Custom Metadata Types Cheatsheet

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Overview

Your custom app configuration records can now be packaged and deployed as easily as any other custom metadata in your app with custom metadata types. You can package and install custom metadata types and records just as you do any metadata. You can migrate them between organizations using change sets and other Metadata API tools.

Add or Modify Custom Metadata Records

1. Search **Setup** for **Custom Metadata Types**.
2. Click **Manage Records** next to the type you want to work on.
3. Click **New** or **Edit**.
4. Fill out the fields and click **Save**.

Protect Custom Metadata Records

Protect records using the Protected Component checkbox in Setup, or the isProtected field in the Metadata API. If you release protected records in a managed package, access to them is limited in specific ways.

- Code that's in the same managed package as custom metadata records can read the records.
- Code that's in the same managed package as custom metadata types can read the records that belong to that type.
- Code that's in a managed package that doesn't contain either the type or the protected record can't read the protected records.
- Code that the subscriber creates and code that's in an unmanaged package can't read the protected records.
- The developer can modify protected records only with a package upgrade. The subscriber can't read or modify protected records. The developer name of a protected record can't be changed after release.

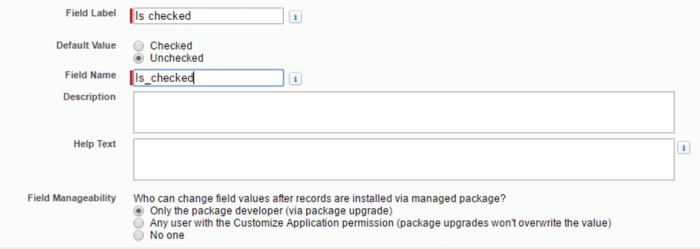
If you create a protected custom metadata record in your organization, then it's accessible only by your code, code from unmanaged packages, and code from the managed package that defines its type.

Create or Modify a Custom Metadata Type

You can create and modify custom metadata types that are public or haven't been released in a managed package.

1. Search **Setup** for **Custom Metadata Types**.
2. Click **New Custom Metadata Type** or the name of the type you want to modify.
3. Fill out the standard fields
4. Add custom fields.
   Use Field Manageability to decide who can change field values after deployment to a subscriber org

   Supported field types:
   Metadata Relationship, Checkbox, Date/Time, Email, Number, Percent, Phone, Picklist, Text, Text Area, URL



Field Label: Is checked

Default Value: ○ Checked ● Unchecked

Field Name: Is_checked

Description:

Help Text:

Field Manageability: Who can change field values after records are installed via managed package?
● Only the package developer (via package upgrade)
○ Any user with the Customize Application permission (package upgrades won't overwrite the value)
○ No one

Metadata Relationship Fields

When you create a metadata relationship field on a type, you can relate it to another custom metadata type or the EntityDefinition object. When you create a record on a custom metadata type that has a relationship field, you pick the specific EntityDefinition or custom metadata record it relates to. The value of a relationship field with the EntityDefinition domain is a custom or standard object.

Keep these considerations in mind when using relationship fields:

- Public custom metadata types can't be related to protected custom metadata types. Protected custom metadata types can be related to public custom metadata types.
- Public custom metadata records can't be related to protected custom metadata records. Protected custom metadata records can be related to public custom metadata records.
- If a user can't access an object and they execute a SOQL query on a type that has a metadata relationship field, the results do not include records that reference the object.

Protect Custom Metadata Types

You can protect types using the Visibility radio button in Setup or the Protected field in the Metadata API. Protected types provide the same access protection as protected records.

Tips:

- If you change a type from protected to public, its protected records remain protected and all other records become public.
- If you use Setup to create a new record on a protected type, the Protected Component checkbox is checked by default.
- Once a type is released as public, you can't convert it to protected. The subscriber can't create records of a protected type.

Apex Examples

Declare a type in your namespace:

```
MyCustomMetadataType__mdt custMeta;
```

Declare a type in another namespace:

```
their_ns__TheirCustomMetadataType__mdt custMeta;
```

Get the names of all objects of a type:

```
MyMdt__mdt[] allEntityNames = [select
QualifiedApiName from MyMdt__mdt]
```

Retrieve EntityDefinitions with related custom metadata:

```
EntityDefinition[] allObjects = [SELECT
QualifiedApiName, (SELECT QualifiedApiName,
Team_Building_Field__c FROM Field_Mappings_
From__r) FROM EntityDefinition];
```

For information about the *Custom Metadata Type*__mdt sObject, see *Custom Metadata Type*__mdt in the Object Reference for Salesforce and Force.com.

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Supported SOQL

Custom metadata types support the following SOQL query syntax.

```
SELECT fieldList [...]
FROM objectType
  [USING SCOPE filterScope]
[WHERE conditionExpression]
[ORDER BY field {ASC|DESC} [NULLS {FIRST|LAST}] ]
[LIMIT limit] [OFFSET offset]
```

- FROM can include only one object. You can use the following operators:
  - IN and NOT IN
  - =, >, >=, <, <=, and !=
  - LIKE, including the % and _ wild cards
  - AND
- You can use ORDER BY, ASC, and DESC with multiple (non-relationship) fields.
- You can use metadata relationship fields in the `fieldList` or `conditionExpression`.
- You can use ORDER BY only with non-relationship fields.
- You can only use ORDER BY when the ordered field is a selected field.
- Metadata relationship fields support all standard relationship queries.

Additional Resources

Custom Metadata Types Implementation Guide – http://bit.ly/CustomMetadataTypes

Search for Custom Metadata Types on the Success community group Blog posts at developer.salesforce.com

Limits

Description	Limit
SOQL queries per Apex transaction	Unlimited
Custom metadata per organization	10 MB
Fields per custom metadata type or record	100
Custom metadata types per organization	100
Characters per description field	1,000
Records returned per transaction	50,000

Tips:

- Record size is based on the maximum field size of each field type, not the actual storage that's used in each field. Use the appropriate field type and length to avoid wasting empty space in records.
- Customer metadata records you install from managed packages don't count towards your limit.
- Custom metadata records you create do count towards your limit.

For other cheatsheets:
http://developer.salesforce.com/cheatsheets