

# Microsoft Dynamics CRM 2013 Logical Entity Diagrams

January 2014

## Overview

Microsoft Dynamics CRM 2013 uses an underlying SQL database to store data, however the programming model for developers is presented as a set of logical relationships. The underlying implementation of the database is not exposed to developers. The metadata in CRM contains the description of the system and custom entities, the attributes and the relationship between entities for a deployment.

CRM 2013 contains over 270 entities, and well over 2000 distinct relationships, making a single diagram representation far too complex to be useful. To make the diagrams more useful we have provided a number of smaller diagrams for specific areas such as Sales, Service and Marketing and have further simplified the diagrams by filtering out repetitive relationships.

This package contains the following logical groupings showing the important relationships involving these entities:

Diagram name	Entities
Activities	Activitypointer, email, fax, letter, phonecall, task
Case Contract	Incident (case), contract
COLA	Account, contact, opportunity, lead
Customer Service	Calendar, incident, kbarticle, contract, service
Goals	Goal, metric, rollupfield, goalrollupquery,
Knowledge Base	Kbarticle, kbarticletemplate, kbarticlecomment
Marketing	Lead, list, campaign, product, salesliterature, bulkoperation
Product Catalog	Product, pricelevel, salesliterature
QOI	Quote, salesorder, invoice
Queues	Queue, queueitem, incident
Sales	Lead, opportunity, list, competitor, product, salesliterature, quote, salesorder, invoice
Scheduling	Calendar, serviceappointment, service, appointment, resource, equipment, recurringappointmentmaster, recurrence rule
Security	Role, privilege, fieldsecurityprofile, fieldpermission, principalobjectattributeaccess

Solutions	Solution, publisher, solutioncomponent, dependency
-----------	--

## How were these diagrams created?

Visual representation of metadata can be very useful, especially when you are trying to describe the relationship between entities in the system. You can use the Metadata Diagram sample code provided for Microsoft Dynamics CRM 2013 and Microsoft Dynamics CRM Online to generate the entity relationship diagrams. You can create a simple diagram that shows a relationship for just one entity, or a complex diagram that includes dozens of related entities, including custom and system entities.

The diagrams in this download were created using the using the metadata diagram sample code that reads the metadata and uses Microsoft Office Visio to draw an entity relationship diagram. The code was altered slightly to filter out a larger list of entity relationships, described below.

You can find this sample in the SDK [Download the Microsoft Dynamics CRM SDK package](#) in the folder `SDK\SampleCode\CS\Metadata\Diagram` or `SDK\SampleCode\VB\Metadata\Diagram`. The folder contains a readme file with instructions for its use.

## Entities that were filtered from the diagrams

There are many repetitive entity relationships found in CRM. For example, every entity that is user owned has a relationship to the SystemUser entity. Every entity that had a relationship to activity point, also has a relationship to each of the 13 activity entities. To make the diagrams readable, relationships to the following entities are filtered out. Many of these are entities that are for internal use only, so there is little value to you. Others are just well known and repetitive, such as the ownership relationships and activity relationships.

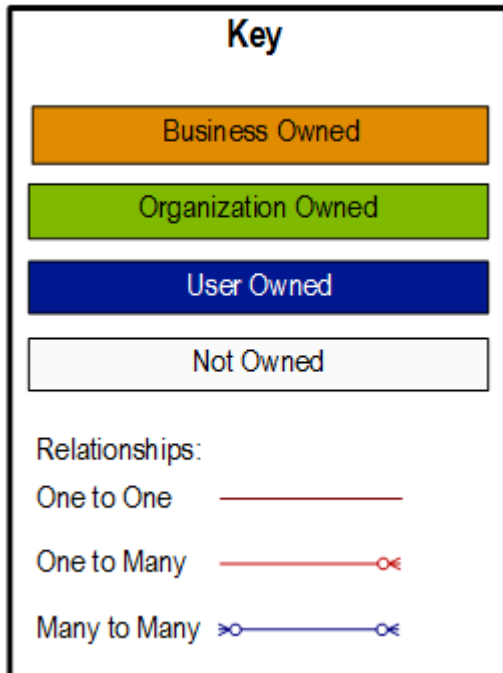
<b>Entities filtered from diagrams</b>
Activityparty
Annotation
appointment
asyncooperation
bulkdeletefailure
bulkoperationlog
businessunit
connection
documentindex
duplicaterecord
email

fax
imagedescriptor
letter
msdyn_wallsavedquery
msdyn_wallsavedqueryusersettings
owner
parnterapplication
phonecall
plugintype
postfollow
postregarding
postrole
principalobjectattributeaccess
processsession
processstage
recurringappointmentmaster
serviceappointment
sharepointdocumentlocation
subscription
Systemuser
task
tracelog
traceregarding
userentityinstancedata

## Key

Color coding is used to indicate the ownership type for each entity and to indicate the type of relationship.

The following shows the key to the colors used in these diagrams:



## Copyright

This document is provided "as-is". Information and views expressed in this document, including URL and other Internet Web site references, may change without notice. You bear the risk of using it.

Some examples depicted herein are provided for illustration only and are fictitious. No real association or connection is intended or should be inferred.

This document does not provide you with any legal rights to any intellectual property in any Microsoft product. You may copy and use this document for your internal, reference purposes.

© 2014 Microsoft Corporation. All rights reserved.

Microsoft, and Microsoft Dynamics are trademarks of the Microsoft group of companies.

All other trademarks are property of their respective owners.