salesforce

The Admin's Guide to Entitlement Management

Salesforce, Summer '16

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INTRODUCTION TO ENTITLEMENT MANAGEMENT

What Is Entitlement Management?

Entitlement management helps you provide the correct support to your customers. It includes a variety of features that let you define, enforce, and track service levels as part of your support management process.

Entitlement management features include:

- *Entitlements,* which let support agents determine whether a customer is eligible for support.
- *Entitlement processes,* which let you design timelines that include all the steps that your support team must complete to resolve support records like cases or work orders.
- *Service contracts,* which let you represent different kinds of customer support agreements like warranties, subscriptions, or maintenance agreements. You can restrict service contracts to cover specific products.
- *Community access to entitlements,* which lets community users view entitlements and service contracts and create support records from them.
- *Reporting on entitlement management,* which lets you track the way entitlements are used in your Salesforce org and whether service contract terms are being met.

Because entitlement management is highly customizable, you have full control of which features you use and how you set them up to reflect your customer support model. We'll walk you through important planning decisions and setup steps to help you make the most of entitlement management. To get started, we recommend that you check out the Entitlement Management Trailhead module: Entitlement Management.

> ⓘ **Important:** Only users in orgs with the Service Cloud can enable, create, and update entitlement management items.

Entitlements: Terms to Know

Learn useful terms related to entitlement features in Salesforce.

Entitlement
A unit of customer support in Salesforce, such as "phone support" or "web support." It's typically used to represent terms in warranties. You can associate entitlement with accounts, assets, contacts, and service contracts. View entitlements from the Entitlements tab or the Entitlements related list on accounts, assets, contacts, and service contracts.

Entitlement Contact
Contacts who are entitled to customer support—for example, a named caller. The Contacts related list on an entitlement shows which contacts are eligible for that entitlement. You can remove or add contacts directly from the related list, or by updating the contact record itself. Your business may not allow you to provide support to customers unless they are a contact on the entitlement.

> **Note:**
> - Contacts on an account don't automatically inherit the account's entitlements. Depending on your business processes, you may need to create a separate entitlement for each contact on an account. You can also set up an Apex trigger that automatically assigns an entitlement to a contact when you create the contact.
> - Entitlement contacts don't have page layouts, search layouts, buttons, links, or record types.
> - The same visibility and sharing settings that apply to the parent account apply to contacts. Associating a contact with an entitlement doesn't share the entitlement record with the contact or the related community user.

Entitlement Template

Predefined terms of customer support that can be quickly added to products in Salesforce. For example, you can create entitlement templates for phone or web support so users can easily add entitlements to products purchased by customers.

Entitlement Management

A collection of Salesforce features that help you provide the correct service levels to your customers. It includes:

- *Entitlements,* which let support agents determine whether a customer is eligible for support.
- *Entitlement processes,* which are timelines that include all the steps that your support team must complete to resolve support records like cases or work orders.
- *Service contracts,* which let you represent different kinds of customer support agreements like warranties, subscriptions, or maintenance agreements. You can restrict service contracts to cover specific products.
- *Community access to entitlements,* which lets community users view entitlements and service contracts and create support records from them.
- *Reporting on entitlement management,* which lets you track the way entitlements are used in your Salesforce org and whether service contract terms are being met.

Depending on your business needs, you may decide to use all of these features or just a few of them.

Service Contract

A customer support agreement between you and your customers. Service contracts in Salesforce can represent warranties, subscriptions, service level agreements (SLAs), and other types of customer support. View service contracts in the Service Contracts tab or on the Service Contracts related list on accounts and contacts.

Contract Line Item

Specific products covered by a service contract. View contract line items in the Contract Line Items related list on service contracts (not contracts!). You can only use contract line items if your org uses products.

> **Note:** Schedules aren't available for contract line items, and community users can't access them.

Entitlement Process

A timeline that includes all the steps (milestones) that support agents must complete to resolve a support record. Each process includes the logic needed to determine how to enforce the correct service level for your customers. Entitlement processes come in two types: Case and Work Order.

Not all entitlements need processes. For example, a simple entitlement might just state that a customer is eligible for phone support 24/7. If you need to add time-dependent steps or service levels to that definition—for example, if you want a supervisor to be notified by email when a customer's case goes unresolved for two hours—you need an entitlement process.

Milestone

A required step in your entitlement process. Milestones are metrics that represent service levels to provide to each of your customers. Examples of milestones include First Response and Resolution Time on cases.

Milestone Action

A time-dependent workflow action that occurs on a milestone in an entitlement process. For example, you might add the following actions to a milestone:

- Send an email alert to certain users one hour before a first response milestone is scheduled to expire
- Update certain fields on a case one minute after a first response is completed

There are three types of milestone actions:

- *Success actions* are triggered when a milestone is completed
- *Warning actions* are triggered when a milestone is about to be violated
- *Violation actions* are triggered when a milestone is violated

You can automate tasks, email alerts, field updates, and outbound messages for each action type.

Entitlement Management Limitations

The following limitations apply to entitlements and their related features.

Entitlement Limitations

- Every entitlement must be associated with an account.
- You can't share entitlements. Entitlements inherit their parent account's sharing settings.
- If you're using entitlement processes, manage customers' work orders and cases on separate entitlements. This is because an entitlement process only runs on records that match its type. For example, when a Case entitlement process is applied to an entitlement, the process only runs on cases associated with the entitlement. If a work order is also associated with the entitlement, the process won't run on the work order.
- Merge fields for entitlements on cases aren't supported. For example, if you add the `Entitlement Name {!Case.Entitlement}` merge field to an email template, the field is not populated on the template.
- Entitlement contacts don't have page layouts, search layouts, buttons, links, or record types.
- Entitlements don't automatically apply to cases created with Web-to-Case or Email-to-Case. If needed, you can add entitlements to these features using Apex code. For a sample trigger, see Automatically Add Entitlements to Cases from Web, Email, and Communities.

Milestone Limitations

- You can't add milestones to support records without using entitlement processes. Entitlement processes apply milestones to support records.
- An org can have up to 1,000 entitlement processes, with up to 10 milestones per process. If your org was created before Summer '13, its maximum number of entitlement processes may be lower, but you can ask Salesforce to increase it.
- Milestones aren't marked completed automatically. If you'd like, you can set up automation to auto-complete milestones on support records that match unique criteria. To learn more, see Auto-Complete Case Milestones.
- After an entitlement process is activated, you can't delete its milestones or create milestone actions. However, you can create versions of entitlement processes with different milestone settings and apply the new version to existing entitlements.
- Only one instance of a milestone can count down on a record at a time. For example, if a Response Time milestone begins counting down on a case, a second Response Time milestone can't be created until the first is completed.
- Business hours on entitlement processes aren't supported in change sets. To transfer an entitlement process with business hours from one Salesforce org to another, use one of these approaches:
  - Create the entitlement process from scratch in the new org
  - Use an alternative method to transfer the entitlement process, such as the Force.com Migration Tool
  - Remove the business hours from the entitlement process before adding it to a change set

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

Contract Line Item Limitations

- You can only use contract line items if your org uses the Product object.
- You can't create list views for contract line items.
- You can't share contract line items. Contract line items inherit their parent service contract's sharing settings. For example, users with the "Read" permission on service contracts inherit the "Read" permission on contract line items.

PLANNING YOUR IMPLEMENTATION

Planning for Entitlement Management

Entitlement management is highly customizable, which means you have many choices during setup. Before you begin the setup process, it's essential to choose an entitlement management model.

Choose What Determines Support Eligibility

You can set up entitlement management so customers are eligible for support based on one or several of the following types of records:

- *Accounts:* Any contact on the account is eligible for support.
- *Contacts:* Specific contacts are eligible for support.
- *Assets:* Specific assets (purchased products) are eligible for support.
- *Service contracts:* Customers are eligible for support based on a specific service contract.
- *Contract line items:* Specific products covered by a service contract are eligible for support.

Your approach depends on how detailed you want your support process to be. If you prefer to keep it simple, just have your support agents determine support eligibility based on accounts. Here's what this approach looks like:

Determining Whether a Customer is Entitled to Support

1. You create an entitlement that entitles Account A to phone support

2. A contact from Account A calls support with a question

3. The support agent looks up the account and sees it has an active phone support entitlement

4. The agent answers the question and, if needed, creates a case from the entitlement

Choose a Setup Model

There are three general ways to set up entitlement management. Once you've decided what should determine support eligibility, review the three models and select the one that best meets your business needs. You can always change which model you're using.

Entitlement model	What determines support eligibility	Use this model if
Entitlements only (simplest option)	Support agents determine whether a customer is eligible for support at the account, contact, or asset level.	- There's no need to manage your customers' entitlements as part of a service contract - Your entitlements don't have a renewal process - Entitlements aren't purchased by your customers; they're bundled with products (warranties) - Your customers' entitlements are short term and managed independently of each other
Entitlements + service contracts	Support agents determine whether a customer is eligible for support based on their service contract.	- Entitlements are purchased and managed separately from the products they cover and are part of a service contract - Your customers' entitlements are renewed at a contract level - You use Salesforce for customer support but not necessarily for service contract management
Entitlements + service contracts + contract line items (most complex option)	Support agents determine whether a customer is eligible for support based on the products covered in their service contract.	- You use Salesforce for customer support and to manage your customers' service contracts - Your support team manages service contract transactions, such as transfers, mergers, and renewals - Warranties, subscriptions, or other support products appear as line items on your sales orders and map to one or more entitlements - Entitlements are created and updated through an integration with your order management system

Regardless of the setup model you choose, you can enhance your support process with other entitlement management features. For example, you can:

- Create entitlement processes to enforce required, time-dependent steps in your support process
- Use entitlement versioning to create and maintain multiple versions of entitlement processes
- Add entitlements to communities
- Report on entitlements

After you select a setup model, head to the invaluable Entitlement Management Setup Checklist.

Entitlement Management Setup Checklist

When you set up entitlement management, you decide which features to use. Use this checklist to confirm that you've set up entitlement management in a way that fits your support processes.

Step	Complete if...
☐ Read Planning for Entitlement Management	You're thinking about using entitlements in your org.
☐ Set Up Entitlements	You want customer support eligibility to be determined at the account or contact level.
☐ Enable Entitlements	You want to use entitlements in your org.
☐ Customize Entitlements	You want to control which fields users see on entitlements, and how and where users associate entitlements with other records.
☐ Set Up Entitlement and Asset Lookup Filters on Cases	You want to control which entitlements and assets users can link to a case.
☐ Give Users Access to Entitlement Management	You want to give users the appropriate user permissions, field access, and tab access.
☐ Set Up an Entitlement Template	You want to predefine the terms of support for specific products.
☐ Automatically Add Entitlements to Cases from Web, Email, and Communities	You want the correct entitlement to be added automatically to cases created using Web-to-Case, Email-to-Case, or communities.
☐ Set Up Milestones	You want to define required steps that support agents must complete to close a support record.
☐ Customize Milestone Page Layouts	You want to control which milestone-related fields users see.
☐ Enable Milestone Feed Items	You want automatic notifications to be added to the feed and the record owner's profile page when a milestone is completed or violated.
☐ Set Up the Milestone Tracker	You want your support team to be able to see a list of upcoming and closed milestones

Step		Complete if...
		and countdowns for active and overdue milestones.
	☐ Limit User Updates to Milestones	You want to prevent users from updating milestones unless certain criteria are met.
	☐ Create a Milestone	You want to define a required step in your support process.
	☐ Auto-Complete Case Milestones	You want milestones to be automatically marked Completed on cases that match unique criteria.
☐ Set Up an Entitlement Process		You want to be able to apply the required steps in your support process to specific records.
	☐ Create an Entitlement Process	You want to create a timeline that includes all of the steps that your support team must complete to resolve support records.
	☐ Customize Entitlement Process Fields	You want to control which entitlement process fields users see.
	☐ Add a Milestone to an Entitlement Process	You want to specify which required support steps occur, and when, on your timeline.
	☐ Add a Milestone Action to an Entitlement Process	You want to define time-dependent workflow actions that occur at every step (milestone) in an entitlement process when the milestone is nearing violation, violated, or completed.
	☐ Apply an Entitlement Process to an Entitlement	You want a specific entitlement's support records to follow the steps defined in your entitlement process.
☐ Create a New Version of an Entitlement Process		You want to update an entitlement process.
☐ Use a New Version of an Entitlement Process		You want to apply a new version of an entitlement process to new or existing entitlements.
☐ Set Up Service Contracts		You want customer support eligibility to be determined at the service contract level.
☐ Set Up Contract Line Items		You want to be able to limit a service contract to cover specific products.
☐ Set Up Entitlement Management in Communities		You want customers or partners to be able to view their entitlements and service contracts and create support records from them.
☐ Report on Entitlements		You want to view and share data on entitlements and service contracts.
☐ Give your support team entitlement management guidelines.		You want your support team to understand: • How to verify that a customer is entitled to support • How to link cases or work orders to entitlements • How entitlement processes affect the way they resolve cases or work orders

Set Up Entitlements

Entitlements are units of customer support in Salesforce, such as "phone support" or "web support". Set up entitlements in your Salesforce org to help support agents determine whether a customer is eligible for support.

1. Enable Entitlements

   Enable entitlements in your Salesforce org to help support agents deliver the correct service level to your customers.

2. Customize Entitlements

   Customize entitlement fields and page layouts based on your business needs and how your agents work.

3. Set Up Entitlement and Asset Lookup Filters on Cases

   Set up lookup filters on entitlement-related case fields to restrict the entitlements that users can select on a case.

4. Give Users Access to Entitlement Management

   After you set up entitlement management, make sure that users have the appropriate user permissions, field access, and tab access.

5. Set Up an Entitlement Template

   Entitlement templates let you predefine terms of support that users can add to products.

6. Automatically Add Entitlements to Cases from Web, Email, and Communities

   Entitlements don't automatically apply to cases created using Web-to-Case, Email-to-Case, or communities. However, you can add entitlements to these features using Apex code.

Enable Entitlements

Enable entitlements in your Salesforce org to help support agents deliver the correct service level to your customers.

1. From Setup, enter `Entitlement Settings` in the `Quick Find` box, then select **Entitlement Settings**.

2. Select `Enable Entitlement Management`.

3. Click **Save**. This takes you to a page where you can customize entitlement management settings. You'll come back to those settings later on in the entitlement management setup process.

Customize Entitlements

Customize entitlement fields and page layouts based on your business needs and how your agents work.

1. **Customize entitlements fields.**

   This lets you control what information users add to entitlements.

   > 💡 **Tip:** Create custom entitlement fields that are specific to your industry or your support processes. For example:
   >
   > - Customize the values for the `Type` field to match the types of entitlements your team provides or sells, like online support or online training.
   > - If your business charges for entitlement renewals, create a currency field on entitlements named `Cost to Renew`.

2. **Customize entitlement page layouts.**

   This lets you specify which fields and related lists users see on entitlements. Consider making the following customizations:

   - Add the `Status Icon` field so users can easily see whether the entitlement is active, expired, or inactive.
   - Add the Cases, Contacts, and Work Orders related lists so users can:
     - View cases, contacts, and work orders associated with entitlements
     - Create cases or work orders automatically associated with the correct entitlements
     - Add contacts to entitlements

3. **Set field history tracking on entitlements.**

   This lets you see when field values were changed. Changes are listed in the Entitlement History related list on entitlements. From the object management settings for entitlements, go to the fields section and click **Set History Tracking**.

4. **Customize other objects' page layouts.**

   - Add the `Entitlement Name` lookup field to case and work order page layouts. This lets users add entitlements to cases or work orders.

     > 🛑 **Important:** To let a user create cases from entitlements or change a case's assigned entitlement, make the `Entitlement Name` field on cases editable for their profile.

   - Add the Entitlements related list to other objects' page layouts:

Add the Entitlements related list to this object's page layouts...	So users can view and create entitlements when...
Accounts	Any contact on the account is eligible for support
Contacts	Specific contacts are eligible for support
Assets	Specific assets (purchased products) are eligible for support

5. **Make the Entitlements tab visible in Salesforce and any custom apps.**

The Entitlements tab is where users create and edit entitlements. Add the tab to an app or instruct your users to add it to an existing tab set in Salesforce. Users need the "Read" permission on entitlements to see the Entitlements tab.

Set Up Entitlement and Asset Lookup Filters on Cases

Set up lookup filters on entitlement-related case fields to restrict the entitlements that users can select on a case.

For example, when community users create a case and use the lookup on the `Entitlement Name` field, you can set up lookup filters so they can choose only entitlements registered to their account or contact.

1. From Setup, enter `Entitlement Settings` in the `Quick Find` box, then select **Entitlement Settings**.

2. Choose the item(s) you'd like returned in the lookup fields.

Lookup Field on Cases	Click...	To Return...
Asset	Same account on the case	Assets registered to the account on the case. 💡 **Tip:** If you want the lookup field to return all assets that share an account with the case, select only this option.
	Same contact on the case	Assets registered to the contact on the case.
	Entitlements on the case's account	Assets associated with entitlements that belong to the case's account.
	Entitlements on the case's contact	Assets associated with entitlements related to the case's contact.
Entitlement	Active status	Entitlements with an Active Status.
	Same account on the case	Entitlements associated with the account on the case.
	Same asset on the case	Entitlements associated with the asset on the case.
	Same contact on the case	Entitlements associated with the contact on the case.

Choosing multiple items acts as an AND function, so the more items you select, the more it restricts the options returned. For example, choosing `Same account on the case` and `Same contact on the case` means the `Asset` lookup field only returns assets registered to both the account and the contact on the case.

> 💡 **Tip:** Choose items that match the way your support agents verify support eligibility. For example, choose the account-related items if your support agents verify support eligibility based on accounts.

3. Click **Save**.

> 📝 **Note:** Equivalent lookup filters aren't available for work orders.

Give Users Access to Entitlement Management

After you set up entitlement management, make sure that users have the appropriate user permissions, field access, and tab access.

1. Assign entitlement management permissions to users.

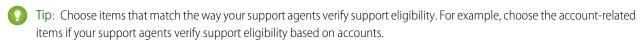| Users Who Will	Need These Permissions	Permissions Are Auto-Enabled on These Standard Profiles
Set up entitlement management, including milestones, entitlement processes, and entitlement templates	"Manage Entitlements" AND "Customize Application"	System Administrator
Provide entitlement management to a community	"Customize Application" AND "Create and Set Up Communities"	System Administrator
Create or update custom report types that include entitlement management	"Manage Custom Report Types"	System Administrator
Create and run reports based on entitlement management custom report types	"Create and Customize Reports"	Read Only, Standard User, Solution Manager, Contract Manager, Marketing User, and System Administrator
Create cases with entitlements	"Create" on cases AND "Read" on entitlements	Standard User, Solution Manager, Contract Manager, Marketing User, and System Administrator
Change a case's entitlement	"Edit" on cases AND "Read" on entitlements	Standard User, Solution Manager, Contract Manager, Marketing User, and System Administrator

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To create and edit users:
- "Manage Internal Users"

Users Who Will	Need These Permissions	Permissions Are Auto-Enabled on These Standard Profiles
Create work orders with entitlements	"Create" on work orders AND "Read" on entitlements	Standard User, Solution Manager, Contract Manager, Marketing User, and System Administrator
Change a work order's entitlement	"Edit" on work orders AND "Read" on entitlements	Standard User, Solution Manager, Contract Manager, Marketing User, and System Administrator
Verify or view entitlements	"Read" on entitlements	Read Only, Standard User, Solution Manager, Contract Manager, Marketing User, and System Administrator
Create entitlements	"Create" on entitlements	None: enable the permission in a permission set or custom profile
Change entitlements	"Edit" on entitlements	None: enable the permission in a permission set or custom profile
View entitlement contacts	"Read" on entitlement contacts	Read Only, Standard User, Solution Manager, Contract Manager, Marketing User, and System Administrator
Change entitlement contacts	"Create" on entitlement contacts AND "Delete" on entitlement contacts	None: enable the permissions in a permission set or custom profile
Verify or view service contracts	"Read" on service contracts	Read Only, Standard User, Solution Manager, Contract Manager, Marketing User, and System Administrator
Create service contracts	"Create" on service contracts	None: enable the permission in a permission set or custom profile
Change service contracts	"Edit" on service contracts	None: enable the permission in a permission set or custom profile
Verify or view contract line items	"Read" on contract line items	Read Only, Standard User, Solution Manager, Contract Manager, Marketing User, and System Administrator
Add contract line items to service contracts	"Edit" on service contracts AND "Create" on contract line items and "Read" on products and price books	None: enable the permissions in a permission set or custom profile
Change contract line items on service contracts	"Edit" on service contracts AND	None: enable the permissions in a permission set or custom profile

Users Who Will	Need These Permissions	Permissions Are Auto-Enabled on These Standard Profiles
	"Edit" on contract line items and "Read" on products and price books	

> 💡 **Tip:** If a standard profile doesn't include a certain user permission, you can create a permission set and enable the permission in it. Or, clone the standard profile and enable the permission in the custom profile.

2. Set field-level security.

Choose which entitlement management fields users can view and edit. Field-level security settings let you specify users' access to fields in several areas of the user interface:

- Detail and edit pages
- Related lists
- List views
- Reports
- Search results
- Email and mail merge templates
- Communities

You can set field-level security from a permission set, profile, or a particular field.

> 🛑 **Important:** To let a user create cases from entitlements or change a case's assigned entitlement, make the `Entitlement Name` field on cases editable for their profile.

SEE ALSO:

    Salesforce Help: Field-Level Security

Set Up an Entitlement Template

Entitlement templates let you predefine terms of support that users can add to products.

You can create entitlement templates for specific products so support agents can quickly add the right entitlement whenever a customer purchases the product. For example, you can create entitlement templates for web or phone support so agents can easily add entitlements to products offered to customers.

Purchased or installed products are represented in Salesforce as assets. That means:

- A *product* (for example, "Laser Scanner") is linked to an entitlement template
- A corresponding *asset* (for example, the laser scanner purchased by ABC Labs) is linked to an entitlement that was created from the entitlement template

> 📝 **Note:** Entitlement templates are only available if entitlements and products are enabled in your org.

> 💡 **Tip:** The Entitlement Management Trailhead module introduces you to common terms and walks you through the process of creating an entitlement template. And, it's fun! To get started, see Entitlement Management.

EDITIONS

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USER PERMISSIONS

To create entitlement templates:
- "Manage Entitlements"

1. Add the Entitlement Templates related list to product page layouts.

2. Optionally, add the `Type` and `Business Hours` fields to the Entitlement Templates related list. This lets users view the type of entitlement, such as Web or phone support, and any business hours that apply to the entitlement.

3. Create an entitlement template.

   a. From Setup, enter `Templates` in the Quick Find box, then select **Entitlement Templates**.

   b. Click **New Template**.

   c. Enter any details:

Field	Description
`Entitlement Template Name`	The name of the entitlement template.
	Use a descriptive name, like `Phone Support`. This helps users better understand entitlement templates when they see them on related lists for products.
`Term (Days)`	The number of days the entitlement is in effect.
	For example, if you want the entitlement template to entitle all customers who purchase this product to 90 days of phone support, enter `90`.
`Entitlement Process`	The entitlement process associated with the entitlement.
`Per Incident`	Lets you limit the number of cases the entitlement supports. The admin determines whether this field is visible.
`Cases Per Entitlement`	The total number of cases the entitlement supports.
	This field is only available if `Per Incident` is selected.
`Business Hours`	The entitlement's supported business hours.
`Type`	The type of entitlement, such as Web or phone support.
	Admins can customize this field's values.

4. Click **Save**.

5. Add the entitlement template to a product.

   a. Go to the product detail page.

   b. Click **Add Entitlement Template** on the Entitlement Templates related list.

   c. Select the entitlement template.

   d. Click **Insert Selected**.

   e. Click **Done**.

   Now when a user creates an asset and links it to that product, the Entitlements related list on the asset includes an entitlement created from the entitlement template. That way, support agents responding to a call about the asset can quickly see what kind of support the customer is entitled to receive.

Automatically Add Entitlements to Cases from Web, Email, and Communities

Entitlements don't automatically apply to cases created using Web-to-Case, Email-to-Case, or communities. However, you can add entitlements to these features using Apex code.

When a case is created via Web-to-Case, Email-to-Case, or a community, it isn't automatically associated with an entitlement. When a case's `Entitlement` field is empty, this sample trigger checks whether the case contact has an active entitlement. If the contact has an active entitlement, the entitlement is added to the case. If the contact doesn't have an active entitlement, the trigger then checks whether the case account has an active entitlement. If the case account has an active entitlement, the entitlement is added to the case. The trigger helps ensure that cases are resolved according to your customer support agreements.

To define this case trigger in your Salesforce org:

1. From Setup, enter *Case Triggers* in the Quick Find box, then select **Case Triggers**.

2. Click **New**.

3. Copy the text below and paste it in the text field.

4. Click **Save**.

```
trigger DefaultEntitlement on Case (Before Insert, Before Update) {
    List <EntitlementContact> entlContacts =
                [Select e.EntitlementId,e.ContactId,e.Entitlement.AssetId
                From EntitlementContact e
                Where e.ContactId in :contactIds
                And e.Entitlement.EndDate >= Today
                And e.Entitlement.StartDate <= Today];
        if(entlContacts.isEmpty()==false){
            for(Case c : Trigger.new){
                if(c.EntitlementId == null && c.ContactId != null){
                    for(EntitlementContact ec:entlContacts){
                        if(ec.ContactId==c.ContactId){
                            c.EntitlementId = ec.EntitlementId;
                            if(c.AssetId==null && ec.Entitlement.AssetId!=null)
                                c.AssetId=ec.Entitlement.AssetId;
                            break;
                        }
                    }
                }
            }
        } else{
            List <Entitlement> entls = [Select e.StartDate, e.Id, e.EndDate,
                    e.AccountId, e.AssetId
                    From Entitlement e
                    Where e.AccountId in :acctIds And e.EndDate >= Today
                    And e.StartDate <= Today];
            if(entls.isEmpty()==false){
                for(Case c : Trigger.new){
                    if(c.EntitlementId == null && c.AccountId != null){
                        for(Entitlement e:entls){
                            if(e.AccountId==c.AccountId){
                                c.EntitlementId = e.Id;
                                if(c.AssetId==null && e.AssetId!=null)
                                    c.AssetId=e.AssetId;
```

```
                        break;
                }
            }
        }
    }
}
```

Set Up Service Contracts

Service contracts are agreements between you and your customers for a type of customer support. Service contracts can represent different kinds of customer support, such as warranties, subscriptions, or service level agreements (SLAs).

> 📝 **Note:** Entitlements must be enabled in your org for you to set up service contracts.

From the object management settings for service contracts:

1. **Customize service contract fields.**

   This lets you control what information users add to service contracts. You can create custom service contract fields that are specific to your industry or support process.

2. **Customize service contract page layouts.**

   This lets you specify which fields and related lists users see on service contracts. Consider making the following customizations:

   - Add the `Status Icon` field so users can easily see whether the service contract is active, expired, or inactive.

   - To let users make one service contract the parent of another, add the `Parent Service Contract` field and Child Service Contracts related list. You can also add the read-only `Root Service Contract` field so users can see the top-level service contract in a service contract hierarchy.

3. **Set field-level security on service contract fields.**

   This lets you choose which service contract fields users can access.

4. **Set field history tracking on service contracts.**

   This lets you see when field values were changed. Changes are listed in the Service Contract History related list on service contracts. From the object management settings for service contracts, go to the fields section, and then click **Set History Tracking**.

5. **Make the Service Contracts tab visible in Salesforce and any custom apps.**

   The Service Contracts tab is where users create and edit service contracts and contract line items. Add the tab to an app or instruct your users to add it to an existing tab set in Salesforce. Users need the "Read" permission on service contracts to see the Service Contracts tab.

6. **Add the Service Contracts related list to account and contact page layouts.**

   This lets users create, update, and verify service contracts from accounts and contacts.

Set Up Contract Line Items

Set up contract line items to be able to specify which products a service contract covers. Contract line items only display to users on the Contract Line Items related list on service contracts (not on contracts!). You can only use contract line items if your Salesforce org uses products.

> 📝 **Note:** Entitlements must be enabled in your org for you to set up contract line items.

From the object management settings for contract line items:

1. **Customize contract line item fields.**

   This lets you control what information users add to contract line items. You can create custom contract line item fields that are specific to your industry or support process.

2. **Customize contract line item page layouts.**

   This lets you specify which fields and related lists users see on contract line items. Consider making the following customizations:

   - Add the `Status Icon` field so users can easily see whether the line item is active, expired, or inactive.

   - To let users make one line item the parent of another, add the `Parent Contract Line Item` field and Child Contract Line Items related list. You can also add the read-only `Root Contract Line Item` field, which lists the top-level line item in a contract line item hierarchy.

3. **Customize other objects' page layouts.**

   This lets you choose how users can associate contract line items with other records. Consider making the following customizations:

   - (Required) Add the Contract Line Items related list to service contract page layouts. This lets users create, edit, and delete contract line items from service contracts.

   - Add the Contract Line Items related list to asset layouts. This lets users view and change associations between assets and contract line items.

   - Add the `Contract Line Item` lookup field to entitlement page layouts. This lets users associate a line item with a particular entitlement.

4. **Set field-level security on contract line items.**

   This lets you choose which contract line item fields users can access.

5. **Set field history tracking on contract line items.**

   This lets you see when field values were changed. Changes are listed in the Contract Line Item History related list on contract line items. From the object management settings for contract line items, go to the fields section, and then click **Set History Tracking**.

> 📝 **Note:** Schedules aren't available for contract line items, and community users can't access them.

Set Up Entitlement Management in Communities

Add entitlement management to your communities to let customers or partners view their entitlements and service contracts. Contract line items don't display in communities.

Follow these steps to expose entitlements and/or service contracts in a community.

1. Update user profiles.

    a. Clone the Customer Community User, Customer Community Plus User, or Partner Community User profiles and enable the "Read" permission on entitlements and/or service contracts.

    > Note: Remember to click **Edit Profiles** at the bottom of the detail page to activate the new profiles.

    b. Optionally, on the profiles of delegated community moderators, enable the "Create" and "Delete" permissions on entitlement contacts. This lets moderators update entitlement contacts.

    c. Verify that the tab visibility for the Entitlements and/or Service Contracts tabs is Default On.

2. Add the Entitlements and/or Service Contracts tabs to the community.

3. Add the `Entitlement Name` field to case and work order page layouts assigned to community users. This lets users add entitlements to cases and work orders. Work orders are not available in communities built using the self-service community templates.

    > Note: To avoid exposing your internal support processes, we recommend **not** adding the following fields to case and work order page layouts for community users:
    > - `Entitlement Process Start Time`
    > - `Entitlement Process End Time`
    > - `Stopped`
    > - `Stopped Since`

4. Optionally, add the Entitlements related list to account and contact page layouts assigned to community moderators. This lets moderators create cases automatically associated with the right entitlements.

Report on Entitlements

Use custom report types to define report criteria that users can use to run and create reports on entitlements, service contracts, and contract line items.

After you set up entitlement management, your Salesforce org automatically includes the following custom report types:

Custom Report Type	Description	Report Type Location
Accounts with entitlements with contacts	Lists accounts with entitlements that include contacts (named callers).	Accounts & Contacts
Service contracts with contract line items	Lists service contracts with contract line items (products).	Customer Support Reports
Service contracts with entitlements	Lists service contracts with entitlements.	Customer Support Reports
Cases with milestones	Lists cases with milestones. 📝 Note: This report type can't be customized.	Customer Support Reports

To customize entitlement management custom report types:

1. From Setup, enter `Report Types` in the Quick Find box, then select **Report Types**.

2. From the All Custom Report Types page, you can:

   - Define a new custom report type. You can't select entitlements as a primary object.

   - Update a custom report type's name, description, report type category, and deployment status.

   - Delete a custom report type.

     🛑 Important: When you delete a custom report type, all the data stored in the custom report type is deleted and cannot be restored from the Recycle Bin.

💡 Tip: If you want to view a list of work orders with milestones in your org, use the Object Milestones custom report type to create a work order report.

ENFORCING SERVICE LEVELS

Set Up Milestones

Milestones represent required steps in your support management process, like first response times. Set up and customize milestones in your org so they can be added to entitlement processes and applied to support records like cases and work orders.

1. Customize Milestone Page Layouts

   Milestones appear in the Case Milestones related list on cases, and the Object Milestones related list on work orders. Customize your page layouts to help support agents and supervisors track support progress.

2. Enable Milestone Feed Items

   Help support agents monitor support activity by enabling milestone feed items. This option posts a notification to the feed and the record owner's profile page when a milestone is completed or violated.

3. Set Up the Milestone Tracker

   The milestone tracker gives support agents a complete view of upcoming and closed milestones, and displays countdowns for active and overdue milestones. Add it to the case feed, work order feed, a custom page, or the service console.

4. Limit User Updates to Milestones

   Add validation rules to milestones to prevent users from updating milestones unless certain criteria are met.

5. Create a Milestone

   Milestones represent required steps in your support process, such as case resolution time and first response time. You'll create "master" milestones in your org, then add them to entitlement processes to enforce different service levels on support records like cases and work orders.

6. Auto-Complete Case Milestones

   Create an Apex trigger that automatically marks milestones Completed on cases that match unique criteria. In your trigger, define which events and related case criteria must be satisfied for a milestone to be marked Completed. You can implement a similar trigger to auto-complete work order milestones.

Customize Milestone Page Layouts

Milestones appear in the Case Milestones related list on cases, and the Object Milestones related list on work orders. Customize your page layouts to help support agents and supervisors track support progress.

1. Add any of the following fields to case and object milestone detail pages.

    - To edit case milestone detail page layouts, from Setup, enter `Case Milestones` in the Quick Find box, then click **Page Layouts** under Case Milestones.
    - To edit object milestone detail page layouts (which apply to work order milestones), from Setup, enter `Object Milestones` in the Quick Find box, then click **Page Layouts** under Object Milestones.

Field	Description
Actual Elapsed Time	The amount of time that it took to complete a milestone. (Elapsed Time) – (Stopped Time) = (Actual Elapsed Time) Note: If you want to be able to display this field, **Enable stopped time and actual elapsed time** must be selected on the Entitlement Settings page.
Completed	Icon (✔) that indicates a milestone completion.
Completion Date	The date and time the milestone was completed.
Elapsed Time	The time it took to complete a milestone. Automatically calculated to include any business hours on the support record. Elapsed time is calculated only after the Completion Date field is populated.
Entitlement Process	The entitlement process that is being used for the record. Entitlement processes are optional.
Start Date	The date and time that the milestone tracking started.
Stopped Time	How long an agent has been blocked from completing a milestone. For example, an agent might wait for a customer to reply with more information. Note: **Enable stopped time and actual elapsed time** must be selected on the Entitlement Settings page.

Field	Description
Target Date	The date and time to complete the milestone.
Target Response	The time to complete the milestone. Automatically calculated to include any business hours on the support record.
Time Remaining	The time that remains before a milestone violation. Automatically calculated to include any business hours on the support record.
Time Since Target	The time that has elapsed since a milestone violation. Automatically calculated to include any business hours on the support record.
Violation	Icon () that indicates a milestone violation.

2. Add milestone elements to case and work order page layouts:

    a. Add milestone fields:

Field	Description
Milestone Status	The milestone's status.
Milestone Status Icon	An icon that corresponds to the milestone status: • Compliant • Open Violation • Closed Violation
Entitlement Process Start Time	The time the record enters the entitlement process.
Entitlement Process End Time	The time the record exits the entitlement process.

    b. Add the Case Milestones or Object Milestones related list to display the record's milestones.

Enable Milestone Feed Items

Help support agents monitor support activity by enabling milestone feed items. This option posts a notification to the feed and the record owner's profile page when a milestone is completed or violated.

🛑 **Important:**

- Chatter and entitlements must be enabled in your org.
- Enabling milestone feed items doesn't create feed items for milestones that have already been completed or violated.
- If you add entitlement management to a community, enabling milestone feed items also makes feed items visible to community users.

1. From Setup, enter `Entitlement Settings` in the `Quick Find` box, then select **Entitlement Settings**.
2. Select `Enable milestone feed items`. This enables feed items for both cases and work orders.

Set Up the Milestone Tracker

The milestone tracker gives support agents a complete view of upcoming and closed milestones, and displays countdowns for active and overdue milestones. Add it to the case feed, work order feed, a custom page, or the service console.

Often, support agents' performance is measured by how often they meet milestones. The milestone tracker helps agents be prepared for support deadlines by showing them:

- The time remaining until an active milestone reaches its Target Date
- The time passed since an overdue milestone's Target Date
- A list of upcoming milestones
- A list of closed milestones

When a milestone is in progress, the milestone is represented by a green circle. The circle winds down clockwise as time elapses. The remaining time is shown in the center of the circle. When the time to complete the milestone expires, the circle turns red. The amount of time that the milestone is overdue is shown in the center of the circle.

If more than 24 hours remain on a milestone, the countdown displays in days (for example, 1d). When fewer than 24 hours remain, the countdown format switches to hours/minutes/seconds.

1. **Expose the milestone tracker to support agents.**

    You can expose the tracker in one of three ways:

    *   Add it to the case feed. If you plan to use milestones on work orders, follow the same steps to add the tracker to the work order feed.

        a.   From the object management settings for cases, go to Page Layouts.

        b.   In the Case Page Layouts section, click **Edit**, and then click **Feed View** in the page layout editor.

        c.   In the Other Tools and Components section, select the Milestone Tracker and specify where on the page you want it to appear.

        d.   Click **Save**.

    *   Add it to a custom Visualforce page using the `<apex:milestoneTracker>` component.

    *   Add it as a component to the service console.

2. **Set how the milestone tracker displays time remaining or time overdue on milestones.**

    By default, the tracker uses actual hours. To make it display time remaining or time overdue in business hours, follow these steps.

    a.   From Setup, enter `Entitlement Settings` in the Quick Find box, then select **Entitlement Settings**.

    b.   In the Milestone Tracker section, deselect **Show the time remaining in actual hours, not business hours**.

    c.   Click **Save**.

👁 Example: Suppose an active milestone's business hours are 9 a.m. to 5 p.m. Right now, it's 4:30 p.m. and the milestone's Target Date is 11:00 a.m. tomorrow.

*   If the milestone tracker shows the remaining time in **business hours** (the default setting), it displays a countdown of 2 hours and 30 minutes (4:30 to 5 p.m. today and 9 to 11 a.m. tomorrow).

*   If the milestone tracker shows the remaining time in **actual hours**, it displays a countdown of 18 hours and 30 minutes (4:30 p.m. today to 11:00 a.m. tomorrow).

Limit User Updates to Milestones

Add validation rules to milestones to prevent users from updating milestones unless certain criteria are met.

1. From the object management settings for case milestones, go to Validation Rules.
2. Click **New**.
3. Enter the rule details.
4. Save your changes.

👁 **Example:** This validation rule prevents users from selecting milestone completion dates that are earlier than the case creation date. You can create a similar validation rule for work orders from the object management settings for Object Milestones in Setup.

Field	Value
Rule Name	`milestone_completion_date`
Description	`A milestone's completion date must be later than the case creation date.`
Error Condition Formula	`CompletionDate < Case.CreatedDate`
Error Message	`Error: The milestone completion date must be later than the case creation date.`
Error Location	`Top of Page`

Create a Milestone

Milestones represent required steps in your support process, such as case resolution time and first response time. You'll create "master" milestones in your org, then add them to entitlement processes to enforce different service levels on support records like cases and work orders.

Follow these steps to create a milestone. Walk Through It: Create a Milestone.

> 💡 **Tip:** The Entitlement Management Trailhead module introduces you to common terms and walks you through the process of creating milestones. And, it's fun! To get started, see Entitlement Management.

1. From Setup, enter `Milestones` in the Quick Find box, then select **Milestones** under Entitlement Management.

2. Click **New Milestone**.

3. Enter a name and description. Try to name milestones after common support tasks, like "First Response Time" or "Resolution Time". Descriptive names help users understand milestones when they see them on cases, work orders, or entitlement processes.

4. Select a recurrence type.

Recurrence Type	Description	Example
No Recurrence	The milestone occurs only once on the record.	"First Response" "Resolution Time"
Independent	The milestone occurs whenever the milestone criteria are met on the record.	"Response Time"
Sequential	The milestone occurs *on repeat* whenever the milestone criteria are met on the record.	"Customer Contact Made"

5. Click **Save**.

You can't apply milestones to a record by themselves; they must be part of an entitlement process. So after you create your milestone, add it to an entitlement process.

> 💡 **Tip:** You can add validation rules to milestones so users can only update a milestone if it meets specific standards. For details, see Limit User Updates to Milestones.

Auto-Complete Case Milestones

Create an Apex trigger that automatically marks milestones Completed on cases that match unique criteria. In your trigger, define which events and related case criteria must be satisfied for a milestone to be marked Completed. You can implement a similar trigger to auto-complete work order milestones.

The following triggers mark specific types of milestones Completed when the case they are on meets unique criteria. We've also provided a milestone utility Apex class and accompanying unit tests. Define the milestone utility class before you use any of the triggers.

Milestone Utility Apex Class

Apex classes reduce the size of your triggers and make it easier to reuse and maintain Apex code. To define this Apex class in your org:

1. From Setup, enter `Apex Classes` in the Quick Find box, then click **Apex Classes**.

2. Click **New**.

3. Copy the class text and paste it into the text field.

4. Click **Save**.

```apex
public class MilestoneUtils {
    public static void completeMilestone(List<Id> caseIds,
            String milestoneName, DateTime complDate) {
    List<CaseMilestone> cmsToUpdate = [select Id, completionDate
            from CaseMilestone cm
            where caseId in :caseIds and cm.MilestoneType.Name=:milestoneName
            and completionDate = null limit 1];
    if (cmsToUpdate.isEmpty() == false){
        for (CaseMilestone cm : cmsToUpdate){
            cm.completionDate = complDate;
            }
        update cmsToUpdate;
        }
    }
}
```

Apex Class Unit Test

You can set up Apex unit tests in the developer console to scan your code for any issues. To keep things running smoothly, Salesforce requires at least three-quarters of your Apex code lines to be covered by tests.

```apex
static testMethod void TestCompleteMilestoneCase(){

    Contact oContact = [select id from Contact limit 1];
    String contactId;
    if (oContact != null)
        contactId = oContact.Id;

    Entitlement entl = [select id from Entitlement limit 1];
    String entlId;
    if (entl != null)
        entlId = entl.Id;

    List<Case> cases = new List<Case>{};
```

```
    if (entlId != null){
        Case c = new Case(Subject = 'Test Case with Entitlement ',
                EntitlementId = entlId, ContactId = contactId);
        cases.add(c);
    }
    if (cases.isEmpty()==false){
        insert cases;
        List<Id> caseIds = new List<Id>();
        for (Case cL : cases){
            caseIds.add(cL.Id);
      }
      milestoneUtils.completeMilestone(caseIds, 'First Response', System.now());
    }
}

static testMethod void testCompleteMilestoneViaCase(){
    Entitlement entl = [select id from Entitlement limit 1];
    String entlId;
    if (entl != null)
        entlId = entl.Id;
    List<Case> cases = new List<Case>{};
    for(Integer i = 0; i < 1; i++){
        Case c = new Case(Subject = 'Test Case ' + i);
        cases.add(c);
        if (entlId != null){
            c = new Case(Subject = 'Test Case with Entitlement ' + i,
            EntitlementId = entlId);
            cases.add(c);
        }
    }

    insert cases;

    List<CaseComment> ccs = new List<CaseComment>{};
    for(Case c : cases){
        CaseComment cc = new CaseComment(CommentBody='TestPublic',
                IsPublished=true, ParentId=c.Id);
        ccs.add(cc);
        cc = new CaseComment(CommentBody='TestPrivate',
                IsPublished=false, ParentId=c.Id);
        ccs.add(cc);
    }
    if (ccs.isEmpty()==false)
        insert ccs;

    List<EmailMessage> emails = new List<EmailMessage>();
    for(Case c : cases){
        emails.add(new EmailMessage(parentId = c.id));
    }
    if(emails.isEmpty()==false)
        database.insert(emails);

    for(Case c : cases){
        Messaging.SingleEmailMessage mail = new Messaging.SingleEmailMessage();
```

```
        String[] toAddr = new String[] {'user@company.com'};
        mail.setToAddresses(toAddr);
        mail.setSaveAsActivity(false);
        mail.setTargetObjectId(c.ContactId);
        mail.setWhatId(c.Id);
        mail.setHtmlBody('TestHTMLBody');
        mail.setPlainTextBody('TestTextBody');
        Messaging.sendEmail(new Messaging.SingleEmailMessage[] { mail });
    }

    for(Case c : cases){
        c.Status = 'Closed';
    }
    update cases;
        List<Case> insertedCases = [SELECT Subject,
                    Description,
                    (SELECT IsPublished, CommentBody From CaseComments),
                    (SELECT TextBody, Subject, Incoming From EmailMessages)
                    FROM Case
                    WHERE Id IN :cases];
}
```

Sample Trigger 1

You can create a milestone named Resolution Time that requires cases to be closed within a certain length of time. It's a great way to enforce case resolution terms in SLAs. This sample case trigger marks each Resolution Time milestone Completed when its case is closed. This way, the support agent doesn't have to manually mark the milestone completed after closing the case.

📝 Note: This trigger references the milestone utility test class, so be sure to define the test class first.

To define this trigger in your org:

1. From Setup, enter `Case Triggers` in the Quick Find box, then click **Case Triggers**.

2. Click **New**.

3. Copy the trigger text and paste it into the text field.

4. Click **Save**.

```
trigger CompleteResolutionTimeMilestone on Case (after update) {
    if (UserInfo.getUserType() == 'Standard'){
        DateTime completionDate = System.now();
            List<Id> updateCases = new List<Id>();
            for (Case c : Trigger.new){
                    if (((c.isClosed == true)||(c.Status == 'Closed'))&&((c.SlaStartDate

                        <= completionDate)&&(c.SlaExitDate == null)))
        updateCases.add(c.Id);
        }
    if (updateCases.isEmpty() == false)
        milestoneUtils.completeMilestone(updateCases, 'Resolution Time', completionDate);

    }
}
```

Sample Trigger 2

You can create a milestone named First Response that requires agents to get in touch with a case contact within X minutes or hours of the case's creation. It's a nice way to ensure that your support team is communicating with case contacts as soon as possible. This sample email trigger marks a First Response milestone Completed when an email is sent to the case contact. That way, the support agent doesn't have to manually mark the First Response milestone Completed after they email the case contact.

> 📝 Note: This trigger references the milestone utility test class, so be sure to define the test class first.

To define this trigger in your org:

1. From Setup, enter `Email Triggers` in the Quick Find box, then click **Email Triggers**.

2. Click **New**.

3. Copy the trigger text and paste it into the text field.

4. Click **Save**.

```
trigger CompleteFirstResponseEmail on EmailMessage (after insert) {
    if (UserInfo.getUserType() == 'Standard'){
        DateTime completionDate = System.now();
        Map<Id, String> emIds = new Map<Id, String>();
        for (EmailMessage em : Trigger.new){
            if(em.Incoming == false)
                emIds.put(em.ParentId, em.ToAddress);
        }
        if (emIds.isEmpty() == false){
            Set <Id> emCaseIds = new Set<Id>();
            emCaseIds = emIds.keySet();
                List<Case> caseList = [Select c.Id, c.ContactId, c.Contact.Email,
                    c.OwnerId, c.Status,
                    c.EntitlementId,
                    c.SlaStartDate, c.SlaExitDate
                    From Case c where c.Id IN :emCaseIds];
            if (caseList.isEmpty()==false){
                    List<Id> updateCases = new List<Id>();
                    for (Case caseObj:caseList) {
                        if ((emIds.get(caseObj.Id)==caseObj.Contact.Email)&&
                            (caseObj.Status == 'In Progress')&&
                            (caseObj.EntitlementId != null)&&
                            (caseObj.SlaStartDate <= completionDate)&&
                            (caseObj.SlaStartDate != null)&&
                            (caseObj.SlaExitDate == null))
                                updateCases.add(caseObj.Id);
                    }
                    if(updateCases.isEmpty() == false)
                        milestoneUtils.completeMilestone(updateCases,
                            'First Response', completionDate);
            }
        }
    }
}
```

Sample Trigger 3

While the previous trigger dealt with email messages, this sample case comment trigger marks a First Response milestone Completed when a public comment is made on the case. You can use it if a public case comment is a valid first response in your support terms.

📝 Note: This trigger references the milestone utility test class, so be sure to define the test class first.

To define this trigger in your org:

1. From Setup, enter `Case Comment Triggers` in the Quick Find box, then click **Case Comment Triggers**.

2. Click **New**.

3. Copy the trigger text and paste it into the text field.

4. Click **Save**.

```
trigger CompleteFirstResponseCaseComment on CaseComment (after insert) {
    if (UserInfo.getUserType() == 'Standard'){
        DateTime completionDate = System.now();
        List<Id> caseIds = new List<Id>();
        for (CaseComment cc : Trigger.new){
                if(cc.IsPublished == true)
                caseIds.add(cc.ParentId);
        }
        if (caseIds.isEmpty() == false){
            List<Case> caseList = [Select c.Id, c.ContactId, c.Contact.Email,
                    c.OwnerId, c.Status,
                    c.EntitlementId, c.SlaStartDate,
                    c.SlaExitDate
                    From Case c
                    Where c.Id IN :caseIds];
        if (caseList.isEmpty() == false){
            List<Id> updateCases = new List<Id>();
            for (Case caseObj:caseList) {
                if ((caseObj.Status == 'In Progress')&&
                        (caseObj.EntitlementId != null)&&
                        (caseObj.SlaStartDate <= completionDate)&&
                        (caseObj.SlaStartDate != null)&&
                        (caseObj.SlaExitDate == null))
                    updateCases.add(caseObj.Id);
            }
            if(updateCases.isEmpty() == false)
                milestoneUtils.completeMilestone(updateCases,
                'First Response', completionDate);
        }
    }
    }
}
```

Set Up an Entitlement Process

Entitlement processes are timelines that include all of the steps (milestones) that your support team must complete to resolve cases or work orders. Set up an entitlement process to apply to entitlements in your Salesforce org.

1. Create an Entitlement Process

   Create an entitlement process to give support agents a timeline of required steps to follow when solving support records. Each process includes the logic necessary to determine how to enforce the correct service level for your customers.

2. Customize Entitlement Process Fields

   If you intend to use entitlement processes in your Salesforce org, customize page layouts to ensure that support agents can see and interact with entitlement processes.

3. Add a Milestone to an Entitlement Process

   Add milestones to entitlement processes to define required steps in your support process.

4. Add a Milestone Action to an Entitlement Process

   Milestone actions are time-dependent workflow actions that occur at every step (milestone) in an entitlement process. After you create an entitlement process and add milestones to it, add milestone actions to the milestones.

5. Apply an Entitlement Process to an Entitlement

   You've created an entitlement process; now it's time to use it! Apply an entitlement process to a customer's entitlement so all support records linked to the entitlement use that process.

Create an Entitlement Process

Create an entitlement process to give support agents a timeline of required steps to follow when solving support records. Each process includes the logic necessary to determine how to enforce the correct service level for your customers.

> **Note:** You must create milestones before you create an entitlement process.

> **Tip:** The Entitlement Management Trailhead module introduces you to common terms and walks you through creating an entitlement process. And, it's fun! To get started, see Entitlement Management.

1. From Setup, enter `Entitlement Processes` in the `Quick Find` box, then select **Entitlement Processes** under Entitlement Management.

2. Click **New Entitlement Process**.

3. Select an entitlement process type. If you intend to use the process to enforce milestones on cases, select Case. If you intend to use the process to enforce milestones on work orders, select Work Order. (If work orders aren't enabled in your org, you only see the Case option.)

   > **Note:** If you're using entitlement processes, manage customers' work orders and cases on separate entitlements. This is because an entitlement process only runs on records that match its type. For example, when a Case entitlement process is applied to an entitlement, the process only runs on cases associated with the entitlement. If a work order is also associated with the entitlement, the process won't run on the work order.

4. Enter a name—for example, *Standard Support Process*—and a description.

5. If you want to enable the process, select **Active**.

> 💡 **Tip:** We recommend waiting to activate an entitlement process until you add milestone actions to it. You can't update or delete milestone actions on a process after it's activated and applied to a record.

6. Optionally, if entitlement versioning is enabled, select **Default Version** to make this version of the entitlement process the default.

7. Choose the criteria for records to enter and exit the entitlement process.

Field	Description	More Actions to Take?
`Record* enters the process`	**Based on record created date** Select if records should enter the process when they're created.	No
	Based on a custom date/time field on the record Select if you want the value of a custom date/time field on the record to determine when the record enters the process.	Yes, a drop-down list displays for selecting the custom date/time. You can only choose a custom date/time, not a custom date.
`Record exits the process`	**Based on when record is closed** Select if records should exit the process when they're closed.	No
	Based on custom criteria Select if records should exit the process based on criteria you define.	Yes, select one of the following: • Choose `criteria are met` and select the filter criteria that a record must meet for it to exit the process. For example, set a case filter to *Priority equals Low* if you want cases with the `Priority` field marked Low to exit the process. Choose `formula evaluates to true` and enter a formula that returns a value of "True" or "False." Salesforce triggers the rule if the formula returns "True." • Choose `formula evaluates to true` and enter a formula that returns a value of "True" or "False." Records exit the process if the formula returns "True." For example, the formula `(Case: Priority equals Low) AND(Case: Case Origin equals Email, Web)` moves cases out of

Field	Description	More Actions to Take?
		the process if their `Priority` field is Low and the `Case Origin` field is marked Email or Web.

*The field names you see will reflect the entitlement process type you selected.

8. Optionally, choose the business hours you'd like to apply to the entitlement process. The business hours you set here calculate the Target Date for all the milestones on this entitlement process. To learn more, see How Business Hours Work in Entitlement Management.

9. Save your changes.

Customize Entitlement Process Fields

If you intend to use entitlement processes in your Salesforce org, customize page layouts to ensure that support agents can see and interact with entitlement processes.

1. Add these fields to case and work order page layouts:

Field	Description
`Timeline` (available only on case page layouts)	How far along a case is to reaching an entitlement process's milestones. You can click or hover your mouse pointer over each milestone to view its details. These icons represent milestones: • Completed milestone • Violated milestone You can drag the Handle icon () along the Timeline Zoom tool to view past and future milestones. If an entitlement process applies to the case, this field appears.
`Stopped`	Lets you stop an entitlement process on a record, which might be necessary if you're waiting for a customer's reponse.
`Stopped Since`	The date and time the entitlement process was stopped on the record.

2. Save your changes.

Add a Milestone to an Entitlement Process

Add milestones to entitlement processes to define required steps in your support process.

1. From Setup, enter `Entitlement Processes` in the Quick Find box, then select **Entitlement Processes**.

2. Click the name of an entitlement process.

3. If you're using versioning, click the name of the entitlement process again under Entitlement Process Versions.

4. Click **New** on the Milestones related list.

5. Choose the milestone.

6. In `Time Trigger (Minutes)`, enter the number of minutes in which users must complete the milestone before it triggers an action.

   Or, if you'd like the trigger time for the milestone to be calculated dynamically based on the milestone type and properties of the case or work order, click **Enable Apex Class for the Time Trigger (Minutes)**.

   > **Note:** You must have a custom Apex class that implements the `Support.MilestoneTriggerTimeCalculator` Apex interface to use this option.

7. If you selected **Enable Apex Class for the Time Trigger (Minutes)**, use the lookup to specify an Apex class for the dynamically calculated milestone.

8. Choose when the milestone starts:

Select	To	Use If
Milestone Criteria	Calculate the milestone `Target Date` when the milestone is applied to a support record (matches the record criteria).	A milestone's `Target Date` is based on when it's applied to a record. Use if the milestone is recurring. **Note:** An entitlement process usually starts when the record is created, but its milestones aren't always applied right away.
Entitlement Process	Calculate the milestone `Target Date` when the entitlement process starts (by default, when a support record is created).	A milestone's `Target Date` is based on the start of the entitlement process. For example, first response and resolution times on a case always calculate their `Target Date` when the entitlement process starts.

9. Optionally, select the business hours that you want to apply to the Target Date calculation for this milestone. If you don't specify business hours for the milestone, then the Entitlement Process business hours are used. If neither are specified, then the business hours on the case or work order are used.

10. Specify the order in which Salesforce should process the milestones. This applies to situations where a support record matches the criteria of multiple milestones at the same time.

EDITIONS

Available in: Salesforce Classic

Available in: **Professional**, **Enterprise**, **Performance**, **Unlimited**, and **Developer** Editions with the Service Cloud

USER PERMISSIONS

To add milestones to entitlement processes:
- "Manage Entitlements"

11. Enter the criteria a record must match for the milestone to apply to it:

- Choose `criteria are met` and select the filter criteria that a record must meet for a milestone to apply to it. For example, set a case filter to `Priority equals High` if you want the milestone to apply to cases with the `Priority` field marked High.

  Choose `formula evaluates to true` and enter a formula that returns a value of "True" or "False." Salesforce triggers the rule if the formula returns "True."

- Choose `formula evaluates to true` and enter a formula that returns a value of "True" or "False." The milestone applies to records if the formula returns "True." For example, the formula `(Case: Priority equals High) AND (Case: Case Origin equals Email, Web)` applies the milestone to cases where the `Priority` field is High and the `Case Origin` field is marked Email or Web. You can't use the `Case Owner` field in formulas.

12. Click **Save**.

> Note: Milestones are measured in minutes and seconds, but their start and end times are only accurate to the minute. For example, suppose a milestone is triggered at 11:10:40 a.m. and the time to complete the milestone is 10 minutes. In this case, the milestone target time is 11:20:00 am, not 11:20:40. As a result, the remaining time for the agent to complete the milestone is 9 minutes and 20 seconds, not the full 10 minutes.

Add a Milestone Action to an Entitlement Process

Milestone actions are time-dependent workflow actions that occur at every step (milestone) in an entitlement process. After you create an entitlement process and add milestones to it, add milestone actions to the milestones.

1. From Setup, enter `Entitlement Processes` in the `Quick Find` box, then select **Entitlement Processes**.

2. Click the name of an entitlement process.

3. Click the name of a milestone on the Milestones related list.

4. If you want to add a warning or violation action, add a time trigger first. After you add a trigger, the option to add a workflow action appears. Success actions use the milestone's time trigger.

> Tip: If you want a violation action to fire immediately after the milestone is violated, set the time trigger to 0 minutes.

5. Click **Add Workflow Action** and select an option.

Workflow Action	What It Does	Example
New Task	Create a workflow task	Create a task for a support agent to call a customer when a First Response milestone is violated.
New Email	Create an email alert	Notify case owners when a First Response milestone on their case is near violation.
New Field Update	Define a field update	Update the case Priority field to `High` when a First

Workflow Action	What It Does	Example
		Response milestone is near violation.
New Outbound Message	Define an outbound message	Send data about parts or services to an external system after a First Response milestone is completed.
Select Existing Action	Select an existing action	Use an existing email alert to notify a case owner when their case is near violation of a first response.

Note: Time-triggered actions only occur during your Salesforce org's business hours. You can add up to 10 actions and 10 time triggers to each type of milestone action.

Apply an Entitlement Process to an Entitlement

You've created an entitlement process; now it's time to use it! Apply an entitlement process to a customer's entitlement so all support records linked to the entitlement use that process.

1. Go to the entitlement.

2. In the `Entitlement Process` lookup field, select the process you want to apply.

   Important: If you're using entitlement processes, manage customers' work orders and cases on separate entitlements. This is because an entitlement process only runs on records that match its type. For example, when a Case entitlement process is applied to an entitlement, the process only runs on cases associated with the entitlement. If a work order is also associated with the entitlement, the process won't run on the work order.

3. Click **Save**.

   Tip: If you've set up entitlement templates, you can associate an entitlement process with a template so all entitlements created using that template automatically use the selected entitlement process.

ENTITLEMENT VERSIONING

Updating an Entitlement Process

Entitlement versioning lets you create multiple versions of an entitlement process, even if it's assigned to active entitlements and support records.

▶ Watch a Demo (2:20 minutes)

Use entitlement versioning if:

- You want to make several versions of an entitlement process that have minor differences
- You want to update an entitlement process to reflect changes in your business processes

You might find that an entitlement process needs to be updated seasonally, or that you need to roll back to a previous version.

> **Note:** To create multiple versions of entitlement processes, entitlement versioning must be enabled in your org. Select **Enable Entitlement Versioning** on the Entitlement Settings page in Setup.
>
> When you create versions of entitlement processes with the same name, the version number and notes help you differentiate between versions. Salesforce prevents you from disabling entitlement versioning so you always know which version you're working with.

When you create a new version of an entitlement process, you can change any of the following:

- Name
- Description
- Whether the process is active
- Whether the version is the default
- Entry criteria
- Exit criteria

You can also add notes about the version. This makes it easy to differentiate between multiple versions of the same process, especially if they have the same name.

On new versions of entitlement processes that are currently in use, you can add new milestones, but you can't edit existing ones. On new versions of processes that aren't currently in use, you can both add new milestones and edit existing ones.

Once you create a new version of an entitlement process, you can choose to apply it to all entitlements and support records assigned to the previously used version, or only to new entitlements and support records. All versions of an entitlement process must be the same type: Case or Work Order.

Create a New Version of an Entitlement Process

Entitlement versioning lets you create multiple versions of an entitlement process, even if it's assigned to active entitlements and support records. You can use multiple versions of an entitlement process at the same time in your Salesforce org.

▶ Watch a Demo (2:20 minutes)

📝 **Note:** To create multiple versions of entitlement processes, entitlement versioning must be enabled in your org. Select **Enable Entitlement Versioning** on the Entitlement Settings page in Setup.

When you create versions of entitlement processes with the same name, the version number and notes help you differentiate between versions. Salesforce prevents you from disabling entitlement versioning so you always know which version you're working with.

1. From Setup, enter `Entitlement Processes` in the `Quick Find` box, then select **Entitlement Processes**.

2. Click the name of the entitlement process for which you want to create a new version.

3. In the Entitlement Process Versions list, click the version of the process from which you want to create a new version.

4. On the Entitlement Process Detail page, click **Create New Version**.

5. Add details about the new version. Follow these best practices:

   - Use the `Version Notes` field to explain what makes the version you're creating different from others. This makes it easier to differentiate between multiple versions of the same entitlement process.

   - Leave the name as is.

   - Click **Active** to be able to use the new version.

   - Click **Default** if you want to make the new version the default version of the process. This makes it easier to find in lookup field searches.

6. Click **Save**.
   After saving, you can modify the entitlement process' milestones if needed.

   ⊘ **Important:**
   - On new versions of entitlement processes that are currently in use, you can add new milestones, but you can't edit existing ones. On new versions of processes that aren't currently in use, you can both add new milestones and edit existing ones.

   - All versions of an entitlement process must be the same type.

When you create a new version of an entitlement process, it isn't automatically applied to entitlements that were using the previous version. To learn how to apply a new version of an entitlement process to existing and new entitlements, see Use a New Version of an Entitlement Process.

Use a New Version of an Entitlement Process

After you create a new version of an entitlement process, you can choose to apply it to all entitlements assigned to the previous version, or only to new entitlements. When you apply an entitlement process to an entitlement, it also applies the process to that entitlement's active support records.

▶ Watch a Demo (2:20 minutes)

📝 **Note:** To create multiple versions of entitlement processes, entitlement versioning must be enabled in your org. Select **Enable Entitlement Versioning** on the Entitlement Settings page in Setup.

When you create versions of entitlement processes with the same name, the version number and notes help you differentiate between versions. Salesforce prevents you from disabling entitlement versioning so you always know which version you're working with.

Applying an Entitlement Process to a New Entitlement

Scenario: You're creating a new entitlement and want to apply a particular version of an entitlement process to it.

1. Choose the entitlement process you want in the Entitlement Process lookup field on the entitlement.

💡 **Tip:** After you click the lookup icon on the Entitlement Process field, select "All Versions" in the lookup dialog box. Otherwise, you can only choose from the default versions of existing entitlement processes.

Applying an Entitlement Process to an Existing Entitlement

Scenario: You made a new version of an entitlement process, and you want to switch all the entitlements that were using the previous version over to your new version.

1. From Setup, enter `Entitlement Processes` in the `Quick Find` box, then select **Entitlement Processes**.

2. Click the name of the entitlement process you want to work with.
   The list on the main Entitlement Processes page shows the default version of each process. Click the name of a process to see a list of all available versions of it.

3. On the detail page for the entitlement process, click the name of the new version that you want to apply to existing entitlements (and by default, to cases or work orders linked to those entitlements).

4. Click **New Update Rule**.

5. Choose the version of the entitlement process you want to update from.
   You can update from any other version of the process, whether or not it's active.

6. Depending on the differences between the old and new versions of the entitlement process, updating an entitlement to the new version can trigger milestone warning and violation actions on that entitlement's support records (such as cases or work orders). To avoid such warnings and violation actions, select **Don't Trigger New Milestone Warnings and Violations**. We recommend selecting this so you don't trigger violation warnings on old entitlements and support records.

7. Click **Save**.
   The update rule detail page shows the estimated number of entitlements and support records that will be updated to use the new process.

8. Click **Start** to begin the update process.

EDITIONS

Available in: Salesforce Classic

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USER PERMISSIONS

To create and update entitlement processes:
- "Manage Entitlements"

Usually the update process completes within an hour, but it depends on the number of entitlements and records being updated. Throughout the update process, the update rule detail page refreshes periodically to show the number of entitlements and records processed. To stop the update at any time, click **Stop**.

LEARN MORE ABOUT ENTITLEMENT MANAGEMENT

Where to Learn More

You can find more helpful reference information about entitlement management features at help.salesforce.com.

Learn More About Entitlements

Search for these titles:

- Entitlements
- Guidelines for Working with Entitlements
- Verify Entitlements
- Entitlement Fields

Learn More About Service Contracts and Contract Line Items

Search for these titles:

- Service Contracts
- Guidelines for Working with Service Contracts
- Service Contract Fields
- Contract Line Items
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- Contract Line Item Fields

Learn More About Milestones and Entitlement Processes

Search for these titles:

- Milestones
- Milestones: Supported Objects
- Milestone Statuses
- Milestone Actions
- Milestone Recurrence Types
- Entitlement Processes
- How a Record Moves Through an Entitlement Process
- How Business Hours Work in Entitlement Management