



HANDS-ON ACTIVITIES

SHARING & VISIBILITY

FEBRUARY, 2018



1. DECLARATIVE SHARING VIA QUEUES

Identify the core declarative platform features that can be used to meet record-level, object, and field sharing requirements.

USE CASE OVERVIEW

Universal Containers computers' branch, PCS Computing, is divided into Sales and Service organizations reporting to the CEO. They are currently using Accounts, Contacts, Cases, and Opportunities functionality in Salesforce.

- 15,000 Direct Sales representatives are organized hierarchically by geography:
 - Executive Vice President (VP) of Global Sales
 - Senior VPs of each major region: APAC, EMEA, AMER
 - Divisional VPs of each region's countries (e.g., USA, Canada, etc.). There are 127 countries that PCS Computing operates in.
 - District Managers for each major territory/state in each country. There can be up to 30 territories per country, with an average of 10.
 - Sales Representatives that report to each District Manager. Sales Reps typically operate at a city or local region level.
- 10,000 Channel Representatives report to the Executive VP of Global Sales and are organized by Partner Tiers:
 - Premium Partners
 - Resellers
- There are over 500 service engineers that form part of a Customer Service organization that are organized by two major product functions, with a manager of each major function:
 - Hardware
 - Software
- Each function has up to 25 specialty teams (e.g., Hardware – Desktops, Hardware – Laptops, etc.) and users can work in more than one team. A team usually consists of 25 users.
- Sales reps at the city/local region level will own accounts and opportunities. Reporting will roll-up through their district manager up to the Executive VP of Sales.
- Channel reps will own partner accounts.



- Opportunities are initially only visible to the Sales Rep that owns the opportunity.
- Users in the Sales organization (Channel and Direct Sales reps) only have access to the accounts they own as well as to the accounts that are owned by their subordinates.
- Users should have the same access to contacts as they do to the contact's related account.
- Direct Sales reporting needs to roll up from the DM to the Executive VP of Sales.
- Channel Sales reporting rolls up by Partner Tier to the Executive VP of Sales.
- Customer Service engineers reports roll up by product function only: e.g., hardware and software. There is no requirement to roll up reporting from specialty teams to the product function level.
- PCS Computing's service engineers can create cases on behalf of customers for servicing the products that they have purchased.
- Cases are categorized into two levels:
 - Type: Hardware and Software
 - Subtype: For each type, there can be multiple related subtypes (e.g., desktops)
- A specialty team will usually work on one or more case subtypes. For example, the Hardware – Desktops team will usually work on Desktop cases.

DETAILED REQUIREMENTS

- Cases are initially owned by a specialty team but can be assigned to an individual case owner.
- Cases are visible to the team by default but will only be visible to the case owner and their manager once assigned.
- When a case is initially created, it will be assigned to members of that specialty team, based on the combination of type and subtype.

PREREQUISITE SETUP STEPS

- Create the two picklist fields – use arbitrary picklist values for the Subtype field. Set up Case.Type field with two picklist values – Hardware and Software. Set up Case.Subtype field with multiple subtypes, e.g., Hardware – Desktop, Accessory, Monitor, Input Devices etc. Software – Office, Financial, Accounting, Banking, Taxes, Games, etc.
- Ensure the fields are added to page layouts and profile FLS is present for the field to be visible.
- Ensure you have created a public group for specialty type and added users to that public group. We will use this group with queue and declarative sharing later.



CONSIDERATIONS

- Can the requirements be met with a declarative solution?
- Does use of queues constitute the correct solution? In which case may queues not be the right choice?
- What will be the default OWD for case?
- Is there a need for a separate OWD for internal versus external users?
- How will the visibility of a case be provided to the whole specialty team when the case is unassigned?
- How will the visibility of a case be restricted when the case is assigned to a specific team member within the specialty team?
- What will the assignment rule look like for assigning a particular case to a specialty team?
- How will you provide for a scenario when a case is not matching any assignment rules and not eligible to be worked on by any specialty team?



SOLUTION

- Queues should be used for each specialty type.
- Case assignment to assign based on subtype field.

DETAIL STEPS FOR SOLUTION

- Set up queues for each specialty Type – Subtype, e.g., Hardware – Desktop.
 - Quick search from Setup for queues and click **Queues**.
 - Click the **New** button to create a new queue.
 - Fill out required fields, select object assigned to the queue [e.g., Case] and assign queue members [e.g., specialty group members either via public group or roles].
 - Repeat for each specialty group you are going to test with.
- Set up assignment rules for the specialty group.
 - Quick search setup for case assignment and click **Case Assignment Rules**.
 - Click **New** [provide Name and save].
 - Click the **name** link [not Edit] of the newly created assignment rule.
 - Click the **New** button in the Rule Entries section.
 - Fill out required fields and criteria, e.g., assign to this queue when Type = Hardware and Sub Type = Desktop [for Desktop specialty].
 - In step 3, assign the queue you created in the previous step as target for assignment rule entry.
 - Save the rule entry and make sure you have made the Assignment Rule Active.

TEST YOUR SOLUTION

- Create a new user and assign the user to a specialty public group.
- Create a new case that matches the case assignment rule to assign to your specialty queue [choose correct type and sub-type fields when creating the case].
- Log in as the new user and go to the list view for the case. The new case that was created should be visible in the list view which has the same name as the queue name [when a queue is created, a corresponding list view with the same name is automatically created].
- Select the case that was newly created from queue list view and click **Accept**.
- At this point, the case ownership changes from the queue to the new user and the case is removed from the queue and assigned to the new user to work on.

NOTE:



Note:

Ensure that all the detailed requirements are met while testing your solution.



2. OWD AND ROLE HIERARCHY

Identify the core declarative platform features that can be used to meet record-level, object, and field sharing requirements.

USE CASE

Universal Containers comprises Sales and Service organizations. They have Account Management, Contact Management, Opportunity Management, and Case Management functionality to be deployed to users. Considering the functionality needed and the organization structure, administrators would like to set up application security to provide the right data visibility to the users.

Sales and Service report to the CEO.

- 15,000 Direct Sales representatives are organized hierarchically by geography.
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- Users should have the same access to contacts as they do to the contact's related account.
- Direct Sales reporting needs to roll up from the DM to the Executive VP of Sales.
- Channel Sales reporting rolls up by Partner Tier to the Executive VP of Sales.
- Customer Service engineer reports roll up by product function only (i.e., hardware and software). There is no requirement to roll up reporting from specialty teams to the product function level.

DETAILED REQUIREMENTS

The role hierarchy should be built to the lowest level required (e.g., to the sales rep level), but you will not need to populate all the roles at each level (e.g., do not populate all countries or all states in a country). It should be sufficient for demonstration purposes.

PREREQUISITE SETUP STEPS

Prior to configuring the solution in the org, please ensure:

- All actors in the scenario should be assigned appropriate user licenses (Salesforce, Community, etc.).
- Use an org which is provisioned with Partner Community licenses.

CONSIDERATIONS

The following considerations will guide in you in designing the solution:

1. Who are the different actors?
2. Who are the internal users?
3. Who are the external users?
4. What are the data sets that need sharing?
5. What are the Organization-Wide Defaults (OWD) for the objects?
6. Will every object need an OWD specified?
7. Who is the owner of the records for each of the objects?
8. What are the different approaches to achieving data roll-ups?



SOLUTION

OWD

- Organization-wide sharing defaults set the baseline access for your records.
- The following is the suggested OWD for the objects:

Organization-Wide Defaults (OWD)	
Object	OWD
Account	Private
Contract	Controlled by Parent
Opportunity	Private
Case	Private

ROLE HIERARCHY

- High-level considerations:
 - Every user that owns application data must be assigned to a role, as it impacts visibility, roll-up, and other displays based on roles.
 - To avoid performance issues, no single user should own more than 10,000 records of an object. Users who need to own more than that number of objects should either not be assigned a role or placed in a separate role at the top of the hierarchy. It's also important to keep that user out of public groups that might be used as the source for sharing rules.
- An indicative role hierarchy to the necessary depth should be built. Width (e.g., countries) should be representative but not exhaustive.
- The following is the suggested role hierarchy:



Universal Computing Role Hierarchy (Partial)				Role defined
CEO				Similar Role (not defined)
	Executive VP Global Sales			
		Senior VP APAC		
			Divisional VP Australia	
				District Manager NSW
				Sales Rep Sydney
				Sales Rep Regional NSW
				...
			Divisional VP Singapore	
				...
		Senior VP EMEA		
				...
		Senior VP AMER		
			Divisional VP USA	
				District Manager CT
				District Manager NJ
				...
				District Manager NY
				Sales Rep NYC
				Sales Rep Buffalo
				Sales Rep Rochester
				...
			Divisional VP Canada	
				...
				...
		Channel Reps		
			Channel Rep Premium Partners	
			Channel Rep Premium Resellers	
	Executive VP Service			
		Service Manager Hardware		
			Service Engineer Hardware	
		Service Manager Software		
			Service Engineer Software	

- There should be no roles for specialty teams. This functionality can be satisfied by Case Queues.
 - If a role was created for specialty teams, then additionally, sharing rules would have to be configured to provide users access to cases across specialties.
- In a Private OWD model for Opportunities and Cases, Account Owner can get access to related Opportunities and Cases, by configuring No / View All / Edit All settings on the role.
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3. DATA MODEL

Identify the core declarative platform features that can be used to meet record-level, object, and field sharing requirements.

USE CASE

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DETAILED REQUIREMENTS

The role hierarchy should be built to the lowest level required (e.g., to the sales rep level), but you will not need to populate all the roles at each level (e.g., do not populate all countries or all states in a country). It should be sufficient for demonstration purposes.

- Users in Universal Containers' Sales organization need to be able to associate industries to an account. Each account can be related to one or more industries.
- If the user has access to the account, they will also have access to the industries related to the account.
- Only system administrators can create and edit a master set of industries.
- A master industry has industry-specific fields, such as SIC code and parent industry, and should be visible when viewing an account industry record.
- Administrators need to be able to report on and view all accounts that a particular industry is related to.

PREREQUISITE SETUP STEPS

Prior to configuring the solution in the org, please ensure:

- All actors in the scenario should be assigned appropriate user licenses; for example, Salesforce, Community, etc.
- Use an org which is provisioned with Partner Community licenses.



CONSIDERATIONS

The following considerations will guide in you in designing the solution:

1. Who are the different actors?
2. Who are the internal users?
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5. What are the Organization-Wide Defaults (OWD) for the objects?
6. Will every object need an OWD specified?
7. Who is the owner of the records for each of the objects?
8. What are the different approaches to achieving data roll-ups?



SOLUTION

The following is the suggested solution:

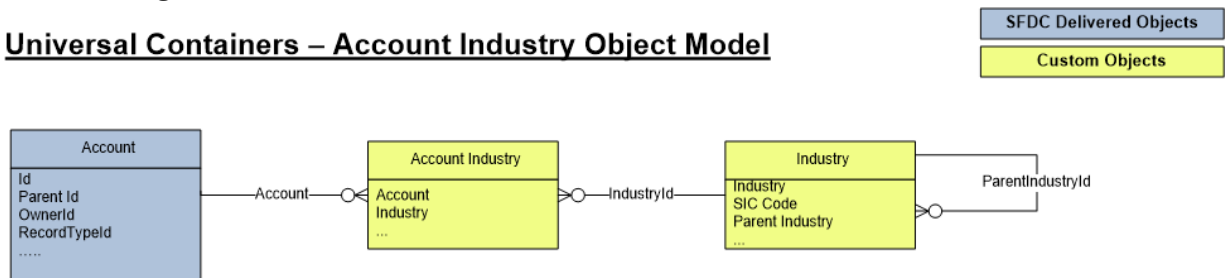
OBJECTS:

- Create a custom object (Industries) that will hold the list of Industries.
 - Field: Industry (Name)
 - Field: SIC Code [Text]
 - Field: Parent Industry [Lookup (Industry)]
 - Field:
 - OWD: Public ReadOnly
 - Only Administrators will have Profile / Permission Set to Create and Edit for Industries
 - Administrators will have Profile set to "View All" on Industries
- Create a custom object (Account Industry) that will list Industries associated with a particular Account.
 - Field: Account [Master-Detail (Account)]
 - Field: Industry [Lookup (Industry)]
 - Field:
 - OWD: Controlled By Parent

DATA MODEL:

- The following is the data model for the solution:

Universal Containers – Account Industry Object Model



- When OWD for Account Industries is set to Controlled By Parent and Parent Account has OWD set as Private, the users that have access to the Account will be able to access the related Account Industries.
- Create a report type of Account Industries with Accounts with a filter on Industry.



ADDITIONAL ACTIVITIES

To practice these activities, you can leverage one of your Playgrounds or other resources, if needed:

- Use your existing Developer org.
- Sign up for a free Developer Edition account [here](#).

1. CREATE USERS DECLARATIVELY

In this step, you create a user who reports to the user you first created when signing up for the organization. Use this configuration to ensure that when this new user creates an invoice meeting certain conditions, it's routed to the manager.

1. From Setup, click **Manage Users > Users**.
2. On the All Users page, click **New User**.
3. Enter the following information:
 - In **First Name**, enter Bob.
 - In **Last Name**, enter Smith.
 - In **Alias**, enter bSmith.
 - In **Email**, enter your own email address, so that you will receive the approval requests routed to Bob Smith.
 - The **Username** defaults to your email address, but you'll need to create a unique username for Bob, in the form of an imaginary email address.

Write down Bob's username (his imaginary email address) because you'll log in as him shortly.

- In **Manager**, select the **user** you created when you signed up for your organization. You can use the magnifying glass to search for the user.
- In **User License**, select **Salesforce**.

4. Click **Save**. You will receive an email confirming the creation of the new user. You still need to configure authorizations, so don't log in as Bob Smith yet or you'll have to immediately log back in as the administrator.



2. CREATE USERS PROGRAMMATICALLY WITH THE REST API

In this tutorial use the Workbench tool to query for existing users and use the information to create a new user with the REST API.

1. Log into Workbench and run a query to find Bob Smith, the user you created in the previous activity.
 - Type or paste the following URL into your browser:
<https://developer.salesforce.com/page/Workbench>
 - Leave the default Workbench settings, accept the terms of service, and click **Login with Salesforce**.
 - Check that the **Logged in as user** in the top right-hand corner of the screen is the administrator of your Developer Edition organization. If it isn't, click **(Not you?)** and log in as the administrator of the Developer Edition organization.
 - Click **Allow** on the "requesting permission" screen.
 - In the workbench menu, select **queries > SOQL Query**.
 - Choose Profile in Object.
 - Select *Id* and *Name* in the Fields selection box. You can select more than one field by holding down the **CTRL** key and clicking the field names.
 - Filter results by *Name = Standard User*.
 - Click **Query**.
 - Copy the Id of the Standard User Profile to an ASCII text editor such as Notepad. The Id will be used later when creating the new user.
2. Now use the REST API in Workbench to retrieve Bob Smith's information.
 - In the workbench menu, select **utilities > REST Explorer**.
 - Click **Execute** next to */services/data*.
 - Click the most recent release.
 - Click **url: /services/data/v{version#}**.
 - Click recent: */services/data/v{version#}/recent*.
 - Click **Bob Smith**.
 - Click **attributes**.
 - Click **url: /services/data/v{version#}/subjects/User/Bob Smith's user Id**.
 - Click **Show Raw Response**.
 - Copy everything in Raw Response between the curly brackets ({}) and paste it into an ASCII text editor such as Notepad.

The text between the curly brackets is a JSON object representation of Bob Smith's information