

Concurrent Session

Session code: CRM13

# Microsoft Dynamics CRM 3.0: Extensibility And Customization

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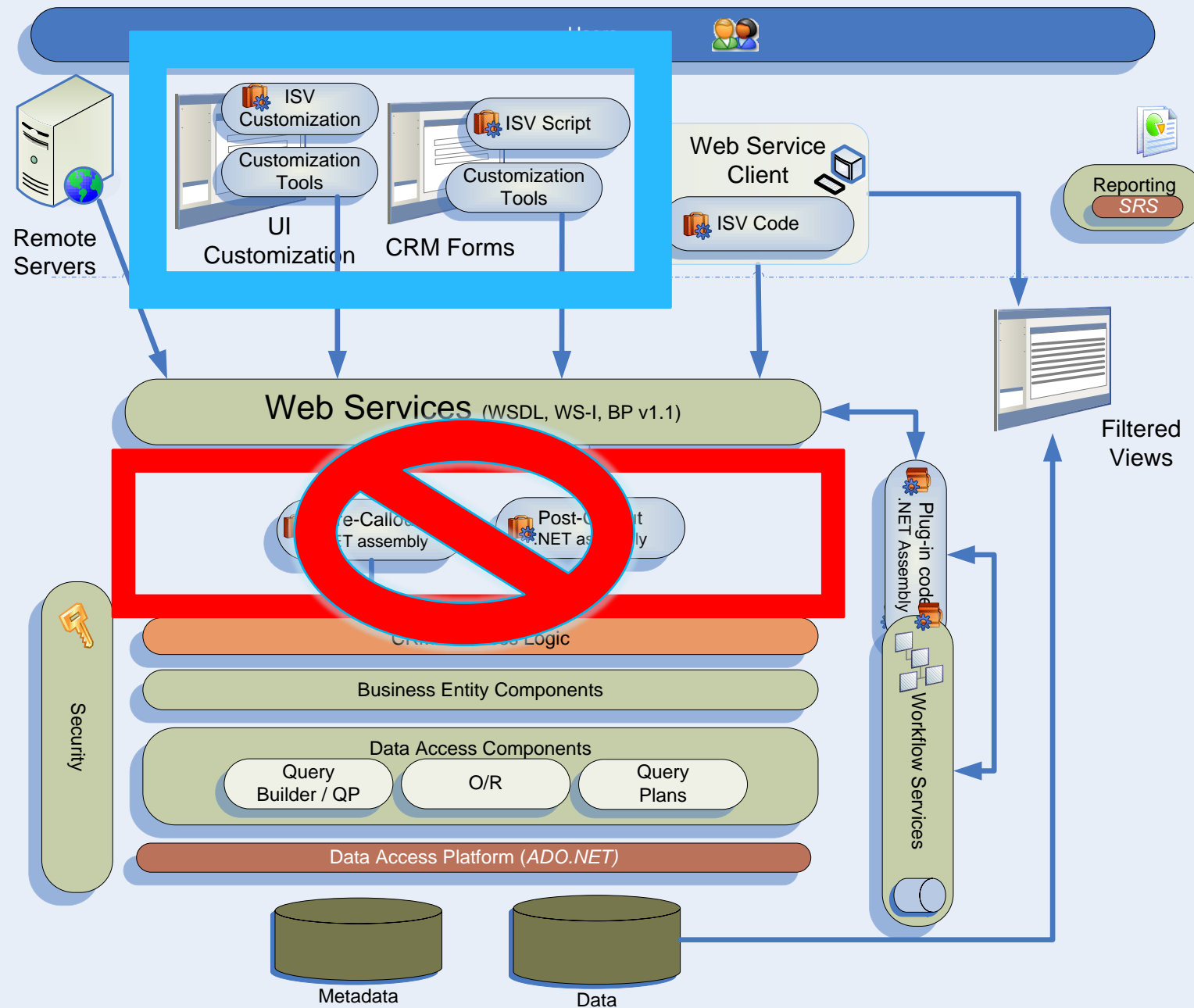
# Expectation Setting

- This session has been designed to show you some quick and easy ways to help improve usability and solve some common questions and comments from customers
- Code Samples will be made available at the end
- This will NOT be:
  - An in-depth review of SDK Materials
  - Utilizing Visual Studio for extending CRM
  - Showing you all of the customizations options for Microsoft CRM

# Customization Spectrum

	Simple	Moderate	Complex
Settings	User	Organization	Security
Data	Attributes	Entities, Relationships	Cross- Database
Processes	Workflow	.NET Assembly	SDK, Callouts
Experience	Forms, Views	Navigation, Reports	Script, Controls

# Extensibility Model



ISV Business Logic

Server Machine

Microsoft CRM  
Extensibility Model



# Configuration Examples

- M:M Relationships
- The “Pesky” Name Field
- Birthdays by Month
- Creating a Master Case with Sub Cases
- Web Service Calls
  - Address Validation
  - Price List
- Calculated Fields
- The Credit Hold Alert
- Renaming Modules
- Displaying non-CRM data

# Server Side Customization

- Pre/Post-Callouts
  - Advantages
    - Work with integration
    - Mobile Integration
    - Bulk Edits
  - Disadvantages
    - Require Code Writing
    - Lack of Immediate End User Feedback
- Workflow
  - Advantages
    - Allows for business requirements to be automated
  - Disadvantages
    - Lack of Immediate End User Feedback
- Fully programmable Webservice based SDK

# Client Side Customizations

- UI Configuration Tool
  - Simple to use
  - iFrames
- JScript
  - Advantages
    - Easy to write
    - Immediate Feedback to end users
  - Disadvantages
    - Integration does not utilize logic
    - Mobile Integration
    - Bulk Edits
- Unsupported Customizations include:
  - DHTML Edits such as hiding Left Navigation items and hiding Fields, Sections and Tabs
    - Direct Database Writes, modification of ASPX Pages and directly calling DLLs

demo

# Configuration And Customization



# Customization Examples

## M:M Relationships

Business issue	Customer has an opportunity that is funded by one government agency, managed by another and contracted by a third. Since this changes on each opportunity, this needs to be user defined easily
Problem	Microsoft CRM has built in tools for 1:M and M:1 relationships, but not a M:M relationship like you will find in areas like Competitors
Solution	Build a “linking” entity and link it to the Account Entity and the Opportunity Entity

## “Pesky” Name Field

Business issue	Whenever a new entity is created, you are required to have at least one field, which is by default called “Name” it is also used for lookups, etc.
Solution	By using some Jscript attached to OnLoad, OnSave or OnChange, have the name field updated automatically by the system to make searches relevant to end users

# Customization Examples

## Birth Date by Month

Business issue	Customer would like to be able to find all birth dates that fall in a certain month to execute a campaign against it based upon month
Problem	Microsoft CRM has a birthday field, but does not have in the query engine the ability to select certain months. (I.e., All Contacts Born in May)
Solution	Create a field called Birthday Month and add the months to the field in a pick list in order. Attach an OnChange event to the Birth Day Field to Populate

## Master Cases

Business issue	Customer has a primary case that spawns “sub cases.” Some customer scenarios for this include things like power outages, system wide trouble tickets, etc.
Problem	Customers would often like to create a “Parent” case much like the “Parent Account” lookup that exists on the Account Entity
Solution	Using ISV.Config and a little Jscript, you can copy the case and relate back to a master case. This will then allow you to use Advanced Find to search for all cases with the same case number in the Master Case Number Field

# Customization Examples

## Address Validation

Business issue	Customer would like to make sure that the address located in the system are valid and correct. For Geographic Analysis of the data in MapPoint, location of the address in latitude and longitude should also be updated
Solution	Using Microsoft CRM's powerful ability to call external web services. This would include ones such as MapPoint and Yahoo Maps. This data is returned in XML, which can be parsed in real time and placed into fields in CRM

## Advanced Field Mappings

Business issue	Customer would like to have fields mapped between entities regardless of where the entities were created. And if the values change on one entity, have that information changed on the other entity
Problem	Microsoft CRM has the ability to map fields, but that is only active when a record is created from its parent. (I.e., you are on the Account Form and click New Opportunity.)
Solution	Using Microsoft CRM's ability to call a Web Service, we call the Microsoft CRM Web Service and reference the first entity to retrieve data in XML format, parse and fill in on the current form

# Customization Examples

## Calculated Fields

Business issue	<p>Customer would like to have the system perform calculations based upon fields in the system</p> <ul style="list-style-type: none"><li>• Total Contract Value divided by Contract Term equals Monthly Contract Value</li><li>• Number of days left in a contract</li></ul>
Solution	<p>Microsoft CRM allows for all standard Jscript Math functions. Create a Calculated Field, Disable on Form, then add an OnChange Event to the fields that the user inputs data into</p>

## Credit Hold Alert

Business issue	<p>Customer's sales people often place orders for customers on credit hold without the ability to see if the customer is on credit hold quickly</p>
Solution	<p>Attach an OnLoad Event that allows you to pop an alert window up every time an account record is opened up to allow for everyone to quickly see that the customer is on credit hold</p>



# Customization Examples

## Displaying non-CRM data

Business issue	A Legal firm wants to store a large amount of documents in MSCRM, and have the ability to do a full text search.
Problem	MSCRM stores documents as BOLBS and does not provide full text search.
Solution	Use iFrames to leverage sharepoint's document management engine.

## Renaming Module

Business issue	An organization uses MSCRM to track projects, and refers to the Sales Module as "Programs"
Solution	Using Sitemap, rename the module Area to "Programs"

# Customization Examples

## **Send notification to the manager when a \$1M opportunity is created**

Business issue	The sales manager needs to be notified once a new opportunity has been created with estimated revenue of \$1M+
Solution	Use MSCRM Workflow utility to send an email to the sales rep's manager once a new opportunity is created with the correct revenue

# Code Samples

- Links to all code samples provided here will be available today @ <http://blogs.msdn.com/MidAtlanticCRM> for your use and downloading
- All samples are provided “AS-IS”

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A black and white photograph of two men in a server room. The man on the left is younger, with dark hair, wearing a light-colored shirt and a patterned tie. The man on the right is older, with white hair, wearing a light-colored shirt and a dark tie. They are both looking towards the camera. The background is filled with server racks and equipment, creating a sense of a high-tech environment.

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