SHARING AND VISIBILITY RESOURCE GUIDE

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Copyright

Introduction

Who is the Salesforce Certified Sharing and Visibility Designer?

The candidate looking to obtain the Salesforce Certified Sharing and Visibility Designer can assess the architecture environment and requirements and designs solutions on the Force.com platform that meet sharing and visibility requirements. The candidate has experience communicating solutions and design trade-offs to business stakeholders.

The experience and skills that the candidate should possess are outlined below:

- Has 5+ years of delivery experience.
- Provides experienced guidance on the appropriate choice of platform technology.
- Understands architecture options, design trade-offs, and has the ability to communicate design choices.
- Understands advanced Force.com data modeling concepts and best practices.
- Able to architect a solution to address sharing complexities, mechanisms, and capabilities of the Force.com platform as part of the functional security model.
- Understands sharing and visibility architecture options, design trade-offs, and the has the ability to communicate design choices.
- Experience with sharing and visibility architecture design for community users.
- Understands performance considerations of sharing in an LDV environment.
- Has held a technical architect role on multiple complex deployments or has gained equivalent knowledge through participation and exposure to these types of projects [either with single or multiple projects].
- Aware of cloud security encryption, tokenization, and data protection solutions.
- Aware of territory management best practices.
- Understands strategies to build an optimized and performant solution.

Learn Materials

General Resources

Here are some comprehensive general resources that are a good starting place for your self-paced study.

A Guide to Sharing Architecture

The Salesforce sharing model is an essential element in your organization's ability to provide secure application data access. Therefore, it's crucial to architect your sharing model correctly to meet your current and future data access requirements. In this document, we'll review data accessibility components, sharing model use cases, and real customer sharing solutions, and we'll provide some troubleshooting guidelines.

Salesforce Security Guide

Salesforce is built with security to protect your data and applications. You can also implement your own security scheme to reflect the structure and needs of your organization. Protecting your data is a joint responsibility between you and Salesforce. The Salesforce security features enable you to empower your users to do their jobs safely and efficiently.

An Overview of Force.com Security

This article examines three aspects of security. The first aspect is users and security, looking at how users are authenticated, network-based security that determines the IP ranges from which a user may access the network, sessions, and auditing.

The second aspect is programmatic security. Any software client that needs to log in to the platform does so through a Web services SOAP interface. This section notes some of the security aspects involved, such as security tokens.

The third aspect is the Force.com platform security framework, which you can use to offer different access permissions to authenticated users within your organization.

> **NOTE:**
> Please register in the Salesforce Success Community and join our Architect Success group here.

General Overview

The following pages will introduce you to various focuses within Sharing and Visibility. You will be introduced to relevant objectives that require a very specific set of skills and the curated learning materials that will help you to achieve them.

- Declarative Sharing
- Programmatic Sharing
- Performance
- Data Security

Each learning resource has a related skill level: **Beginner**, **Intermediate**, or **Advanced**. Resources marked **Core** cover essential concepts, while those marked **Recommended** provide additional materials for further edification.

1. Declarative Sharing

The sharing features of Salesforce allow you to make absolutely sure that record access is limited to specified users, while at the same time ensuring that all users can access the information they need.

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

Who Can See My File?

Your files in Salesforce can be private to you, privately shared, or visible to your entire company. Learn how to identify a file's sharing settings and how you can change them.
Tags: Beginner, Recommended

Trailhead : Control Access to Records

Users can manually grant other users access to certain kinds of records, including accounts, contacts, and leads. In some cases, granting access to one record includes access to all its associated records.
Tags: Intermediate, Core

Behind the Scenes of Record Ownership in Salesforce

In this post, you'll learn how those years of heavy lifting have actually simplified record access for the most common enterprise security models, allowing you to configure record access declaratively instead of with painstakingly developed code.
Tags: Intermediate, Core

Locking Down Record Access in Salesforce

In this post, you'll learn about the sharing features and strategies you can use to make absolutely sure that record access is limited to a very small number of people, regardless of their position within the corporate hierarchy.
Tags: Intermediate, Recommended

Salesforce CRM Content Implementation Guide

Salesforce CRM Content simplifies content management by incorporating user-friendly features into organizing, searching, subscribing, and contributing.
Tags: Intermediate, Recommended

Custom Permissions

Use custom permissions to give users access to custom processes or apps.
Tags: Intermediate, Recommended

Define External Objects

Tables in external data sources map to external objects in Salesforce, combining all your data and content in federated search.
Tags: Intermediate, Recommended

Record-Level Access: Under the Hood

In this paper, you can find a brief overview of these different levels of data access, and under the hood, table-level views of record-level access. After reading Record-Level Access: Under the Hood, you should feel better prepared to give the right users the right access to the right records at the right time – and do so in the fastest time possible.
Tags: Advanced, Recommended

1.2 Describe the use of team functionality to meet business requirements (Account and Sales Teams).

Account Teams Overview

An account team is a team of users that work together on an account. For example, your account team may include an executive sponsor, dedicated support representative, and project manager.
Tags: Beginner, Recommended

[Account Team Fields](#)

An account team member has the following fields, listed in alphabetical order. Depending on your page layout and field-level security settings, some fields may not be visible or editable.
Tags: Intermediate, Recommended

1.3 Understand List View, Report Folder, and Dashboard Folder Security.

[Creating Custom List Views](#)

Step 5 of this process illustrates how, if you are an administrator or a user with the "Manage Public List Views" permission, you can specify whether everyone or just you can see the custom view.
Tags: Beginner, Recommended

[Share a Report or Dashboard Folder](#)

To enable others to use a report or a dashboard, share the folder it is in. Give each user, public group, or role the degree of access to the folder that makes sense for them.
Tags: Beginner, Recommended

1.4 Describe the implications of implicit sharing within the platform.

[Built-in Sharing Behavior](#)

Salesforce provides implicit sharing between accounts and child records (opportunities, cases, and contacts), and for various groups of portal users.
Tags: Intermediate, Core

[Implicit Sharing](#)

This table describes the different kinds of implicit sharing built into Salesforce applications and the record access that each kind provides.
Tags: Intermediate, Recommended

1.5 Describe the appropriate sharing design for the various community user types.

Communities User Licenses

There are three Communities licenses for external users: Customer Community, Customer Community Plus, and Partner Community.
Tags: Intermediate, Core

Trailhead : Engage with Your Partners

With this content, you'll be able to describe some typical use cases for a partner community, define measurable goals for a partner community and list features that you can use to help your partners.
Tags: Intermediate, Core

Grant High-Volume Community Users Access to Records

Grant high-volume community users access to records using sharing sets.
Tags: Intermediate, Core

Share Records Owned By High-Volume Community Users

Share groups allow you to share records owned by high-volume community users with internal and external users in your communities.
Tags: Intermediate, Recommended

1.6 Determine whether to apply a territory management solution and what the trade-offs and considerations are.

Enterprise Territory Management Implementation Guide

Salesforce's original territory management feature lets you grant users access to accounts based on criteria such as postal code, industry, revenue, or a custom field relevant to your business. Enterprise Territory Management builds upon the original feature by introducing territory types, territory models, and territory model states.
Tags: Intermediate, Core

[Overview of differences between Territory Management (1.0) and Enterprise Territory Management (2.0)](#)

This is a table of the main differences between Territory Management (1.0) and Enterprise Territory Management (2.0).
Tags: Intermediate, Recommended

[Territory Management Best Practices](#)

This article provides best practices when planning and managing Territory Management tasks. The information is intended for expert Salesforce architects and developers working on implementations with complex territory management requirements and large-scale sales realignments.
Tags: Intermediate, Recommended

[Territory Management Decision Guide (1.0)](#)

This paper outlines the factors and tools, including the Salesforce Territory Management feature, that organizations should consider when organizing and allocating their sales responsibilities, attempting to meet their other territory hierarchy- and territory management-related business requirements.
Tags: Intermediate, Recommended

[Deploying Territory Management](#)

Territory management is an account sharing system that grants access to accounts based on the characteristics of the accounts. It enables your company to structure your Salesforce data and users the same way you structure your sales territories.
Tags: Intermediate, Recommended

[Salesforce Territory Management and Programmatic Sharing (1.0)](#)

In this blog post, you'll learn how to use manual territory access grants to share just about any standard and custom object in Salesforce to a territory. In addition, you'll learn how that access extends through the territory and role hierarchies.
Tags: Advanced, Recommended

RESOURCE: See "Suggested Activities," later in this document.

2. Programmatic Sharing

This section will focus on programmatic methods for sharing and restricting data.

2.1 Identify the core programmatic platform security features that can be used to meet sharing requirements.

Sharing a Record Using Apex

To access sharing programmatically, you must use the share object associated with the standard or custom object for which you want to share.
Tags: Intermediate, Core

Dynamic Data Sharing on Force.com

Do you need to share data dynamically in Salesforce based on the attributes of the data itself? This blog entry shows you how to implement two common dynamic sharing use cases.
Tags: Advanced, Recommended

Protecting Force.com Custom Sharing Code

In this blog post, we'll discuss some advanced sharing features and coding strategies you can use to keep Force.com from messing with your sharing code.
Tags: Advanced, Recommended

Storing Sensitive Data

Sensitive data is also called personally identifying information (PII) or high business impact (HBI) data. What is considered sensitive data varies greatly from state to state and country to country. Various compliance standards, such as the Payment Card Industry (PCI) compliance standard, require special steps to be taken when collecting sensitive data in order to stay in compliance.
Tags: Advanced, Recommended

2.2 Able to minimize security risks in programmatic customizations (Apex and Visualforce) relative to data visibility and understands the difference in capabilities between programmatic sharing for standard vs. custom objects.

Without Sharing: Best Practices When Bypassing Apex Sharing Rules and Object Security

You might wonder: why doesn't Apex enforce platform security at all times? There are several reasons.
Tags: Advanced, Core

Enforcing Sharing Rules

Because these rules aren't enforced, developers who use Apex must take care that they don't inadvertently expose sensitive data that would normally be hidden from users by user permissions, field-level security, or organization-wide defaults.
Tags: Advanced, Core

Using Apex Managed Sharing to Create Custom Record Sharing Logic

This article looks at the components of Apex Managed Sharing and how you can use Apex Managed Sharing in your own applications.
Tags: Advanced, Core

Testing CRUD and FLS Enforcement

To help your application scale and perform with large data volumes, it is important to understand the performance implications when choosing one field over the other as you use them in your SOQL filters.
Tags: Advanced, Recommended

[Enforcing Object and Field Permissions](#)

These are some examples of how to call the access control methods.
Tags: Advanced, Recommended

RESOURCE: See "Suggested Activities," later in this document.

3. Performance

This section provides guidance on architecting solutions that can be scaled to enterprise levels while ensuring optimal performance and maintainability.

3.1 Design a solution that is scalable and maintainable to enterprise levels.

Reducing Lock Contention by Avoiding Account Data Skew

This post uncovers a common situation that you should watch out for when managing Salesforce solutions because it has the potential to produce unwanted lock contention and reduced database concurrency: account data skew.
Tags: Intermediate, Core

Salesforce Group Membership Sharing for Peak Performance

Salesforce engineered its group architecture to enhance the performance of several of its key internal sharing features. Read this blog post to learn why and when you should leverage the Salesforce group architecture as a performance tool to help improve the performance of your app.
Tags: Intermediate, Recommended

Designing Record Access for Enterprise Scale

This paper introduces advanced topics in user record access for the Salesforce Sales, Customer Service, and Portal applications, and provides guidance on how to configure your organization to optimize access control performance.
Tags: Advanced, Core

Managing Group Membership Locks for Success

Salesforce uses a central Group object to manage visibility related to the Role Hierarchy, Territory Hierarchy, Public Groups and Queues. When administrative changes occur in these areas, a group membership lock is taken to ensure data integrity is maintained while complex sharing calculations are completed.
Tags: Advanced, Recommended

[Technical Enablement Case Study – Complex Sales Realignment](#)

The Salesforce Technical Enablement team was engaged to help ensure a smoother realignment for the coming year-end, providing best practice advice on both technical and process issues.
Tags: Advanced, Recommended

RESOURCE: See "Suggested Activities," later in this document.

4. Data Security

This section covers data encryption methods to satisfy security requirements.

4.1 Describe how data is secured in the cloud on the Force.com platform.

Protecting Your Data in the Cloud

This paper explains why you should trust Salesforce cloud solutions with your assets: you'll learn about our commitment to earning and maintaining your trust, discover the core operational and functional security measures that our platforms use to protect your data, and explore the built-in features of our services that you can draw on to build applications that satisfy even the most stringent security requirements.
Tags: Intermediate, Core

Using the Apex Crypto Class

This article explains useful information that will help you understand and successfully use the Apex Crypto class.
Tags: Advanced, Recommended

4.2 Describe the use of "classic" encrypted fields in Salesforce and the limitations that need to be taken into consideration.

Classic Encryption for Custom Fields

Restrict other Salesforce users from seeing custom text fields you want to keep private. Before you begin working with encrypted custom fields, review these implementation notes, restrictions, and best practices.
Tags: Beginner, Core

4.3 Describe the difference between "classic" data encryption and Force.com platform encryption.

[Platform Encryption](#)

Platform Encryption lets your company prove compliance with privacy policies, regulatory requirements, and contractual obligations for handling private data.
Tags: Advanced, Recommended

[What's the Difference Between Classic Encrypted Custom Fields and Platform Encryption?](#)

A table compares Classic Encrypted Custom Fields and Platform Encryption solutions.
Tags: Advanced, Recommended

RESOURCE: See "Suggested Activities," later in this document.

Suggested Activities

To practice these activities, you may do one of the following:

- Request a free Practice Org by creating a case [here](#).
  - □ Question Type: Architect Support
  - □ Question Detail: Request Practice Org

  You should receive login information in about two business days.

- 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#*}/sobjects/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.

Build Materials

1. Comprehensive Sharing and Visibility Build

> 1.1 Identify the core declarative platform features that can be used to meet record-level, object, and field sharing requirements.

Use Case

Universal containers (UC) is a Global Shipping company based in the United States serving individual and business customers across 3 regions of the world. They ship out customer goods using 4 different container boxes to their customers. Their customers are spread out in AMER, APAC, and EMEA. Their product offerings include local and global shipping using large, medium, and small containers. Customers use UC.com, a customer-facing site that facilitates shipment requests, opens service requests for any general inquiries or lost shipments, and tracks their shipment orders. The customer chooses the pickup address, destination address, container size, and makes payments to place requests for shipment. Payments are processed by a UC back office system outside of Salesforce. Once payment is received, a shipment order is created to track the shipment. The customer can call sales reps to place shipment orders, or they can place the order themselves from the customer-facing community site. Campaign reps generate leads for prospective customers, convert to opportunities, and assign to sales reps according to the region in which the customer resides.

- Currently UC serves 2M individual customers and 200K business customers. 300 Sales reps and 200 support agents are employed across the regions.
- There is a small group of product specialists who can only set up product offerings and make the product active.
- The campaign manager, who reports to the VP of Marketing, runs campaign events and generates leads based on the interest of the event attendees. A small group of campaign reps pursue the leads and promote them into opportunities when a prospect is interested in shipping their goods through UC.
- The product specialist and campaign representative teams report to Manager Marketing.
- Sales operation is managed by separate sales managers under each region. All the sales managers roll up to the VP of sales.
- Each region has three specific groups:
  - □ The Business Sales Rep group serves business customers only.
  - □ The Consumer Sales Rep group serves individual customers only.
  - □ The Partner Channel Rep group manages selling partners. All three groups report to sales managers under their respective regions.

- All 3 regions have partnered with local sales partners, who manage their leads and opportunities where UC has no satellite offices. Each region has approximately 100 partners serving customers on behalf of UC. Partners manage their customers through their sales reps and/or sales manager where needed.
- The UC channel rep's primary role is to manage partners and also serve direct customers when needed.
- Customer service requests are handled by internal employees of UC. One group of agents is dedicated to support only individual customers across the regions and another group of agents handles all business customer cases. Business customers have SLA to meet support requirements.
- Both support agent groups are managed by a global support manager who is, in turn, managed by the VP of Service.
- UC hired a part-time CIO to oversee the sales and support operations and to advise on best practices.
- The pricing model for business customers is different from individual customers.
- Customers can log in to the customer-facing site and track their shipment status.
- On average, 100 support requests are opened per day per region. Each customer places an average 3 shipment orders per year.

Detailed Requirements

- There are some key VIP customers who are directly managed by the sales manager and should be editable only by the respective regional sales manager and above. Only regional sales managers can set an account in their region as VIP customer.
- Product specialists are only authorized to set up and enable the product as active. Only active products are available for purchase by the customers.
- Customers can only view their own account and contact information, create and view support requests, and track their shipment status.
- Campaign reps only are authorized to create and manage leads and convert their interests into sales opportunities.
- Leads should be visible to the lead owner once they are created, but only the owner can set the Lead Visible to All flag to allow all other campaign reps to manage that lead.
- The CIO would like a monthly summary report on all the shipment orders across the regions.
- Sales reps are allowed to open an internal complaint called employee grievance, that should not be visible to the sales manager but only to the VP of sales and CIO or above.
- When needed, the partner channel rep involves a partner manager or partner user on the sales deal.
- Some partner users in a partner company like to collaborate with other partner members in a sales deal, track shipment orders, and want to update the opportunity records irrespective of which member owns the record.

- A global partner called UCFriend has franchises in all 3 regions serving UC customers. The owner of the partner company wants to see all the customers that are managed by his franchise across the regions.
- All the partner managers have the ability to sell, raise service requests, and view the shipment status on behalf of the customer they manage.
- Internal sales reps create opportunities for the customers they manage and want to share some of those opportunities to external partner users to get help on the deal.
- UC serves large defense production industries. They have unique data visibility requirements for their employees and they do not want employees to track shipments due to high security reasons. They also specify this request during customer registration. Only the CIO and CEO can track the shipment order.
- Partner managers in the USA region want to manage all the users in their partner account.
- The global support manager needs the ability to create new users or freeze any existing external user who is spamming lots of service requests.
- During winter holidays, the number of service requests raised by customers doubles, and UC wants a few partners in the USA region to handle the cases opened by any customer across the APAC and EMEA regions.
- Sales managers in one region should be allowed to share opportunities with sales managers in another region for just one week only.
- One of the individual customers in the EMEA region met with the CEO during a customer conference and the CEO wants to collaborate with him to learn about his experience.
- The CIO wants the ability to collaborate with any external partner, individual, or business customers.
- The consumer price book should be visible only to individual customers on the community site, and consumer sales should not be allowed to pick the business customer price book.
- Restrict the customer from looking up a service request that was created for the customer account by the internal user. UC wants these cases to be visible only to internal users.
- Support agents want to share service requests marked as fraud to a few sales reps, but they do not want those cases visible to the sales rep manager.
- All sales reps are allowed to delete the open opportunities they own, but should not be allowed to delete them when the opportunity amount is is >$100000.
- The CIO would like to have read access to all cases where the sum of the open opportunity amount is >$100,000 for that customer.

Prerequisite Setup Steps

- Define and build the data model.
- Define and build the role hierarchy.

Considerations

- Large data volumes and their impact on performance.
- Reporting requirements and performance considerations.

2. Declarative Sharing via Queues

1.1 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 engineer 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

Best Solution Overview

- 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.

3. OWD and Role Hierarchy

1.1 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.
  - □ Executive Vice President (EVP) of Global Sales
  - □ Senior VPs of each major region – APAC, EMEA, AMER
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  - □ 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 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

Best Solution Overview

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.

Role Edit
Director Finance

Role Edit

Label	Director Finance
Role Name	DirectorFinance
This role reports to	CEO
Role Name as displayed on reports	

Opportunity Access
- Users in this role cannot access opportunities that they do not own that are associated with accounts that they do own
- Users in this role can **view** all opportunities associated with accounts that they own, regardless of who owns the opportunities
- Users in this role can **edit** all opportunities associated with accounts that they own, regardless of who owns the opportunities

Case Access
- Users in this role cannot access cases that they do not own that are associated with accounts that they do own
- Users in this role can **view** all cases associated with accounts that they own, regardless of who owns the cases
- Users in this role can **edit** all cases associated with accounts that they own, regardless of who owns the cases

Save   Save & New   Cancel

4. Data Model

1.1 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.

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?
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

## Best Solution Overview

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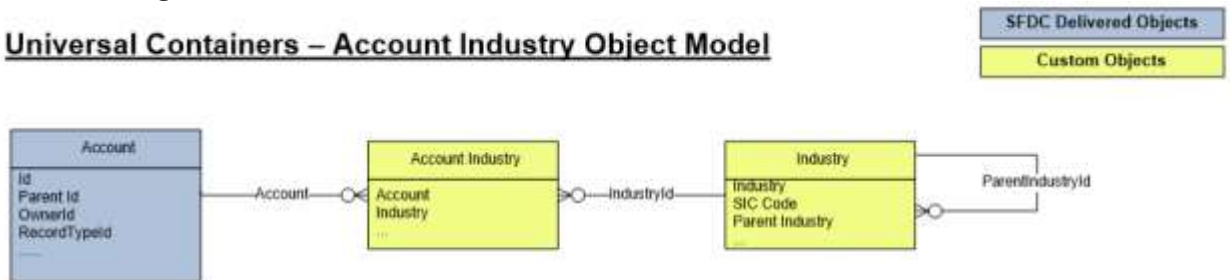
- When OWD for Account Industries is set to Controlled By Parent and Parent Account has OWD set as Private, the users that have access to the Account will be able to access the related Account Industries.
- Create a report type of Account Industries with Accounts with a filter on Industry.

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