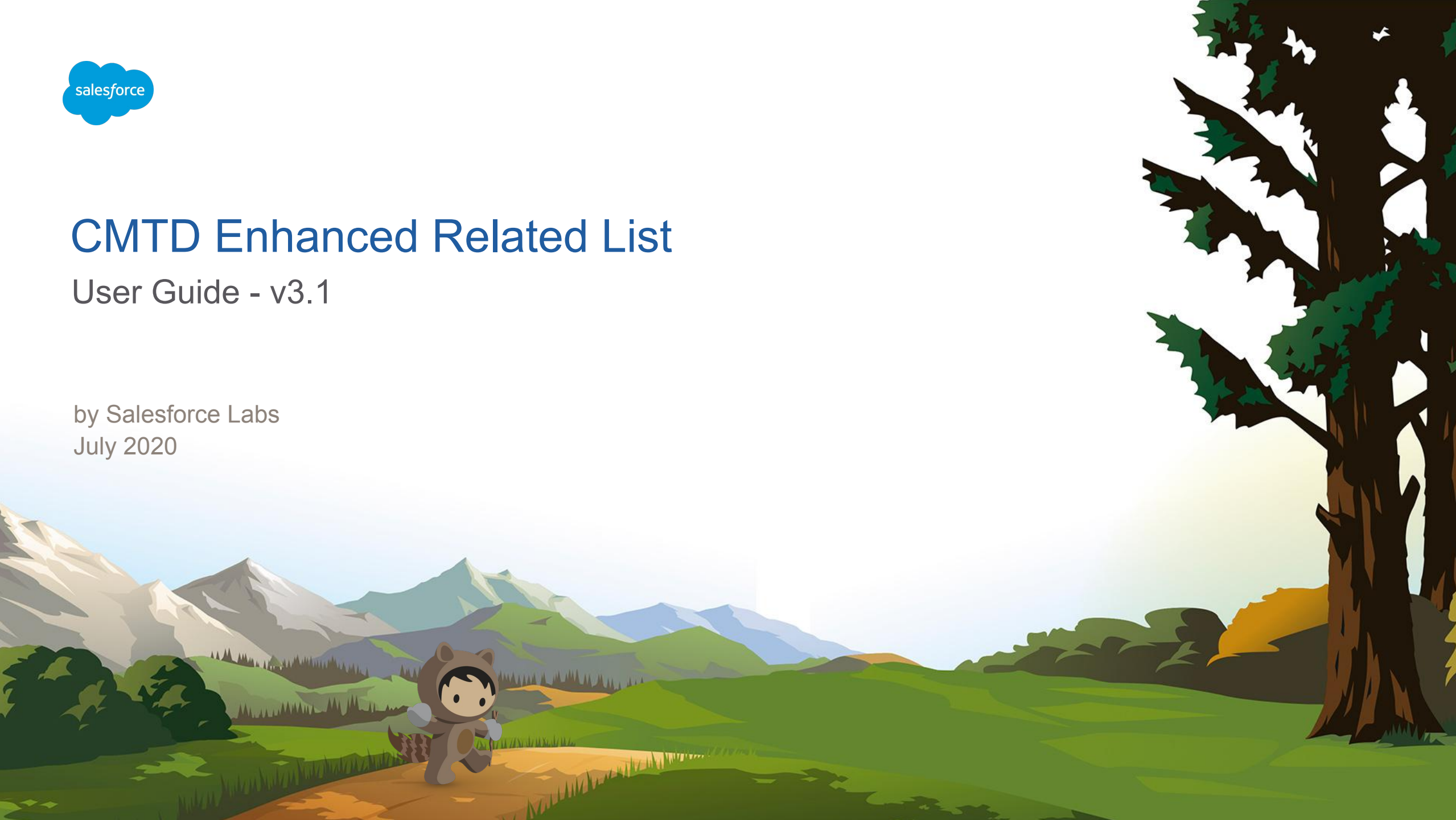




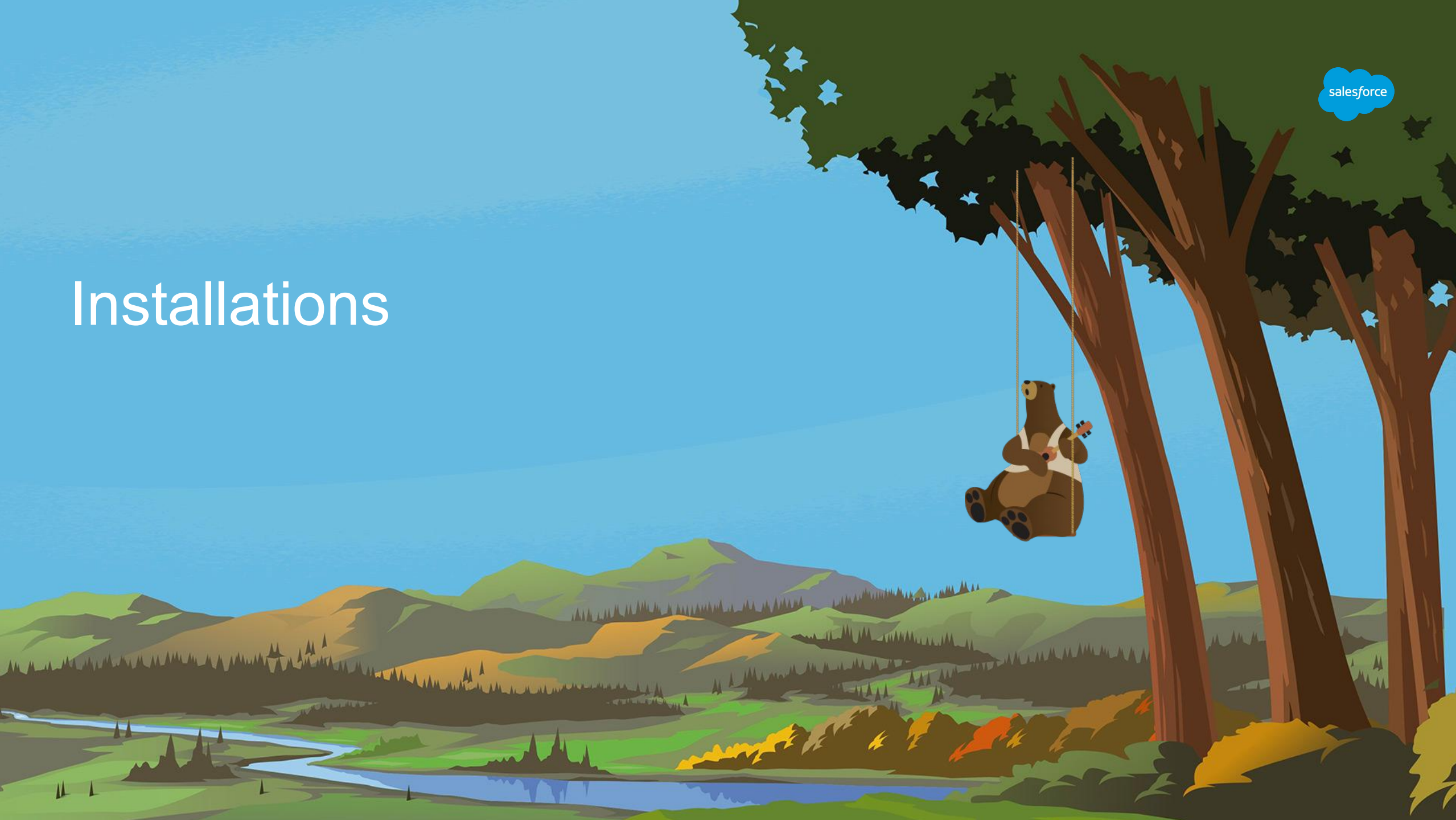
# CMTD Enhanced Related List

User Guide - v3.1

by Salesforce Labs  
July 2020



# Installations



# Installations

## Version 3.1 - Package Components



### Package Components

Action	Name	Parent Object	Type
	<a href="#">multilineToastCSS</a>		Static Resource
	<a href="#">Colour</a>	Enhanced Related List	Custom Field
	<a href="#">Field API Name</a>	Enhanced Related List	Custom Field
	<a href="#">Enhanced Related List</a>		Custom Metadata Type
	<a href="#">Order</a>	Enhanced Related List	Custom Field
	<a href="#">Related List Name</a>	Enhanced Related List	Custom Field
	<a href="#">Header</a>	Enhanced Related List	Custom Field
	<a href="#">Inactive</a>	Enhanced Related List	Custom Field
	<a href="#">ERL Tile</a>		Aura Component Bundle
	<a href="#">ERL_RecordNavigation</a>		Aura Component Bundle
	<a href="#">ERL_RTSelector</a>		Aura Component Bundle
	<a href="#">ERL_RefreshEvent</a>		Aura Component Bundle
	<a href="#">All Fields</a>	Enhanced Related List	List View
	<a href="#">Enhanced Related List Layout</a>	Enhanced Related List	Page Layout
	<a href="#">ERL_DeleteRecord</a>		Aura Component Bundle
	<a href="#">EnhancedRelatedList</a>		Aura Component Bundle
	<a href="#">ERL_List</a>		Aura Component Bundle
	<a href="#">ERL_RTSelector_CC</a>		Apex Class
	<a href="#">ERL_RTSelector_Test</a>		Apex Class
	<a href="#">Colour Populated For Badge</a>	Enhanced Related List	Validation Rule
	<a href="#">Target API Name</a>	Enhanced Related List	Custom Field
	<a href="#">EnhancedRelatedList_Test</a>		Apex Class
	<a href="#">UI Type Override</a>	Enhanced Related List	Custom Field
	<a href="#">CMTD ERL_Permission_Set</a>		Permission Set
	<a href="#">EnhancedRelatedList_CC</a>		Apex Class

# Installations

## Version 3.1



Lightning Components

Standard (0)

Custom (0)

Custom - Managed (1)

- CMTD Enhanced Related List

Account Record Page

Account: Grand Hotels & Resorts Ltd

RELATED DETAILS NEWS CMTD

Test Open Cases (8)

ACTIVITY CHATTER CMTD

Page > CMTD Enhanced Related List

- Object API Name: Case
- Related List Name: TestOpenCases
- Parent Field: AccountId
- Records Display Type: Tile 1
- Fields Layout Type: 1 Column
- Filter: [Empty]
- Sort: [Empty]

- Once installed, “CMTD Enhanced Related List” component is available in App Builder
- Use “Enhanced Related List” Custom Metadata Type to configure the fields

### Sample configuration:

- Simply drag the component into Account page (ensure Account has some Case records)
- Leave all the attributes as default

### Enhanced Related List

View: All Fields Edit Create New View

Action	Enhanced Related List Name	Label	Related List Name	Field API Name	Header	Order	UI Type Override	Colour	Target API Name
Edit   Del	TestOpenCases_CaseNumber	Case Number	TestOpenCases	CaseNumber	✓	1			Id
Edit   Del	TestOpenCases_IsEscalated	Escalated	TestOpenCases	IsEscalated	✓	3	Badge	FF7F50	
Edit   Del	TestOpenCases_Origin	Origin	TestOpenCases	Origin		11			
Edit   Del	TestOpenCases_Priority	Priority	TestOpenCases	Priority		12			
Edit   Del	TestOpenCases_Status	Status	TestOpenCases	Status	✓	2			
Edit   Del	TestOpenCases_Subject	Subject	TestOpenCases	Subject		13			
Edit   Del	TestOpenCases_Type	Type	TestOpenCases	Type		10			



# Installations

Version 3.1

If you have previously added the CMTD Apex classes\* to user profile/ permission set, please remove the class below:

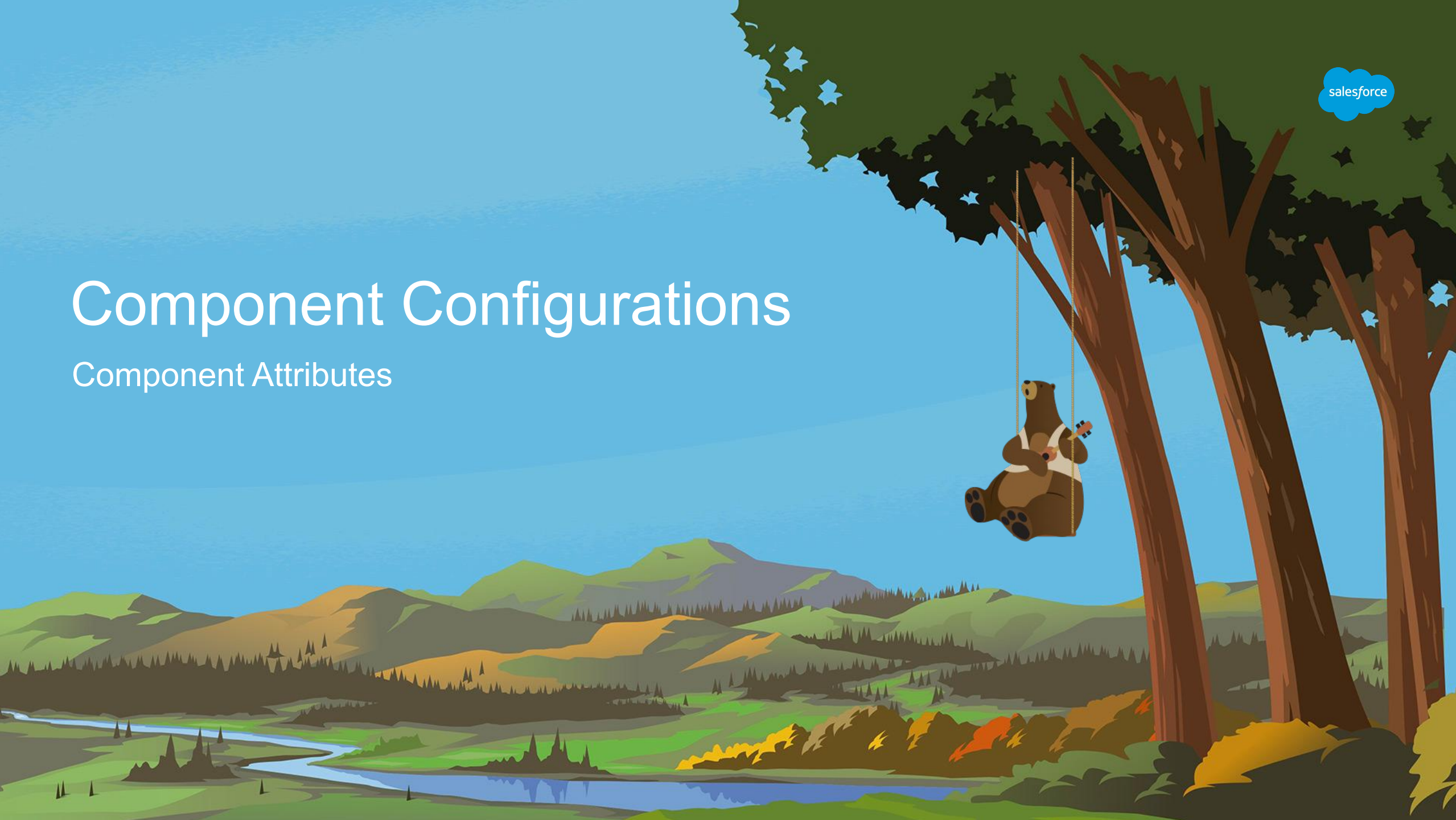
- a. CMTD.ERL\_RecordNavigation\_CC
- b. CMTD.ERL\_RTSelector\_CC

\*This step was introduced in version 2.6 and required for the Critical Update below:

- Restrict Access to @AuraEnabled Apex Methods for Guest and Portal Users Based on User Profile
- Restrict Access to @AuraEnabled Apex Methods for Authenticated Users Based on User Profile

# Component Configurations

Component Attributes



# Component Configurations

## Component Attributes



Attribute Name	Attribute API Name	Description
Parent Object Id Field	parentObjectIdField	The API name of the Id field in the Parent object. <ul style="list-style-type: none"><li>• By default(or when it is empty) it uses the record Id of the Parent Object</li></ul>
Object API Name*	objectAPIName	API name of the Object whose records will be displayed. When showing related Cases on an Account record page, this value is Case.
Related List Name*	relatedListName	This is a <a href="#">unique identifier</a> for the component. It must match the "Related List Name" in the "Enhanced Related List" Custom Metadata Type records.
Parent Field in Child Object*	parentField	The API name of the field on the Child Object (Object API Name) that holds the record Id of the parent. When showing related Cases on an Account, the value is AccountId (Case object's AccountId field)

\*required

# Component Configurations



Attribute Name	Attribute API Name	Description
Records Display Type	displayType	Display mode to display the records. List = Display records in List. Tile 1 = Display records in 1 column Tile. Tile 2 = Display records in 2 columns Tile.
Fields Layout Type	layoutType	The layout of fields in the body when Records Display Type = "Tile 1" or "Tile 2" 1 Column = Fields are displayed in 1 column layout 2 Columns = Fields are displayed in 2 columns layout
Filter	filter	Filter criteria for the object. Eg: Status = 'Open'
Sort	sort	Sort mode for the object. Syntax = Field API Name and ASC/DESC. eg: Created DESC. For multiple sorting, use ',' (eg: Created DESC, Amount DESC) Note: Please use sorting in consideration as it will impact performance.
Default Number of Records to Display	defaultNumberOfRecordsTo Display	Number of records displayed when the component is loaded
Max Number of Records to Display	maxNumberOfRecordsTo Display	Maximum number of records that can displayed. Recommended:50 Limit:500
Title	title	Title of the component
Icon Name	iconName	Icon for the title. This is using SLDS icon. Syntax = category:icon name. Eg: standard:case



# Component Configurations



Attribute Name	Attribute API Name	Description
New Record	newRecord	<p>Valid value = Standard, StandardWithRecordType, Custom LC Name or leave it blank. Note: The value is case sensitive.</p> <ul style="list-style-type: none"><li>• Leave blank would hide the New button.</li><li>• <b>Standard</b>: New record creation without record type. If the object has a record type it will use profile's default record type (or "Default Record Type" when provided)</li><li>• <b>StandardWithRecordType</b>: New record creation with record type selection. When "Default Record Type" is provided, it will be pre populated.</li><li>• Provide custom LC name (case sensitive) when additional functionality is required eg: setting default value on creation (please refer to Advanced Mode)</li></ul>
Default Record Type	defaultRecordType	Default record type to be selected or populated when 'New Record' attribute is used. The value should be the <a href="#">Record Type Label</a> available for the object.
Show Header?	showHeader	Display/hide the component header. If this attribute is set to false, 'New' record functionality will not be available
Show Refresh Button?	showRefreshButton	Display/hide the refresh button
Show Menu Action?	showMenuAction	Display/hide the Menu Action (eg: Edit/ Delete items)
Hide on No Record?	hideOnNoRecord	Hide the component when there is no record

# Component Configurations

## Component Attributes

Page > CMTD Enhanced Related List

Parent Object Id Field

\* Object API Name

\* Related List Name

\* Parent Field in Child Object

Records Display Type

Fields Layout Type

Filter

Sort

The API name of the Id field in the Parent object.

API name of the Object whose records will be displayed

Must match with the 'Enhanced Related List' CMT

The API name of the field on the Child Object (Object API Name) that holds the record Id of the parent.

Default Number of Records to Display

Max Number of Records to Display

Title

Icon Name

New Record

Default Record Type

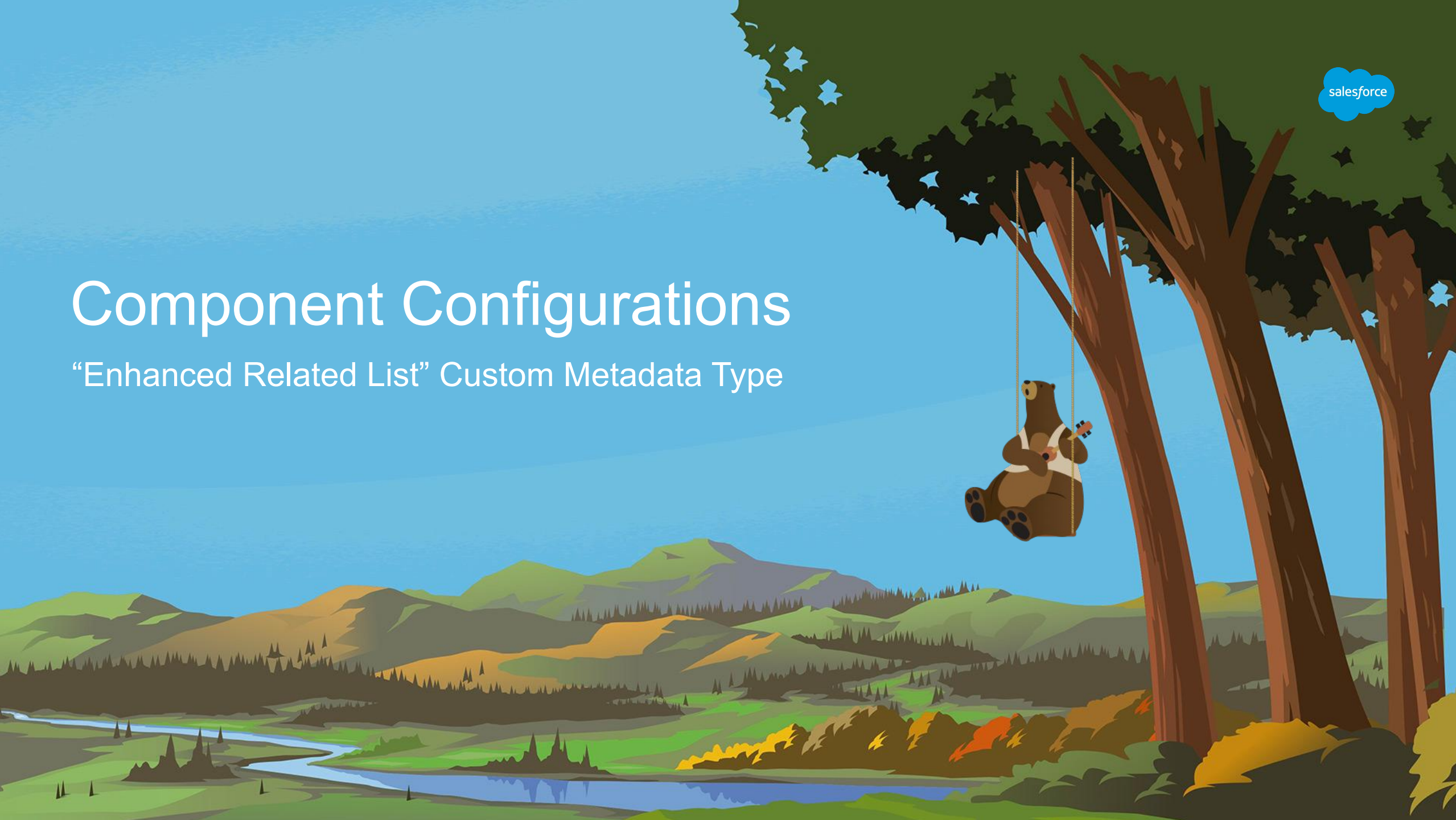
Show Header?

Show Refresh Button?

Show Menu Action?

# Component Configurations

“Enhanced Related List” Custom Metadata Type





# Component Configurations

## “Enhanced Related List” Custom Metadata Type

Attribute Name	Data Type	Description
(Enhanced Related List) Name*	Text	<b>Unique</b> record identifier. Recommended naming convention: Related List Name + “_” + Label. This is a standard field.
Label*	Text	<b>Label to display for the field</b> in CMTD Enhanced Related List component. This is a standard field.
Related List Name*	Text	Related List Name as specified in "Related List Name" attribute of the individual CMTD Enhanced Related List component in App Builder.
Field API Name*	Text	Field API Name of the object as specified in "Object API Name" attribute of the CMTD Enhanced Related List component <ul style="list-style-type: none"><li>Reference Field syntax: <code>referenceField__c.FieldName__c</code></li><li>Examples (on <b>Case</b> object):<ul style="list-style-type: none"><li>Display Account Name: <code>AccountId.Name</code></li><li>Display Case Creator’s Username: <code>CreatedById.Username</code></li><li>Display Account’s Creator’s Username: <code>AccountId.CreatedById.Username</code></li></ul></li></ul>
Header	Checkbox	Used to display fields in the header section when using Tile display mode
Order	Number	Sequence to display the fields in the component

\*required



# Component Configurations

## “Enhanced Related List” Custom Metadata Type

Attribute Name	Data Type	Description
UI Type Override	Picklist	To override the UI display of the field. <ul style="list-style-type: none"><li>• <b>Checkbox</b>: to display a checkbox field (Boolean) using a checkbox icon</li><li>• <b>Badge</b>: To highlight important text<ul style="list-style-type: none"><li>○ Badge will only display when the field value is not empty.</li><li>○ Hint: Use formula field (text) to display a value that meet certain criteria eg: If(IsEscalated, "Escalated", "")</li></ul></li><li>• <b>Unescaped HTML</b>: To display any rich text or any formula fields that uses HTML</li></ul>
Colour	Text	Colour for Badge UI Type Override - only accept HEX
Target API Name	Text	When populated, the field value will have a hyperlink (only support Salesforce record Id). Provide field API Name of the Id of the target record.
Inactive	Checkbox	Flag to indicate if the CMT record is used. When this field is checked, the CMT record will be ignored and the field will not be displayed in the component.

\*required

# Component Configurations

## “Enhanced Related List” CMT

- Each Custom Metadata Type (CMT) record represents a single column and its configuration that will be displayed in the component.

Enhanced Related List Help for this Page

View: All Fields [Edit](#) | [Create New View](#)

[New](#)

Action	Enhanced Related List Name ↑	Label	Related List Name	Field API Name	Header	Order	UI Type Override	Colour	Target API Name
<a href="#">Edit</a>   <a href="#">Del</a>	TestOpenCases_CaseNumber	Case Number	TestOpenCases	CaseNumber	<input checked="" type="checkbox"/>	1			Id
<a href="#">Edit</a>   <a href="#">Del</a>	TestOp	Escalated	TestOpenCases	IsEscalated	<input checked="" type="checkbox"/>	3	Badge	FF7F50	
<a href="#">Edit</a>   <a href="#">Del</a>	TestOp	Origin	TestOpenCases	Origin	<input type="checkbox"/>	11			
<a href="#">Edit</a>   <a href="#">Del</a>	TestOpenCases_Priority	Priority	TestOpenCases	Priority	<input type="checkbox"/>	12			
<a href="#">Edit</a>   <a href="#">Del</a>	TestOpenCases_Status	Status	TestOpenC		<input checked="" type="checkbox"/>	2			
<a href="#">Edit</a>   <a href="#">Del</a>	TestOpenCases_Subject	Subject	TestOpenC		<input type="checkbox"/>	13			
<a href="#">Edit</a>   <a href="#">Del</a>	TestOpenCases_Type	Type	TestOpenC		<input type="checkbox"/>	10			

Hint: Create your own list view for each “Related List Name” to manage your data

Please ensure to provide the correct field API name

Must be unique across all records

Must match the value configured in App Builder for the component

For hyperlink. Specify field API name that holds Salesforce record Id

- When the component is added in the AppBuilder, the default values of the attributes uses these sample data below (Note: the records below are used but will not be visible).
- Please create your own records to start using the component

# Component Configurations

## “Enhanced Related List” CMT Record Creations

To start creating the "Enhanced Related List" Custom Metadata Type records:

- 1. In Setup, type "meta" and select "Custom Metadata Types"
- 2. Click on "Manage Records" on the "Enhanced Related List"

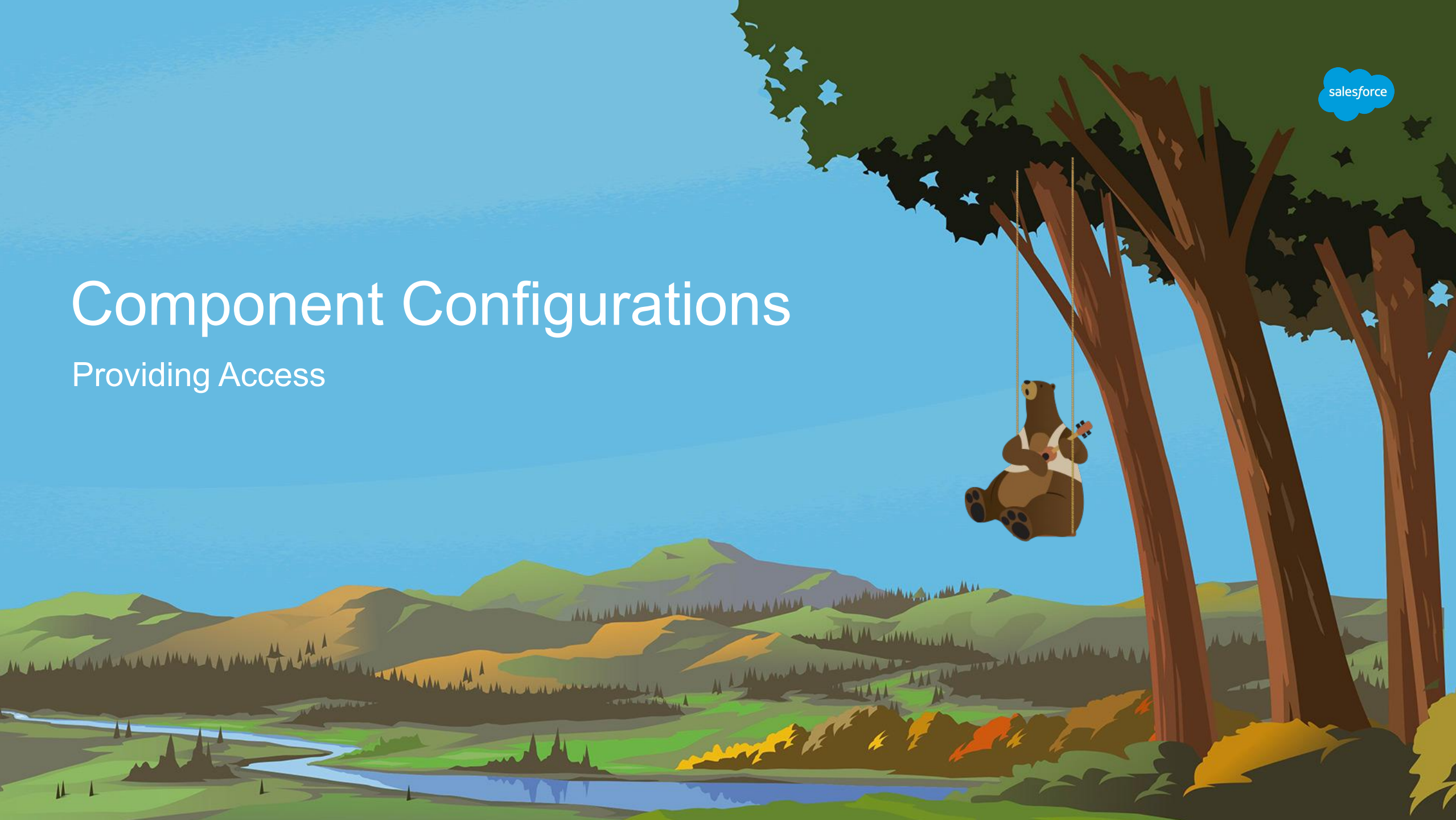
The screenshot shows the Salesforce Setup interface. The search bar at the top contains the text "meta". In the left sidebar, under "Custom Code", the "Custom Metadata Types" option is selected. The main content area is titled "All Custom Metadata Types" and contains a table with one record. The "Manage Records" button for this record is highlighted with a blue box.

Action	Label	Installed Package	Namespace Prefix	Visibility	Api Name	Record Size	Description
<a href="#">Manage Records</a>	<a href="#">Enhanced Related List</a>	<a href="#">CMTD Enhanced Related List</a>	CMTD	Public	CMTD__EnhancedRelatedList__mdt	320	Custom Metadata Type object to manage the fields used in CMTD Enhanced Related List lightning component

**Note:** Follow the Examples provided in the AppExchange listing for some sample use cases

# Component Configurations

Providing Access







# Component Configurations

## Providing Access

### Options:

1. Add 'CMTD ERL Permission Set' to the users who need access to the App, or
2. Add the following classes in the user profile/ permission set. You may need to enable 'Enhance Profile User Interface' to add the classes.
  - a. CMTD.EnhancedRelatedList\_CC
  - b. CMTD.ERL\_RTSelector\_CC

### Note:

This step is needed after activating Critical Update below:

- Restrict Access to @AuraEnabled Apex Methods for Guest and Portal Users Based on User Profile
- Restrict Access to @AuraEnabled Apex Methods for Authenticated Users Based on User Profile

# Advanced Mode



# Advanced Mode

## 1. Parent Object Id Field

When to use:



- Display the related list on the Lightning Record page using Id field other than Record Id

Sample [use case](#):

### 1. **Case** record page, display a list of Open Opportunities for the same Account.

- Parent Object Id Field: AccountId  This would be AccountId on the Case object
- Object API Name: Opportunity
- Parent Field in Child Object: AccountId  This would be AccountId on the Opportunity object

### 2. **Case** record page, display Related Cases for the same Contact

- Parent Object Id Field: ContactId  This would be ContactId on the Case object (*Parent* Object)
- Object API Name: Case
- Parent Field in Child Object: ContactId  This would be ContactId on the Case object (*Child* Object)



# Advanced Mode

## 2. Custom LC Wrapper

When to use:

- Display the related list in Lightning Home page
- Display the related list from Custom Lightning Component

Use `parentId` attribute (Hidden - not available in App Builder):

- pass the `value` of the Id to match with the 'Parent Field in Child Object'



# Advanced Mode

## 2. Custom LC Wrapper - Cont'd

Sample [use case](#):

### 1. Display My Open Cases on the Home Page

- homeMyOpenCases.cmp (sample only)

```
<aura:component implements="force:appHostable,flexipage:availableForAllPageTypes,flexipage:availableForRecordHome" access="global" >
  <aura:attribute name="userId" type="String" />
  <aura:attribute name="showComponent" type="Boolean" default="false" />

  <aura:handler name="init" value="{!this}" action="{!c.doInit}" />
  <aura:if isTrue="{!v.showComponent}">
    <CMTD:EnhancedRelatedList objectAPIName="Case" relatedListName="Test Open Cases"
      parentField="OwnerId" parentId="{!v.userId}"
      displayType="Tile 1" layoutType="1 Column"
      sort="CreatedDate DESC" filter="Status!=Closed"
      defaultNumberOfRecordsToDisplay="2" title="My Open Cases"
      iconName="standard:case"
      showHeader="true" showRefreshButton="true" />
  </aura:if>
</aura:component>
```

- homeMyOpenCases.js (sample only)

```
{{
  doInit : function(component, event, helper) {
    var userId = $A.get("$ObjectType.CurrentUser.Id"); // hint: call server controller for other fields
    component.set("v.userId", userId);
    component.set("v.showComponent", true);
  }
}}
```



# Advanced Mode

## 2. Custom LC Wrapper - Cont'd

### 2. Custom Lightning Component

- Customer 360 - display dynamic related list based on certain selections
- Check out sample usage by my colleague on his blog  
<https://cloudmatters.blog/2018/11/04/lightning-out-visualforce-lightning-printing/>



# Advanced Mode

## 3. Override New Record using custom LC

- ‘New Record’ component attribute support custom LC
- Sample use cases:
  - Set default fields on New record. Eg: New case creation, pre populate Contact field with Primary Contact of the Account.
  - Prompt users with some selections before navigating to standard Case creation page layout
- The custom LC must implement the following attributes.
  - `<aura:attribute name="parentFieldName" access="global" type="String" />`  
It will be populated with the value of parentField attribute from “CMTD Enhanced Related List”
  - `<aura:attribute name="parentFieldId" access="global" type="String" />`  
It will be populated with the value of the parent record used in the “CMTD Enhanced Related List”
- Custom LC to utilise the attributes above to retrieve necessary information on init method.
- Custom LC is responsible to display the UI and create new record



# Advanced Mode

## Override New Record using custom LC - Sample

Case New Record

Record Type	Billing & Accounts
Account	DC Test Account
Contact	Denny Test
Billing Account	Please select...
Service	Please select...

Cancel Next

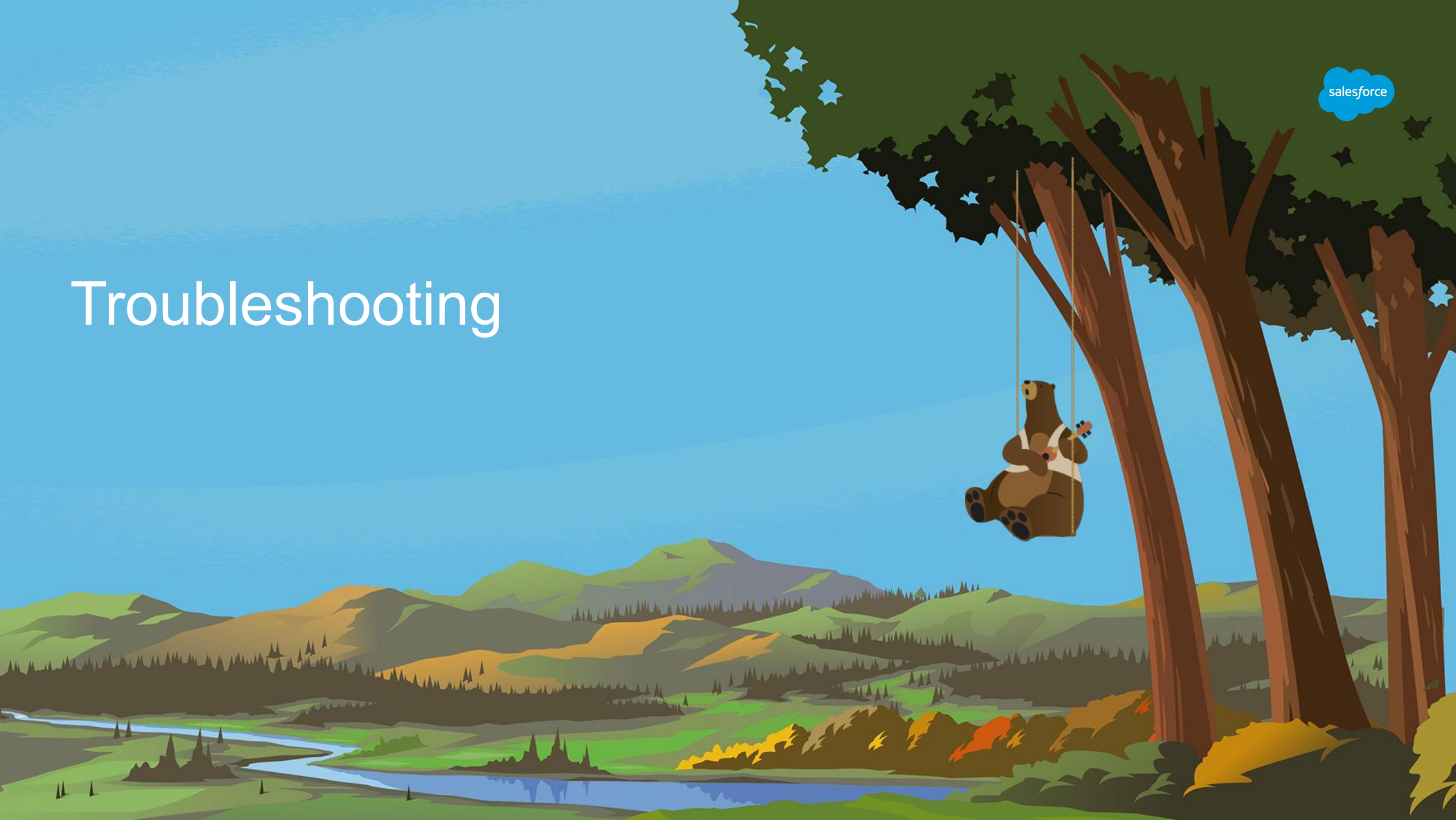
caseRecordTypeSelector custom component

AccountId is set in parentId attribute and the Account record Id is available for this component

On init, it perform SOQL to retrieve the Primary Contact of the Account and set the value



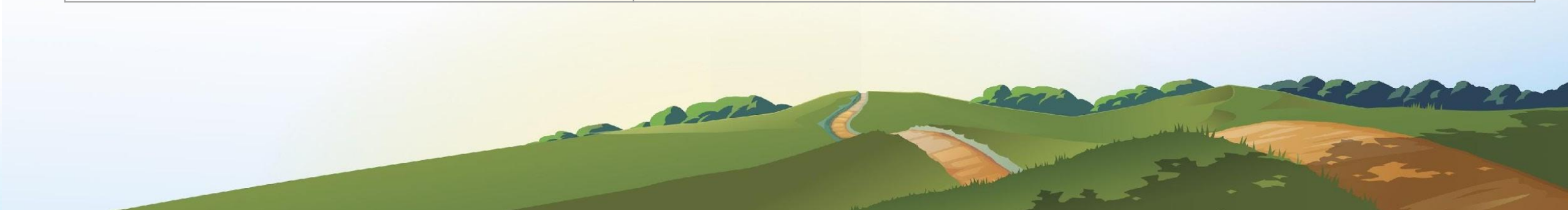
# Troubleshooting



# Troubleshooting



Error/ Issue	Resolution
CMTD_ERL Related List Name: abc - No configuration found	Unable to find records in CMT where Related List Name = 'xyz'. Please check the 'Related List Name' attribute in the component and 'Related List Name' in CMT. Make sure they match.
Invalid Object API Name abc	The field API name for the Object is incorrect. Please check the Component Attributes
No such Field abc on xyz Object	The field API name for the Field is incorrect. Please check the Component Attributes and Custom Metadata Type configuration
No COMPONENT named markup://c:standard found	Please check "New Record" Component Attributes. The value is case sensitive.
Slow in loading the records	<p>This component uses SOQL to retrieve the data based on the fields provided in the CMT.</p> <p>Please review the query by generating the SOQL listing all the fields (including filter and sort). Reduce number of fields or apply index as required.</p>
Access Check Failed! AttributeSet.set():...	Disable Lightning Debug mode



# Version History



# Version History



## 3.1

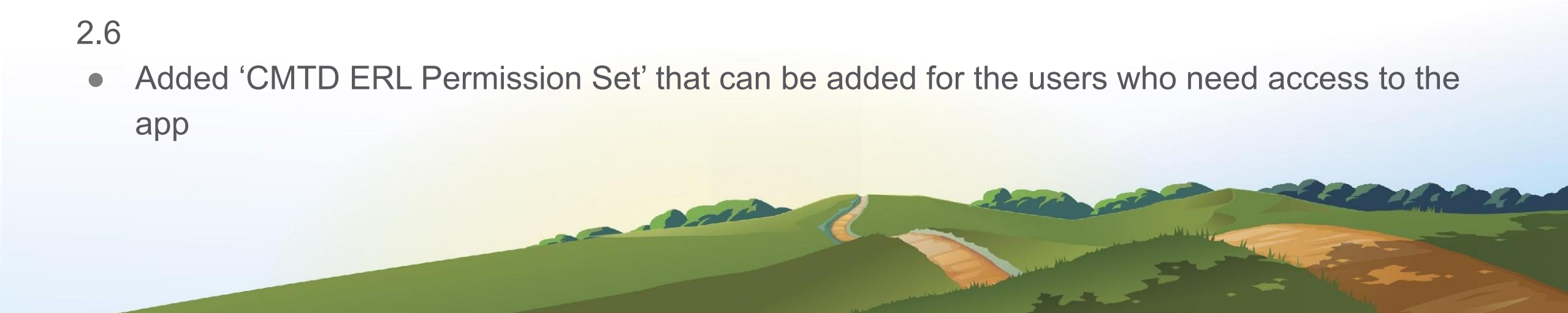
- Fix non default 'Parent Object Id Field' issue

## 3.0

- Major upgrade to the code for overall performance improvement
- New Component Attributes 'Hide on No Record?'
- Updated styling to 'match' more with Standard Related List

## 2.6

- Added 'CMTD ERL Permission Set' that can be added for the users who need access to the app



# Version History



## 2.5

- Updated Apex version to 47 to support new objects that requires newer API version (eg: Financial Service Cloud object)
- Support default NamePointing reference that uses common field name (eg: on Case object OwnerId.Name)



THANK YOU

