

Customer Service Care Reference Scenario



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Icons in Body Text

Icon	Meaning
	Caution
	Example
	Note
	Recommendation
	Syntax

Additional icons are used in SAP Library documentation to help you identify different types of information at a glance. For more information, see *Help on Help → General Information Classes and Information Classes for Business Information Warehouse* on the first page of any version of *SAP Library*.

Typographic Conventions

Type Style	Description
<i>Example text</i>	Words or characters quoted from the screen. These include field names, screen titles, pushbuttons labels, menu names, menu paths, and menu options. Cross-references to other documentation.
Example text	Emphasized words or phrases in body text, graphic titles, and table titles.
EXAMPLE TEXT	Technical names of system objects. These include report names, program names, transaction codes, table names, and key concepts of a programming language when they are surrounded by body text, for example, SELECT and INCLUDE.
Example text	Output on the screen. This includes file and directory names and their paths, messages, names of variables and parameters, source text, and names of installation, upgrade and database tools.
Example text	Exact user entry. These are words or characters that you enter in the system exactly as they appear in the documentation.
<Example text>	Variable user entry. Angle brackets indicate that you replace these words and characters with appropriate entries to make entries in the system.
EXAMPLE TEXT	Keys on the keyboard, for example, F2 or ENTER.

Exploring SAP NetWeaver CE Reference Scenario	5
Customer Service Care Application	5
Scenario Overview	5
Application Architecture.....	7
Running the Application	9
Setting Up Customer Service Care	9
Activating the Configuration Template.....	10
Adding Guided Procedures Runtime Portal Roles	11
Preparing the SAP NetWeaver Demo Model Application.....	11
Configuring SMTP server	12
Initiating the Customer Service Care Process.....	12
Executing the Scenario Process	13
Reviewing the Application's Source Code	15
Reviewing the GP Design Time of the Application	16



Exploring SAP NetWeaver CE Reference Scenario

This documentation provides information about the SAP NetWeaver CE reference scenario Customer Service Care. With the examples the user can gain benefit and see the actual representation of the Service Oriented Architecture (SOA).

Composite applications are defined as packaged applications that sit on top of other applications and reuse their functionality by service calls. The composites are developed following the paradigm of model-driven development and this is relevant for the examples described in this documentation. Model-driven development reduces the amount of handcrafted coding and increases the amount of configured or modeled parts of the composite. This approach improves the overall productivity and quality.

The scenario demonstrates the end-to-end development of a composite application from scratch. It reuses back-end services and data, at the same time adding its own business logic to flexibly implement a specific business process. The application shows how you can easily enhance the collaborative workflow by adding offline form-based steps and involving additional contributors.



Customer Service Care Application

Use

The following documentation provides a logical procedure describing the scenario in general, architecture hints, steps describing how to run the application, also the necessary steps when executing the scenario, and instructions how to review the source code of the application.

Procedure

1. Review general information about the scenario.
More information: [Scenario Overview \[Page 5\]](#)
2. Review the application architecture.
More information: [Application Architecture \[Page 7\]](#)
3. Run the application.
More information: [Running the Application \[Page 9\]](#)
4. Execute the scenario process.
More information: [Executing the Scenario Process \[Page 13\]](#)
5. Review the source code of the application.
More information: [Reviewing the Application's Source Code \[Page 15\]](#)



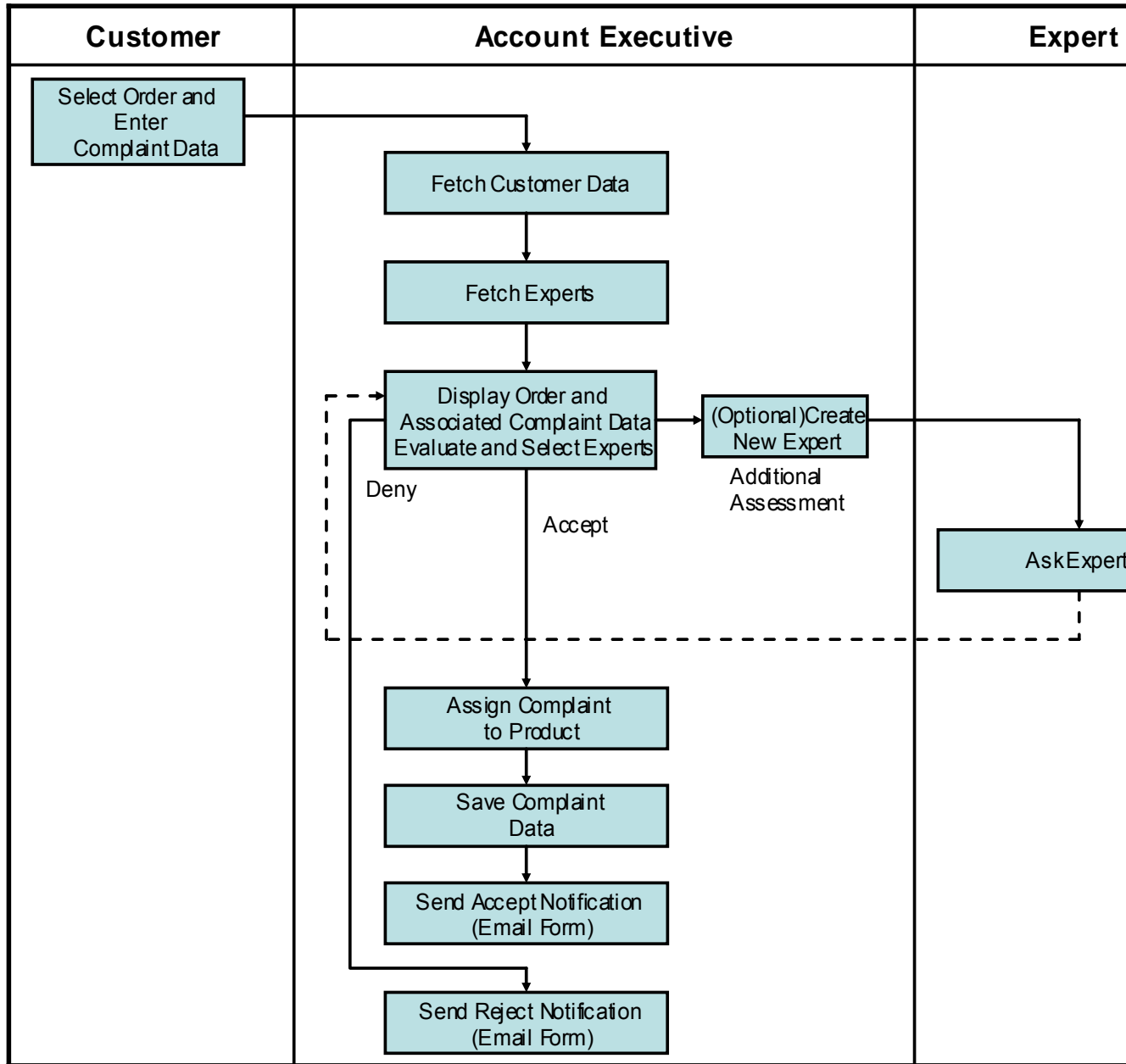
Scenario Overview

This scenario represents a composite application named Customer Service Care that is built from scratch. It uses Composite Application Framework and Java Web Services to structure its business logic.

You can start this scenario in Guided Procedure (GP) runtime of the Portal by selecting *Start a New Process* → *ReferenceApplication* → *CSC* and choosing *CSC_Process*.

The implemented functionality allows a customer to enter a complaint for an existing order. The complaints are handled by an account executive. After the required evaluation, the account executive can deny, accept or choose an expert for additional assessment. As displayed below, the process flow can proceed in three directions:

- An order complaint is denied.
The complaint is considered as insignificant and the account executive rejects it. The customer who entered the complaint form is notified by e-mail.
- An order complaint is accepted.
The complaint is well-founded, therefore the account executive accepts it. The complaint data is saved and the customer is notified by e-mail.
- An order complaint is forwarded for additional expert investigation.
The account executive appoints additional expert assessment. Once the assessment is done, the complaint needs to be sent for repeated account executive evaluation.



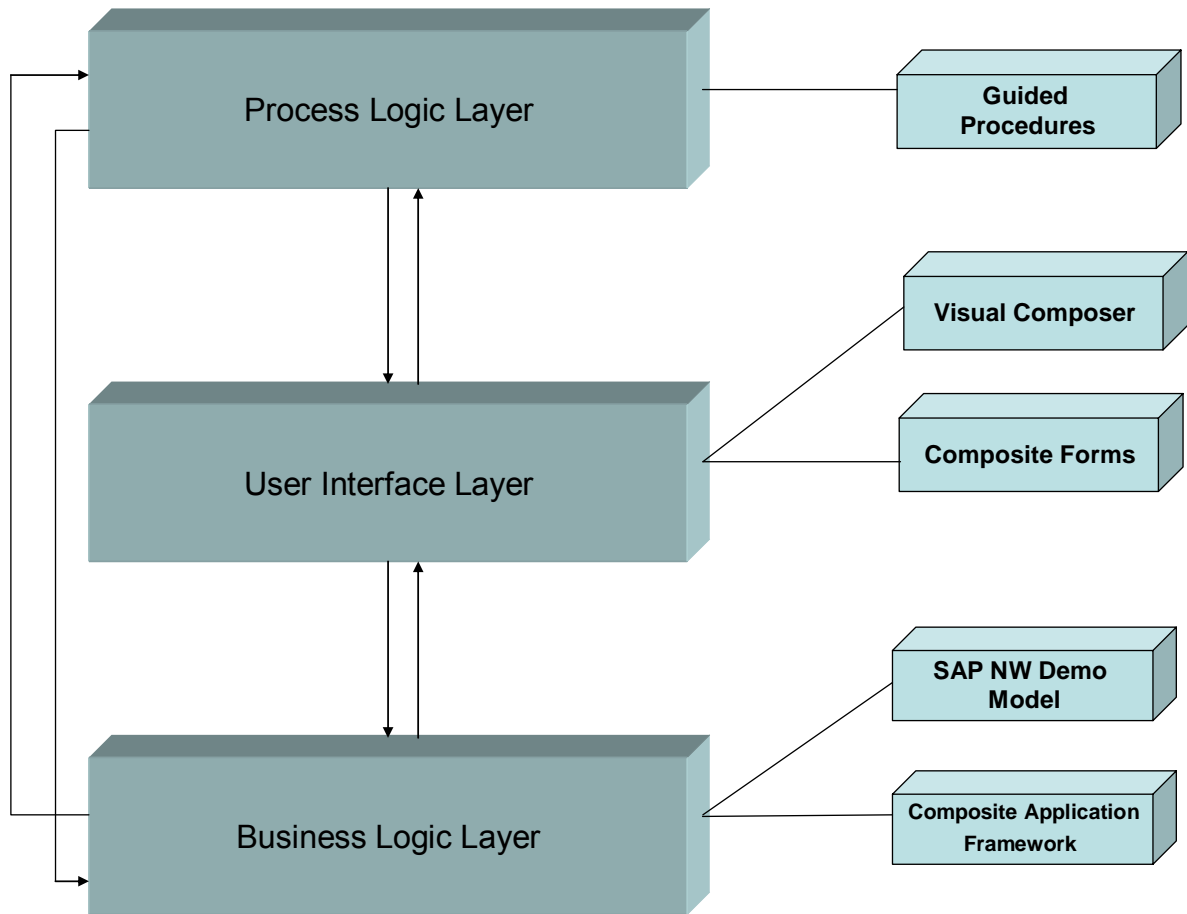
Application Architecture

The application Customer Service Care has an architecture variant, which provides the flexibility of adding own business logic (services, created with Composite Application Framework) to address a specific scenario.

The application uses Guided Procedures (GP) to build the process. The user interface is implemented with Visual Composer and Composite Forms. The business case is realized with

services built with Composite Application Framework and others that are provided by SAP NetWeaver Demo Model.

The details of the application layer structure are described below.



Process Logic Layer

The process logic layer is implemented with GP. GP allows you to model lightweight collaborative processes in which you connect various back-end applications and services into a single workflow. Process modeling with GP does not require specific programming skills and is targeted at business experts who are familiar with business processes. You can review the process content (the actual step sequence with the corresponding callable objects, actions, sequential blocks, and so on) in the Portal by selecting *Guided Procedures* → *Design Time* → *CSC Process* and choosing *Open*.

Within each process step, exactly one action is executed. Each action is wrapped around a callable object, which either represents a user interface or a service.

User Interface Layer

Visual Composer and Composite Forms enable model-driven user interface creation and do not require specific programming skills. They describe the case where user interaction is needed. Visual Composer is applicable for straightforward online user interfaces. Composite Forms

provide the opportunity to add offline process steps in which user interaction is needed (for example, the user has to fill in a specific form or questionnaire) to continue the process workflow. The available functionality can cover the requirements of a more complicated process involving additional contributors.

Business Logic Layer

The Customer Service Care application includes invocations of Java Web services provided by the:

- Composite Application Framework (CAF) that includes the service modeling tools for creating and modeling business objects, application services, and for importing and exposing external services. With this toolset you can create a specific functionality (services) that meets your business case needs. For example, service *CreateComplaint* creates a complaint belonging to a specific order.
- CAF-composed services provided by SAP NetWeaver Demo Model, which is part of the SAP NetWeaver 7.1 Composition Environment installation. This model provides demo data for many of the SAP NetWeaver areas. It contains a variety of data (services, business objects, Portal content, non structured data, and so on). For example, *GetSalesOrderById*, which finds a specific sales order by order ID.



Running the Application

Use

This procedure shows the necessary configuration steps to run the Customer Service Care composite application.

Procedure

1. Set up the Customer Service Care application.
More information: [Setting Up Customer Service Care \[Page 9\]](#)
2. Activate the Configuration Template.
More information: [Activating the Configuration Template \[Page 10\]](#)
3. Add Guided Procedures Runtime portal roles.
More information: [Adding Guided Procedures Runtime Portal Roles \[Page 11\]](#)
4. Prepare the SAP NetWeaver Demo Model application for use in this scenario.
More information: [Preparing the SAP NetWeaver Demo Model Application \[Page 11\]](#)
5. Configure the SMTP server.
More information: [Configuring SMTP server \[Page 12\]](#)
6. Initiate the Guided Procedures process.
More information: [Initiating the Guided Procedures Process \[Page 13\]](#).



Setting Up Customer Service Care

This procedure shows you how to configure the AS Java in the SAP NetWeaver Developer Studio, and how to deploy the downloaded archive files on the AS Java. To actually run the application, you need to perform additional configuration steps.

Prerequisites

- You have SAP NetWeaver 7.1 Composition Environment (SP3 or newer) installed in your system landscape.
- You have started SAP NetWeaver Developer Studio.
- You have the necessary application archive files available on your system.
- You need to have configured Adobe Document Services for CE to execute the step *Assign Expert*. More information:
http://help.sap.com/saphelp_nwce10/helpdata/en/45/bf03b55b9847f2e10000000a114a6b/frameset.htm

Procedure

1. Configure the AS Java in the SAP NetWeaver Developer Studio

1. Navigate to *Window* → *Preferences* → *SAP AS JAVA*.
2. In the *SAP Instance identity* field, enter the correct settings.
For a local SAP NetWeaver Composition Environment installation the settings are:
 - Instance Number: the number you entered during installation. Usually **0** or **1**.
 - Instance Host: **localhost**If you use a remote SAP NetWeaver 7.1 Composition Environment installation, enter the corresponding IP address or name.
3. Select the *Default SAP System* indicator.
4. Choose *Register SAP Instance* and then *OK*.

2. Deploy the Archive File to the AS Java

1. In the SAP NetWeaver Developer Studio, open the *Deploy* perspective by selecting *Window* → *Open Perspective* → *Other* → *Deploy* and then choosing *OK*.
2. In the *Deploy view* window, select the context menu of *External Deployable Archives* choose *Add*.
3. Select the deployable *CERACSC00_0* and choose *Deploy*.





Activating the Configuration Template

Use

This procedure describes how to activate the application configuration template, which performs configuration steps, not visible for the user, such as importing users (roles), creating Web service destinations, and so on.

Procedure

1. From your browser, start the SAP NetWeaver Administrator:
`http://<server>:<port>/nwa`.
If prompted for a log on, use the following credentials:
 - User ID: administrator
 - Password: the password set during SAP NetWeaver 7.1 Composition Environment installation

2. Choose *Configuration Management* → *Scenarios* → *Configuration Wizard*.
3. Select *All Configuration Tasks* from the dropdown box in the *Configuration Tasks* window.
4. In the field next to the  *filter button*, enter **Configuration of Reference Application CSC** and choose *Enter*.
5. Choose  *Expand tray* in the *Details* field.
6. To activate the configuration template, choose *Start*.
7. Enter the administrative user name (the user name you entered during SAP NetWeaver 7.1 Composition Environment installation, usually *administrator*) and choose *Next*.



Adding Guided Procedures Runtime Portal Roles

Use

The following procedure describes how you assign *GP Runtime WC* portal roles to the default *Administrator* user and the users executing the application.

Procedure

1. From your browser, start the portal: `http://<server>:<port>/irj`.
If you are prompted to log on, use the following credentials:
 - User ID: administrator
 - Password: the password set during SAP NetWeaver 7.1 Composition Environment installation
2. Choose *System Administration* → *Permissions* → *Portal Content* → *Content Provided by SAP* → *platform_add_ons* → *Guided Procedures* → *GP Runtime WC*.
3. From the *GP Runtime WC* context menu, choose *Open* → *Permissions*.
4. In the *Search In* field, located in the *Assigned New Permissions* window, choose *Group* and then *Go*.
5. Select the indicator in front of the group *Everyone* and choose *Add*.
The group *Everyone* appears in the list in the *Assigned Permissions* window.
6. Select the group *Everyone* indicator that appoints to *End User* and choose *Save* then *OK*.

Result

After you assign the above roles, the *Administrator* user and the rest of the users are able to access the *Guided Procedures Runtime*.



Preparing the SAP NetWeaver Demo Model Application

Use

This procedure describes how to prepare the necessary test data needed for the application, provided from the predeployed SAP NetWeaver demo model application. To run the reference application, you need to call and run a predefined via the Web Service Navigator.

Procedure

1. Open the start page of the Application Server Java using the following URL:
http://<host>:<port>
2. Choose *Web Services Navigator*.
3. Enter the following URL in the WSDL URL field:
http://<host>:<port>/NWDemoAdminBeanService/NWDemoAdminBean?wsdl

Configuration

WSDL URL: *

Select Service

4. Choose *Go*.
5. Select the `generateData` operation and select the *Endpoint in WSDL* option under *Configuration*.

Service Information

WSDL URL: <http://localhost:50100/NWDemoAdminBeanService/NWDemoAdminBean?wsdl>

Configuration

Timeout (in seconds):

Endpoint in WSDL

Custom Endpoint

Parameters

generateData (generateData):

6. Choose *Execute*.

Configuring SMTP server

Use

This procedure helps you configure your mail server, thus you can execute the Customer Service Care process thoroughly including the steps where mail notifications are necessary.

Procedure

1. Launch your portal by entering `http://<host>:<port>/irj` in your browser.
2. Log on using the user name (for example, **Administrator**) and the SAP NetWeaver CE master password defined at installation.
3. Under *Guided Procedures*, choose *Administration* → *Administer BMF*.
4. Choose *Clients*, then under *BMF Clients* choose *Settings*, and then choose *Mail Sending*.
5. Enter the data for *SMTP Server and Mail Transport Protocol*. For example:
 - SMTP Server: **mail.sap.corp**
 - Mail Transport Protocol: **smtp**
6. Choose *Save*.

Initiating the Customer Service Care Process

Prerequisites

You have completed the preceding steps described in [Running the Application \[Page 9\]](#).

Procedure

1. Launch your portal using the following URL:
 http://<host>:<port>/irj
2. Log on as a user who belongs to the ITeloPartners UME group. For example, **buyerb**. All users from ITeloPartners UME group can be used in the application role *Customer*.
 The default password is **we1come123** but you are prompted to change it the first time you log on.
3. Go to *Guided Procedures* → *Runtime*.
4. Choose *Start a New Process*.
5. Browse to select *ReferenceApplication* → *CSC* → *CSC Process* and choose *Next*.
6. Choose *Add User*, then enter the name of a user, who belongs to the ITeloEmployees UME group, in the *Find* field, and finally choose *Go*.
 All users from ITeloEmployees UME group can be used in the application role *Account Executive*. For example, you can use **springs**)
7. To add the user to the role, choose *Add*, then *Done*, and then *Next*.
8. (Optional) You can change the name of the process in the *Process Name* field.
9. To start the process, choose *Initiate*.

Result

You are automatically redirected to the first process item that you need to execute.



Executing the Scenario Process

Use

This procedure shows the process flow of the Customer Service Care reference scenario.

Prerequisites

You have completed the steps in [Running the Application \[Page 9\]](#)

Procedure

1. Select order from the *Order Id* dropdown box.

Business Partner			
First Name	<input type="text" value="Bob"/>	Last Name	<input type="text" value="Buyer"/>
Company	<input type="text" value="Panorama Studios"/>	Street	<input type="text" value="Morning Drive"/>
City	<input type="text" value="Hollywood, California"/>	Postal Code	<input type="text" value="91602"/>
Country	<input type="text" value="US"/>	Building	<input type="text" value="178"/>
Phone Number	<input type="text" value="2244668800"/>	Order Id	<input type="text" value="5000000007"/> <input type="text" value="5000000016"/> <input type="text" value="5000000016"/> <input type="text" value="5000000029"/> <input type="text" value="5000000031"/>
Sales Order			
Orderid	<input type="text" value="5000000007"/>		

For example, you can use order ID 5000000007.

2. Enter your comment or disagreement in the *Complaint* field and choose *Create Claim*.
3. Log off from the portal and log on again with the user assigned to the Account Executive role (in our case **springs**).
4. Go to *Guided Procedures* → *Runtime* and choose *Tasks Where Action is Required to Continue Process Flow*.
5. Select *Display Order and Evaluate Complaint*.
6. At this point, the process workflow can have three different variants:
 - You (as an account executive) agree with the claim, enter comments (if any), and choose *Approve*. Then you choose *Save* to complete this variant.
A notification email is sent to the customer informing him/her for the complaint approval.
 - You disagree with the claim, enter comments, and choose *Reject*. This completes the second variant of the process workflow.
A notification e-mail is sent to the customer informing him/her of the complaint rejection.
 - You decide that additional claim investigation is necessary. The following procedure describes this case:

- i. Choose *Assign Expert*.



- ii. (Optional) You can add a new expert to the list by choosing *Add Expert* and entering details such as first name, last name, e-mail, and so on.
- iii. Select one of the available experts (users belonging to the CSC expert role) and add comments (if any).
- iv. Choose *Assign*.



Make sure you have configured Adobe Document Services for CE. More information:
http://help.sap.com/saphelp_nwce10/helpdata/en/45/bf03b55b9847f2e10000000a114a6b/frameset.htm

After executing this step, the expert (either newly created or chosen from the existing list of experts) receives an e-mail notification with a PDF file attached. In the PDF file, the expert sees all the comments made by the customer (**buyerb**) and the account executive (**springs**) and is prompted to investigate the complaint.

- v. You (now acting as the expert) can enter your final decision in the PDF file provided in the *Verification Results* field.
- vi. In the PDF file provided, choose *Submit*.

Now the process workflow can proceed with the action required from the account executive: to approve or reject the complaint.



Reviewing the Application's Source Code

Use

This procedure shows you how to review the source code of the Customer Service Care application, built with Guided Procedures, Visual Composer, and Composite Application Framework.

Prerequisites

- You have installed and started SAP NetWeaver Developer Studio.

1. Review the Application Part Built with Composite Application Framework




If you have already imported the development configuration file *CE-RA.export* (if you were reviewing the source code of Project and Skill Management application) do not execute steps from 1 to 5. Alternatively, start from step 1.

1. Open the *Development Infrastructure* perspective by choosing *Window* → *Open Perspective* → *Other* → *Development Infrastructure* → *OK*.
2. From the main menu, choose *File* → *New* → *Other* → *Development Infrastructure* → *Development Configuration* → *Next*.
3. From the *New/Import Development Configuration* field select the *from Development Configuration file* indicator and choose *Browse*.
4. Browse to the correct location of the downloaded file from SDN *CE-RA.export* development configuration file and choose *Open* → *Next*.
5. In the *Development Configuration Info* window choose *Finish*.
6. If prompted for a log on, use the following credentials again:
 - User ID: administrator
 - Password: the password set during SAP NetWeaver 7.1 Composition Environment installationThe content of development configuration named *CE-RA [0]* appears in the *Component Browser*.
7. From the *Development Infrastructure perspective*, select the *CE-RA-CSC[sap.com]* context menu, then choose *Import*.
8. Browse to the correct location of the downloaded file from SDN *CERACSC00_0* and choose *Open*.
9. Choose *Next* → *Finish*.
10. Select simultaneously the following software components under *CE-RA-CSC[sap.com]* (using the *Ctrl* button):
 - *xapps/ra.csc.caf/dictionary(sap.com)*
 - *xapps/ra.csc.caf/ear(sap.com)*
 - *xapps/ra.csc.caf/ejbmodule(sap.com)*
 - *xapps/ra.csc.caf/metadata(sap.com)*
 - *xapps/ra.csc.caf/permissions(sap.com)*
11. From their context menu, choose *Sync/Create Project* → *Create Project*.

12. Deselect the *Build DC after sync* indicator and choose *OK*.
13. When prompted to switch to another perspective, choose the *Composite Application* perspective.
The components are displayed in the *Composite Application* perspective and you can browse through their content.

2. Review the Application Part with Visual Composer

1. From your browser, start the Visual Composer
`http://<host>:<port>/VC/freestyle.jsp`
 2. When prompted for a log on, use the following credentials:
 - User ID: administrator
 - Password: the password set during SAP NetWeaver 7.1 Composition Environment installation
 3. Choose *Model* → *New*.
 4. Make sure you set in the *Repository* field *Local Repository*.
 5. In the *Create New Model* window, choose *New* (located to the *Development component* field).
 6. Enter `racscvcdc` in the *Development component* field and choose *OK*.
 7. On the *Create New Model* screen, choose *Cancel*.
 8. From the main menu, choose *Model* → *Import* → *Browse*.
 9. Browse to the location of the *AccountExecutiveForm.zip*, choose *Open* and then *Import*.
 10. Repeat step 9 for the following files:
 - *AssignComplaint.zip*
 - *CreateCustomerClaim.zip*
-  You may receive a message saying that some of the models already exist and if you continue, you will override them. You can agree by choosing *Yes*.

You can now explore the VC models locally.

3. Review the Application Part Built with Guided Procedures

More information: [Reviewing the GP Design Time of the Application \[Page 16\]](#)



Reviewing the GP Design Time of the Application

Procedure

1. Allow General Portal Permissions

1. From your browser, start the portal: `http://<server>:<port>/irj`.
2. When prompted for a logon, use the following credentials:
 - User ID: administrator
 - Password: the password set during SAP NetWeaver 7.1 Composition Environment installation
3. Choose *System Administration* → *Permissions* → *Portal Content* → *Content Provided by SAP* → *platform_add_ons* → *Guided Procedures* → *GP Superuser*.

4. From the *GP Superuser* context menu, choose *Open* → *Permissions*.
5. In the *Search In* field, located in the *Assigned New Permissions* window, choose *Group* and then *Go*.
6. Select the indicator in front of the group *Everyone* and choose *Add*.
The group *Everyone* appears in the list in the *Assigned Permissions* window.
7. Select the group *Everyone* indicator that points at *End User* and choose *Save then OK*.
8. Repeat steps from 3 to 7 (as described above for the role *GP Superuser*) also for the role *GP Business Expert*.

2. Allow the Administrator to View the GP Design Time

1. Open the start page of the Application Server Java using the following URL:
`http://<host>:<port>`
2. Choose *User Management* → *Identity Management*.
3. From the *Search Criteria* dropdown box, select *Role*.
4. Enter
`pcd:portal_content/com.sap.pct/platform_add_ons/com.sap.caf.eu.gp.fo
lders.gp/com.sap.caf.eu.gp.roles.superuser` then choose *Go*.
5. Select the role displayed and choose *Modify*.
6. Select *Assigned Users*, enter `A*` in the *Search Criteria* field, and choose *Go* to find the default *Administrator* user.
7. Select the *Administrator* user, choose *Add* and then *Save*.
8. Repeat steps 3 to 7 also for the role
`pcd:portal_content/com.sap.pct/platform_add_ons/com.sap.caf.eu.gp.fo
lders.gp/com.sap.caf.eu.gp.roles.designtime`

3. Review the Design Time of the Application

1. Start the portal again `http://<server>:<port>/irj` .
2. If prompted for a logon, use the following credentials again:
 - User ID: administrator
 - Password: the password set during SAP NetWeaver 7.1 Composition Environment installation
3. Choose *Guided Procedures* → *Design Time* → *Reference Application* → *CSC* → *CSC Process* → *Open*.
In the application process you can browse through the process steps and review the details such as type of step (action, sequential block, parallel dynamic block), also details as roles, parameters, permissions, exceptions, and so on.