SDK

SDK

- What is the SDK
- Components of the SDK
- Plugins
- Custom Workflow Activities

What is the SDK?

- What is the SDK
  - Documentation
  - Sample Code
- Where is it?
  - MSDN Online Version
  - Downloadable Version
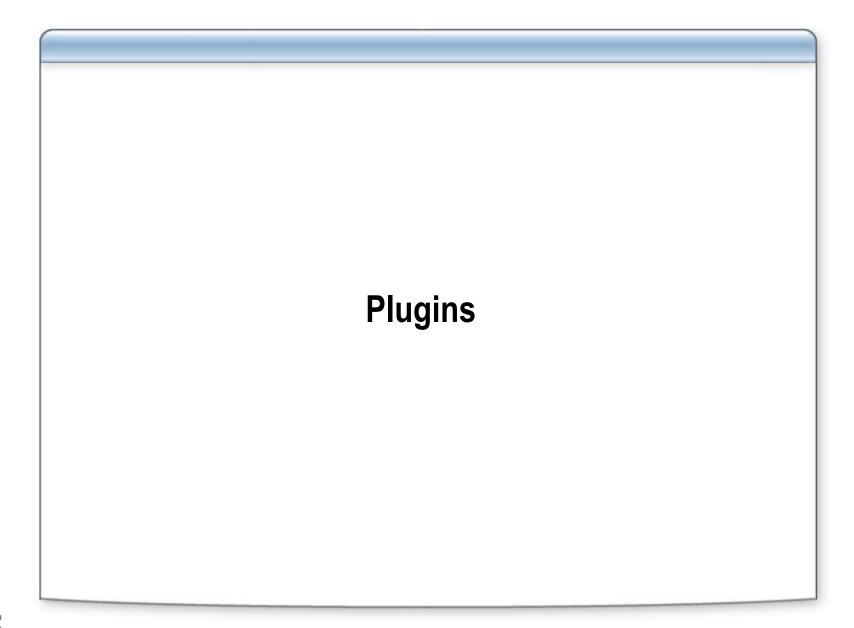   - http://www.microsoft.com/downloads/en/details.aspx?FamilyID=420f0f05-c226-4194-b7e1-f23ceaa83b69

Main Components

- **Server Side**
  - Plugins
  - Workflow .NET Assemblies/Custom Workflow Activities
- **Client Side**
  - Web Resources
    - Jscript Libraries
    - Silverlight Applications
    - Images (JPG, PNG, GIF, ICO)
    - Text based pages (HTML, XML, XSL, CSS)
  - IFRAME
  - Site Map
  - Ribbon
- **External Custom Applications (via CRM web services)**

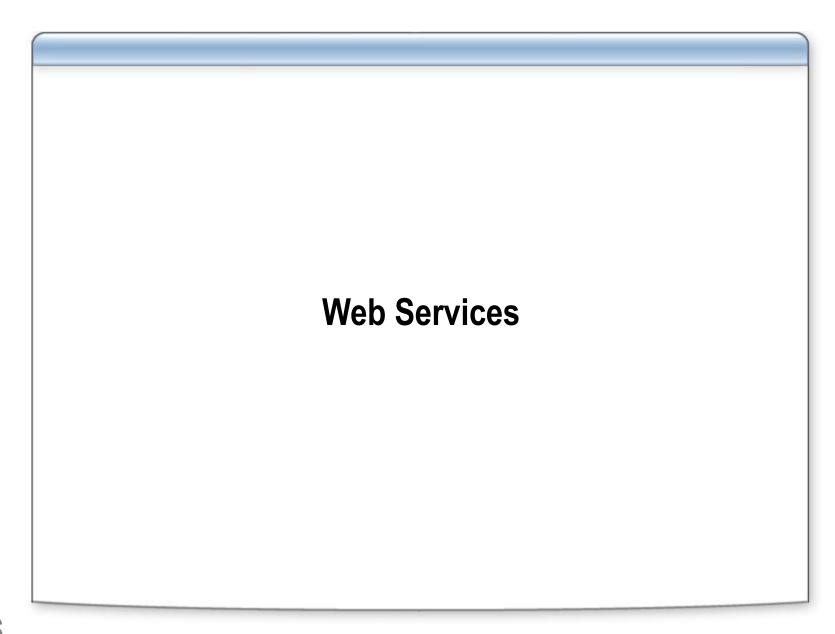# Plugins

Plugins

- Modify or extend the CRM Business Logic
- Pre and Post Events
  - Create
  - Update
  - Delete
  - Assign
- Examples
  - Randomly generate an Account Number
  - Automatically fire a Workflow rule when a certain field is updated.

Plugin Deployment

- Plugin Registration Tool
- Ability to deploy in isolation mode
- Plugin storage location
  - Database
  - Disk
  - Global Assembly Cache
- Register New Step
  - Message
  - Primary Entity
  - Event Pipeline
  - Execution Mode
  - Deployment

Custom Workflow Activities

- .Net assembly
- Can be a simple task, or complex logic
- Ability to call a web service through a Workflow Rule
- Assembly contains logic that cannot be completed through standard rule
- Can be used with workflows or dialogs
- Examples:
  - Send email from workflow as another user
  - Send email that contains URL to specific entity
  - Create an Incident from an Email
- On-premises only

Web Services

Web Services

- Two global installation-level Web services

  - IDiscoveryService Web Service

    - Returns a list of organizations that the specified user belongs

  - IOrganizationService Web Service

    - Used to access Microsoft CRM data and metadata

- REST (Representational State Transfer) endpoint

  - Uses Windows Communication Framework oData

Service Endpoints

- **SOAP 2007**
  - [org root url]/mscrmservices/2007/crmservice.asmx
- **REST (OData)**
  - [org root url]/xrmservices/2011/organizationdata.svc
- **Discovery**
  - [org root url]/xrmservices/2011/discovery.svc
- **Organization**
  - [org root url]/xrmservices/2011/organization.svc

Upgrades

Upgrades

- Plugins and Workflow .Net Assemblies will upgrade
  - Will not be able to take advantage of new functionality
- Supported Jscript will upgrade
- Custom applications may need additional configuration

Unsupported Customizations

- Direct SQL updates
- Modifications to default CRM files
- Undocumented jscript

- NOTE: There are many public blogs that contain unsupported customizations.

Summary

- What is the SDK
- Components of the SDK
- Callouts and Plugins
- Workflow .Net Assemblies
- JSCRIPT
- IFRAMES