

Integrating Web Dynpro and SAP NetWeaver Portal

Part V: Using the WorkProtect Mode within a Web Dynpro application

Applies to:

Integration of Web Dynpro for Java applications into SAP NetWeaver Portal for the SAP NetWeaver 04s SP8 release.

Summary

This article describes the usage of the portal WorkProtect mode within a Web Dynpro application running in SAP NetWeaver Portal.

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Author Bio



Jochen Guertler works as a development architect within the Web Dynpro for Java team. His main responsibilities are the integration of Web Dynpro for Java with other components of SAP NetWeaver, especially the integration with the SAP NetWeaver Portal.

Jochen is co-author of the book "Maximizing Web Dynpro for Java" from SAP Press.

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Introduction

The SAP NetWeaver Portal allows defining a hierarchical navigation structure using roles, worksets, pages and iViews. Using the Top Level Navigation (TLN) component or the Detailed Navigation (DTN) component the user can navigate within this navigation structure. Furthermore navigation could be triggered programmatically as described in previous parts of the series.

Using the *WorkProtect Mode* of the SAP NetWeaver Portal you can make sure, that unsaved data is not lost when navigating from one iView to another.

The following document describes in details how the WorkProtect Mode can be used within a Web Dynpro for Java application on top of the SAP NetWeaver04s SP8 release.

Using the WorkProtect Mode

To make sure, that the user cannot leave a Web Dynpro application by navigating to another portal page or iView in case the Web Dynpro application has unsaved data, a Web Dynpro application can use the WorkProtect Mode in three levels:

- **NONE**

In this level the WorkProtect Mode is not used by the Web Dynpro application (i.e. there is no check whether data is saved or unsaved).

- **APPLICATION_ONLY**

In this level only the Web Dynpro application itself decides whether or not the application “is dirty” (an application is “dirty” as soon as there is unsaved data). Using the `WDPortalWorkProtectMode` Java wrapper class the Web Dynpro application developer can define the “dirty state” of the application. The “dirty state” is therefore only defined on server-side. You cannot make sure in this level that the user lost any input data, which is not transported to the server yet.

This level is the default level (although the next level is called `STANDARD`).

- **STANDARD**

In this level both the application and the Web Dynpro HTML Client checks the application state. Therefore both the application developer and the Web Dynpro HTML Client checks the “dirty state” of a Web Dynpro application. The Web Dynpro HTML Client makes sure, that no user input data, which is typed in and not transported to the server, is lost, by setting the “dirty state” of the application in the SAP NetWeaver Portal as soon as the user makes any input.

The first example demonstrates how to define the Work-Protect-Mode level:

```
// Define the needed level. The level can be switched during
// the application lift time, i.e. it can for example be
// switched for different views.
WDPortalWorkProtectMode.setApplicationDirtyControl(
    WDApplicationIsDirtyMode.NONE);

WDPortalWorkProtectMode.setApplicationDirtyControl(
    WDApplicationIsDirtyMode.APPLICATION_ONLY);

WDPortalWorkProtectMode.setApplicationDirtyControl(
    WDApplicationIsDirtyMode.STANDARD);
```

The second example demonstrates how to define the “dirty state” of an application:

```
// Set the “dirty state” to YES, i.e. the application is dirty and
// a navigation should be launched in a new window to make sure that
// no data is lost
WDPortalWorkProtectMode.setApplicationDirty(true);

// Set the “dirty state” to FALSE, i.e. the application state is “clean”
// and therefore the navigation is launched inplace and the
// running application is left.
WDPortalWorkProtectMode.setApplicationDirty(true);
```

Embedded Web Dynpro iViews

As described in the first part of this series one major improvement of the integration of Web Dynpro for Java applications into the SAP NetWeaver portal is the Web Dynpro page builder allowing embedding Web Dynpro for Java iViews. But what happens if a Web Dynpro page contains more than one embedded Web Dynpro iView using the WorkProtect Mode? Each Web Dynpro iView could of course define a different WorkProtect Mode level and each Web Dynpro iView (i.e each Web Dynpro application) could define independent from each other whether the application is “dirty” or not?

To overcome this we introduced the following rules:

A Web Dynpro page running one or more embedded Web Dynpro iViews is “dirty” as soon as at least one of the embedded iViews is dirty. Or in other words: As long as at least one (embedded) Web Dynpro iView is “dirty”, the whole Web Dynpro page is “dirty”.

The used WorkProtect Mode level of a Web Dynpro page is the highest level defined by one of the embedded iViews. Example: If there is a Web Dynpro page running two embedded iViews and one iView

defines the `APPLICATION_ONLY` level and the second one the `STANDARD` level, then the whole page is running with the `STANDARD` level.

Navigating Inside a Web Dynpro Application

The WorkProtect Mode ensures that no data is lost as long as the user navigates between different iViews or pages.

The WorkProtect Mode is **not** available as long as you navigate *inside* your Web Dynpro application (for example by triggering a plug to navigate to another Web Dynpro view or to change the view assembly of your Web Dynpro application completely). If you need the same behavior for these internal navigation steps you have to implement this by your own.

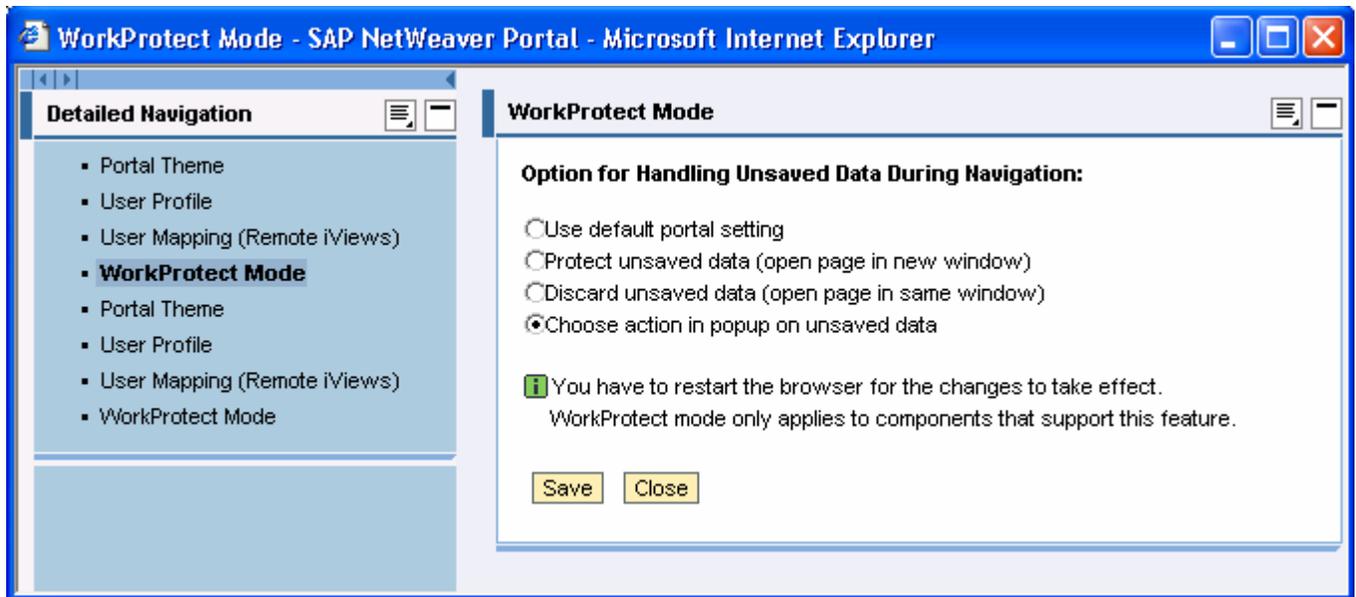
But there is one exception for this: when splitting one Web Dynpro application into several iViews (as described in the part 1 of this series) you could of course navigate between these iViews using standard portal navigation capabilities. In this case the WorkProtect Mode of course checks if there is unsaved data when navigating from one iView to another. As the iViews in this example are exposed by the same Web Dynpro application the navigation between these iViews is in the end navigation inside the Web Dynpro application – although the WorkProtect Mode could be used in this case.

Customizing the WorkProtect Mode Behavior

At the end of this document we would like to mention a nice personalization capability within the SAP NetWeaver Portal. Starting the Portal Personalization using the **Personalize** link (as shown in the next screenshot) you can define some useful settings also for the WorkProtect Mode.



The next screenshots shows the available options:



Using the first option *Use default portal setting* you reuse the overall portal settings. The second option **Protect unsaved data (open page in a new window)** is normally the standard behavior. Choosing this navigating to an iView or page opens a new browser window as soon as the original iView or page contains some unsaved data. Choosing the third option **Discard unsaved data (open page in same window)** turns off the WorkProtect Mode at all (you have to be careful with this option).

The last option **Choose action in popup on unsaved data** offers the most user-friendly behavior from our point of view. If there is unsaved data when navigating away from an iView or page a popup is shown (see next screenshot) and the user can directly choose the needed behavior in this current situation.

Leaving the SAP NetWeaver Portal at all

The WorkProtect Mode works even in case the user wants to leave the SAP NetWeaver Portal at all. As soon as the user wants to open a new URL in the browser window running the SAP NetWeaver portal, he gets a browser popup as shown in the next screenshot.



This browser popup also occurs as soon as the user closes the browser window running the SAP NetWeaver portal.

Further Information

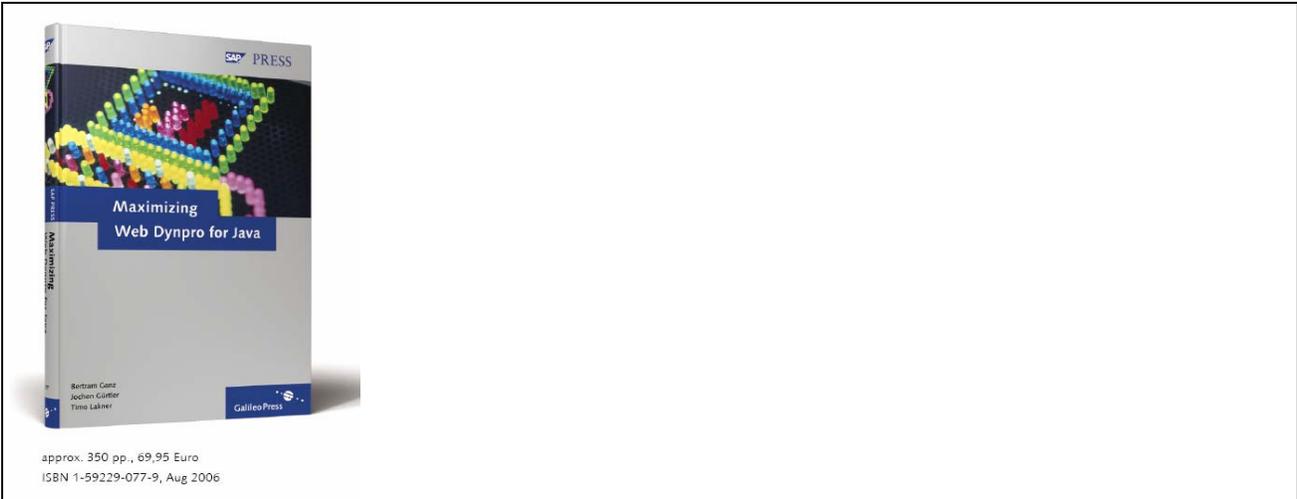
To get more information especially about extended features of the SAP Application Integrator we would like to bring to your attention to a new Web Dynpro for Java book. The German version *Praxisbuch Web Dynpro for Java* is available now – the English translation *Maximizing Web Dynpro for Java* will follow soon.



Praxisbuch Web Dynpro for Java

“Maximizing Web Dynpro for Java” is aimed at Web Dynpro developers who already have development experience but want to go to the next level. As members of the Web Dynpro development team, the authors of this book are expert at revealing tips and tricks for avoiding inefficiencies and pitfalls. They cover many areas including the SAP NetWeaver Development Infrastructure, component-oriented application design, portal integration, object-based navigation, installation tips, configuration and administration, and more. There are also complete examples on how to write web service or portal-based applications.

Note: This book is currently available in German only. The English version will be released in August/September 2006. You can order the book through [SAP](#) or [Amazon.com](#).



Maximizing Web Dynpro for Java

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