



How-to Guide

How To ... **Interoperate** **SAP Enterprise** **Portal** **and** **IBM WebSphere** **Portal Server**

Document Version 1.00 – June 2005

Applicable Releases:

SAP Enterprise Portal SP Stack 13

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Contents

1	INTRODUCTION	4
1.1	PREREQUISITES	5
2	SINGLE SIGN-ON	6
2.1	SAP ENTERPRISE PORTAL LEADS.....	6
2.1.1	<i>Solution</i>	6
2.2	IBM WEBSHERE PORTAL SERVER LEADS.....	7
2.2.2	<i>Log-Off</i>	8
2.3	OTHER AUTHENTICATION	9
2.3.1	<i>Tivoli Access Manager WebSEAL</i>	9
3	USER MANAGEMENT	10
3.1	CONFIGURING LDAP IN THE IBM WEBSHERE PORTAL SERVER	10
3.2	CONFIGURING LDAP IN SAP ENTERPRISE PORTAL.....	10
4	GRANULARITY OF ACCESS.....	11
4.1	SAP ENTERPRISE PORTAL LEADS (URL IVIEW).....	11
4.2	IBM WEBSHERE PORTAL SERVER LEADS (WEB PAGE PORTLET)	12
5	LOOK & FEEL	13
5.1	SAP ENTERPRISE PORTAL	13
5.1.1	<i>Navigation</i>	13
5.1.2	<i>Theme</i>	18
5.2	IBM WEBSHERE PORTAL SERVER	19
5.2.1	<i>Navigation</i>	19
5.2.2	<i>Theme</i>	20

Document History

Document version	Description
V 1.00	First official release of document

1 Introduction

This guide describes how the IBM WebSphere Portal Server (WPS) and the SAP Enterprise Portal (SAP EP) can interoperate.

Starting with SAP Enterprise Portal SP Stack 13, you can integrate the two portals by either displaying SAP EP content within WPS (with the help of WPS's Web Page Portlet) or WPS content in SAP EP (with the help of SAP EP's URL iView).

The following is an example of SAP EP content displayed within WPS:

The screenshot shows a web browser window titled "IBM WebSphere Portal - Microsoft Internet Explorer". The address bar shows a URL starting with "http://wic1.ctsc.com:9081/wps/myportal/!ut/p/kcxml/04_5j95Pykssy0xPLMnMz0vM0Y_QjzKLN4g3cQHJgFjGpvqRqCKOcAffI_zcVKBwpDmQ7xOIH5Wtmp6YXkfmqclpuZl5mbW". The page content is divided into several sections:

- Navigation:** Includes "Welcome", "My Tasks", "SAP EP MSS", "My Workplace", "Documents", "Personalization", and "My Favorites".
- SAP EP Content:**
 - General Data:** Helmut Giesa (00001247)
 - Contract Data:** Work Contract, Hiring Date (1/1/1994), Cap. Util. Level (100.00)
 - Organizational Assignment:** Org. Unit (Research and development), Position (Product manager (D)), Cost Center (000004500 R & D), Payroll Area (HR-D: Sal. employees)
 - Communications Data:** E-Mail (Helmut.Giesa@ides.com), Office (2/219), Telephone (4798/9162)
 - Personnel Structure:** Personnel Area (Frankfurt), Pers. Subarea (Produktion), EE Group (Active), EE Subgroup (Non-PS staff)
 - Absence Days:** No data available
 - Organizational History:** Position Product manager (D) From 1/1/1994
 - Job:** Team leader
 - Organizational Unit:** Research and development From 1/1/1998
 - Manager:** Dr. William Saxton
 - Telephone:** 9882/9785
 - Room:** 16/212
 - Photo:** A portrait of Helmut Giesa.
 - Personal Data:** Birth Date (9/5/1952), Mar. Status (Marr.), Address (Herrn Helmut Giesa, Parkstraße 7, 60020 Frankfurt)
 - Emergency Contact:** No data available
- Team Viewer:** A table listing employees:

Employee	Personnel Num
Waldemar Lesner	00900142
Dieter Martens	00001100

This guide describes the following:

- Single sign-on when either SAP EP or WPS is leading, using JAAS and TAI modules. Single sign-out for WPS-leading scenarios is also discussed. For more information, see *Single Sign-on* on page 6.
- Shared user management (for example, via an LDAP directory), which ensures that all users exist with the same user names on both portals. For more information, see *User Management* on page 10.
- Nesting of one portal within the other, enabling easier access and integration of navigation. The SAP EP's URL iView and the WPS's Web Page Portlet generate the needed `iFrame` tag for inclusion of the other portal's content. For more information, see *Granularity of Access* on page 11.
- Unified look and feel of the portals. The portals should look similar and fit the design requirements for corporate identity. The SAP EP Theme Editor and the WPS Portal Theme Builder can be used for changing existing themes and for the creation of new ones. For more information, see *Look & Feel* on page 13.

1.1 Prerequisites

You should be familiar with the following software:

- IBM WebSphere Portal Server 5.x
- SAP Enterprise Portal 6.0 SP Stack 13
- An LDAP server for shared user directory (recommended)

2 Single Sign-on

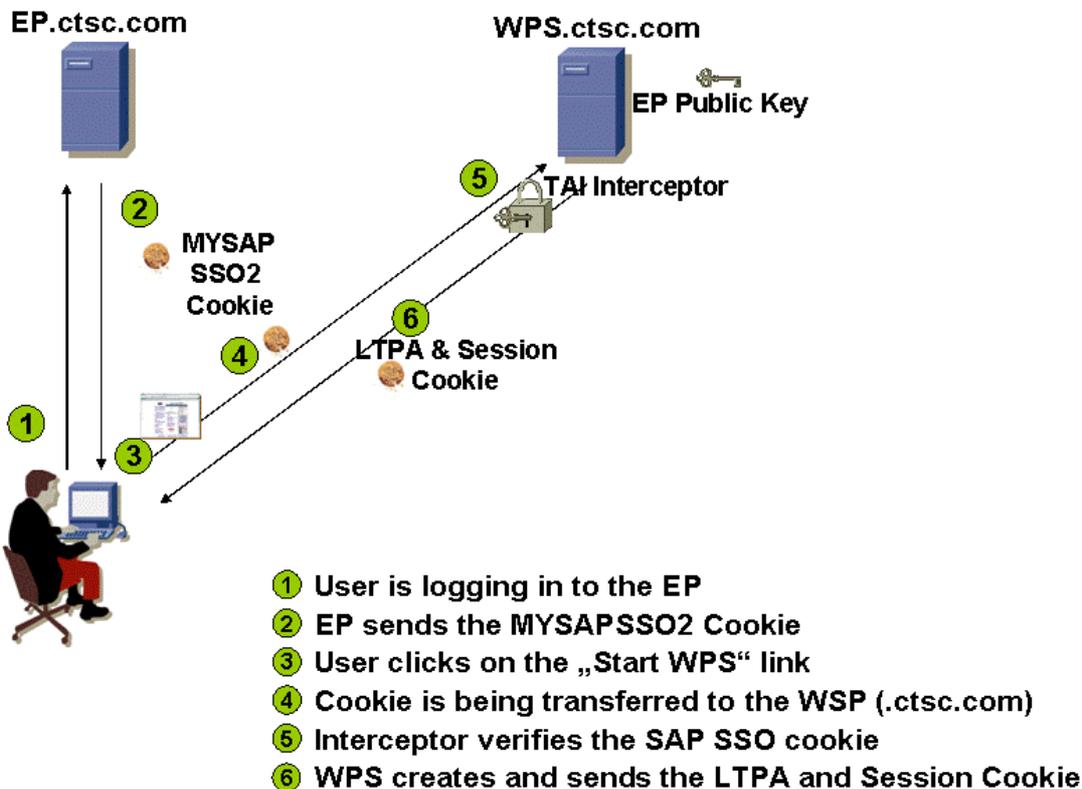
2.1 SAP Enterprise Portal Leads

This scenario uses the SAP Enterprise Portal as the leading portal for access to IBM WebSphere Portal Server content. After launching WPS from your SAP EP, you can log on to WPS with the same user already logged on to SAP EP.

There is only one limitation: Both the WPS and SAP EP must either use the same user repository or have a user with the same ID defined for both portals independent of their repositories.

2.1.1 Solution

After setup, a TAI module checks all requests for a SAP SSO cookie. If a cookie is found, the module verifies the certificate. If the certificate is valid, the user is logged on to WPS with the same user name. Therefore, it is recommended to use a shared user directory (LDAP) for both portals.



For more information, see *How to Set Up SSO Between SAP Enterprise Portal and IBM WebSphere Portal using TAI* on SAP Developer Network at sdn.sap.com. The document also explains how to download the precompiled TAI module.

2.2 IBM WebSphere Portal Server Leads

This scenario uses the WPS as the leading portal for access to SAP EP content. After launching SAP EP from WPS, you can log on to the SAP EP with the same user already logged on to WPS.

There is only one limitation: Both the WPS and SAP EP must either use the same user repository or have a user with the same ID defined for both portals independent of their repositories.

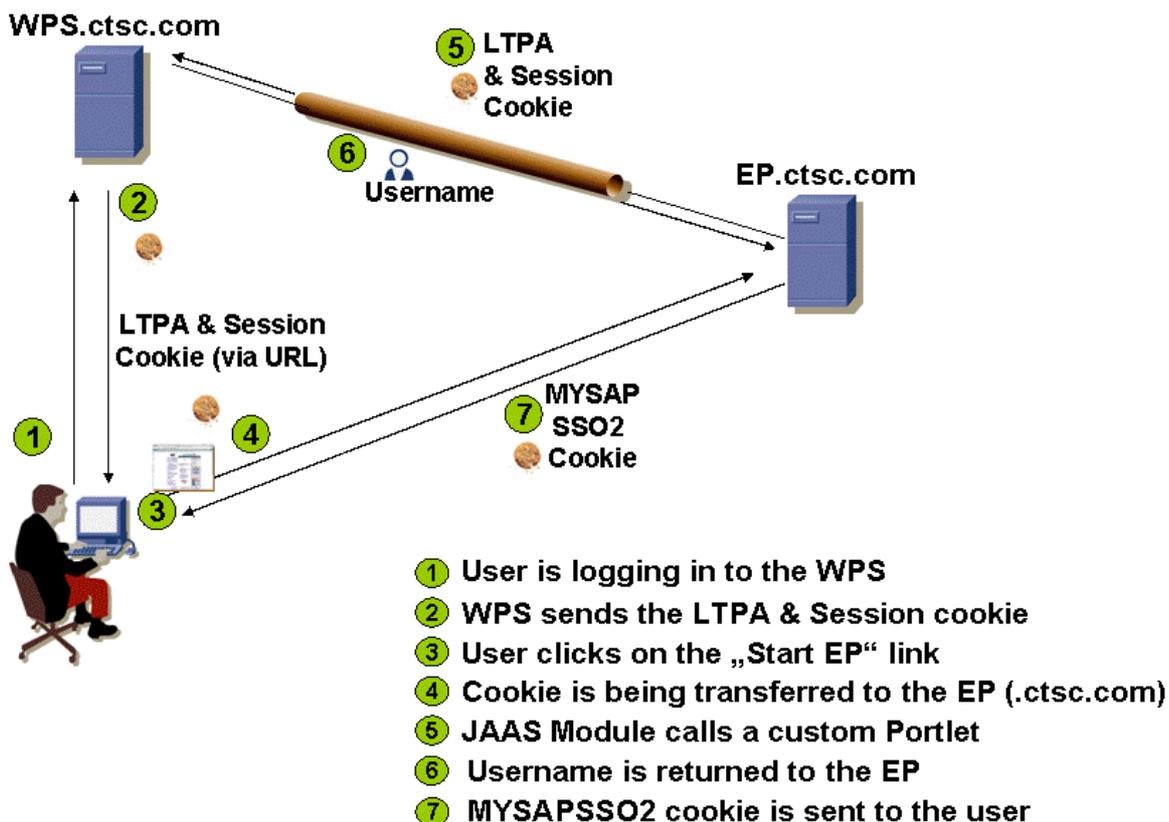
2.2.1.1 Solution

When a request is sent to the SAP EP login page (`http://<hostname>:<port#>/irj/portal`) or any other page, a login module is activated that determines whether the current user is authenticated and has access to SAP EP content. The active login module is determined by the SAP EP configuration.

In this solution, a new login module needs to be developed that gets the user ID from WPS and logs on to SAP EP with the same user.

Assuming that both portal servers are in the same domain, a request to SAP EP transfers the logon cookie for WPS. The new login module uses this cookie to send an HTTP request to a dedicated WPS Portlet that returns the user ID currently logged on to WPS. The login module uses this user to log on to SAP EP.

In case the portals are in different domains, it is important to get the relevant cookie values from the URL when initiating the first call to SAP EP. These values are used by the SAP EP login module for logging into WPS, as well as for creating new cookies in the domain of the SAP EP side.



To implement this solution, you must perform the following:

1. Deploy the provided WPS Portlet, which returns the user ID.
2. Deploy the provided SAP EP JAAS module.
3. Configure SAP EP JAAS module parameters in the Visual Admin tool of the SAP J2EE Engine.
4. Configure SSO and the session parameter in the WPS Administration Console.

For more information, see *How to Set Up Single Sign-on Between an IBM WebSphere Portal and the SAP Enterprise Portal using JAAS* on SAP Developer Network at sdn.sap.com. The precompiled modules can be downloaded from the IBM Interoperability pages on SDN.

2.2.2 Log-Off

You must change the location of the **Log Out** link. The *ToolBarInclude.jsp* file, which contains this link, is located in the directory `<was_root>/installedApps/<cell name>/wps.ear/wps.war/themes/html`. You also have to place a custom *logoutEp.jsp* on SAP EP (for example, in the directory `c:\usr\sap\<sid>\<no>\j2ee\cluster\<server>\apps\sap.com\irj\servlet_jsp\irj\root`), which is called from WPS.

Different versions of these files exist on SDN for scenarios with one or two domains.

2.3 Other Authentication

2.3.1 Tivoli Access Manager WebSEAL

This integration uses WebSEAL as a reverse proxy. A WebSEAL junction is created and connected to the back-end portal. When a user is authenticated on WebSEAL, WebSEAL passes the authenticated user ID to the portal within an HTTP header. The portal is configured to accept and trust this user ID from WebSEAL.

This scenario has the following workflow:

1. A client accesses SAP EP or WPS through WebSEAL.
2. WebSEAL intercepts the request, and then authenticates and authorizes the user.
3. On successful authentication, WebSEAL passes the request to the portal, together with the authenticated user ID, within the *iv-user* HTTP header.
4. The portal accepts and trusts the user ID from WebSEAL.

The following software is needed:

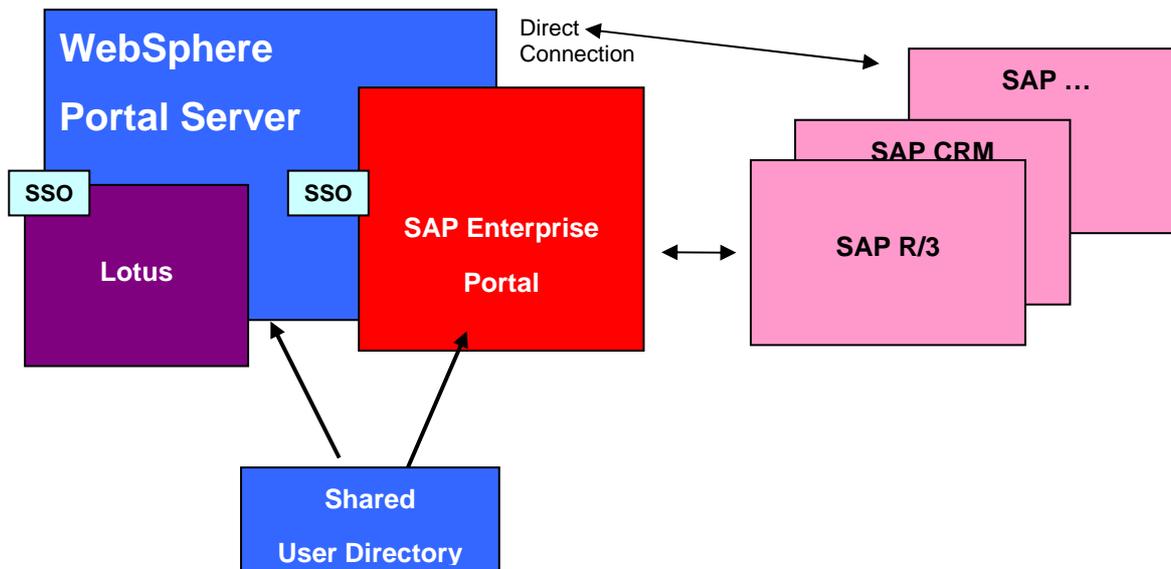
- IBM Tivoli Access Manager Base 4.1 with Fix Pack 5 or higher
- IBM Tivoli Access Manager WebSEAL 4.1 with Fix Pack 5 or higher

3 User Management

The SAP Enterprise Portal and the IBM WebSphere Portal Server have their own user registry provider, but they can be configured to use a common registry, such as an LDAP directory.

Back-end systems like SAP applications in the mySAP Business Suite have their own user management. The integration in a business scenario with SSO and one common user registry leads to some architectural issues on how best to integrate those registries.

The following shows a portal scenario with a shared LDAP:



Alternative solutions to a shared LDAP can be developed on per project basis (for example, replicating and synchronizing different user stores).

3.1 Configuring LDAP in the IBM WebSphere Portal Server

Perform the following to configure LDAP support in WPS:

1. Start the WPS administrative server for the administrative domain.
2. Start the WPS administration console.
3. In the administration console, select **Security Center** from the console menu.
4. Click on the **Authentication** tab, and set the **Authentication Mechanism** field to **Lightweight Third Party Authentication (LTPA)** in order to use an LDAP directory as the user registry.

3.2 Configuring LDAP in SAP Enterprise Portal

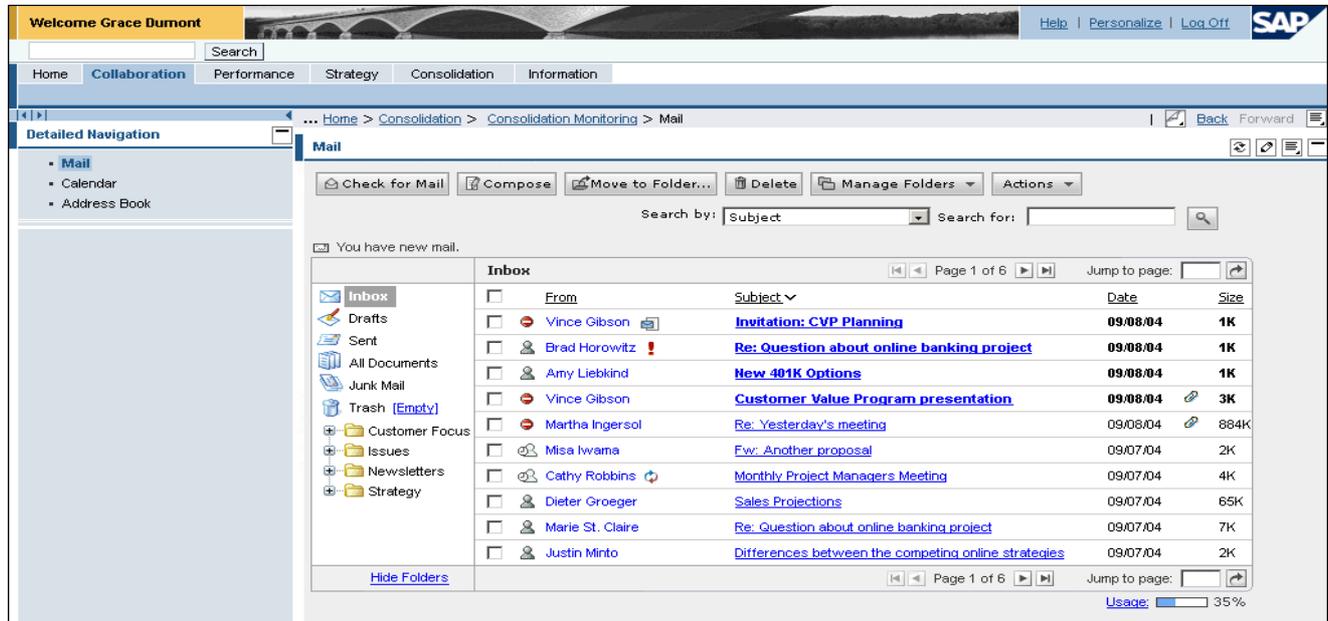
For information on defining an LDAP directory as a user registry, see *Defining an LDAP Directory as a Data Source* on the SAP Help Portal at help.sap.com → *Documentation* → *SAP NetWeaver*. Open the documentation of your preferred language and software release:

1. In the documentation, navigate to *SAP Library* → *SAP NetWeaver* → *People Integration* → *Portal*.
2. In the Portal documentation, navigate to *Administration Guide* → *System Administration* → *System Configuration* → *User Management Configuration* → *User Management Configuration Tool*.

4 Granularity of Access

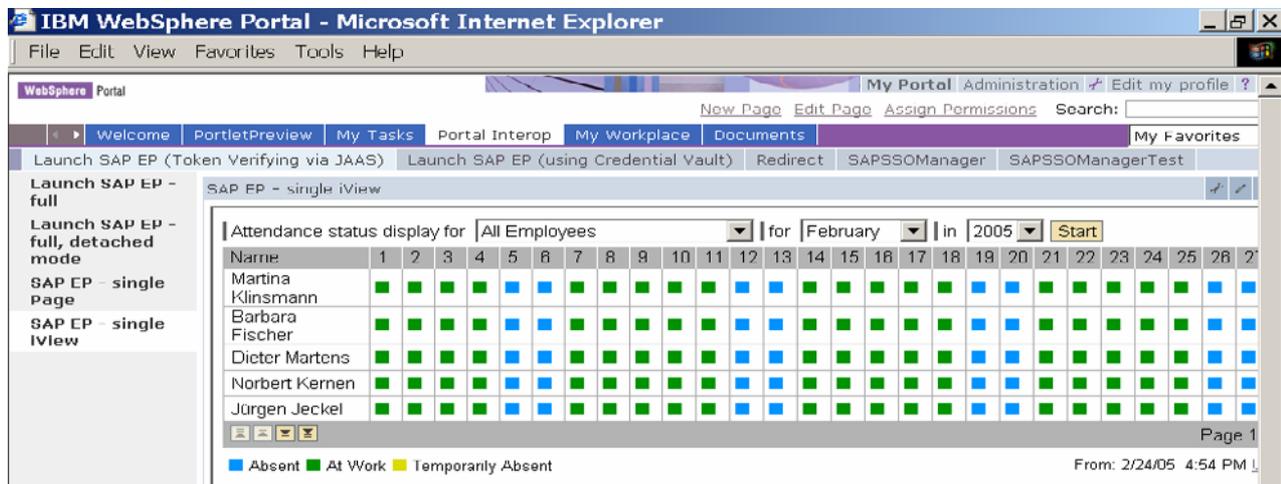
4.1 SAP Enterprise Portal Leads (URL iView)

The SAP Enterprise Portal includes the URL iView, which enables the integration of any URL resource. This iView can be used for integrating a complete WPS or selected WPS pages, which can contain one or more Portlets.



4.2 IBM WebSphere Portal Server Leads (Web Page Portlet)

IBM WebSphere Portal Server provides the Web Page Portlet, which enables the integration of any URL resource via an iFrame. It can be downloaded from the *IBM WebSphere Portal Catalog*, available at catalog.lotus.com/wps/portal/portalworkplace.



4.2.1.1 Limitations

Running SAP EP in WPS has the following limitations:

- Only Internet Explorer is supported. Some SAP EP iViews display a warning message if they are viewed within a different browser.
- You cannot access SAP EP administration pages. To work with administrative pages, you must start SAP EP in a new window and log on directly to SAP EP, not via WPS.
- To avoid JavaScript errors, you must enter SAP EP with a special URL alias. This causes the modification of some JavaScript routines that generally require the SAP EP to run in its own browser window.

The alias must be set in the web.xml file, located in the directory
C:\usr\sap\<SID>\<NO>\j2ee\cluster\server0\apps\sap.com\irj\ servlet_jsp\irj\root\WEB-INF).

In the web.xml, make a copy of the *init-param* element whose *param-name* element has the value *portal*. In the copy, change the *param-name* value to *portal/interop*, and then append *nested_window=1* to the value for *param-value*.

The following is an example of such a *init-param* element:

```
<init-param>
  <param-name>
    portal/interop
  </param-name>
  <param-value>
    anonymous=0,proxy=0,low_bandwidth=0,include_in_url=1,
    include_application_name_in_url=1,nested_window=1
  </param-value>
</init-param>
```

Whenever you enter the portal with the URL <http://localhost:50000/irj/portal/interop>, the portal works in nested mode and changes its internal JavaScript references.

- Some (older) business packages may not fully work in a nested iFrame because of JavaScript errors (for example, CRM 5.0 and higher business packages are required).
- CRM versions prior to 5.0 are not supported.

5 Look & Feel

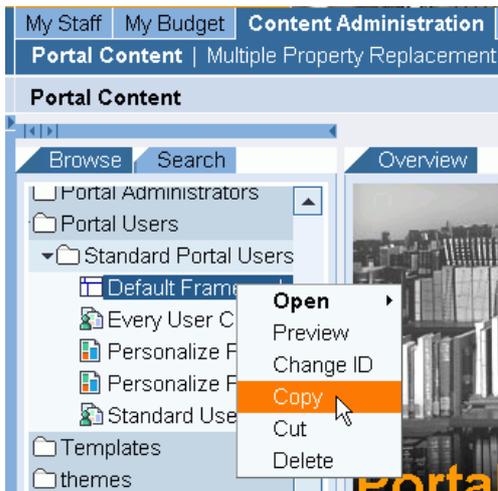
5.1 SAP Enterprise Portal

5.1.1 Navigation

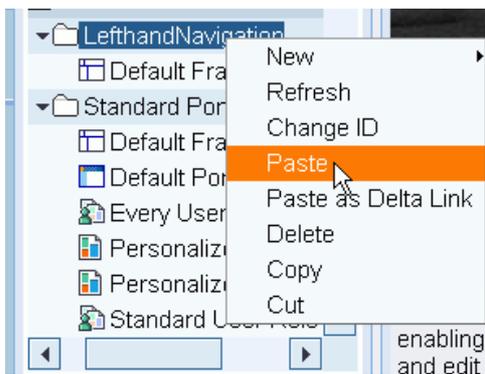
To adapt the SAP Enterprise Portal to the IBM WebSphere Portal Server navigation, move the SAP EP top-level navigation to the left side by doing the following:

1. Make a copy of the default framework page by doing the following:

Navigate to *Content Administration* → *Portal Content*, and then browse to *Portal Content* → *Portal Users* → *Standard Portal Users*, which contains the default framework page. Right-click the *Default Framework* object, and select **Copy**.

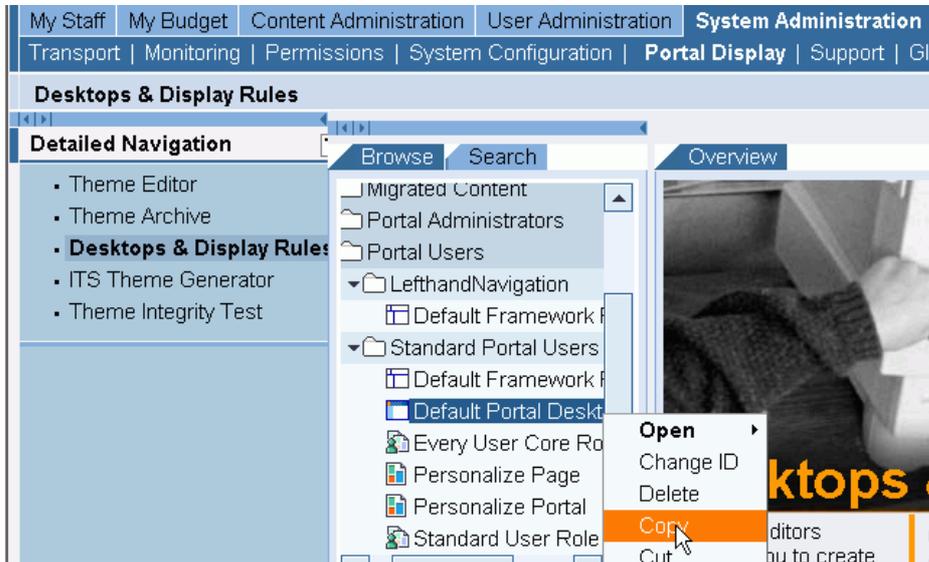


2. Paste a copy of the standard framework page into a new folder, by right-clicking the folder and selecting **Paste**.



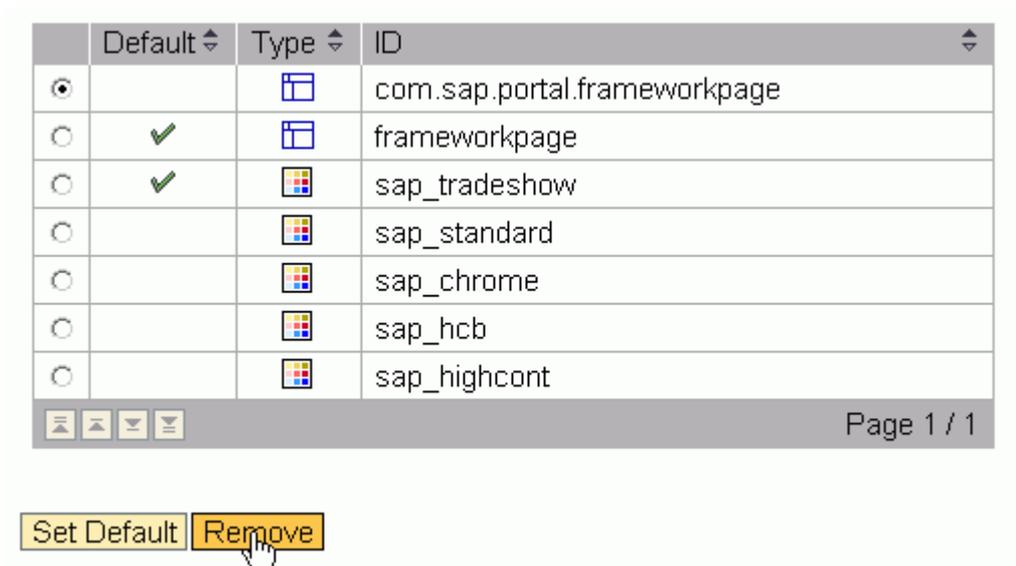
3. Make a copy of the default desktop by doing the following:

Navigate to *System Administration* → *Portal Display* → *Desktop & Display Rules*, and then browse to *Portal Content* → *Portal Users* → *Standard Portal Users*, which contains the default desktop. Right-click the *Default Portal Desktop* object, and select **Copy**.

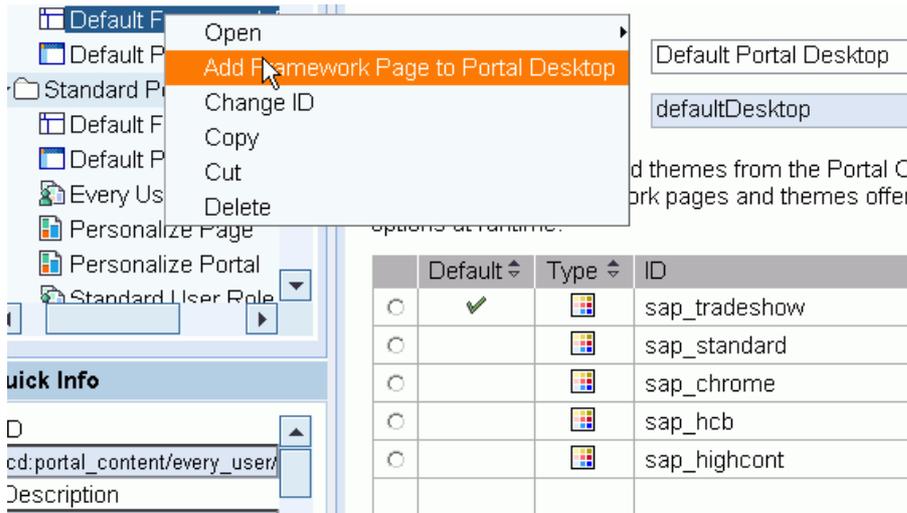


4. Add the copy of the default framework page to the copy of the default desktop by doing the following:

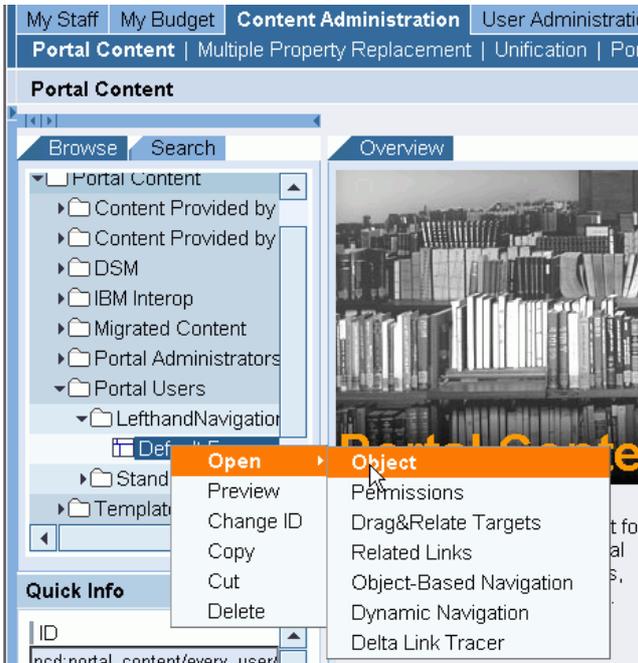
Right-click the copy of the default desktop and select **Open** → **Object**. Remove all framework pages from the desktop.



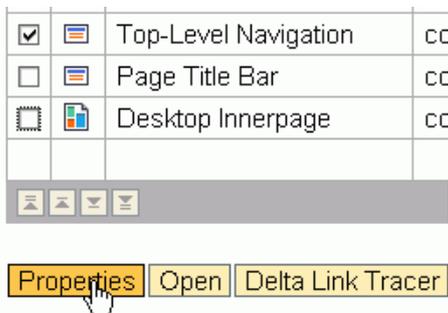
Right-click the copy of the default framework page and select **Add Framework Page to Portal Desktop**.



5. Navigate to *Content Administration* → *Portal Content*, and then browse to your folder. Right-click your framework page and select **Open** → **Object**.



From the editor, select **Top-Level Navigation**, and then click **Properties**.



6. Set the **Number of Display Levels** property to **0**, and then click **Save**.

▶ Number of Display ...

7. Hide the masthead and tools area by unchecking the **Visible** checkbox for the **Masthead iView** and **Tool Area**, and then click **Save**.

<input type="checkbox"/>		Name	ID	Visible	Fixed
<input type="checkbox"/>		Masthead iView	com.sap.portal.masthead	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>		Tool Area	com.sap.portal.toolAreaiView	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>		Top-Level Navigation	com.sap.portal.topLevelNavigationiView	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>		Page Title Bar	com.sap.portal.pageToolbar	<input type="checkbox"/>	<input type="checkbox"/>
<input type="checkbox"/>		Desktop Innerpage	com.sap.portal.innerpage	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Page 1 / 1

8. On the left side, check only **Desktop Innerpage** and click **Open**. From the new editor, check only **Detailed Navigation** and click **Open**.

<input type="checkbox"/>		Name	ID
<input checked="" type="checkbox"/>		Detailed Navigation	com.s:
<input type="checkbox"/>		Dynamic Navigation	com.s:
<input type="checkbox"/>		Drag&Relate Targets	com.s:
<input type="checkbox"/>		Related Links	com.s:
<input type="checkbox"/>		Content Area	com.s:

Properties **Open** Delta Link Tracer

9. From the **Property Category** dropdown list, select **Show All**. Set the **Start at Level** property to **1**.

▶ Start at Level:

10. Navigate to *System Administration* → *Portal Display* → *Desktop & Display Rules*, and then browse to *Portal Content* → *Portal Administrators* → *super_admin*, which contains the master rule set.

Create a new rule for the URL alias **portal/interop**, which was defined in the web.xml file, as described in *Limitations* on page 12. Set the portal desktop to your new custom desktop by specifying its PCD address. The new desktop will be used whenever the portal is launched via the URL

http://<hostname>:<port#>/irj/portal/interop.

THEN Portal Desktop = pcd:portal_content/com.ctsc.ibminteropfolder/com.ctsc.lefthandnavigati **Apply**

▼ Rule Collection

- ▼ IF URL Alias = portal/interop
 - THEN Portal Desktop = pcd:portal_content/com.ctsc.ibminteropfolder/com.ctsc.lefthandnavigationfolder/defaultDesktop**
- ▼ IF User = *
 - THEN Portal Desktop = pcd:portal_content/every_user/general/defaultDesktop

Add IF Expression **Delete** **Move Up** **Move Down**

A desktop like the following is created:

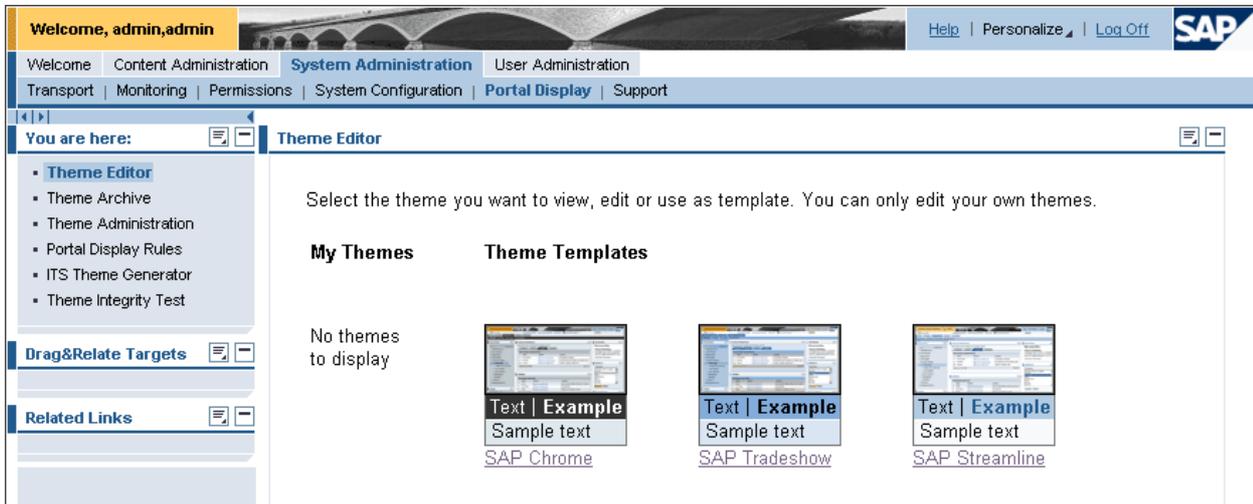
The screenshot shows the SAP EP portal interface with the following sections:

- Detailed Navigation:** A sidebar menu with options like My Staff, Overview, Attendance, Employee Review, Personnel Change Requ, Recruitment, ESS in MSS, Reporting, Compensation, Quota Planning, My Budget, and Interop.
- Phone List:** A table titled 'Telephone List (In-House)' with columns for Last name, First name, and Tel. It lists employees such as Klinsmann, Fischer, Martens, Kernen, Jeckel, Saxton, Giesa, Hirth, Tenson, Koch, and Heldner.
- Attendance Overview:** A section with a dropdown for 'Choose Employee List' (set to 'All Employees'), a table showing status counts (Absent: 1, At Work: 66), and a pie chart. It includes an 'Update' link and buttons for 'Overview' and 'Hide Graphic'.
- Reminder of Dates:** A section titled 'Display Dates/Tasks for All Employees in May 2005' with a table listing dates and events, such as 'Date of Birth (43)' for Adriano Pasoli and 'Date of Birth (45)' for Maurizio Fantoli.

5.1.2 Theme

SAP EP provides several default themes, which can be edited or used as templates for creating new themes.

To create and modify themes, open the Theme Editor by navigating to *System Administration* → *Portal Display* → *Theme Editor*. The following is displayed:



You can use the Theme Editor to change the colors and graphics to match the layout of the WPS.

For more information about the Theme Editor, see *Portal Themes* on the SAP Help Portal at help.sap.com → *Documentation* → *SAP NetWeaver*. Open the documentation of your preferred language and software release:

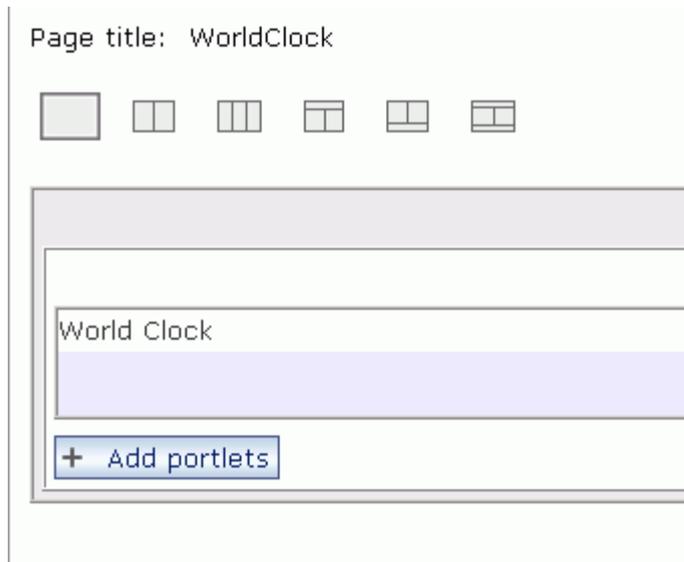
1. In the documentation, navigate to *SAP Library* → *SAP NetWeaver* → *People Integration* → *Portal*.
2. In the Portal documentation, navigate to *Administration Guide* → *System Administration* → *Portal Display* → *Portal Themes*.

5.2 IBM WebSphere Portal Server

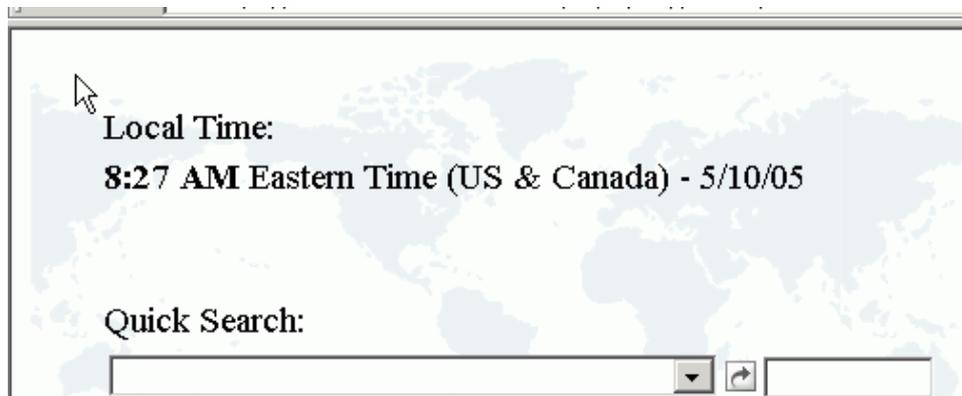
5.2.1 Navigation

You can use the layout properties of a page and a custom theme to remove unwanted headers, which makes it easier to include such pages with the SAP EP URL iView. But you must create an empty theme first, which would only display the content of the Portlet.

A page could look like the following:

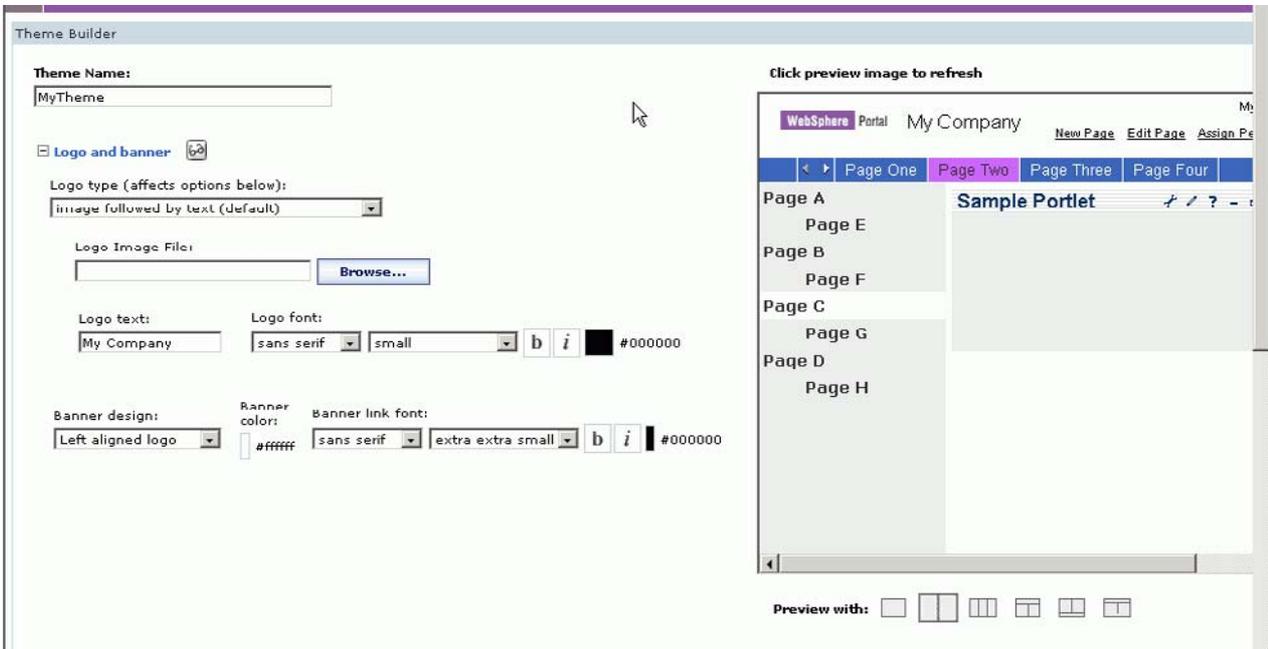


The following is a page with the World Clock Portlet and an empty theme and skin:



5.2.2 Theme

WPS provides the Portal Theme Builder Portlet, which allows you to create your own themes, by changing the company name or colors. The results of the new theme are displayed in the preview box on the right side of the page.



It is easy to change the look of the different hierarchies and pages. You can also download the generated theme as a ZIP file for installation on other WPS installations.

