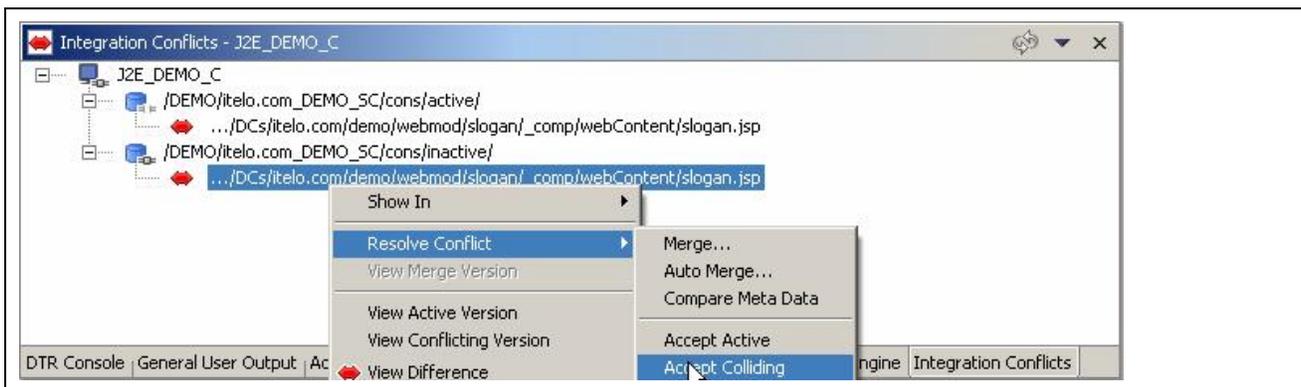
Creating a project to solve a conflict

3. Checking a conflict is the next natural step – it has to be performed by the owner of the object:



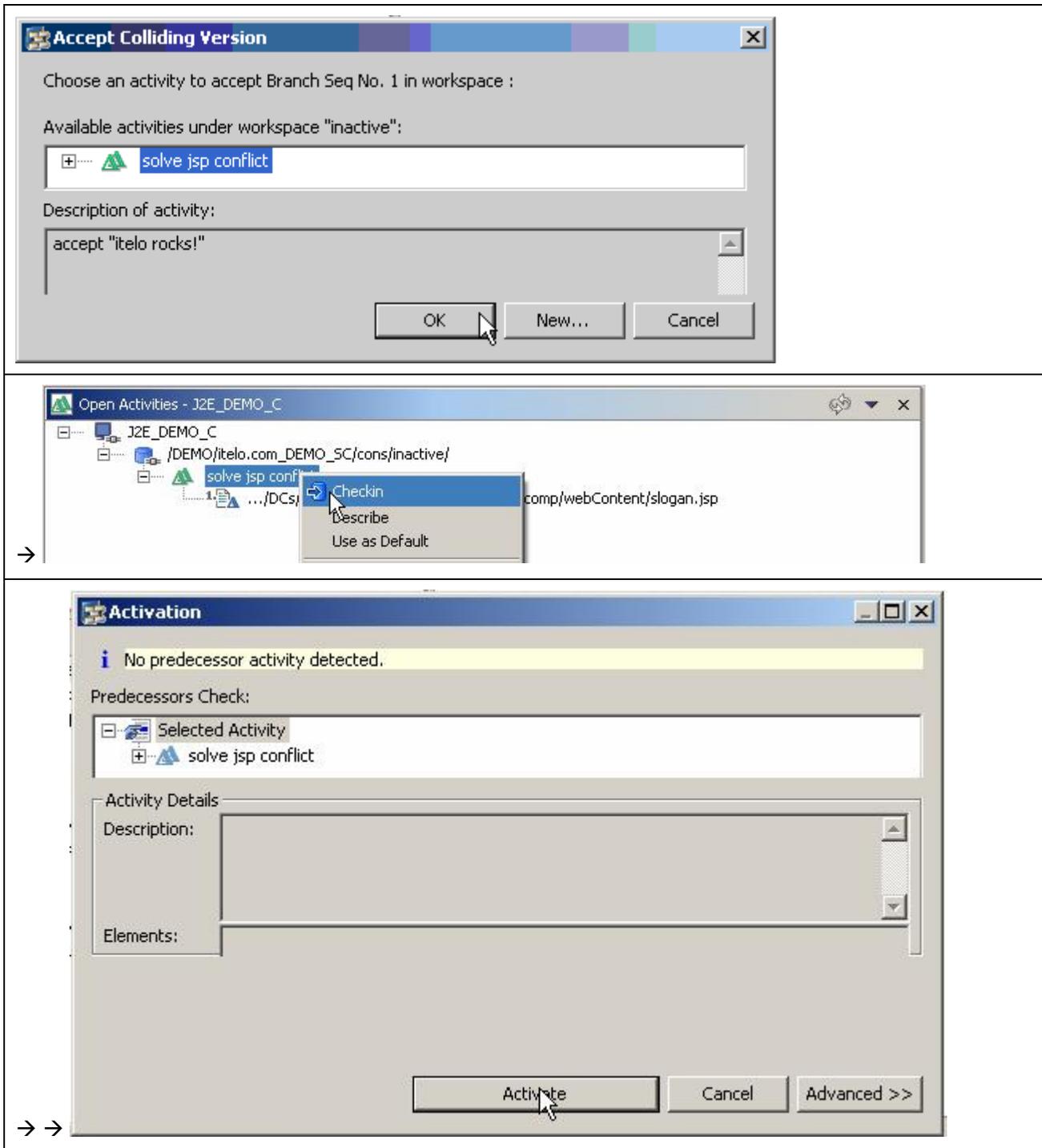
Checking the delta in conflicting versions

4. This, the owner has to check semantically, a syntactic analysis would not reveal which version is correct. “Hello World” is not the correct Slogan of ITelO company, so it’s now obvious, what to do: The *active* version is incorrect, luckily the conflict was noticed!
5. For conflict resolution in this case **Accept Colliding** is the correct solution (Jack could have created a merge version also, editing the file content in a text editor provided or accept the active version):



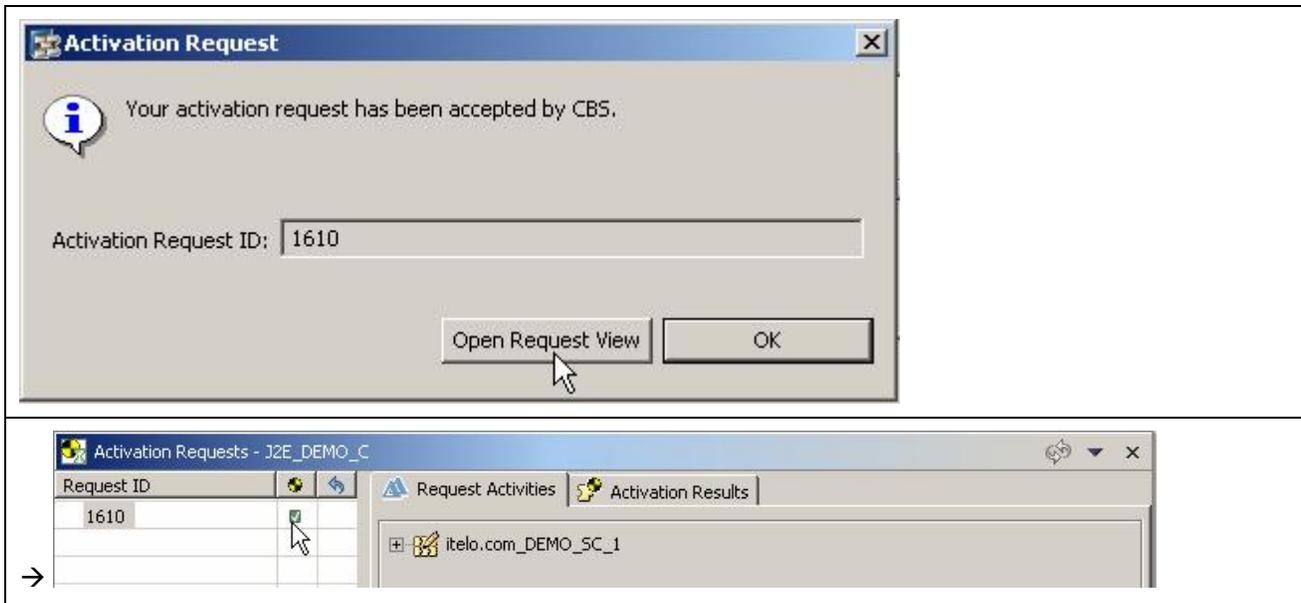
Choosing a conflict solution

6. Like any other change, solving a conflict needs an activity. He adds the solution to the *activity* created for this purpose and checks it in and activates his changes:



Activity creation, check-in and activation of the activity used for the conflict resolution

7. He checks the result of the activation, and, almost immediately, he gets a success message from the CBS, indication a successful build:

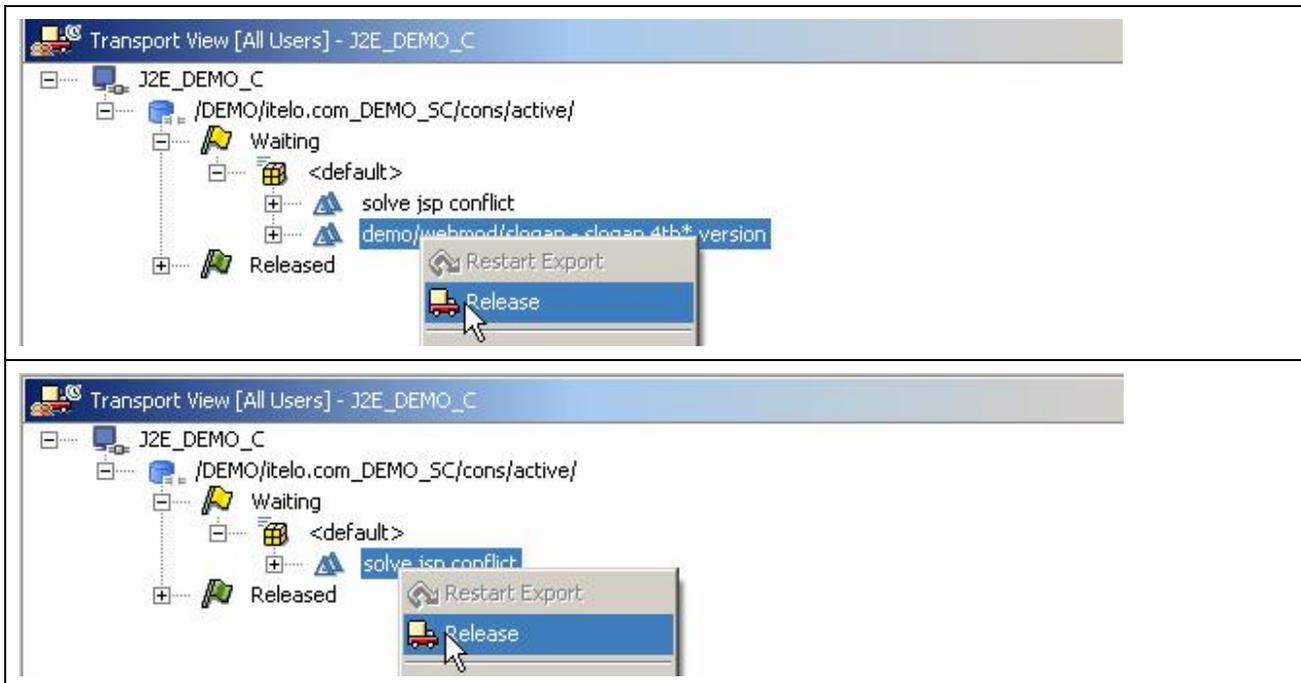


Checking the CBS build process

The last step is to release the activity in the CMS Transport view... however, as we will see, this conflict could have been avoided:

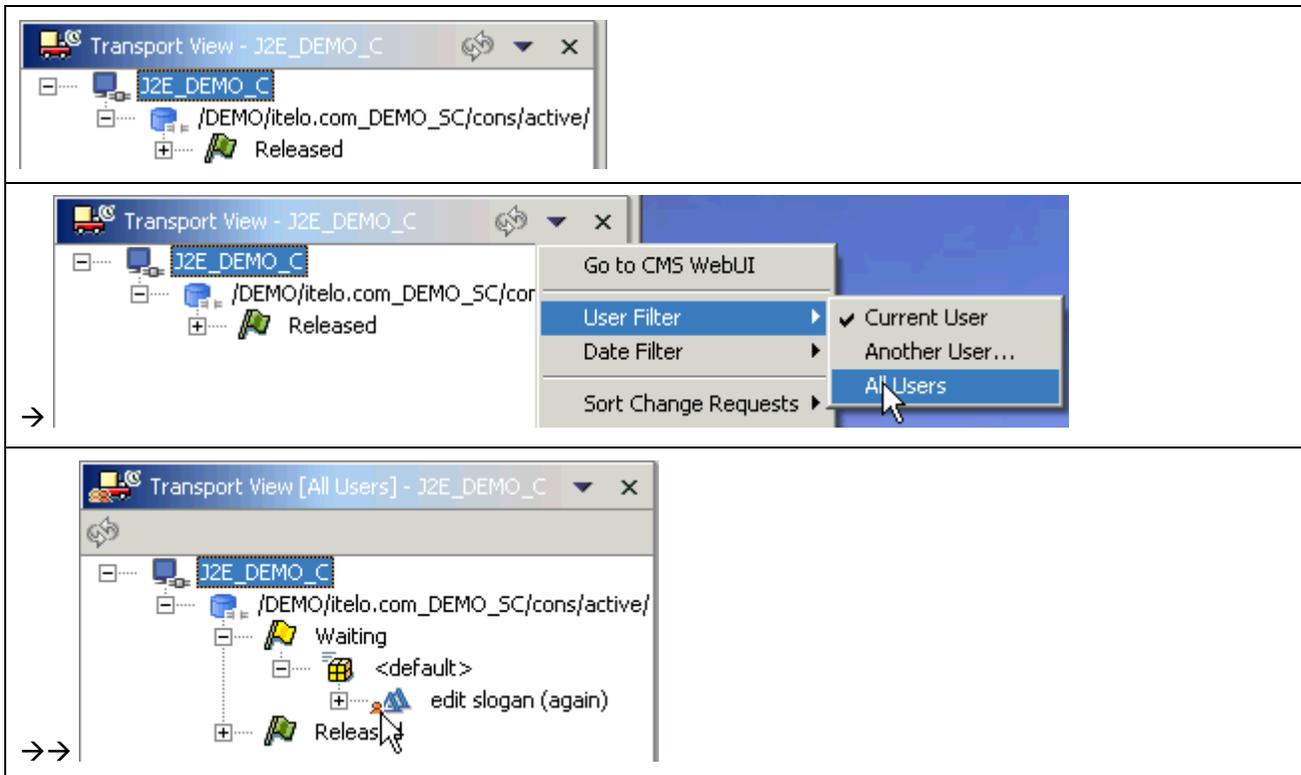
Avoiding a Specific Reason for Conflicts

1. In the Transport view, he finds the conflict's reason: He forgot releasing a version, so he releases both:



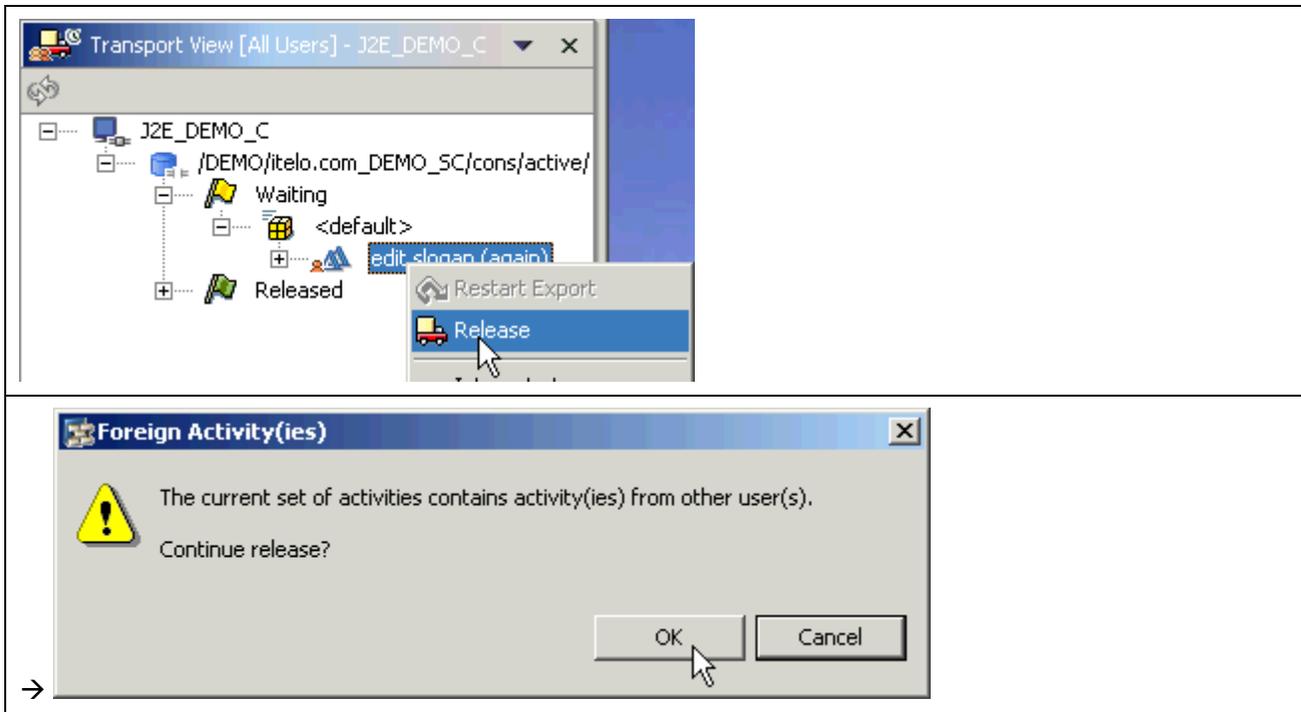
Checking the transport queue of still to be released transports

2. This can be even checked for the whole workspace by any user in the Developer Studio Transport view. He chooses **Menu → User Filter → All Users**:



No waiting request is shown, but setting the filter to All Users shows foreign requests also

3. This he can even try to release:





Trying to release a foreign – not his own – activities

Because of missing permissions (administrator permissions are required) this fails. However, now he can contact me...

Related Content

- Learn how to solve problems in the CBS also: [CBS Secrets Unveiled – Understanding Broken and Dirty DCs](#)

Copyright

© Copyright 2007 SAP AG. All rights reserved.

No part of this publication may be reproduced or transmitted in any form or for any purpose without the express permission of SAP AG. The information contained herein may be changed without prior notice.

Some software products marketed by SAP AG and its distributors contain proprietary software components of other software vendors.

Microsoft, Windows, Outlook, and PowerPoint are registered trademarks of Microsoft Corporation.

IBM, DB2, DB2 Universal Database, OS/2, Parallel Sysplex, MVS/ESA, AIX, S/390, AS/400, OS/390, OS/400, iSeries, pSeries, xSeries, zSeries, z/OS, AFP, Intelligent Miner, WebSphere, Netfinity, Tivoli, Informix, i5/OS, POWER, POWER5, OpenPower and PowerPC are trademarks or registered trademarks of IBM Corporation.

Adobe, the Adobe logo, Acrobat, PostScript, and Reader are either trademarks or registered trademarks of Adobe Systems Incorporated in the United States and/or other countries.

Oracle is a registered trademark of Oracle Corporation.

UNIX, X/Open, OSF/1, and Motif are registered trademarks of the Open Group.

Citrix, ICA, Program Neighborhood, MetaFrame, WinFrame, VideoFrame, and MultiWin are trademarks or registered trademarks of Citrix Systems, Inc.

HTML, XML, XHTML and W3C are trademarks or registered trademarks of W3C®, World Wide Web Consortium, Massachusetts Institute of Technology.

Java is a registered trademark of Sun Microsystems, Inc.

JavaScript is a registered trademark of Sun Microsystems, Inc., used under license for technology invented and implemented by Netscape.

MaxDB is a trademark of MySQL AB, Sweden.

SAP, R/3, mySAP, mySAP.com, xApps, xApp, SAP NetWeaver, and other SAP products and services mentioned herein as well as their respective logos are trademarks or registered trademarks of SAP AG in Germany and in several other countries all over the world. All other product and service names mentioned are the trademarks of their respective companies. Data contained in this document serves informational purposes only. National product specifications may vary.

These materials are subject to change without notice. These materials are provided by SAP AG and its affiliated companies ("SAP Group") for informational purposes only, without representation or warranty of any kind, and SAP Group shall not be liable for errors or omissions with respect to the materials. The only warranties for SAP Group products and services are those that are set forth in the express warranty statements accompanying such products and services, if any. Nothing herein should be construed as constituting an additional warranty.

These materials are provided "as is" without a warranty of any kind, either express or implied, including but not limited to, the implied warranties of merchantability, fitness for a particular purpose, or non-infringement.

SAP shall not be liable for damages of any kind including without limitation direct, special, indirect, or consequential damages that may result from the use of these materials.

SAP does not warrant the accuracy or completeness of the information, text, graphics, links or other items contained within these materials. SAP has no control over the information that you may access through the use of hot links contained in these materials and does not endorse your use of third party web pages nor provide any warranty whatsoever relating to third party web pages.

Any software coding and/or code lines/strings ("Code") included in this documentation are only examples and are not intended to be used in a productive system environment. The Code is only intended better explain and visualize the syntax and phrasing rules of certain coding. SAP does not warrant the correctness and completeness of the Code given herein, and SAP shall not be liable for errors or damages caused by the usage of the Code, except if such damages were caused by SAP intentionally or grossly negligent.