A How to Build Roles in the Controlling Component

from the book

Controlling with SAP® ERP: Business User Guide

by Janet Salmon

"The step-by-step guide for all your CO tasks!"

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A How to Build Roles in the Controlling Component

This appendix explains how to work with your system administrator to find the roles we used to illustrate the business processes and configure them for productive use.

Since the passage of Sarbanes-Oxley Act (SOX) in the United States and similar mandates in other countries, there's been a requirement to ensure proper segregation of duties, and organizations have been forced to clearly document which users have access to which transactions and reports. This process is made manageable by defining *roles* that provide access to the transactions for every job performed in SAP ERP. The roles are also used to generate authorization profiles on the basis of the transactions included in these roles.

- In some companies, the roles are used to control access authorizations for compliance purposes, but users continue to select transactions from the full SAP Easy Access menu, seeing transactions they are not authorized to use.
- In other companies, the users' roles are used to provide a role-based menu, displaying only those transactions and reports that users are authorized to perform.

The roles we used to illustrate our examples were first delivered in SAP ERP 6.0, SP8. They're not designed for productive use, but simply as a delivery mechanism for providing access to the existing transactions and reports, initially by uploading them to the SAP Enterprise Portal and later for direct use in the SAP Business Client. With this in mind, you should copy them into your own namespace and generate the appropriate authorization profiles before using them. These roles were built by taking the area menus for each application and creating a role for each area. The example we showed in Chapter 3, Figure 3.1 (cost center master data) was created using the area menu KSMN for Cost Center Accounting. This used the role `SAP_EP_RW_CO_KSMN`, and we looked at the contents of the first folder (the master data). Figure 3.13 (internal order master data) was created using the area menu KAMN for internal orders and showed the first folder for the role `SAP_EP_RW_CO_KAMN`, whereas Figure 3.30 (master data for product cost controlling by period) was created using the area menu KKPM for product cost controlling by period and showed the first folder of the role `SAP_EP_RW_CO_KKPM`. The easiest way to find all delivered roles for the Controlling component of SAP ERP Financials (CO) is to call Transaction PFCG and search by entering "SAP_EP_RW_CO*" in the F4 help.

Finding Out About New Roles

To find out which roles were delivered for use on the web, refer to SAP Note 1000291, which is updated as new roles are added with each enhancement package.

Role Maintenance

Figure A.1 shows the role structure for the master data in Cost Center Accounting that we saw in Chapter 3, Figure 3.1. To display this role, select Transaction PFCG or **Tools • Administration • User Maintenance • Role Administration • Roles** and enter the role `SAP_EP_RW_CO_KSMN`. Transaction PFCG is normally used by an administrator, and controllers don't usually have access. However, this appendix will help you discuss with your system administrator whether you can implement the roles in your current system landscape.

If you compare the folder structure for the role with the web page we saw in Chapter 3, Figure 3.1, you'll see that the folders on the left represent the menu structure **Cost Center Accounting • Master Data • Cost Element • Individual Processing** and the final item **Create Primary.** When you select this item, you'll see Transaction KA01 on the right, as shown in Figure A.1. This means you're effectively calling the transaction via the role rather than via the menu or the transaction code.

You'll only be able to use a role like this if an administrator has assigned the role to your user. Figure A.2 shows the roles assigned to our demo user (CONTROLLING, Melissa Adams). You can display this by selecting Transaction SU01 or **Tools • Administration • User Maintenance • Users** and then entering the user name and selecting the **Roles** tab.

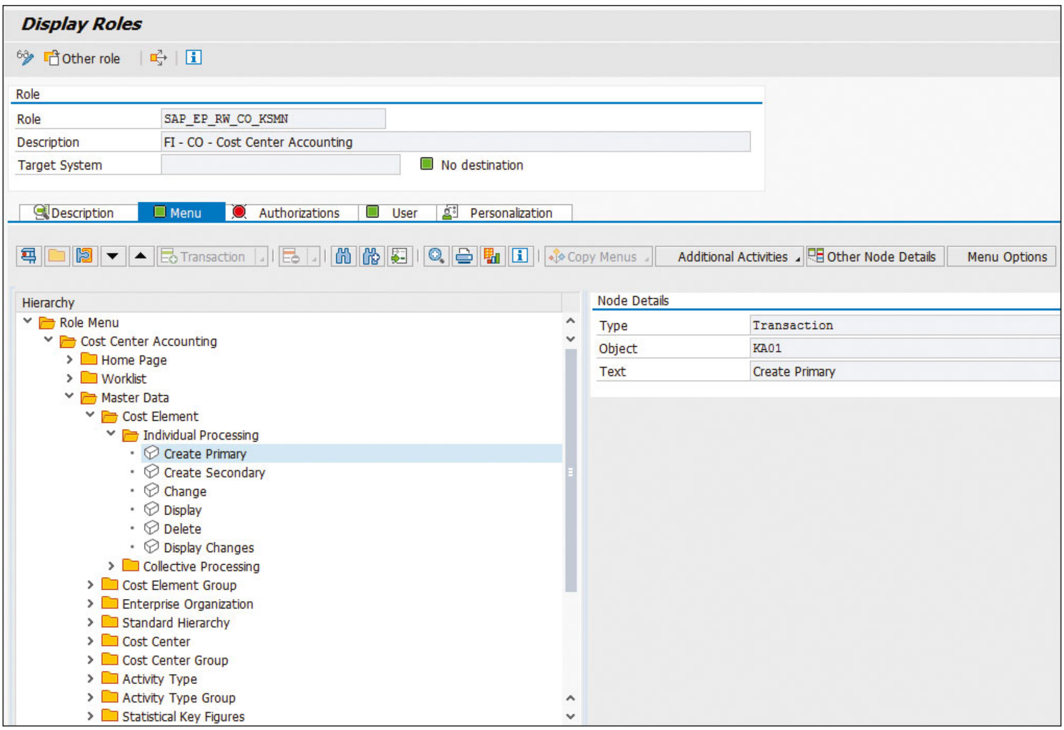

Figure A.1 Role for Cost Center Accounting, Showing Transaction

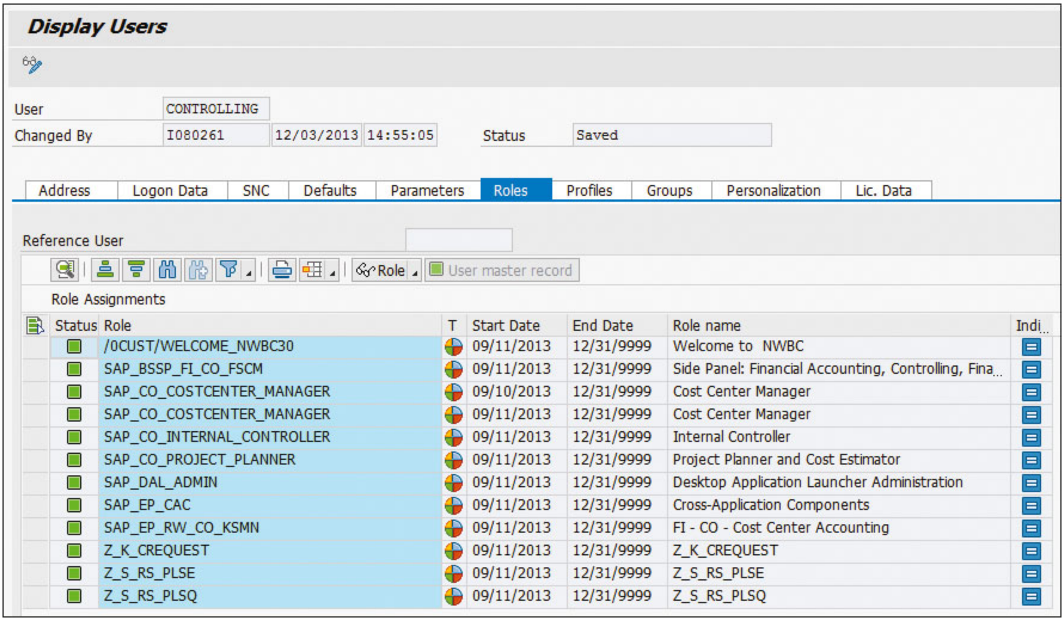

Figure A.2 Assignment of Roles to User

What makes the SAP_EP_RW_CO* roles different from the roles you're probably using now is that they're used to generate a navigation structure in the SAP Business Client and web pages (known as service maps) for each folder. If you refer back to Chapter 2, Figure 2.1 (Cost Center Accounting), Figure 2.10 (Internal Orders), Figure 2.15 (Product Cost Planning), Figure 2.19 (Order-Related Controlling), Figure 2.23 (Product Cost by Period), Figure 2.25 (Sales Order Controlling), Figure 2.28 (Actual Costing/Material Ledger), and Figure 2.32 (Profitability Analysis) illustrate how the folder structure of the roles provides the navigation structure in the SAP Business Client. As you navigate, each of these folders represents the canvas area, which contains the web page with the icons, links, and texts (the service map) we've used for illustrative purposes throughout the book.

We'll now look at the settings for each of the folders. To look at the settings for the top node used to provide access to the navigation structures we looked at in Chapter 2, place your cursor on the folder **Cost Center Accounting** and click on the **Other Node Details** button, as shown in Figure A.3. The top folder, or root node, needs to have a special flag, **Single Top Level**. To ensure correct navigation, there should be only one folder with this flag in any role.

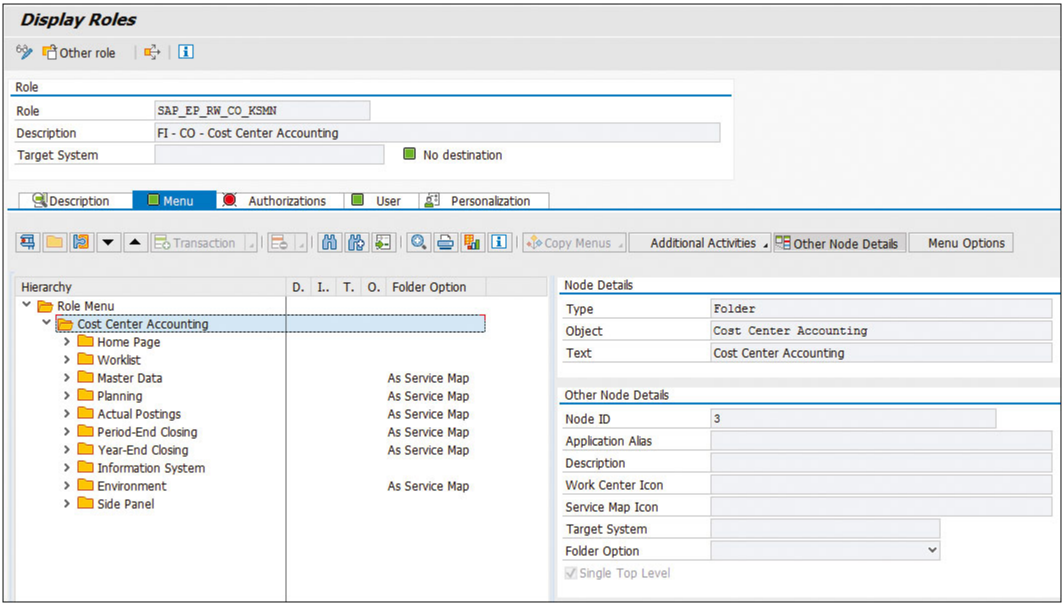

Figure A.3 Root Node of Role for Cost Center Accounting

The next levels are represented by folders that are flagged as service maps. To see this next level, move your cursor down to the folder **Master Data** and click on the **Other Node Details** button, as shown in Figure A.4. Notice that this folder is flagged as a service map but does not include any texts because it's used to generate the settings in the navigation panel. If you refer back to Chapter 3, you'll see the pages for master data in Cost Center Accounting (Figure 3.1), master data in Internal Orders (Figure 3.13), and master data for product cost by period (Figure 3.30). These pages include both icons and texts that describe the applications.

The texts and icons are entered in the folder for the third-level navigation, which you can display by moving your cursor down to the **Cost Element** folder, as shown in Figure A.5. Here you'll see the text that appears in the web page and the icon that appears next to the folder. You can easily change these texts to reflect the way you use the relevant transactions.

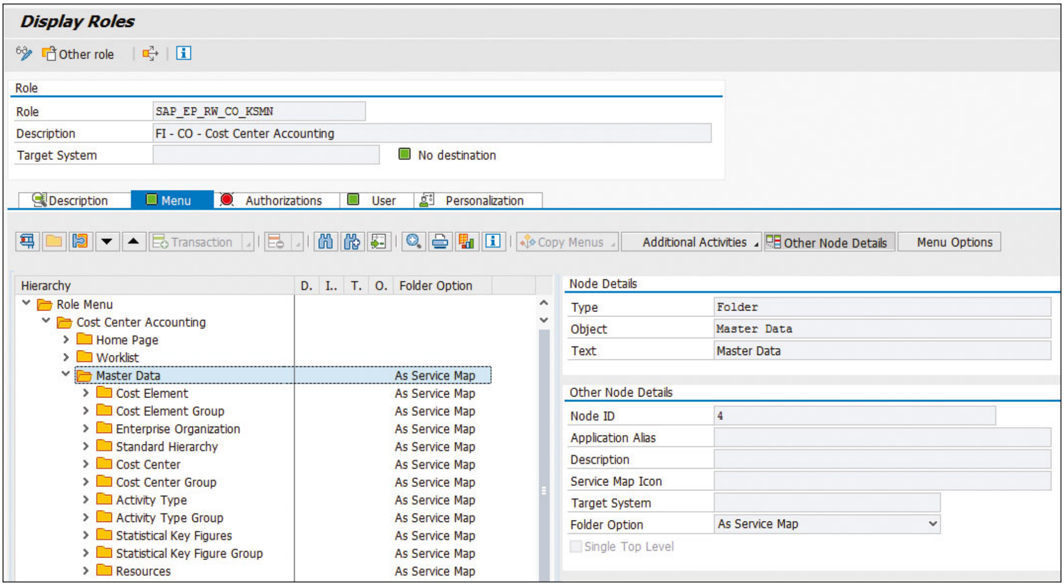

Figure A.4 Master Data Folder as Service Map

For productive use, you should copy these roles into your own namespace to make sure that they're not accidentally overwritten if SAP updates the content of the roles in the future. As you start to change the roles to meet your own needs, you need to be aware of some ground rules for the preparation of roles with web pages:

- The top folder (**Cost Center Accounting**, in our example) must have other folders, rather than transactions, assigned to it. It should be flagged as **Single Top-Level**, as we saw in Figure A.3.
- The next level of folders (**Master Data, Planning, Actual Postings**, and so on) are used to generate the web pages (or service maps) we've been showing in our examples.
- The third level of folders are used to generate the headings in the web pages (**Cost Element, Cost Element Group, Enterprise Organization**, and so

on in our example). You can create subheadings by adding fourth-level folders, such as **Individual Processing** and **Collective Processing** in our example.

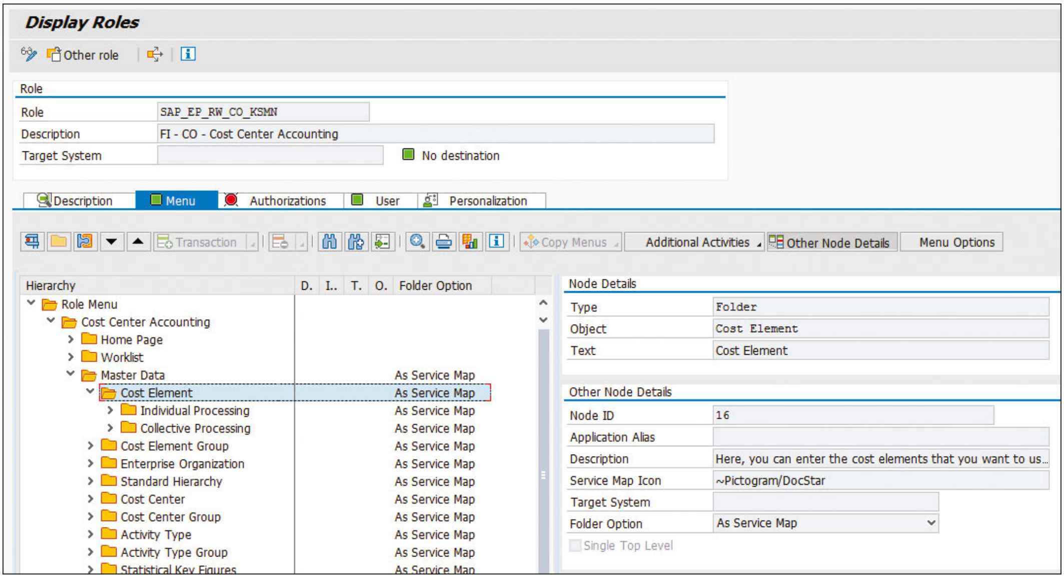

Figure A.5 Cost Element Folder with Texts and Icons

If you want to take your own roles and adjust them for use in the SAP NetWeaver Business Client, you should follow the preceding ground rules. Depending on the complexity of the roles, it will take you a couple of hours to juggle the folder structures to get the right number of levels, enter appropriate texts, and choose fitting icons.

If you are using EHP 6 for SAP ERP 6.0, you'll find additional folders for the roles listed previously. We looked at examples in Chapter 2, Figure 2.2, where we showed the home page for Cost Center Accounting, and in Figure 2.11, where we showed the home page for Internal Orders. This page is a generic Web Dynpro application `WDR_CHIP_PAGE` that is included in each role. To see the configuration specifically for Cost Center Accounting, right-click the **Home Page** application to see the Application Configuration `CO_KSMN_`

HOME, as shown in Figure A.6. It is this application configuration that contains the settings for the entry page shown in Figure 2.2. You can use the page builder settings to configure this page to add or remove the various CHIPs to best meet the needs of your organization. According to the documentation, a Collaborative Human Interface Part (CHIP) is an encapsulated piece of software that, together with other CHIPs, provides functions on a page or side panel of the Web Dynpro ABAP Page Builder. To put it simply, CHIPs provide access to snippets of information, such as the attributes of a cost center, the expenses on an internal order, or a note created to document a posting. A CHIP catalog provides access to all CHIPs delivered by SAP. Users can add CHIPs to their entry pages as they see fit by right clicking on the upper right of the page and choosing **Call Page in Customizing Level**. From here they will see the **CHIP Catalog** button and can add additional CHIPs to their home pages.

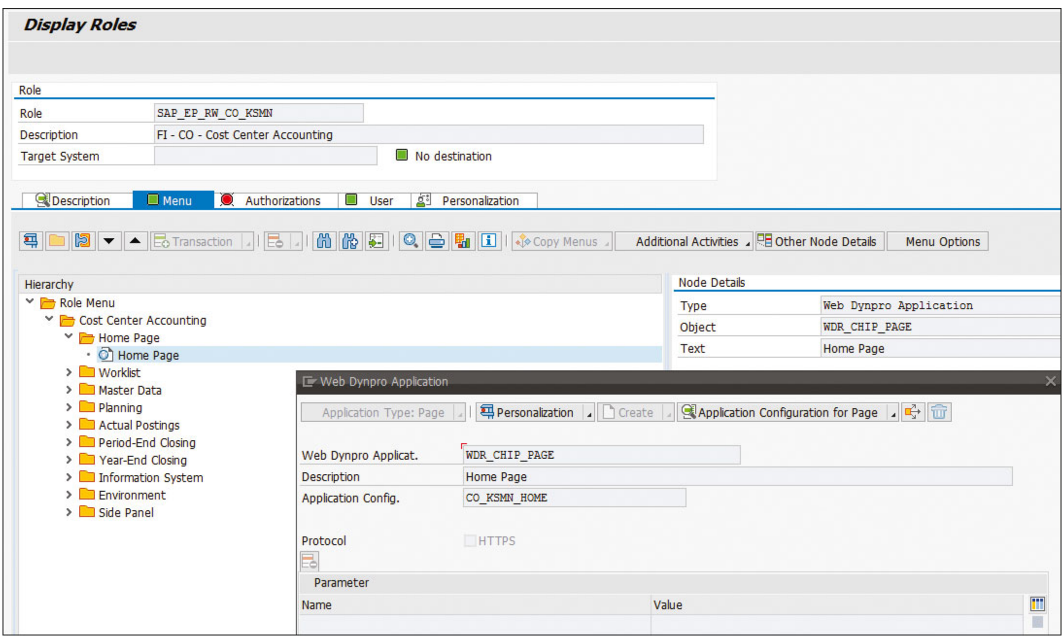

Figure A.6 Settings for Home Page

Now that you have your role structure in place, let's look at how to make the role available to users in the SAP Business Client or SAP Enterprise Portal.

Providing Access to Your Roles

If you want to work with a web-based user interface, you can either use SAP Business Client (as we have for most of the examples in this book) or SAP Enterprise Portal.

SAP Business Client

You can install the SAP Business Client locally on your desktop, where it will appear as an icon (see Figure A.7). Clicking on the icon will take you into a logon dialog. For the results shown in this book, you'll need to use SAP Business Client version 4.0. You can, of course, work with earlier versions of SAP Business Client, but then the role structure will be presented differently, with folders along the top of the screen and a navigation panel on the left of the screen. The theme colors are also different (dark blue rather than the gray that we've been demonstrating).

Figure A.7 SAP Business Client Icon on Desktop

If you're using the link for the first time, you'll have to establish the connection with the SAP ERP system you want to work with. Figure A.8 shows the parameters needed to establish logon.

The easiest way to find the URL for your system is to log on to SAP ERP and enter Transaction NWBC. This will generate an HTML page, as shown in Figure A.9, with a link to each of your roles. You'll see the URL you need in the browser area at the top of the screen. You'll need the part of the string up to and including */nwbc*. You can also use these links for testing.

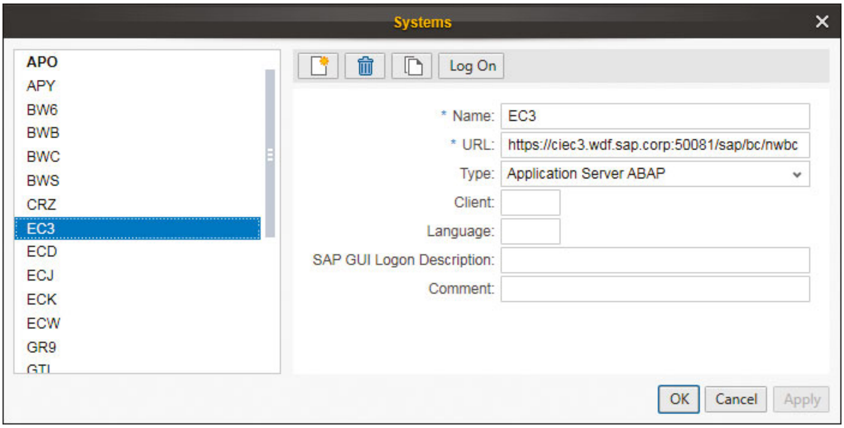

Figure A.8 System Connection for SAP Business Client

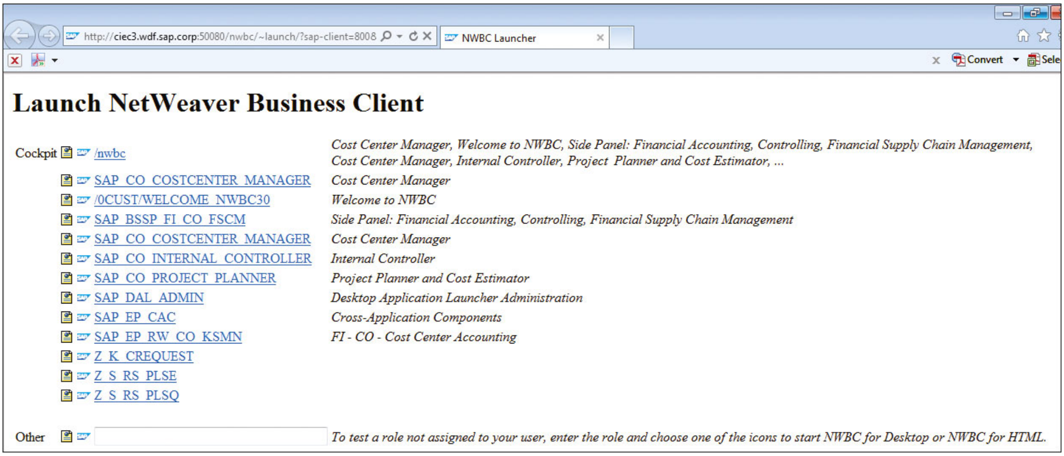

Figure A.9 Role Access via HTML

You can use the SAP Business Client with almost zero implementation effort, because once you've installed it, you're simply calling roles in SAP ERP. If your organization uses SAP Enterprise Portal, you can use the same web pages in the portal. The next section will show your portal administrator how to configure the settings.

SAP Enterprise Portal

If your organization uses the SAP Enterprise Portal, a role upload tool exists from SAP NetWeaver 7.0, SP11 that allows you to upload the roles we've been discussing to your portal. This generates the roles, pages, worksets, and iViews you need to run the relevant transactions within the portal. Before you use the role-upload service in the SAP Enterprise Portal, you should check the following portal settings in collaboration with your portal administrator. For further details on this procedure, please refer to the documentation under **Portal • Portal Administration Guide • System Administration • Upload of Roles from ABAP-Based System**.

To view the relevant settings in your portal, log on to the SAP Enterprise Portal, select **System Administration • Service Configuration • Role Migration • Services** (see Figure A.10), and set the following properties:

- Set the **Best Fit Leaf Level** to 3.
- In the **Role Target** folder, enter the portal content directory path (PCD path) in which you wish the uploaded roles to be stored.
- In **Root Path for Migration Objects,** enter the PCD path under which the uploaded objects (iViews, pages, worksets) are to be created.
- In **Use Default Alias or Selected Alias as System Identifier**, enter "selected" as the default system alias to be passed as a system property to the created iViews.

Figure A.10 shows the portal settings prior to upload.

Once you're happy with the settings, have your administrator select **System Administration • Transport • Role Upload** to upload the roles.

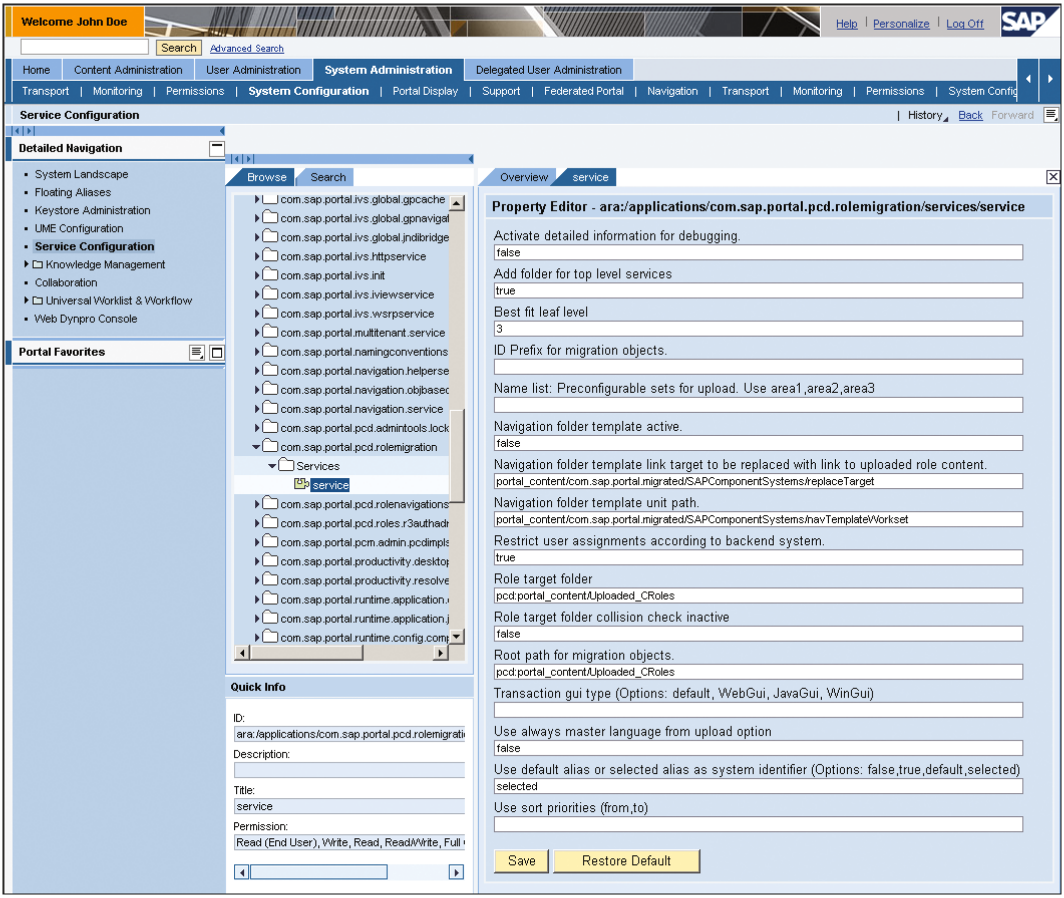

Figure A.10 Role Upload Settings in the Portal

Figure A.11 shows the results of the role upload. You and your administrator will find the roles as portal content by selecting **Content Administration • Portal Content**, then **Migrated Content • SAP Component System • Roles • Uploaded C-Roles**, and then scrolling to the roles beginning with **FI-CO**. Then select the role **FI-CO Cost Center Accounting** from the list of uploaded roles, and view the role details (the folder structure uploaded from Transaction PFCG).

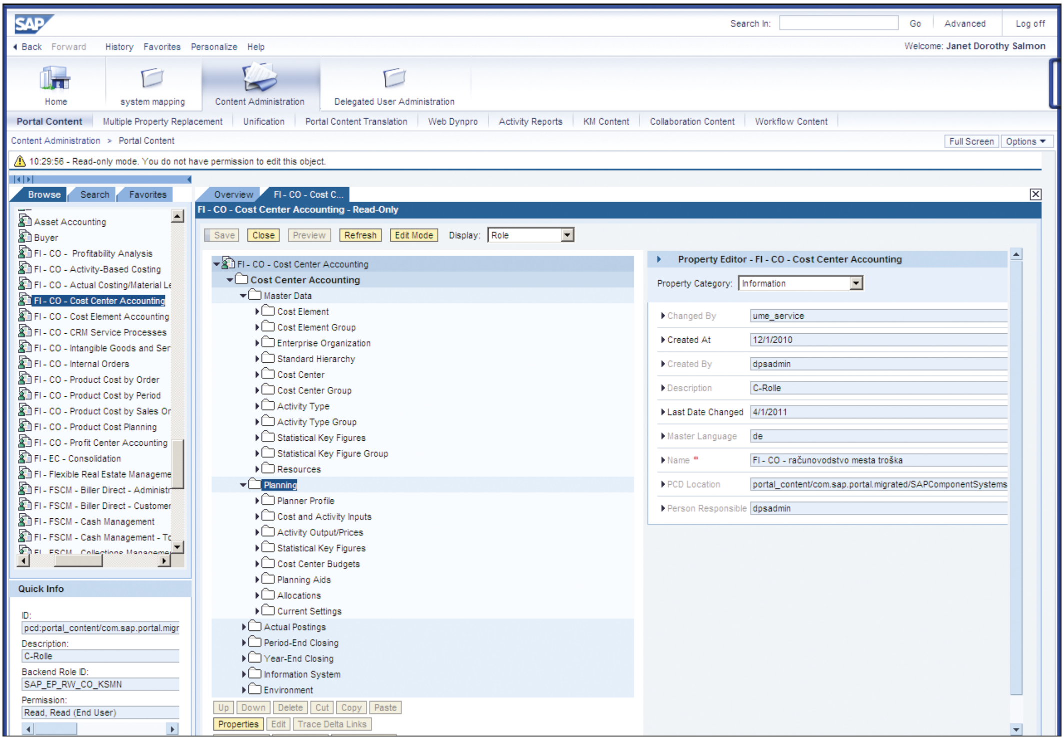

Figure A.11 Cost Center Accounting Role after Upload to SAP Enterprise Portal

Before you can use these roles, you have to assign them to the relevant users. Normally, this is a task of the portal administrator. To make the assignment yourself, select the **Delegated User Administration** folder, if your portal administrator allows this, find your user ID, as shown in Figure A.12, and proceed as follows:

To access your user details, double-click on the user ID and click on the **Modify** button.

1. Select the **Assigned Roles** tab, and in the **Available Roles** area (on the left) search for the portal role `SAP_EP_RW_CO_KSMN`.
2. When you've found it, click to highlight the role `SAP_EP_RW_CO_KSMN`, and click on the **Add** button.

3. When the role appears in the **Assigned Roles** area on the right, save the assignment by clicking on the **Save** button beneath **Details of User**.

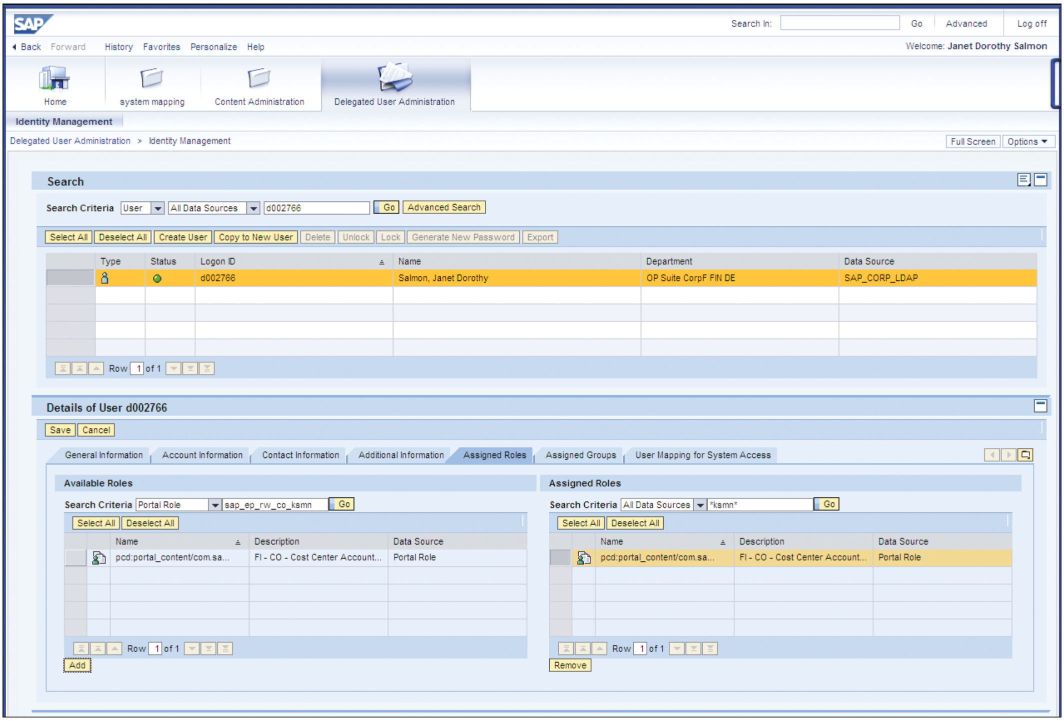

Figure A.12 Assigning a Portal Role to a User

Figure A.13 shows an example of the Cost Center Accounting role in the SAP Enterprise Portal. We could continue and add all the other CO roles to our user in the same way.

In addition to the roles derived from the SAP application menus, we've looked at several other roles in the course of this book.

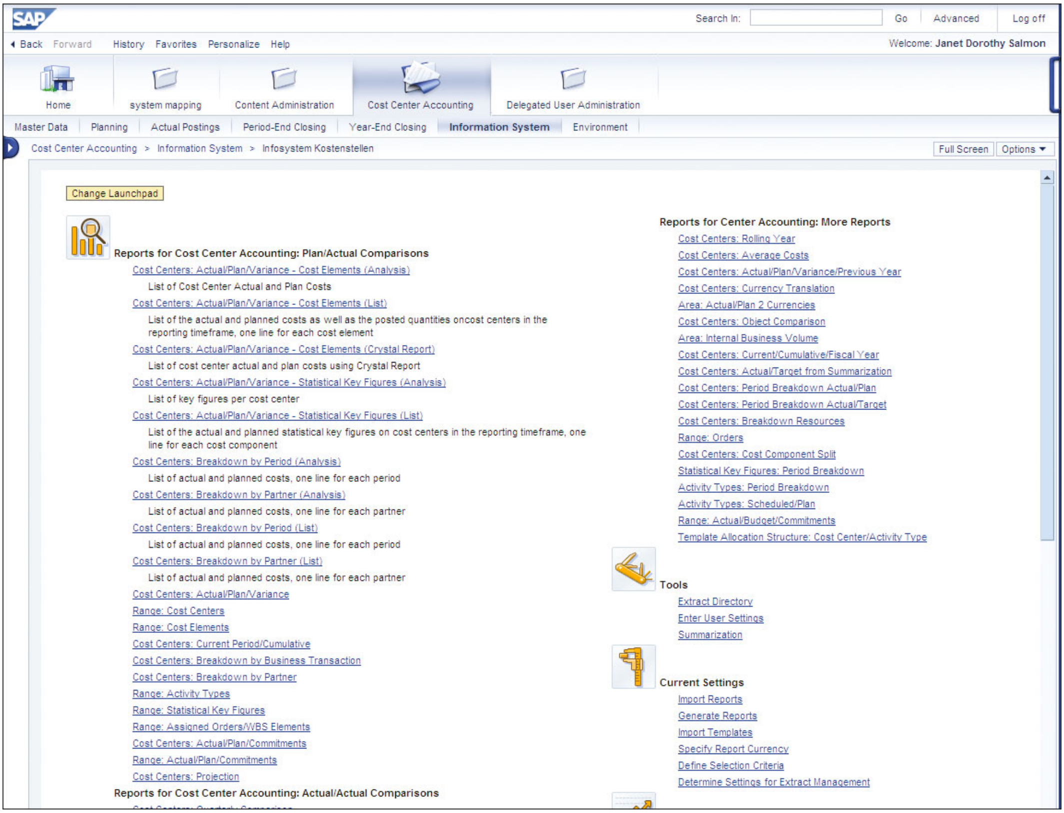

Figure A.13 Cost Center Accounting Role in SAP Enterprise Portal

Other Roles

We have looked at various roles in this book. All of these roles were initially delivered as portal content using the mechanism of a business package, but since EHP 5 they've also been available as roles in Transaction PFCG.

If you're using the SAP Enterprise Portal, your administrator can find these roles by logging on to the portal and selecting **Content Administration • Portal Content • Content Provided by SAP**, as shown in Figure A.14.

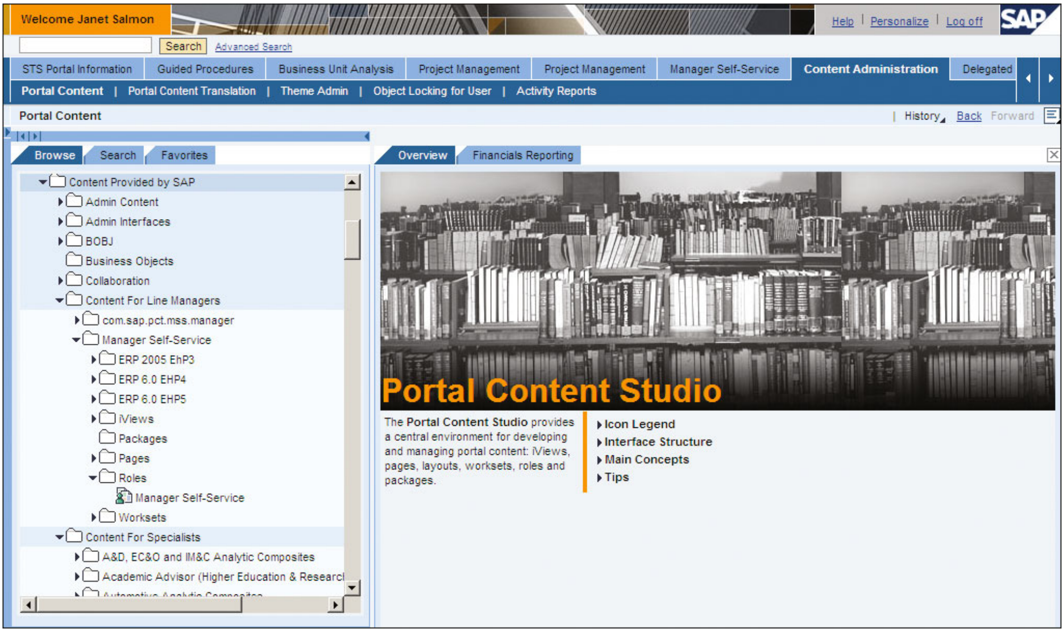

Figure A.14 Portal Content Directory

You'll find the role structure for Manager Self-Service (see Chapter 3 and Chapter 10) by selecting **Content for Line Managers • Manager Self Service.** If you aren't using the portal, then consider using the role Cost center Manager instead, since it contains many of the same web applications.

The rest of the roles are delivered in the **Content for Specialists** folder, where you'll find the business packages:

- **Business Unit Analyst 2.0** (see Chapter 10)
- **Financial MDM** (see Chapter 9)
- **Worksets for Reuse in Roles • Closing Cockpit** (see Chapter 12)
- **Worksets for Reuse in Roles • Simplified Reporting** (see Appendix B, also available at www.sap-press.com/4691)

From EHP 5 for SAP ERP 5.0 on, these roles are also available as roles in Transaction PFCG, meaning you can use these web applications without having to implement the portal.

- When we discussed SAP Master Data Governance in Financials in Chapter 9, we looked at the role `SAP_FIN_MDM` for master data governance. We also used the role `SAP_FIN_INT_SELF_SERVICE` when we discussed the shared service framework.
- When we looked at the SAP Financial Closing cockpit in Chapter 12, we used the role `SAP_FAGL_CLOCO_WD_15`.

Summary

If you're using EHP 5 for SAP ERP 6.0, this guide should help your administrator implement the web applications we've seen in this book, using the SAP Business Client as an alternative to the SAP Enterprise Portal. Web applications designed to run in the SAP Enterprise Portal are available from SAP ERP 6.0. The web applications for the business unit analyst and manager self-service are available in Web Dynpro ABAP from SAP ERP 6.0, SP8 (earlier versions used Web Dynpro Java).