**Interview Questions for Functional Consultant:**

**Basic:**

What is Sales Flow in MSCRM?

Explain Marketing flow in MS CRM?

Explain Service flow in MS CRM?

**What is a Plug-in**?

a)A plug-in is custom business logic (code) that you can integrate with Microsoft Dynamics CRM 2011 and Microsoft Dynamics CRM Online to modify or augment the standard behavior of the platform.

**How many DB created after installed MS CRM and what are they?**

1.MS CRM\_config

2.Organisation Name\_MS CRM

**What is a Workflow**?

a)**Workflows**. The automated or asynchronous processes that may require user input to start them. Further, these processes do not require user input to run them to completion. These processes run in the background.

**Dialogs**. The interactive or synchronous processes that require user input to start and run them to completion. When you start the dialog process, a wizard-like interface is presented to you so you can make appropriate selections to run the process.

What is CRM Service of MSCRM?

**Features of 2011**?

a) 1.DaRecords

2.Navigationshboards

3.Sub Grids

4.Customise Tab

5.Form editor

6.Multiple Forms per entity

7.Global Picklist - Option set

8.Entity Forms left navigation

9.Publish within the customisation screen

10.Auditing

11.Field Level Security

12.Form level Security

13.Excel Import and Export CRM Data

**What are the types of attributes?**

a) Data types are nothing but attributes.

**What are the types of views?**

a)View is nothing but saved query type.we have mainly 5 types of views,which are

**1.Public View**

The Type Code for this view is '0' and we can perform 'Create','Update' and 'Delete'actions on this view.

**2.Advanced Find View**

The Type Code for this view is '1' and we can perform only 'Update' action on this view.

**3.Associated View**

The Type Code for this view is '2' and we can perform only 'Update' action on this view.

**4.Quick Find View**

The Type Code for this view is '4' and we can perform only 'Update' action on this view.

**5.LookUp View**

The Type Code for this view is '64' and we can perform only 'Update' action on this view.

**What are the types of customization**?

a)

**What are the types of entities**?

a) Ex: Lead,Account,Contact,Opportunity,Quotation,SalesOrder and Invoice, like this we have several entities for each module.

**What is an Email-Router**?

**How will u schedule service**?

a)

**What is N:1, 1: N and N: N relationship in Microsoft Dynamics CRM?**

**What is relationships behavior available in MS Dynamics CRM 4.0?**

**Relationship Behavior in MS Dynamics CRM 4.0**

**Explain security Roles. Different Level of privileges?**

**How do you build the custom report? How u will you upload in MS Dynamics CRM 4.0?**

**Team Concept in MS Dynamics CRM 4.0. Where do you use it?**

**What all different view in MS Dynamics CRM 4.0?**

**Difference between outlook client and web client?**

**Explain editions of Microsoft Dynamics CRM 4.0?**

**Features of MS Dynamics CRM 2011 as compared to MSCRM 4.0?**

**Architecture of MS Dynamics CRM 4.0? Layers in MS CRM**

**Difference between Marketing Campaign and Quick Campaign?**

**Types of CRM Service?**

**Beginner:**

**What is Ribbon?**

**What is dialog?**

How will you change organization in outlook?

What is auditing? How will you enable it?

What is solution management? Difference between managed and unmanaged solution?

How will u change business recommended to business required field?

What will you create lookup field for between two entities?

What type of relationship cannot be created in Microsoft Dynamics CRM 4.0?

What are the steps to configure an Email router?

What is Deployment manager?

List entities of Service Module?

How will u create new organization?

How will you configure crm in outlook?

What are the differences between Plug-in and a Workflow?

Can we change a base currency?

Can we remove the root Business Unit?

Can we use the same database for different instance?

Can we use Oracle in replace of SQL server?

Can we modify the name of Root Business Unit?

Can we hide Add Existing from Entity?

Explain CRM flavours?

What all are the software requires/ prerequisite to install MS Dynamics CRM (SQL, AD, Report Serveretc.)?

Does MS Dynamics CRM 4.0 works with SQL Server 2000? No

Concept of Multitenancy?

Architecture of MS Dynamics CRM 4.0? Layers in MS CRM

**Expert:**

For what purpose does Microsoft Dynamics CRM 4.0 use Active Directory?

When will you use a workflow and when will you use a Plug-in? Give some Real-life scenario.

How a Plug-in is different from a Call-out?

What is ‘Append’ and ‘append To’ privilege in MSCRM? Give one example of it?

What is difference between workflow and process?

What are the maximum numbers of tabs allowed on a Microsoft Dynamics CRM 4.0 form?

How to achieve 1:1 Relationship in MS Dynamics CRM 4.0?

How do you move an organization from one server to other server. What all are the steps u will follow?

Can we add new button in Actions menu?

Difference between scheduling and recurring scheduling?

Suppose if I have 100 user license and I have created 100 users. What will happen if I create 101User?

List entities of Service Module?

List entities of Marketing Module?

How will you import and export entities?

How do u track Campaign Response?

How will you add members in marketing list?

What are the activities we can create in ms crm?

What are the components need for crm client and server?

What are the software’s and with ERP crm will integrate?

In which industries MS CRM supported?

How MS CRM useful for chemical, manufacturing and retail industry?

What version of IIS will support for MS CRM?

How will you install IIS?

In which mobiles CRM will support to use crm in mobile?

How will you get users from active directory to CRM?

Can we do regional language based customization?

Difference between business units and territory?

How will you change the quote prefix name and suffix length?

What is the maximum suffix length?

**Microsoft Dynamics CRM Technical Interview questions:**

**Basic:**

**Difference between outlook client and web client?**

**Explain Service Life Cycle?**

**Explain Sales Cycle?**

**What is Sales and Marketing life cycle in MSCRM?**

**What is a Plug-in?**a)A plug-in is custom business logic (code) that you can integrate with Microsoft Dynamics CRM 2011 and Microsoft Dynamics CRM Online to modify or augment the standard behavior of the platform. Another way to think about plug-ins is that they are handlers for events fired by Microsoft Dynamics CRM. You can subscribe, or register, a plug-in to a known set of events to have your code run when the event occurs.

**How many DB created after installed MS CRM and what are they?**

a)

**What is a Workflow?**a)**Workflows**. The automated or asynchronous processes that may require user input to start them. Further, these processes do not require user input to run them to completion. These processes run in the background.

**What are the differences between Plug-in and a Workflow?**

a) The main differences are following:

1. Workflows at the moment can be executed only in Asynchronous mode.

2. To build workflow you don't need to have any knowledge of .Net.

3. Workflow can be triggered On-Demand but plugin reacts only on system events.

4. Workflow can be triggered on following events - Create, Update, Delete, Assign and Changing of State of record. Plugin can be triggered on much more system events.

**What is CRM Service of MSCRM?**

CRM Service is the main web service and it exposes Six methods such that you can write your code against CRM entities. To perform operation other than the six operations (six methods provided by mscrm) we will have to use the Execute method.

* Below are 3 main services that developers can use to extend the Dynamics CRM 2011 platform.
* **Deployment Web Service**

Using this service we can

* Create or import organizations
* Enable and Disable organizations
* Add deployment administrators
* Configure IFD and Claims-based authentication

**2.Discovery Web service**

Using this service we can

* Identify the organization information available in a deployment.
* The discovery service returns the list of organization URLs that the current-requester (current user) belongs to. During the Outlook client configuration discovery service shows he list of organization the current-user belongs to.

**3. IOrganization Service**

* In CRM 4.0 we had the CrmService & CrmMetadataService to access data & metadata.
* In CRM 2011, These are combined in single IOrganization service endpoint that includes both data and metadata

**What is Metadata service of MSCRM?**

a)Dictionary meaning of the word METADATA is data about data and similarly the metadata holds the information about MSCRM means the information about the entity and attribute e.g. Display name, platform name, size of the attribute, datatype of attribute etc. If we want to access any information about any entity (Dynamic or system) we will have to make use of the Metadata service. In the database we can find the metadata table and name of these table begins with keyword Metadata.

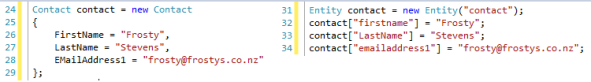
In Microsoft Dynamics CRM 2011, the primary Web service accessing data and metadata for your organization is the IOrganizationService Web service. This contains the methods that you must be used in order to write code that uses all the data and metadata in Microsoft Dynamics CRM.

To use the **IOrganizationService** Web service, add a reference to Microsoft.Xrm.Sdk.dll assembly to your Microsoft Visual Studio project

**What is Early Binding and Late Binding?What is The Difference between Them?**

a)There is not much difference between the early bound and late bound as compared to performance but naturally Late Binding executes little fast but at the cost of other disadvantages of not identifying compile time error.....I would ideally suggest that if the application is small then go for the late binding but if the code is huge than always to go for the Early Binding(as also suggested by SDK).

EarlyBinding VS LateBinding



**What is discovery Service?**

a)**The IDiscoveryService Web service is used to determine the organizations that a user is a member of**, and the endpoint address URL to access the IOrganizationService Web service for each of those organizations. This discovery service is necessary because Microsoft Dynamics CRM 2011 is a multi-tenant environment—a single Microsoft Dynamics CRM server can host multiple business organizations. **By using the discovery Web service, your application can determine the endpoint address URL to access the target organization’s business data.**

**What are the namespace will add to create plugin?**

a)Add the following references from the SDK\bin folder.

Microsoft.Xrm.Client.dll

Microsoft.Xrm.Sdk.dll

Add the following .NET references.

Microsoft.IdentityModel.dll

System.Data.Services

System.Data.Services.Client

System.Runtime.Serialization

System.ServiceModel

**How will you create web services? Give steps**.

a)

**What all different view in MS Dynamics CRM 4.0?**

**Explain editions of Microsoft Dynamics CRM 4.0?**

**Plugin registration steps?**

**List entities of Marketing Module?**

a) We have the folowing Entities under Marketing madule.

1.Campaigns

2.Quick Campaigns

3.Marketing Lists.

4.Campaign Responses

**Types of CRM Service?**

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**Pre event & Post event Plugin?(Plugin Registration Types)?**

a) **Pre event**: This event can takes place in 2 stages

1. **Pre-Validation**: This is one of the Pre event stage which is numbered as 10.The plugins that are to executed before the main system operation. The plugins which are registered in this stage may execute outside of database transaction.

2.**Pre-Operation:** This is one of the Pre event stage which is numbered as 20.The plugins that are executed before the main system operation. The plugins which are registered in this stage may execute inside of database transaction.

**Post event**: This event can takes place in 2 stages

1.**Post-Validation:**This one of the Post event stage which is numbered as 40.The plugins that are to execute after the main system operation. The plugins that are registered in this stage may execute inside the database transaction.

**2.Post-Operation:**This is one of the Post event which is numbered as 50. The plugins that are to execute after the main system operation. The plugins that are registered in this stage may execute the outside the database transaction.

**What is Filtered Views?**

a) Filtered Views are SQL Server views that do wonderful things for the application developer needing to get access to data from the CRM system:

1.Filtered Views know about your CRM security permissions – which objects you are able to access and what you are allowed to do with them.

2.Filtered Views encapsulate all the standard table joins necessary to make sense of a CRM object: base tables to extension tables (for custom attributes), picklist values to strings, etc.

3.Filtered Views exist for all the user-visible CRM objects, including separate views for each activity type.

4.Filtered Views work for custom entities.

**How to give web link or URL in email activity of MS Dynamics CRM 4.0?**

**Purpose of Metadata Service?**

a) In Microsoft Dynamics CRM 2011, the primary Web service accessing data and metadata for your organization is the IOrganizationService Web service. This contains the methods that you must be used in order to write code that uses all the data and metadata in Microsoft Dynamics CRM.

To use the **IOrganizationService** Web service, add a reference to Microsoft.Xrm.Sdk.dll assembly to your Microsoft Visual Studio project

**Beginner:**

**What are the differences between Asynchronous Plug-in and a Workflow?**a)The main differences are following:

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2. To build workflow you don't need to have any knowledge of .Net.

3. Workflow can be triggered On-Demand but plugin reacts only on system events.

4. Workflow can be triggered on following events - Create, Update, Delete, Assign and Changin of State of record. Plugin can be triggered on much more system events.

**When will you use a workflow and when will you use a Plug-in? Give some Real-life scenario.?**

a)1. Workflows are user friendly and can be created by End Users but plugins requires coding knowledge of .Net and

2. Workflows assemblies can not be deployed on CRM 2011 online versions but plugin can on CRM 2011 online version

3. Plugin can retrieve configuration data stored in any custom entity but workflows can only read data form assosiated records (or have to develop custom workflow activity)

4. You can also pass fixed value configuration paramters into plugin constructor but not in workflows

5. Plugin supports range of SDK messages or can be triggered but workflows are limited to be triggered on on record creation, status change, assignment, attribute change and deletion

6. Plugins can execute Synchronously on Pre Validation and Database Transactions as well as asynchronously on Post Database Transaction but workflows can only execute on asynchronously on Post Database

7. Plugin overall execution time is lesser then workflows and if validations are required to be performed then plugins should be preffered

You may also refer the following Urls:

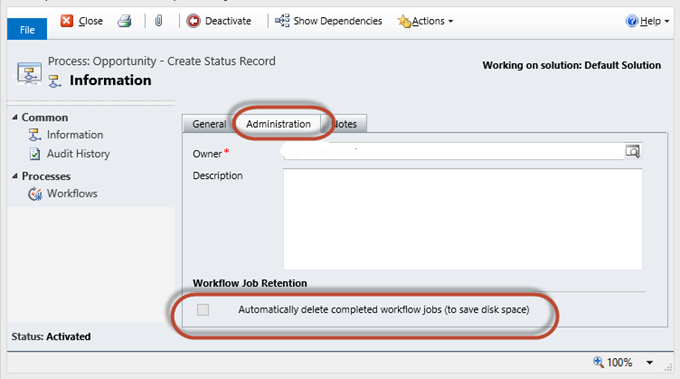
1. <http://mohanswargam.wordpress.com/2011/06/08/difference-between-crm-2011-plug-in-and-workflow/>

2. <http://blogs.msdn.com/b/crm/archive/2010/06/25/plug-ins-vs-workflows-in-microsoft-dynamics-crm.aspx>

3. <http://blogs.msdn.com/b/lezamax/archive/2008/04/02/plug-in-or-workflow.aspx>

**How to delete completed workflows in crm 2011?**

Workflows are a powerful tool that CRM users utilize to create records, [update records](http://www.powerobjects.com/blog/2012/11/09/create-recursive-or-scheduled-workflows-in-crm/), [send emails](http://www.powerobjects.com/blog/2013/03/18/sending-emails-via-on-demand-workflows-in-dynamics-crm/) and much more. With a recent update to Microsoft Dynamics CRM, a new option was added to the administration tab that allows users to “automatically delete completed workflow jobs (to save disk space).”



So what does this mean?

When you check this option, it will remove the system job as soon as it has been marked complete, and your completed workflows will appear to be missing. This could cause issue with auditing or troubleshooting a workflow as well as present issues with performance.

To avoid these issues, PowerObjects recommends that you leave this option unchecked and schedule a system job on either a weekly or monthly basis to remove these completed job records instead.

Difference between Sql Server 2005 and 2008?

What are the steps to configure an Email router?

**How the Plug-in and Workflow will behave in case of Off-line client?**a)The workflows does not work in case of off-line client (because workflows requires MSCRMAsyncService and it is only available on server) but plugins can, if plugin is deployed to execute on off-client then it will be executed as per registered step on SDK Message. if only deployed for Server then during outlook off-line client data synchronization the plugin will be executed on Server side.

**What is 1:1, 1: N and N: N relationship in Microsoft Dynamics CRM?**

**How a Plug-in is different from a Call-out?**

**What is Sales and Marketing life cycle in MSCRM?**

**What is Queue entity in MSCRM?**

a)Programmatically, a queue is a collection of queue items. A queue item serves as a container for an entity record, such as a task, an email, or an invoice that needs processing.Queues are instrumental in organizing, prioritizing, and monitoring the progress of your work. As a **central location for work management**, queues assist you in processing sales orders, responding to service calls, or sending out product information to prospective customers.

The following list contains default queue-enabled entities in Microsoft Dynamics CRM 2011 and Microsoft Dynamics CRM Online:

Appointment,Campaignactivity,CampaignResponse,Email,Fax,Incident,Letter,PhoneCall,RecurringAppointmentMaster,ServiceAppointment,Task

**What is ‘Append’ and ‘append To’ privilege in MSCRM? Give one example of it?**

a)**Security Role Basics**

Privileges are the verbs in CRM: **Create, Read, Write, Delete, Append, Append To, Share, Assign.**

Access levels, from most to least generous: **organization, parent-child business unit, user, none.**

Entities are the units to which a security role applies an access level for every privilege.

This three-dimensional model is what accounts for the very colorful and initially somewhat overwhelming security role UI.

**Privileges**

**Create**: Create a new record

**Read**: Read access to a record (if you search for it in Advanced Find or a data grid, can you see it?)

**Write**: If you have a record open on a form, can you make changes and save them?

**Delete**: The easiest one to understand!

**Append**: Can you append this record to any other record? Example: if you don’t have any append privileges for the **Contact entity**, you cannot associate any contact record with **a parent account**.

**Append To**: Can you append any other records to this record? Example: if you don’t have any append to privileges for **contacts**, you cannot associate **notes or activities** to contact records.

**Assign**: can you change the owner of a record?

**Share**: can you override the security model by sharing a record with somebody who otherwise wouldn’t have access to it?

**Access Levels**For most entities – all record types that can be assigned to a user, the so-called “User-Owned” entities – there are five access levels for each privilege, from least to most generous:

**None**: The easiest to understand: you cannot do it!

**User**: You can do it for records you own. Notice that the Salesperson role has user-level delete privilege for contacts. By default, a user assigned to this role can delete contact records assigned to them, so if you don’t want this, empty out the circle to set it to None.

**Business Unit**: From User to Business Unit is a big jump, since it broadens out to include any record you own, plus any record owned by anybody else in your business unit. This is also the intersection between business units and security.

**Parent-Child Business Unit**: This one only matters if your business unit structure is complex enough to have parent and child business units. If it is, the jump from Business Unit to Parent-Child Business Unit extends your access level down to any BU that is a child of the one you are assigned to.

**Organization**: Also easy to understand, organization-level access means you can do it for any record owned by anybody in the organization. For example, notice that the account, contact and lead entities all have organization-level read privilege even in the least generous security role. Lots of organizations don’t want this level of visibility for a low-level security role, and thus might dial this back a little bit.

**How to create a Custom Entity record using SDK**?

a)Need to do practise

**How to join two table using Query Expression**?

a) Using Linked entity. You should always try to minimize the number of SWS calls that we make in the database. Often during code review it is explored that the number of Microsoft CRM web-service could have been reduced by making use of the Linked-entity concept. So we should always look for the opportunity to minimize the effort.

**Suppose if I have 100 user license and I have created 100 users. What will happen if I create 101User**?

a)We can create User in both CAL based and Concurrent based ,but using CAL only 101th user able to login whereas not able to login using Concurrent. And also the user will be in disable mode.

**What are the maximum numbers of tabs allowed on a Microsoft Dynamics CRM 4.0 form**?

a)maximum number is 8

**How to enable/disable the form assistant? How to make sure the form assistant is expanded/collapsed on a form?**

a)  Navigate to Customization >> Open the Entity >> Open Forms and Views >> Open Form >> Select Form Properties >> Open Display Tab >> Check/Uncheck the “Enable the Form Assistant” and “Expanded by Default”.

Note: There is no Check/Uncheck the “Enable the Form Assistant” and “Expanded by Default”.

And I have only “Show navigation Items”.

**What is Filtered Views?**

**What was your role in the MSCRM implementation project that you have worked on?**

**What was the most challenging task you have faced till now?**  
a)Here you should give answer that exihibit your positive attiude . e.g. for a techincal consultant it may be something like … “I was new to the suppport and during this experience i faced challenging issue related to plug-in that impoved my debugging skills. Email-to-case plug-in was really diffcult as we had to take care of so many conditions. I have learnt one thing during my previos assignment and that is ‘Never give-up’”.

**Q. Suppose there is a plug-in registered for account entity. When a user submits a request (e.g. account creation etc.) to the web-server then what will happen in the server?**  
**a)**The plug-in will get loaded into the memory and will perform the operation it is needed to do.

**Q. Suppose I want to migrate an Microsoft CRM implementation from one environment to other environment. Let us assume that there a published workflow for account entity. Now in normal usage there will be few accounts-records for which the workflow will be waiting/Waiting for Resource/Failed/Succeded state. So what should be our strategy for the migration. What will happen to the records which are in waiting state and what will happen to the records which are in-progress?**

**How to Audit user Login information in CRM 2011**

Prerequisite:

In order to view the User Access information in the Audit, User Access Audit option should be enabled in the system settings in CRM

Steps to do that:

* Go to Settings >Administration > System Settings => Auditing
* Check the Audit User Access check box to enable user access auditing

**Q. Now what will happen if 100 users will submit the request to the web-server? The plug-in code will get loaded into the memory for 100 times?**  
Ans – Answer is NO. Noticable point over here is that the Microsoft CRM is a mananged application and runs under .Net framework. So whenever the first request arrives at the web-server the plug-in code is loaded into the memory and will perform its operation and susequently the same plug-in code will serve the process for other user as well. So this way it saves the amount of time required to load the plug-in into the memory. If the plug-in code is not being used for long then the Garbage collector will identify it and will sweep the plug-in out from the memory.

**Can we change a base currency?**

a)User has to remember that we cannot change the base currency once organization created. User can change base currency name and currency symbol if he wants. If mistakenly you chose wrong currency you have no option to change the currency and ultimately you will need to recreate the organization. When user deactivate or delete a currency, the transaction related to the currency remains unchanged, but for new records user cannot add the deleted or deactivated currency.

**Can we remove the root Business Unit?**

a)The root business unit is the ultimate parent business unit in the organization structure. It is created by the CRM Server setup program, when CRM is installed with all server roles or by the CRM Deployment Manager, when a new CRM organization is deployed.

The root business unit has the following properties:

It can be renamed

It cannot be disabled or deleted

It cannot have a parent business unit

**Can we use the same database for different instance**?

a)No

**Can we use Oracle in replace of SQL server**?

a)No, I'm afraid that this is impossible... You should check Implementation Guide .The implementation guide describes all the supported server operating systems, database management systems, client operating systems, web browsers and office productivity packs. You'll notice that none of the technologies mentioned are anything except Microsoft technologies. The implementation guide doesn't specify all the unsupported technologies (since every other technology in world would need to be listed)

**Can we add new button in Actions menu**?

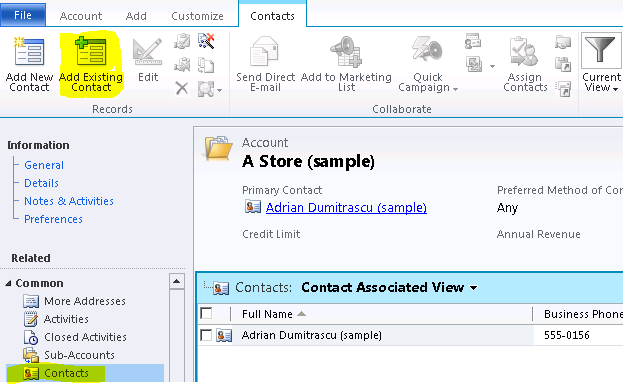
a)

**Can we hide Add Existing from Entity**?

Step by Step - Hiding “Add Existing” button in CRM 2011

In MSCRM 4.0, hiding the “Add Existing” button was a very common request. This blog will show how to do this in CRM 2011. When we click on associated record link in left navigation of an entity form, we can see a "Add Existing" button on the ribbon. To hide this button we need to modify the ribbon of the associated entity.

The following screen shot is of an account entity. If we click on "Contacts" on left navigation, we can see the "Add Existing Contact" button on the ribbon. To hide this button we need to modify the ribbon of the contact entity.



Here are the steps

Create a new solution.

Add the contact entity to the solution. Do not include any required components or dependent components to the solution.

Export the solution and unzip the solution file.

Open the customizations file and look for “<RibbonDiffXml>” tag.

Replace the <CustomActions /> with

<CustomActions>

<HideCustomAction Location="Mscrm.SubGrid.contact.AddExistingAssoc" HideActionId="Mscrm.SubGrid.contact.AddExistingAssoc.HideAction" />

<HideCustomAction Location="Mscrm.SubGrid.contact.AddExistingStandard" HideActionId="Mscrm.SubGrid.contact.AddExistingStandard.HideAction" />

</CustomActions>

Save the file.

Replace the customizaions.xml file in your zip solution with this file.

Import the solution and publish the changes.

Note: Replace the highlighted "contact” text with your entity name. It can be “opportunity” or a custom entity like “new\_entity” etc.

**Relationships in MS Dynamics CRM 4.0 (parental, referential, Non Referential)?**

**Relationship Behavior in MS Dynamics CRM 4.0 (Cascading, Cascading to record, cascading None, Set Configure)?**

**How to achieve 1:1 Relationship in MS Dynamics CRM 4.0?**

**Web service call through JavaScript. JS Debugging?**

**How you will achieve Hierarchal Picklist or Look Up**?

**What is meant by Dynamic Picklist**?

**Plugin step by step creation procedure?**

**If CRM user is there and if he doesn’t have account in Active Directory will he be able to access CRM?**

a)No

**How do u track Campaign Response**?

a)Using Microsoft Dynamics CRM Online, you can track responses to marketing campaign activities, such as e-mail messages, faxes, direct mail, and more. Campaign responses are records of the responses you've received from potential customers, not automated responses to your potential customers.

You can create campaign responses:

Manually.

Convert an existing campaign activity to a campaign response.

Automatically generate responses.

Import campaign responses into Microsoft Dynamics CRM Online from an external file.

**For Asp.Net integration with MSCRM what are prerequisite**?

Download the Microsoft Dynamics CRM SDK.

You must be able to sign in to Microsoft Dynamics CRM Online

Microsoft Visual Studio 2010

Microsoft .NET Framework 4 or .NET 4.5

Install Windows Identity Foundation if using .NET Framework 4; Pre-installed in .NET Framework 4.5

**When do we register a plugin in child pipeline? Give examples?**   
Quote can be created in 2 ways, through the home screen OR the opportunity screen. If you create it from the latter, it will run on the child pipeline and you will find that your plugin will not work.  
  
**What are images? Why are they used?**   
Plugins in Dynamics CRM, allow you to register images against the steps of a plugin assembly. Images are a way to pass the image of the record that is currently being worked upon prior or after the action has been performed. In general it could be said, it is the image of the record as is available in the SQL backend.  
  
Two types of Images are supported, Pre-Image and Post Image.  
  
In case of Pre-image, you get the image of the record as is stored in the SQL database before the CRM Platform action has been performed.  
Post Image, returns the image of the record after the CRM Platform action has been performed.

**What is the use of stringmap table?**   
stringmap table used to store picklist value in ms crm.

Most of the time while creating SSRS reports we need to fetch the Optionset Attribute Text as well. But in the respective table it will only show the Optionset Value instead of the Text.

***This problem can be shorted out from the table ‘FilteredStringMap’ which contains the OptionSet and TwoOption text and values for all the entities.***

select \* from FilteredStringMap where Attributrname='new\_problemtype' and FilteredViewName='FilteredIncident'

***In the table ‘FilteredStringMap’:***

* ‘FilteredViewName’ represents the Entity
* ‘AttributeName’ represents the Optionset/TwoOptions fields
* ‘AttributeValue’ represents their values
* ‘Value’ represents the Text of those fields
* ‘DisplayOrder’ represents their display order.

**Writing a query for getting optionset value?**

SELECT FirstName, LastName, GenderCode FROM Contact

**The better way to write the query is**

SELECT FirstName, LastName, GenderCode, sm.Value as Gender FROM Contact c, StringMap sm

WHERE c.GenderCode = sm.AttributeValue

AND sm.AttributeName = 'gendercode'

***This problem can be shorted out from the table ‘FilteredStringMap’ which contains the OptionSet and TwoOption text and values for all the entities.***

**When can infinite loop occur in a plugin? How do you avoid infinite loops in plugin code?**   
Using InDepth of the context we can get the loop number.

**What is the difference when the ownership is user vs. organization for a custom entity?**   
Organization-owned entities typically contain data involving something that belongs to or that can be viewed by the whole organization. Organization-owned entities cannot be assigned or shared. For example, products are owned by the organization.  
User-owned entities are associated with a user. User-owned entities typically contain data that relates to customers, such as accounts or contacts. Security can be defined according the business unit for the user.

**If you delete a record from UI, what happens in database? Can you bring the record back?OR, what is deletion service? Can you change its schedule?**   
In Microsoft Dynamics CRM, deleting an entity by using the Web application or through SDK Web service calls usually results in a "soft delete" where the entity is not immediately deleted from the database. Instead, the entity is marked for deletion later. The platform marks the entity for deletion by setting the entity's**DeletionStateCode** attribute to 2. Entities with a **DeletionStateCode** attribute set to 2 are filtered out from all data views in the Web application and are not accessible using the SDK.  
These marked entities are physically deleted from the database by the Deletion Service. The Deletion Service is an asynchronous operation that is based on a table named **ScaleGroupOrganizationMaintenanceJobs** in the MSCRM\_CONFIG database of Microsoft Dynamics CRM. By default, the frequency of the Deletion Service job execution is set to once a day. You can use the **Scale Group Job Editor** tool to change the execution frequency of the Deletion Service. You can find the tool on the Web at http://code.msdn.microsoft.com/ScaleGroupJobEditor.

**When would you use a pre validation plugin and when would you use a post validation plugin?**   
Pre-validation:- Stage in the pipeline for plug-ins that are to execute before the main system operation. Plug-ins registered in this stage may execute outside the database transaction.  
  
Pre-operation:- Stage in the pipeline for plug-ins that are to execute before the main system operation. Plug-ins registered in this stage are executed within the database transaction.  
  
Post-operation:- Stage in the pipeline for plug-ins which are to execute after the main operation. Plug-ins registered in this stage are executed within the database transaction.  
  
Post-operation:- Stage in the pipeline for plug-ins which are to execute after the main operation. Plug-ins registered in this stage may execute outside the database transaction. This stage only supports Microsoft Dynamics CRM 4.0 based plug-ins.

**What does the CRM asynchronous service do?**   
The asynchronous service executes long-running operations independent of the main Microsoft Dynamics CRM system process. This results in improved overall system performance and improved scalability.  
The asynchronous service features a managed queue for the execution of asynchronous registered plug-ins, workflows, and operations such as bulk mail, bulk import, and campaign activity propagation. These operations are registered with the asynchronous service and executed later when the service processes its queue. All workflows are executed by the asynchronous service.  
  
**What is an Email-Router?**   
Microsoft Dynamics CRM E-mail Router is a software component that creates an interface between a Microsoft Dynamics CRM deployment and the organization's messaging system. The E-mail Router routes qualified email messages to the Microsoft Dynamics CRM system as email activities and fully integrates with different messaging systems, such as Microsoft Exchange Server, Microsoft Exchange Online, POP3, and SMTP. The E-mail Router includes the functionality for sending email through any desired SMTP provider and for receiving email from Microsoft Exchange Server or from a POP3 server. Additionally, the Forward Mailbox feature remains available.

**For plugin deployment, Difference between GAC, Database, Disk deployments?**  
  
**GAC Deployment**

1. Does not support CRM 2011 online deployments

2. You can refer external DLL assemblies used in Plugin only if they are registered in GAC

**Database Deployment**

1. Supports CRM online 2011 deployment

2. You can refer external DLL assemblies used in Plugin only if they are registered in GAC

**Disk deployments**

1. Does not support CRM 2011 online deployments

2. You can refer external DLL assemblies from the disk and from GAC

Difference between FetcxXml and QueryExpression?

FetchXml allows the querying of CRM data using an XML representation.  This is the format in which Views (userquery and savedquery) are stored.

Fetchxml supports aggration, grouping & filter criteria.

QueryExpression allows the programmatic definition of a query, whereby an object model may be used to build a query using a series of conditions.

queryexpressuion does not support aggration,grouping & filter criteria

There are two Web Service messages available that allow you to convert between both formats:

QueryExpressionToFetchXml

FetchXmlToQueryExpression

Example of QueryExpression:  
      QueryExpression query = new QueryExpression();  
      query.EntityName = EntityName.contact.ToString();  
      ColumnSet columns = new ColumnSet();  
      columns.Attributes =  
                         new string[] { “contactid”, “lastname”, “firstname” };  
      ConditionExpression whereClause = new ConditionExpression();  
      whereClause.AttributeName = “lastname”;  
      whereClause.Operator = ConditionOperator.Equal;  
      whereClause.Values = new string[] { “Jones” };  
      FilterExpression filter = new FilterExpression();  
      filter.FilterOperator = LogicalOperator.And;  
      filter.Conditions = new ConditionExpression[] { whereClause };  
      OrderExpression orderBy = new OrderExpression();  
      orderBy.OrderType = OrderType.Descending;  
      orderBy.AttributeName = “createdon”;  
      query.ColumnSet = columns;  
      query.Criteria = filter;  
      query.Orders = new OrderExpression[] { orderBy };  
BusinessEntityCollection retrieved =crmService.RetrieveMultiple(query);  
Example of FetchXML:  
string fetch = @”  
   <fetch mapping=“logical”>  
       <entity name=“contact”>  
            <attribute name=“contactid”/>  
            <attribute name=“lastname”/>  
            <attribute name=“firstname”/>  
            <order attribute=“createdon”/>  
                 <filter>  
                     <condition attribute=“lastname” operator=“eq”  
                        value=“KRISHNA”/>  
                 </filter>  
         </entity>  
   </fetch>”;  
   try  
  {   
           string result = service.Fetch(fetch);  
   }  
   catch(System.Web.Services.Protocols.SoapException se)  
   {  
            // handle exception  
   }

LINQ : Queries are built using standard language, but internally uses **QueryExpression** so is limited to the features of **QueryExpression**.

.NET Language-Integrated Query (LINQ) uses standard query patterns. The [OrganizationServiceContext](http://msdn.microsoft.com/en-us/library/microsoft.xrm.sdk.client.organizationservicecontext.aspx) class contains the LINQ query provider and is efficient at creating multiple associations.

**Type Convertions**

Text = Demo.Attributes["new\_text"].ToString();

Picklist = ((Microsoft.Xrm.Sdk.OptionSetValue)(Demo.Attributes["new\_picklist"])).Value.ToString();

Chk = Convert.ToBoolean(Demo.Attributes["new\_options"]);

Number = Convert.ToInt32(Demo.Attributes["new\_number"]);

FloatNumber = Convert.ToDouble(Demo.Attributes["new\_flotingnumber"]);

DecimalNumber = Convert.ToDecimal(Demo.Attributes["new\_decimalnumber"]);

Currency:

decimal rev = entity.GetAttributeValue<Money>("estimatedvalue").Value;

then see you can convert into int

int intValue = Convert.ToInt32(rev);

**Difference between None and Sandbox mode?**

**The none-sandbox environment always keeps an instance of the plugin class alive and only call the method Execute(). But the sandbox mode always creates a new instance of the plugin class for every execution.**

**Which Isolation Mode should I choose?**

So these are the reasons that one should register plugin assembly into Sandbox:  
1. Using MSCRM Online or planning to migrate to MSCRM Online (supported on all MSCRM deployments)  
2. It is a more secure environment. No access to file system, system event log, certain network protocols, registry and more.  
3. Supports run-time monitoring and statistics reporting  
4. If sandbox worker process that hosts a plugin exceeds threshold CPU/memory/handle limits or unresponsive, it will be killed by the platform. And because there is one worker process per organization, failures in one organization will not affect another organization.

**Run-time Statistics**  
This is a very interesting feature that I think will help CRM developers in developing a more robust and efficient plugins. The statistics information is contained in PluginTypeStatistic entity. This entity contained informations such as:  
1. Execute Count  
2. Crash Count/Percent  
3. Crash Contribution Percent  
4. Related Entities

**Web Access**  
Plugin in Sandbox can access the web/network but there are some restrictions:  
1. Only HTTP and HTTPS protocols are allowed  
2. Loopback (localhost) access is not allowed  
3. IP addresses cannot be used.  
4. No provision for user credentials.

However you can modify these restrictions by changing regex of the registry key

**Sandbox (recommended option)**

|  |  |
| --- | --- |
| **Pros** | **Cons** |
| Supported by all types of CRM deployment | You haven’t got access to the file system, system event log, certain network protocols, registry |
| Supports run-time monitoring and statistics reporting |
| Secure approach |
| MS CRM monitors sandbox worker process and handles situations of CPU/memory/handle limits exceeding. |

**None**

|  |  |
| --- | --- |
| **Pros** | **Cons** |
| All power of .NET framework is in your hands | Not supported by CRM online |
| Doesn’t support monitoring and statistic |

**Which Assembly Storing variant should I choose?**

**Database**

|  |  |
| --- | --- |
| **Pros** | **Cons** |
| This is recommended option in production environment |  |
| You should register assembly once, even if you have several servers |
| During recovery of the server you don’t need any additional step |
| Supported by all deployment scenario |

**Disk**

|  |  |
| --- | --- |
| **Pros** | **Cons** |
| This is recommended option in development environment | You should place assembly in the \server\bin\assembly directory on each server. |
| You need just copy assembly to redeploy newer version |

**GAC**

|  |  |
| --- | --- |
| **Pros** | **Cons** |
|  | You should place assembly in GAC on each server. |

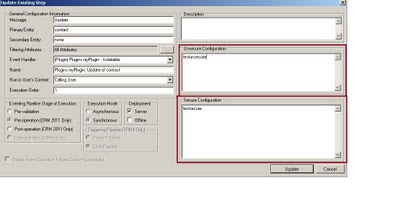
I have never used this option.

**Where is Secondary Entity used?**

The secondary entity only applies to the SetRelated and RemoveRelated messages.

**What is secure/unsecure configuration? How to access secure/unsecure configurations in the plugin?**

As you all know the plugin registration tool in CRM 2011 contains Secure and Unsecure configuration sections as shown below.

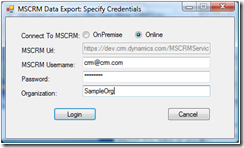
[](http://4.bp.blogspot.com/-e_9Oygww4E4/TgEBfvD6rrI/AAAAAAAAAKw/EoUxDfUt2qU/s1600/1.jpg)

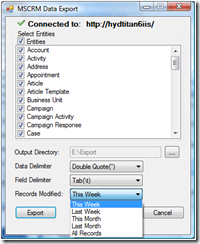
Following are the two key differences found between these two configuration settings.

|  |  |
| --- | --- |
| Unsecure Configuration of  Plugin Registration tool in CRM 2011 | Secure Configuration of Plugin  Registration tool in CRM 2011 |
| Unsecure configuration information could be read by any user in CRM. Remember its *public* information (Eg: Parameter strings to be used in plugin could be supplied here) | The Secure Configuration information could be read only by CRM Administrators.(Eg: Restricted data from normal user could be supplied here) |
| Imagine that you include a plugin, plugin steps and activate them in a solution. Later solution was exported as Managed Solution to another environment. In this scenario, the supplied Unsecure configuration values would be available in the new environment. | Imagine that you include a plugin,plugin steps and activate them in a solution. Later solution was exported as Managed Solution to another environment. In this scenario, the supplied Secure configuration  information would *NOT* be available in the new environment. The simple  reason behind this is to provide more security to the contents of Secure Configuration. |

**Bulk Data Export Tool:**

Reference to a great post on the CRM [blog](http://blogs.msdn.com/crm/archive/2008/04/30/crm-4-0-bulk-data-export-tool.aspx) which describes a sample tool for bulk data export from CRM Online.  This sample tool allows the administrator of the CRM Online instance to export records of CRM entities in the form of .csv files.  This tool can be downloaded from [codeplex](http://www.codeplex.com/mscrmbulkdataexport).

[](http://blogs.msdn.com/blogfiles/dynamicscrmonline/WindowsLiveWriter/BulkDataExportTool_891E/image_2.png)

[](http://blogs.msdn.com/blogfiles/dynamicscrmonline/WindowsLiveWriter/BulkDataExportTool_891E/image_4.png)

**why GAC/DISC does not support CRM online verson?**

If you have your assemblies registered on database, you could include them in a solution. Therefore, you can easily migrate to CRM Online by exporting/importing the solution and you can mark your assemblies as sandboxed. You would not be able to sandbox your assemblies for disk/GAC and you would not be able to package them to migrate to CRM Online.

**what are the input parameters that we can pass to the workflows?**

A) get and set parameters

New Plugin Messages made available by Microsoft in Dynamics

**Execute**: The execute event always gets fired when you open the views. Like from Main application view, lookup view, Advanced search view etc. (but not from associated views).  
While registering this event, no primary entity name is required.  
Input parameter: fetchxml - The fetchXML query sent.  
Output parameter: fetchxmlresult - The resultant records of the fetchXML query  
  
**Retrieve**: The event is available for each of the entities like account, contact, custom entities etc. When user opens CRM record (CRM form) this event is fired  
Input parameter: columnset - the attributes requested in the Retrieve Message  
Output parameter: businessentity - The resultant business entity found.  
  
**Retrieve Multiple**: The event will fire when user goes to associated view of Contacts or Custom entities that do not use the Rollup message. So it works for all associated views that does not provide the “Related Regarding Records” option.  
Input parameter: query - Query passed to the Retrieve Multiple message  
Output parameter: businessentitycollection - The resultset business entity collection.  
  
**Rollup message**can be used for associated views that provide the option of displaying related records. However the Plugin registration tool does not provide for registering on the Rollup message. So that is something we still need to find out how it works.  
  
**Route**: Route event gets fired when any of below entity instance moves from one queue to another.  
Appointment  
CampaignActivity  
CampaignResponse  
Email  
Fax  
Incident  
Letter  
PhoneCall  
ServiceAppointment  
Task  
  
For email entity new events introduced are,  
Assign, BackgroundSend, CheckIncoming, CheckPromote, Create, Delete, DeliverIncoming, DeliverPromote, DetachFromQueue, GrantAccess, Handle, ModifyAccess, Retrieve, RetrieveMultiple, RetrievePrincipalAccess, RetrieveSharedPrincipalsAndAccess, RevokeAccess, Route, Send, SendFromTemplate, SetState, SetStateDynamicEntity, Update  
  
So with Dynamics CRM 4.0 Microsoft has given greater control to the developers to trap appropriate messages and perform custom actions.

# [Creating OrganizationServiceProxy in CRM2011 Plugin](http://stackoverflow.com/questions/18252277/creating-organizationserviceproxy-in-crm2011-plugin)

1. **static** **void** Main(**string**[] args)
2. {
3. //Grab the organization service url by navigating to
4. // Settings -> Customizations - > Developer Resources
5. // The following is from online CRM org
6. Uri oUri = **new** Uri("https://yourorg.api.crm5.dynamics.com/XRMServices/2011/Organization.svc");
7. //\*\* Your client credentials
8. ClientCredentials clientCredentials = **new** ClientCredentials();
9. clientCredentials.UserName.UserName = "YourAccount.onmicrosoft.com";
10. clientCredentials.UserName.Password = "YourAdminPassword";
12. //Create your Organization Service Proxy
13. OrganizationServiceProxy \_serviceProxy = **new** OrganizationServiceProxy(
14. oUri,
15. **null**,
16. clientCredentials,
17. **null**);
19. //\*\* Now simple use Entity and create a sample account
20. Entity entity = **new** Entity("account");
21. entity.Attributes["name"] = "This is my sample account";
23. //use the service proxy to create the entity object
24. \_serviceProxy.Create(entity);
26. Console.WriteLine("Welldone SuperNova!");
27. Console.ReadKey(**true**);
28. }

**creating discovery service proxy in crm 2011 plugin**

public class DiscoveryService

{

#region Class Level Members

private DiscoveryServiceProxy \_serviceProxy;

#endregion Class Level Members

#region How-To Sample Code

/// <summary>

/// Demonstrates the RetrieveOrganization and RetrieveOrganizations messages

/// of the Discovery service.

/// </summary>

/// <param name="serverConfig">Contains server connection information.</param>

/// <param name="promptforDelete">When True, the user will be prompted to delete all

/// created entities.</param>

public void Run(ServerConnection.Configuration serverConfig, bool promptforDelete)

{

try

{

// Connect to the Discovery service.

// The using statement assures that the service proxy will be properly disposed.

using (\_serviceProxy = new DiscoveryServiceProxy(serverConfig.DiscoveryUri,

serverConfig.HomeRealmUri,

serverConfig.Credentials,

serverConfig.DeviceCredentials))

{

// You can choose to use the interface instead of the proxy.

IDiscoveryService service = \_serviceProxy;

**What is plugin context?**

[IPluginExecutionContext](http://msdn.microsoft.com/en-us/library/microsoft.xrm.sdk.ipluginexecutioncontext.aspx) contains information that describes the run-time environment that the plug-in is executing in, information related to the execution pipeline, and entity business information. The context is contained in the [System.IServiceProvider](http://msdn.microsoft.com/en-us/library/system.iserviceprovider.aspx) parameter that is passed at run time to a plug-in through its [Execute](http://msdn.microsoft.com/en-us/library/microsoft.xrm.sdk.iplugin.execute.aspx) method.

**What is Filtering Attributes in plugin registration tool ?**

A list of entity attributes that, when changed, cause the plug-in to execute. A value of null causes the plug-in to execute if any of the attributes change.

**OrganizationservieProxy Vs OrganizationServiceContext?**

In Microsoft Dynamics CRM 2011, the primary Web service accessing data and metadata for your organization is the IOrganizationService Web service.

The class [OrganizationServiceContext](http://msdn.microsoft.com/en-us/library/microsoft.xrm.sdk.client.organizationservicecontext.aspx) is used as the base class for the data context which is created when you are using early bound entity classes. See how to [Use the Organization Service Context Class](http://msdn.microsoft.com/en-us/library/gg334504.aspx). It uses an[IOrganizationService](http://msdn.microsoft.com/en-us/library/gg309449.aspx) as the underlying connection.

**What** **is the use of document location entity in MS CRM 2011.**

Document location entity is used to store location of crm record which point to a document folder in share point.

**What is the use of subgrids?**

Subgrids are used to display any entity view in another entity, you can add subgrids from Insert tab while customizing entity form and can select entity to display view in that subgrid

**What is the use of tracing Service in plugin development.**

This is a new feature in Microsoft CRM 2011, using tracing service we can get more error details and can display them to user.

**What are the new messages introduced for plugins in MS CRM 2011?**

Microsoft CRM 2011 has introduced many new entities, you can refer new entity and their messages in “message-entity support for plug-ins” files that comes with Microsoft CRM 2011 SDK.

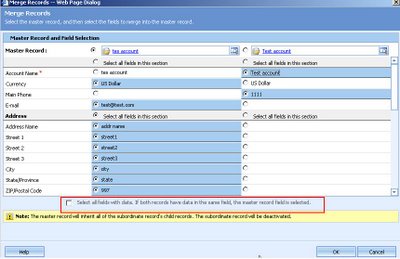
How to merge records in Dynamics CRM

In one of our earlier posts we had explained the Duplicate Detection Feature that is now available in Dynamics CRM 4.0. However suppose there was not Duplication detection rule setup and it resulted in you have duplicate records of Accounts in your CRM.  
  
For this CRM provides the option to Merge 2 records.  
  
This feature is available only on below entities:  
- Account  
- Contact  
- Lead  
  
Using merge functionality user can merge two records and can deactivate the duplicate record. Below is the screen shot which will show you the button to merge the selected two records.

[](http://2.bp.blogspot.com/_pMlyDuF-ngc/Sb-ho41hRHI/AAAAAAAAAC8/zSUGqLaCm7g/s1600-h/merge1.JPG)

When user clicks on merge button user will be prompted with following window using which user can choose fields which are latest one and update record with latest values while other record will get deactivated.  
  
- User can choose master record which is at the end will remain active and other will get deactivated.

- Also there is an option to directly choose the filled values from two records. If for a field there is value present in both the records then master records value will get selected here. For this user need to checked on check box as shown in below screen shot.



**IpluginExecutionContext Parameters?**

BusinessUnitId - Gets the global unique identifier of the business unit that the user making the request, also known as the calling user, belongs to.

**CorrelationId -** Gets the global unique identifier for tracking plug-in or custom workflow activity execution.

**Depth -** Gets the current depth of execution in the call stack.

**InitiatingUserId -** Gets the global unique identifier of the system user account under which the current pipeline is executing.

**InputParameters -** Gets the parameters of the request message that triggered the event that caused the plug-in to execute.

**IsExecutingOffline -** Gets a value indicating if the plug-in is executing from the Microsoft Dynamics CRM for Microsoft Office Outlook with Offline Access client while it is offline.

**IsInTransaction** - Gets a value indicating if the plug-in is executing within the database transaction.

**IsOfflinePlayback -** Gets a value indicating if the plug-in is executing as a result of the Microsoft Dynamics CRM for Microsoft Office Outlook with Offline Access client transitioning from offline to online and synchronizing with the Microsoft Dynamics CRM server.

**OutputParameters -** Gets the parameters of the response message after the core platform operation has completed.

**ParentContext** - Gets the execution context from the parent pipeline operation.

**PreEntityImages -** Gets the properties of the primary entity before the core platform operation has begins.

**PostEntityImages -** Gets the properties of the primary entity after the core platform operation has been completed.

**PrimaryEntityId -** Gets the global unique identifier of the primary entity for which the pipeline is processing events.

**PrimaryEntityName -** Gets the name of the primary entity for which the pipeline is processing events.

**SecondaryEntityName -** Gets the name of the secondary entity that has a relationship with the primary entity.

**RequestId** - Gets the global unique identifier of the request being processed by the event execution pipeline.

**UserId** - Gets the global unique identifier of the system user for whom the plug-in invokes web service methods on behalf of.

**SharedVariable-**

SharedVariables in CRM 2011 plugins

Hi All, There is a slight change in Shared Variables in CRM 2011.             
  
                // Passing Data to shared Variable  
            context.SharedVariables.Add("PrimaryContact", (Object)contact.ToString());  
  
  
            // Retrieving data from context shared variables.  
                Guid contact = new Guid((string)context.SharedVariables["PrimaryContact"]);

# QueryByAttribute and QueryExpression:

The QueryByAttribute class is a less complex class to use than QueryExpression when the query is very simple. It retrieves instances of a specific entity type by specifying a set of attributes and value pairs. Use it to create a query that meets a simple set of criteria, it can have multiple equal conditions that are combined using “AND”. Notice that QueryByAttribute does not support “OR”. the criteria can be defined using attribute-value pairs. The query returns only those entities meeting all the defined criteria.

QueryExpression provides an object oriented, strongly typed approach to developing queries against the Microsoft Dynamics CRM database. It provides an object oriented model and methods to help create queries. You can also use QueryExpression helper classes and methods for ease.

// Create query using QueryByAttribute.

QueryByAttribute querybyattribute = new QueryByAttribute("account") {

ColumnSet = new ColumnSet("name", "address1\_city", "emailaddress1"),

Attributes.AddRange("address1\_city"),

Values.AddRange("Redmond")

};

// Query using ConditionExpression and FilterExpression

ConditionExpression condition1 = new ConditionExpression();

condition1.AttributeName = "lastname";

condition1.Operator = ConditionOperator.Equal;

condition1.Values.Add("Brown");

FilterExpression filter1 = new FilterExpression();

filter1.Conditions.Add(condition1);

QueryExpression query = new QueryExpression("contact");

query.ColumnSet.AddColumns("firstname", "lastname");

query.Criteria.AddFilter(filter1);

EntityCollection result1 = \_serviceProxy.RetrieveMultiple(query);

Console.WriteLine();

Console.WriteLine("Query using Query Expression with ConditionExpression and FilterExpression");

Console.WriteLine("---------------------------------------");

foreach (var a in result1.Entities)

{

Console.WriteLine("Name: " + a.Attributes["firstname"] + " " + a.Attributes["lastname"]);

}

Console.WriteLine("---------------------------------------");

**Difference between drilldown reports and drill through reports ?**

**How can we delete a workflow after completing?**

**what is plugin rank ?**

Execution Order is called as Rank.Specifies the order, also known as rank, that plug-ins are executed within a pipeline [stage](http://msdn.microsoft.com/en-us/library/gg327941.aspx). Plug-ins registered with an order value of 1 are executed first, followed by plug-ins registered with an order of 2, and so on. However, if there is more than one plug-in in a stage with the same order value, then the plug-in with the earliest compilation date is called first.

**Difference between SSRS 2005 and SSRS 2008?**

Few of the major differences between SSRS 2005 and SSRS 2008 are as follows: 

* SSRS 2005 report server requires IIS, whereas SSRS 2008 comes with a build-in web server and hence does not require IIS.
* SSRS 2005 is multiple services architecture (Windows Service & IIS Service), whereas SSRS 2008 is a single service architecture (Windows Service) due to the presence of an inbuilt web server.
* SSRS 2005 deployment & configuration involves lot of effort and a little bit of complexity due to the dependency on IIS, whereas SSRS 2008 deployment is much simpler especially with the help of Reporting Services Configuration Manager.
* SSRS 2005 has less visualization components, whereas SSRS 2008 has a very rich set of visualization components like Dials, Gauges, Sparklines etc.

|  |  |
| --- | --- |
| **SQL Server 2005 Reporting Services** | **SQL Server 2008 Reporting Services** |
| Multiple service architecture (IIS Service & Windows Service) | Single service architecture (Windows Service) |
| Depends on IIS | Comes with Built-In Web Server and hence does not depend on IIS |
| Complex deployment due to the need for separate configuration for IIS | Deployment is simple due to inbuilt web server and Reporting Services Configuration Manager |
| Charts, Dials etc. had to be separately installed and integrated | Comes packaged with Charts, Dials, Indicators, Sparklines etc. |
| Limited exporting options | More exporting options including Microsoft Word etc |
| You can only format entire text in a textbox with one single formatting style (**bold**, *italicize*,**colors** etc.) | Allows you to format pieces of text or words or letters within a single textbox with different formatting styles like **bold**, *italicize*, **colors**etc. **Example**: a Disclaimer Textbox, Header Textbox etc. |
| Comparison of SSRS 2005 and SSRS 2008 | |

**How do you replace standard Activities section with any other custom activity?**

Create a new solution adding the existing sitemap.

Export the solution as Unmanged.

Extract the solution zip file and open up customizations.xml in Visual Studio and add the schema customizationsolution.xsd (from the SDK schemas folder) if you need to.

Make the changes below

Original:

<Area Id=”SFA” ResourceId=”Area\_Sales” Icon=”/\_imgs/sales\_24x24.gif” DescriptionResourceId=”Sales\_Description” >  
        <Group Id=”SFA”>  
          <SubArea Id=”nav\_leads” Entity=”lead” DescriptionResourceId=”Lead\_SubArea\_Description” GetStartedPanePath=”Leads\_Web\_User\_Visor.html” GetStartedPanePathAdmin=”Leads\_Web\_Admin\_Visor.html” GetStartedPanePathOutlook=”Leads\_Outlook\_User\_Visor.html” GetStartedPanePathAdminOutlook=”Leads\_Outlook\_Admin\_Visor.html” />  
        </Group>  
      </Area>

Amended:

<Area Id=”SFA” ResourceId=”Area\_Sales” Icon=”/\_imgs/sales\_24x24.gif” DescriptionResourceId=”Sales\_Description” >  
**<Titles>**  
**<Title Title=”Membership” LCID=”1033″/>**  
**</Titles>**  
        <Group Id=”SFA”>  
          <SubArea Id=”nav\_leads” Entity=”lead” DescriptionResourceId=”Lead\_SubArea\_Description” GetStartedPanePath=”Leads\_Web\_User\_Visor.html” GetStartedPanePathAdmin=”Leads\_Web\_Admin\_Visor.html” GetStartedPanePathOutlook=”Leads\_Outlook\_User\_Visor.html” GetStartedPanePathAdminOutlook=”Leads\_Outlook\_Admin\_Visor.html” />  
        </Group>  
      </Area>

CRM Relationship Behavior

The blog will help you in the scenarios when you requires to move records from one user to another user with some conditions. Like in scenario one of your sales rep leave the organization and you need to assign his records to the newly joined rep but you also need to keep the history of this old rep (completed work like activities etc) in such scenario you need to check what type relationship behavior is applied in your entity relationship.  
  
The relationship behavior feature of CRM handles action output as per specified settings. Like you can decide major actions Assign, Delete, Share to be handled properly. Say you assigned accounts from one user to another user and in this action you also need to assign all active calls to new user but not need to assign completed call then in such scenario you need to provide relationship behavior of Account-Phone Call entity to Configurable Cascading and set apply rule as “Cascade Active” for Assign action. This will apply changes as per discussed above.   
  


The different type of behaviors provided are,

**Parental**  
o In a parental relationship between two entities, any action taken on a record of the parent entity is also taken on any child entity records that are related to the parent entity record. if you delete a record in the parent entity, the related child entity records are also deleted; or if you share a parent entity record, the related records from the child entity are also shared. All option are disable for Parental relationship  
**Referential**  
o In a referential relationship between two entities, you can navigate to any related records, but actions taken on one will not affect the other  
**Referential, Restrict Delete**  
o Actions taken on parent will not affect child record but parent record cannot be deleted till the child record exists. i.e you cannot delete a record when related records exist.  
**Configurable Cascading**  
o You need to specify your setting here.  
  
The type we are interested here is “Configurable Cascading”. It allows you to decide what type of behavior we need to apply.  
  
The useful details of different cascading rules are (note here me is referred to the user on whom you will perform actions)  
• Cascade All: Perform action on all of my child records. Like if assigned my account to another user then all my activities, orders, invoices etc are assign to new user including open, completed and other user owned records  
• Cascade Active: Perform action on only my active child records  
• Cascade User-Owned: Perform action on all my child records which is owned by me  
• Cascade None: do nothing to my child records  
• Remove Link: remove link from child record  
• Restrict: Applies to Delete. The delete is not allowed if there are other entity instances that reference the ID of the entity instance being deleted.

**Suppose we have 2 Plugins A & B, how do we know that which plugin is executed first?**

If you want to execute two plugins one after the other for the same event, you have to specify the order of execution when you register the plug-in.

You can use preentityImages and postentityImages to compare which field is changed so that you can conditionally execute the second plugin.

**Difference between input parameters, preentityimage & postentityimage of plugin context?**

***PreEntityImages*** :

It is basically used to capture the data when the form loads. That is the data which is present by default when the form loads.  The syntax for using the PreEntityImages in CRM 2011 is changed as compared to CRM 4.0. Remember the PreEntityImages cannot be registered for “create” operation.

Syntax Used in CRM 2011 :

Suppose you registered the Plugin and added a Image with name “PreImage ”

Entity preMessageImage;

if (context.PreEntityImages.Contains(“PreImage”) && context.PreEntityImages["PreImage"] is Entity)

{

preMessageImage = (Entity)context.PreEntityImages["PreImage"];

accountnumber = (String)preMessageImage.Attributes["accountnumber"];

}

Here Entity is an Class that is available in the Microsoft.Crm.Sdk.dll

***PostEntityImages :***

The Post Image contains the attributes value which are finally changed. We can capture the changed data before the database operation takes place. And can do any kind of validation based on the changed data. Remember it can only be registered  for update message and cannot be registered on create message.

Syntax Used in CRM 2011 :

Suppose you registered the Plugin and added a Image with name “PostImage ”

Entity postMessageImage;

if (context.PostEntityImages.Contains(“PostImage”) && context.PostEntityImages["PostImage"] is Entity)

{

postMessageImage = (Entity)context.PostEntityImages["PostImage"];

accountnumber = (String)postMessageImage.Attributes["accountnumber"];

}

The PreEntityImages and PostEntityImages are Very useful in Scenarios where we want to compare the data that is changed by the user. Based on the changes the custom operation can be performed.

The below PLugin shows the use of PreEntityImages and PostEntityImages.The plugin creates a contact record when a account record is updated. The plugin uses late binding or Dynamic Entity concept for the creation of the record.

**How can you provide security for a form?**

This can be done by an option called **Enable Security Roles** which is on the ribbon under the home tab.

**Advantages of MS Dynamics CRM?**

* Reduce time spent on finding data
* Share knowledge across the organization
* Streamline your sales force
* Optimize your marketing effort
* Manage your organization efficiently

**How to debug a Custom Workflow?**

To debug a custom workflow activity, copy the .pdb file for the assembly to the %installdir%\server\bin\assembly folder. The assembly can be deployed as on-disk or stored in the database. The recommended deployment is in the database, but for debugging you should choose on-disk. Next, attach the debugger to the**CrmAsyncService.exe process**. Make sure that you remove the .pdb file when you have finished debugging because it uses memory to have it loaded.

**How to run a workflow using javascript?**

I think you can do it in that way,

1. you can create button and add it in to the ribbon.
2. set the button visibility based on the user roles.
3. Add javascript trigger for that button to trigger the workflow.

To Execute a Workflow using jscript, first we need to get the workflow id by passing the process name.

In my example i’m performing an ODATA call to get the Workflow id, so don’t forget to add **jquery1.4.1.min** and**json2** files in your Form Properties. You can get those files from sdk.

path – \sdk\samplecode\js\restendpoint\jqueryrestdataoperations\jqueryrestdataoperations\scripts.

Finally here is your jscript code to trigger the workflow.

 // function to trigger workflow

function TriggerWorkflow() {

    // get the workflow id

    var workflowId = GetProcessId();

    if (workflowId[0].results.length > 0) {

        var xml = "" +

       "<?xml version=\"1.0\" encoding=\"utf-8\"?>" +

       "<soap:Envelope xmlns:soap=\"http://schemas.xmlsoap.org/soap/envelope/\" xmlns:xsi=\"http://www.w3.org/2001/XMLSchema-instance\" xmlns:xsd=\"http://www.w3.org/2001/XMLSchema\">" +

       GenerateAuthenticationHeader() +

       "<soap:Body>" +

       "<Execute xmlns=\"http://schemas.microsoft.com/crm/2007/WebServices\">" +

       "<Request xsi:type=\"ExecuteWorkflowRequest\">" +

       "<EntityId>" + Xrm.Page.data.entity.getId() + "</EntityId>" +

       "<WorkflowId>" + workflowId[0].results[0].WorkflowId + "</WorkflowId>" +

       "</Request>" +

       "</Execute>" +

       "  </soap:Body>" +

       "</soap:Envelope>" +

       "";

        var xmlHttpRequest = new ActiveXObject("Msxml2.XMLHTTP");

        xmlHttpRequest.Open("POST", "/mscrmservices/2007/CrmService.asmx", true);

        xmlHttpRequest.setRequestHeader("SOAPAction", "http://schemas.microsoft.com/crm/2007/WebServices/Execute");

        xmlHttpRequest.setRequestHeader("Content-Type", "text/xml; charset=utf-8");

        xmlHttpRequest.setRequestHeader("Content-Length", xml.length);

        xmlHttpRequest.send(xml);

    }

}

// function to get workflow id by performing and ODATA call.

function GetProcessId() {

    // pass the workflow name manually to get the Id of the workflow

    var processName = "Send Email on Contact Create";

    // get the server url

    var serverUrl = Xrm.Page.context.getServerUrl();

    var oDataUri = serverUrl + "/xrmservices/2011/OrganizationData.svc/WorkflowSet?$select=WorkflowId&$filter=Name eq '" + processName + "' and ActiveWorkflowId/Id ne null";

    var jSonArray = new Array();

    jQuery.ajax({

        type: "GET",

        contentType: "application/json; charset=utf-8",

        datatype: "json",

        url: oDataUri,

        async: false,

        beforeSend: function (XMLHttpRequest) {

            //Specifying this header ensures that the results will be returned as JSON.

            XMLHttpRequest.setRequestHeader("Accept", "application/json");

        },

        success: function (data, textStatus, XmlHttpRequest) {

            if (data && data.d != null) {

                jSonArray.push(data.d);

            }

        },

        error: function (XmlHttpRequest, textStatus, errorThrown) {

            alert("Error :  has occured during retrieval of the workflowId");

        }

    });

    return jSonArray;

}

Explain brief about functionality in CRM 2011?

Sales Module, Marketing Module and Service Module.

* Sales Module:

Sales modules help companies to handle their sales cycle. In Microsoft CRM 2011, the sales cycle starts with a lead. The lead represents a potential customer, which contains basic information about the potential customer. It could be an organization or an individual. Once the lead is generated, it is assigned to a sales person or a team. A sales person will start communicating with the lead to fetch some more information and will update the lead status based on customer interest. Once the lead is qualified, it is converted to the following records type:

* Account
* Contact
* Opportunity

An opportunity represents qualified potential sales. While converting a lead into an opportunity we have to set a potential customer, but if we have selected the **Account**checkbox then CRM will create the account with the **Company name**field in the **Lead**created and will set it as a potential customer of the opportunity. Similarly, if we select **Contact**and **Opportunity**then CRM will set **Contact**as a potential customer in the opportunity.

Once an opportunity is created, we can attach a quote to the opportunity to inform the customer about the product and price information. If the customer agrees on the sent quote, we can activate the quote and create an order using **Create Order**ribbon button on the quote form. Once the order is fulfilled, an invoice will be generated using the **Create Invoice**ribbon button on the order form. Once a customer is billed, we can close the opportunity.

* **Marketing Module:**

Marketing modules deal with all the marketing related activities such as creating a marketing list, creating and sending campaign literature, and capturing its response. In Microsoft CRM 2011, you can create two types of marketing lists:

* Static
* Dynamic

In the case of a static list, we have to add/remove list members manually, but in case of a dynamic list, we can specify our query and based on the query criteria list, members will be added or removed automatically by Microsoft CRM 2011. While creating the list we can select its type to create a static or dynamic list. Let’s say we want to create a dynamic marketing list. Select the**dynamic radio**button from the **type**selection and hit the **Save**button. Once the marketing list is saved we can add a query to the dynamic list using the **Manage Members**ribbon button.

As soon as we will hit the **Use Query**button it will fetch contacts based on the specified query and will add those contacts into our marketing list. Once we have a marketing list ready, we can start creating a new campaign. We can create two types of campaigns in Microsoft CRM 2011:

* Campaign
* Quick campaign

The quick campaign is used to create a single activity campaign, while the campaign can be used to create multiple campaign activities. Creating a campaign includes tasks such as creating**Planning Activities**, **Campaign Activates**, and **Campaign Response**to capture campaign activity responses.

* **Service Module:**

The service module is used to provide service support to our customer. The service processes start with creating a case in Microsoft CRM 2011. A case contains information about customer services or support requests. A case can be created by a customer service executive or we can automate the process of creating a case in Microsoft CRM 2011 using a queue. We can process a case under a different category by selecting **Subject**from subject lookup in case form.

A case can also include contract information. Once the case is created in Microsoft CRM 2011, it is assigned to a customer support executive. The resolution process of a case can include various activities based on the complexity of the case. Sometimes it can be solved by just looking at the Knowledge Base article. Once a case is resolved, the customer support executive can close the case by using the **Resolve Case**ribbon button on the case form. While closing the case, the customer support executive needs to enter information such as resolution type, resolution, and time spent on the resolution process.

**When we will use plugin and when we will use JavaScript?**

JavaScript we can use in field change event, but plugin can’t be used.

Plugin and JavaScript both can be used in form events and ribbon actions.

Plugin we use for custom business logic, and also used for to get Pre and Post data’s.

So according to the need we can use anyone of them.

6).**Why we use Plugin and why we use JavaScript?**

|  |  |  |
| --- | --- | --- |
| **Criteria** | **Plug-in** | **Workflow** |
| Executes before or after the core platform operation (Create, Update, Delete, etc.) | Executes immediately before or after the core operation (synchronous). Can also be queued to execute after the core operation (asynchronous). | Is queued to execute after the core operation (asynchronous). |
| Performance impact on the Microsoft Dynamics CRM platform | Synchronous plug-ins can increase the platform’s response time as they are part of the main platform processing. A poorly designed plug-in could hang the platform. | Less of a negative impact on platform response time. |
| Security restrictions | To register a plug-in with the platform requires a System Admin or System Customizer security role and membership in the Deployment Administrator group. | Users can interactively create worksflows in the Web application. However, in order to register custom workflow activities, the deploying user must have the same security roles as required for registering plug-ins. |
| Microsoft Dynamics CRM version (SKU) support | Not supported in Microsoft Dynamics CRM Online. May be supported in partner hosted installations. | Workflows without custom activities are supported by all product versions. Workflows with custom activities are supported the same as plug-ins. |
| Best application is for tasks which require a short or long amount of computing time | A plug-in registered for synchronous execution is best used for short processing tasks while a plug-in registered asynchronously can be used for process intensive operations. However, an asynchronous plug-in can only execute after the core platform operation has completed. | Either short or long processing tasks |
| Can be executed while the Outlook client is online or offline | Both online and offline are supported | Workflows do not execute on the offline Outlook client host computer. |
| Process and data persistence | Plug-ins execute to completion. | Workflows can be paused, postponed, cancelled, and resumed through SDK calls or by the user through the Web application. The state of the workflow is automatically saved before it is paused or postponed. |

Ref this link: <http://msdn.microsoft.com/en-us/library/dd393303.aspx>

**What are the message entity support for plugin’s?**

Since there are lots of messages present, this we can get from the sdk itself we have a excel file called message-entity support for plug-ins, so from that you can get the answer.

**What is GUID?**

A GUID (global unique identifier) is a term used by Microsoft for a number that its programming generates to create a unique identity for an entity such as a Word document. GUIDs are widely used in Microsoft products to identify interfaces, replica sets, records, and other objects. Different kinds of objects have different kinds of GUIDs – for instance, a Microsoft Access database uses a 16-byte field to establish a unique identifier for replication.

**CRM 2011 web services?**

**Organization SOAP Service**: This is the primary web service accessing the data and metadata (data about data) for a CRM organization.  It provides methods to perform any operation in Dynamics CRM.

**Discovery SOAP Service**: A CRM implementation can have multiple “tenants” or organizations.  To determine/retrieve an organization and the web service endpoint to access the Organization service, the discovery service can be used.

**Organization ODATA Service**: This is a web services that utilizes a REST endpoint and is limited to only CRUD (create, retrieve, update and delete) operations.  This is typically the bulk of the operations performed, but an example of an action the REST endpoint cannot do is to assign records in CRM.

Traditionally within plug-ins, you’ll use the organization service because you can easily retrieve the service as it’s being passed into the plug-in execution context.  However within web resources such as *JScript* and *Silverlight* applications, what should you use and when?  The Dynamics CRM SDK lists the following:

CRUD Operations: REST

Associate and Disassociate records: REST

Assign Records: SOAP

Retrieve Metadata: SOAP

Execute Messages: SOAP

**Difference between retrieve and retrieve multiple?**

Retrieve: used to retrieve single entity instance using the specified ID.

Retrieve Multiple: used to retrieve a collection of entities instance based on the specified query criteria.

**Can we rename parent business unit?**

Yes we can rename it and it is located in settingsàadministrationàbusiness units.

The parent business unit will be creating automatically when user creates an organization in that name the parent business unit also created.

And we can rename that as mentioned above.

And we can create different business units, and assign them for different users.

**Can a lead have multiple contacts?**

No as per in OOB we can’t have multiple contacts for a lead, but by creating custom N:N relationship we can have multiple contacts in a lead.

**What is the use of PDB files?**

They don’t impact the performance of the application. They offer very useful information when exceptions occur.

1. You should *also* test and debug your application (before you release it) using the "Release" build. That's because turning optimizations on (they are disabled by default under the "Debug" configuration) can sometimes cause subtle bugs to appear that you wouldn't otherwise catch. When you're doing this debugging, you'll want the PDB symbols.

**Object Pooling:**

Object Pooling is something that tries to keep a pool of objects in memory to be re-used later and hence it will reduce the load of object creation to a great extent. This article will try to explain this in detail. The example is for an Employee object, but you can make it general by using Object base class.

**What does it mean?**

Object Pool is nothing but a container of objects that are ready for use. Whenever there is a request for a new object, the pool manager will take the request and it will be served by allocating an object from the pool.

**What is Application Poll?**

Concept of Application pool has from IIS 6.0 .   
Application pools are used to separate sets of IIS worker processes that share the same configuration and application boundaries. Application pools used to **isolate**our web application for better security, reliability, and availability and performance and keep running with out impacting each other . The worker process serves as the process boundary that separates each application pool so that when one worker process or application is having an issue or recycles, other applications or worker processes are not affected.   
One Application Pool can have multiple worker process Also.   
  
Main Point to Remember:   
1. Isolation of Different Web Application   
2. Individual worker process for different web application   
3. More reliably web application   
4. Better Performance

**Steps To Create Application Pool**

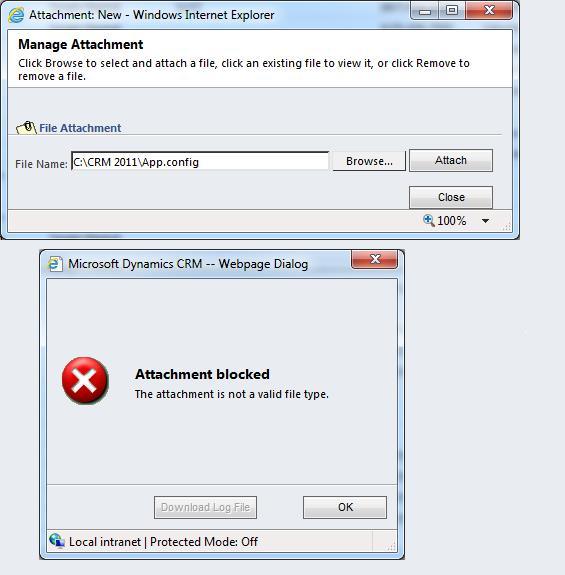
1. Open IIS Manager. For information about opening IIS Manager, see [Open IIS Manager (IIS 7)](http://technet.microsoft.com/en-us/library/cc770472(v=ws.10).aspx).
2. In the **Connections** pane, expand the server node and click **Application Pools**.
3. On the **Application Pools** page, in the **Actions** pane, click **Add Application Pool**.
4. On the **Add Application Pool** dialog box, type a friendly name for the application pool in the **Name** box.
5. From the **.NET Framework version** list, select the version of the .NET Framework required by your managed applications, modules, and handlers. Or select **No Managed Code** if the applications that you run in this application pool do not require the .NET Framework.
6. From the **Managed pipeline mode** list, select one of the following options:
   * **Integrated**, if you want to use the integrated IIS and ASP.NET request- processing pipeline.
   * **Classic**, if you want to use IIS and ASP.NET request-processing modes separately. In classic mode, managed code is processed by using Aspnet\_isapi.dll instead of the IIS 7 integrated pipeline.
7. Select **Start application pool immediately** to start the application pool whenever the WWW service is started. By default, this is selected.
8. Click **OK**.

**How to solve the error rsProcessingAborted while running custom SSRS report?**

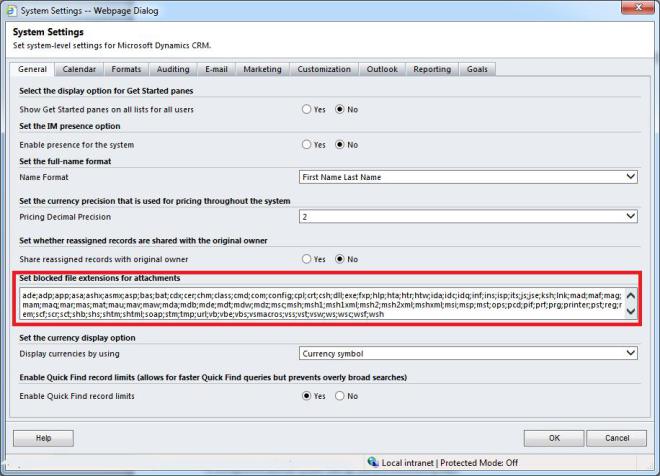
MS CRM 2011 system where Out of Box reports were working fine however custom reports were giving error (**rsProcessingAborted**). If MS CRM 2011 is installed on a separate server and   
SQL is on a different server and you are getting the same error then this post can be helpful for you.   
  
 You need to follow the steps below/  
  
1) SSRS connector is missing or not installed. The SSRS Connector needs to be installed on the SQL Server system. The installer for SSRS Connector can be found under MS CRM installation media. Installing the SSRS connector requires MSSQL service to restart. This should solve 90% of the problems as this is one of the most common step that may be missed out in a CRM installation. To see if SSRS connector is already installed or not please go to c:\program files\SSRS Connector  if this folder is already present then SSRS connector is already installed. I will advice you to repair it even if it is installed.  
  
2) If the above does not fix the problem then it can be a Kerberos issue. A service principal name (SPN) is the name by which a Kerberos client uniquely identifies an instance of a service for a given Kerberos target computer. It is very possible that CRM Application pool user (which in this case will be a domain user) is unable to negotiate with SSRS. For fixing this run the following command from the command prompt from the SQL Server system.  
  
setspn -a HTTP/   
setspn -a HTTP/   
  
3) Make sure that SSRS user is added to PrivUserGroup.

**You need to block file extensions on Microsoft Dynamics CRM 2011 attachments. Where do you make this change?**

In this post I am discussing about ‘Manage Attachment file types in CRM 2011’  
Users can attach any file to any record in Dynamics CRM 2011, except that file type is blocked in CRM 2011, when you try to attach a file, if that file type is blocked in CRM 2011, it gives an exception message “The attachment is not a valid file type”.  
In the below example I am trying to attach an app.config file which is actually blocked in CRM 2011.

[](http://msdynamicscrmblog.files.wordpress.com/2013/06/attachmentblocked1.jpg)

If you are the system administrator, navigate to Settings –> Administration and click onSystem Settings. You can set the file types to block in the General tab under ‘Set blocked file extensions for attachments’ shown below.

[](http://msdynamicscrmblog.files.wordpress.com/2013/06/attachmentblocked2.jpg)

**Does MS Dynamics CRM 4.0 works with SQL Server 2000**?

**Which interface you have to implement in Plugin**?

**Which Method is there in Plugin?**

**Can we create service using sdk and sdktypeproxy dll?**

**Purpose of Discovery Service?**

**Explain Dynamic Entity?**

**Different Modules in MS Dynamics CRM and Each Module flow?**

**Expert:**

How to develop custom WF?

Explain WCF and WPF?

Difference between WCF and Webservice?

a) **What is Web Service?**

Web Service is an application that is designed to interact directly with other applications over the internet. In simple sense, Web Services are means for interacting with objects over the Internet. The Web serivce consumers are able to invoke method calls on remote objects by using SOAP and HTTP over the Web. WebService is language independent and Web Services communicate by using standard web protocols and data formats, such as HTTP, XML and SOAP.

**What is WCF (windows communication foundation) Service?**

Windows Communication Foundation (Code named Indigo) is a programming platform and runtime system for building, configuring and deploying network-distributed services. It is the latest service oriented technology; Interoperability is the fundamental characteristics of WCF. It is unified programming model provided in .Net Framework 3.0. WCF is a combined feature of Web Service, Remoting, MSMQ and COM+. WCF provides a common platform for all .NET communication.

**Difference between WCF and Web service**

Web service is a part of WCF. WCF offers much more flexibility and portability to develop a service when comparing to web service. Still we are having more advantages over Web service; following table provides detailed difference between them.

|  |  |  |
| --- | --- | --- |
| **Features** | **Web Service** | **WCF** |
| Hosting | It can be hosted in IIS | It can be hosted in IIS, windows activation service, Self-hosting, Windows service |
| Programming | [WebService] attribute has to be added to the class | [ServiceContract] attribute has to be added to the class |
| Model | [WebMethod] attribute represents the method exposed to client | [OperationContract] attribute represents the method exposed to client |
| Operation | One-way, Request- Response are the different operations supported in web service | One-Way, Request-Response, Duplex are different type of operations supported in WCF |
| XML | System.Xml.serialization name space is used for serialization | System.Runtime.Serialization namespace is used for serialization |
| Encoding | XML 1.0, MTOM(Message Transmission Optimization Mechanism), DIME, Custom | XML 1.0, MTOM, Binary, Custom |
| Transports | Can be accessed through HTTP, TCP, Custom | Can be accessed through HTTP, TCP, Named pipes, MSMQ,P2P, Custom |
| Protocols | Security | Security, Reliable messaging, Transactions |

How to get parameter for Custom WF from UI of the workflow?

**How to debug the JS?**

a)  With in the Jscript function we should include the miscellaneous line: **debugger;** This causes a breakpoint in your code that can be picked up in your code as long as you go in IE to Tools - Internet Options - Advanced and**uncheck** the two "Disable script debugging" check boxes that are checked by default in IE.

Regarding Plug In ask what if you want to right some logic on deletion of record referring to deletion for record what he will do like custom entity?

**What is the difference in Using CRM Web Service and SDK DLL?**

a) Either you create a reference to the CRM Web service in your Visual Studio project and the proxy classes are generated.

Or you can reference microsoft.crm.sdk.dll and microsoft.crm.sdktypeproxy.dll that exists&nbsp;in the CRM SDK.

You will soon notice that if you create a Request object, or maybe a BusinessEntity, DynamicEntity they are not compatible with eachother, and furthermore they might not even have the same methods and properties.

My recommendation is to use the CRM SDK only and never create a Web reference from within Visual Studio. The CRM SDK objects have more friendly properties and methods.

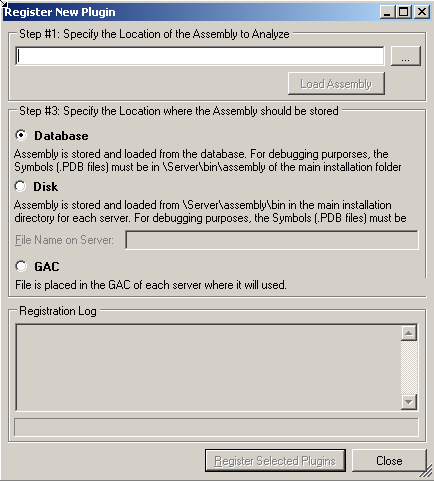
Please read these articles:

<http://msdn.microsoft.com/en-us/library/ee704593.aspx>

<http://www.shanmcarthur.net/crm/developers-corner/using-crm-sdk-instead-of-web-reference>

**What is the benefit of using SDK DLL over web service?**

**Different way of registering plugin (database, file and GAC)?**



**1. disk**

in this case the file must be under server\bin\assembly folder

**2. database**

CRM upload the file to database. this plug-in option is the faster from all the three options

**3. GAC**

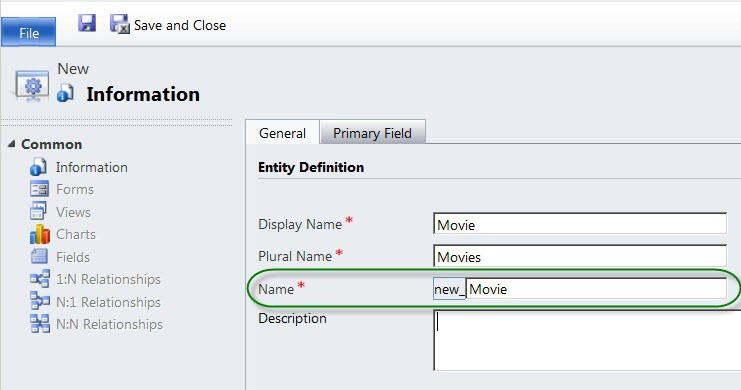
file must be under c:\windows\assembly

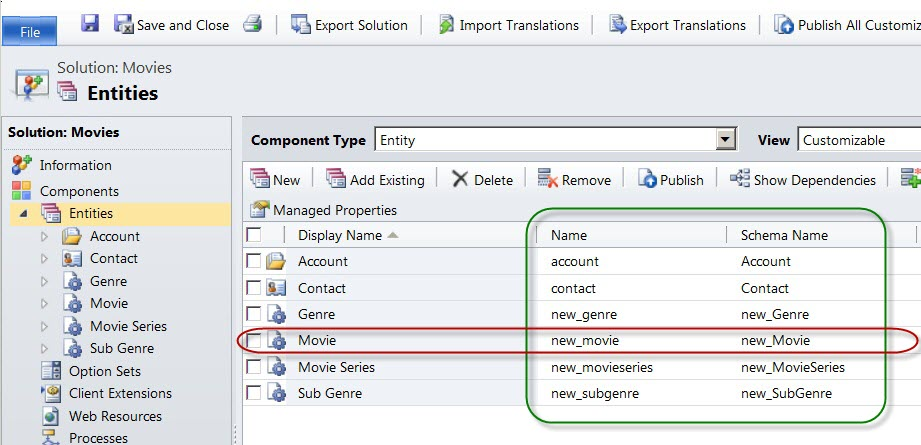
**Difference between entity and Dynamic Entity**?

n Microsoft Dynamics CRM 2011 schema names have a special meaning. This is because Microsoft Dynamics CRM 2011 started the wide use of early bound programming model. CRM 4.0 also had the concept of early bound programming model through the use of “wsdl”. CRM 2011 has taken this to the next level. We can generate early bound classes for all the entities and use them in our custom development.

When we create an Entity, what is the difference between Entity Schema Name and Entity Logical Name?

When we are creating an entity, at that time, the Name we give is its schema name. When we save this entity the schema name also becomes the logical name. So entities have two names; logical name and schema name. The values are same but with one difference, the casing.

For example, if I create an entity with the Name “new\_Movies”. Here “new\_” is the customisation prefix set to maintain uniqueness in naming of components. When I save this entity, the name “new\_Movies” will be set as schema name and “new\_movies” will be set as logical name.Schema Name and Logical Name for "Movies" Entity



Where do we use the Schema Name and when do we use the Logical Name of an Entity

In CRM 2011 early bound programming model, we always use schema names. We also use schema names in “Rest/oData” programming. Logical names are used in CRM 2011 late bound programming model. In CRM 2011 JavaScript web resources, we use logical names.

So in this blog we saw that schema names and logical names are same except the casing but they have different usage. In plugins and custom workflow activities, if we use early bound programming model, then we have to use schema names. In plugins and custom workflow activities, if we use late bound programming model, then we have to use logical names.

**Field Level Security. People will say using JS and all and then u can ask @ what will happen to views?**

**Difference between Discovery and Metadata Service?**

**DB Structure for MS Dynamics CRM 4.0. What information MSCRM\_Config DB will have?**

**How do you move an organization from one server to other server. What all are the steps u will follow?**

**How do you build the custom report? How u will you upload in MS Dynamics CRM 4.0?**

**Team Concept in MS Dynamics CRM 4.0. Where do you use it?**

**Site Map and ISV Config difference and use in MS Dynamics CRM 4.0?**

**How many by default reports are there in mscrm? How many is of case?**

**Memory of SQL Express Edition?**

**Can workflows, CRM Webservice can be hosted on another system?**

**Difference between plugins & workflows?**

**Email to case creation condition?**

**Features of MS Dynamics CRM 2011 as compared to MSCRM 4.0?**

**In Visual studio 2005 and VS 2008 what is the difference while creating plugins /workflows.**

**What add-ons need to be added while Asp.Net integration with MS Dynamics CRM 4.0?**

**Indexing in SQL Server 2005?**

**What setting has to be done to plugin run in offline mode?**

**Which parameter is passed in Execute Method?**

IServiceProvoder serviceprovider

**How to update Primary Contact in Account using Plugin. Whether single Query Expression is required or 2 is required?**

**Difference between abstract class & Interface?**

Abstract class contains abstract methods as well as concrete methods,whereas Interface containes only abstract methods.

**Difference Between value type & reference type?**

Value types are stored in stack memory,whereas Reference types are stored in Heap memory.

**Class** is a Reference type & **Structure** is a Value type.

**Explain boxing & unboxing?**

Converting a value type into reference type is known as Boxing whereas converting a reference type into value type is known as Unboxing

Ex: int x=2;

object obj=x;//Boxing

int y=(int)obj;//Unboxing

**Retrieve Contact’s information using Account entity?**

**Types of Joins?**

**How to pass parameters to Report?**

Using Automatic Filtering

**Can we update Display Name of Entity through Metadata Service?**

**Types of Authentication in MS Dynamics CRM 4.0?**

**How to give windows Authentication in Asp.Net application?**

a)By setting Authentication mode=”Windows” in web.config file.

**Concept of Multitenancy?**

**Deployment of pluign types?**

Database,File/Disc,GAC

**Benefit of deploying plugin in Database?**

**Which type of deployment u have used of MS Dynamics CRM 4.0?**

**Have u used Crm Webservice in Asp.Net application?**

a)Yes

**Important URLs:**

[**http://blog.cloudshare.com/2012/10/08/step-by-step-guide-to-installing-microsoft-dynamics-crm-2011-server/**](http://blog.cloudshare.com/2012/10/08/step-by-step-guide-to-installing-microsoft-dynamics-crm-2011-server/)

[**http://msdn.microsoft.com/en-us/library/gg695782.aspx**](http://msdn.microsoft.com/en-us/library/gg695782.aspx)

<http://dynamicscrmguru.wordpress.com/tag/microsoft-crm-interview-questions/>

[Compiling the Plugin Registration Tool ready for use with CRM 2011](http://crmconsultancy.wordpress.com/2010/10/25/plugins-in-crm-2011/)  
[DevelopingHYPERLINK "http://crmconsultancy.wordpress.com/2010/10/25/plugins-in-crm-2011/" and Registering a new CRM 2011 Plugin](http://crmconsultancy.wordpress.com/2010/10/25/plugins-in-crm-2011/)  
[Using LINQ in CRM 2011 Plugins](http://crmconsultancy.wordpress.com/2011/06/06/using-linq-in-crm-2011-plugins)

<http://crmvoyager.net/2011/01/14/deploying-referenced-assemblies-in-crm-2011-plugins-and-workflows/>

<http://msdn.microsoft.com/en-us/library/hh127042.aspx>