Esri Maps for Dynamics CRM
What is Esri Maps for Dynamics CRM?

Esri Maps for Dynamics CRM, powered by ArcGIS, is a solution that brings mapping capabilities into Microsoft Dynamics CRM. With Esri Maps for Dynamics CRM, you can easily create a geospatial view of your organization's data by creating an interactive map that includes data from Microsoft Dynamics CRM and ArcGIS services—all without leaving the Microsoft Dynamics CRM environment.

After importing the Esri Maps for Dynamics CRM solution, you will see Esri Maps in the Workplace pane of Microsoft Dynamics CRM. Use this to interact with Esri Maps for Dynamics CRM.
Esri Maps for Dynamics CRM and ArcGIS

With Esri Maps for Dynamics CRM, you can easily create maps that combine your Microsoft Dynamics CRM data with published geographic content from ArcGIS. You can also share the maps you create in Esri Maps for Dynamics CRM with others within and outside of your organization using ArcGIS. ArcGIS provides an online infrastructure for making maps and geographic information available throughout an organization, across a community, and openly on the web.

Esri Maps for Dynamics CRM works directly with your organization's ArcGIS subscription to allow you to access geographic content to enhance your business data. Your subscription includes a number of service credits, which are the currency of ArcGIS and are used in exchange for most of the ArcGIS services your organization uses. The number of service credits required depends on the type of service you are using.

With Esri Maps for Dynamics CRM, dashboard designers can easily add data from ArcGIS to a map to help dashboard consumers visualize data in new ways. Once created in Esri Maps for Dynamics CRM, maps and layers can be published to ArcGIS for sharing with others.
About ArcGIS service credits

Esri Maps for Dynamics CRM works directly with your organization's ArcGIS subscription to give you access to geographic content to enhance your business data. Your subscription includes a number of service credits, which are the currency of ArcGIS and are used in exchange for most of the hosted services your organization uses.

The number of service credits required depends on the type of service you are using. Some services don't require any credits, while others can use a substantial amount of your organization's service credit account. Services such as hosted tiled map services, optimized route services, geocoding services, infographics, and geographic data enrichment can consume a large number of credits.
Install Esri Maps

System requirements

Esri Maps for Dynamics CRM requires an account that is part of an ArcGIS organization and access to Microsoft Dynamics CRM (2013 or 2015), either on premise or online.

See Microsoft Dynamics CRM web application requirements for operating system and software requirements.

Esri Maps for Dynamics CRM supports the following environments:

- Dynamics CRM 2013 (on premise)
- Dynamics CRM 2015 (on premise and online)

The latest version of Esri Maps for Dynamics CRM doesn't support CRM 2011. Please contact Esri Support if you require support of Dynamics CRM 2011.

Esri Maps for Dynamics CRM supports the following browsers:

- Internet Explorer 9, 10*
- Chrome (latest)
- Firefox (latest)
- Safari (Mac OS X 10.7 and 10.8)

*Internet Explorer 10 compatibility is limited to the desktop browser and doesn't extend to the touch-based version. Also, IE10 version 10.0.9200.16688 has known issues with OAuth 2.0. It is recommended that this version not be used when authenticating via OAuth 2.0.

**Note:** Users may need to configure the pop-up blocker on the browser to create an exception for Microsoft Dynamics CRM web pages.
Import the Esri Maps for Dynamics CRM solution

Install Esri Maps for Dynamics CRM by following the instructions in this topic. See the System Requirements for information on supported platforms and Internet browsers.

New Installation

Steps:

1. Download and save the setup file to your local computer.
2. Log in to Microsoft Dynamics CRM as an Administrator or other user that has the System Customizer role.
3. Browse to Settings > Solutions.
4. Click Import and click Browse on the Select Solution Package page of the Import wizard. Browse to the location where you saved the Esri Maps file and click Open. Click Next.

5. Click Next on the Solution Information page of the wizard.

6. Ensure the Activate any processes and enable any SDK message processing steps included in the solution is checked on the Import Options page of the wizard and click Next.
After the solution installs successfully, click **Close**.

**Upgrade an existing installation**

**Steps:**

1. Download the setup file to your local computer.
2. Log in to Microsoft Dynamics CRM as an Administrator or other user that has the System Customizer role.
3. Browse to **Settings > Solutions**.
4. Click **Import** and click **Browse** on the **Select Solution Package** page of the **Import** wizard. Browse to the location where you saved the Esri Maps file and click **Open**. Click **Next**.
5. Dynamics detects that this is an upgrade to an existing solution. Click **Next**.

6. The upgrade can be completed in one of two ways:

   - **Maintain customizations.** When this option is chosen, existing configuration settings pointing to Esri Maps for Dynamics CRM 1.0.1 customization files will be kept. However, choosing this option will break the Esri Maps solution and it should be avoided. If you choose to use this method, you will need to manually update the Esri Maps web root setting to match the screenshot on the **Configure Esri Maps** help page. All maps and workflows that were previously created will also be retained.

   - **Overwrite customizations.** When this option is chosen, configuration settings will be overwritten and updated to work with Esri Maps for Dynamics CRM 1.0.2. If your organization uses Portal for ArcGIS, you will need to update...
the ArcGIS connection setting after the upgrade completes. Maps and workflows previously created using Esri Maps will be kept during the upgrade. This is the recommended upgrade path.

Choose how previous customizations should be handled and click **Import**.

7. After the solution installs successfully, click **Close**.

**Note:** The warning message in the screenshot above is normal and expected during a successful Esri Maps upgrade.
Configure Esri Maps

There are several properties for the Esri Maps solution that can be configured to work within your Dynamics CRM environment. In most instances, the default configuration options will not need to be changed. If your organization uses Portal for ArcGIS or has certain security configurations (OAuth, IWA, or PKI), you may need to modify configuration options. The option to enter into Esri Maps Configuration will only be available to users with Administrator or System Customizer roles.

<table>
<thead>
<tr>
<th>Property</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ArcGIS connection</td>
<td>By default, this points to ArcGIS Online and allows you to connect to your ArcGIS organizational account. If your organization uses Portal for ArcGIS, enter the URL for your portal here.</td>
</tr>
<tr>
<td>OAuth application ID</td>
<td></td>
</tr>
<tr>
<td>Esri Maps web root</td>
<td>Don't change this setting prior to contacting your Esri account manager and requesting the Esri Maps web root files. This setting is typically only changed in environments that do not have external web access. Making an incorrect change to this setting will cause Esri Maps for Dynamics CRM to stop working for all users.</td>
</tr>
<tr>
<td>Esri Maps proxy</td>
<td>The proxy is primarily used with older browsers that don't support cross-origin resource sharing (CORS). Normally it is not necessary to change this setting. As with the Esri Maps web root setting, don't change this value prior to contacting your Esri account manager. You will be given the correct value for this field at that time.</td>
</tr>
</tbody>
</table>
Manage user roles

In order for any user to access Esri Maps for Dynamics CRM, they must be assigned the Esri Maps User security role. The security role must be assigned by a user with the appropriate privileges such as the System Administrator or System Customizer role. The Esri Maps User role will only be available after the Esri Maps for Dynamics CRM solution has been installed.

Steps:

   
   Note: The Users feature for CRM 2011 and CRM 2013 can be found under Settings > Administration.

2. Click the check box next to the users you want to assign to the role.

3. Click Manage Roles.

4. Click the check box next to Esri Maps User.

5. Click OK.
Spatially enable your data

**Esri Maps Locate workflow**

Esri Maps for Dynamics CRM provides the Esri Maps Locate workflow to find the geographic coordinates of addresses stored in your customer records. Geocoding is the process of taking data, such as an address, and converting it to a coordinate that corresponds to a location in a coordinate system. The geocoding process consumes service credits. In addition to address geocoding, Esri Maps provides place-name lookup functionality that allows you to use places such as US cities, ZIP Codes, and world countries and match your data to those locations. Place name lookups also spatially enable your data, but they do not consume service credits.

Locate workflows run in the background and watch for certain events. For example, you could set one up to watch for new records to be added to Dynamics CRM and automatically geocode them. This workflow could also be set up to watch for changes to the address field and automatically re-geocode customers when their addresses are changed. Locate workflows are very powerful and can handle many actions automatically. You can also configure workflows to run manually. You can set up a one-time manual Locate workflow to geocode all of your records in CRM after installing the Esri Maps solution for the first time.

Address geocoding can be performed on records on-the-fly at design time, but doing so consumes geocoding credits each time the map chart is loaded (in both design mode and run-time mode). The Locate workflow allows you to permanently geoenable your records by storing the latitude and longitude coordinates with your records. When you map your records using latitude and longitude in the future, you are saved from being charged for address geocoding each time the map chart containing those records is loaded.

**Note:** The Locate workflow does not support configurations where Esri Maps connects to Portal for ArcGIS using IWA or PKI authentication.
To create a new Locate workflow, use the following steps:

Steps:

1. In the navigation pane, click Esri Maps and select Workflow Gallery.
2. Click the Create new locate workflow button within the Workflow Gallery.
3. Choose the record type to be geocoded. Any entity (including custom entities) with a location component can be used. Commonly geocoded entity types are Accounts, Competitors, Contacts, and Leads. Click Next.
4. Select the desired location type and click Next.
5. Select the columns that contain location information for your records and click Next.
6. Give the new workflow a name and description that will help you remember what the workflow was created to do, and select which columns will store the geocoded location information. If you choose not to store location into columns, you will not be spatially enabling your data and you won’t see your records on a map. If you are using a custom entity type, you may need to create fields to store latitude and longitude values in your entity prior to running the Locate workflow.
To proceed without enriching your data, verify the Enrich data check box is unchecked and select Create workflow.

To enrich your records with new demographic, lifestyle, policy, or landscape information, check the Enrich data check box and click Next. Choose one or more data collections you want to browse and click Next.

Select the variables you want to add to your records by checking the check box next to the names. You must also choose a column within your entity that will store each variable. You may need to create fields to store data enrichment values in your entity prior to running the Locate workflow. Click the drop-down list under the Column heading, choose where each variable will be stored, and click Create workflow.
7. The Process Information page allows you to add more steps to the workflow to perform pre and post-processing to extend your workflow. For more information on what can be done in the workflow, see the Microsoft page on how to Create or edit a workflow. If you would like to be able to run this process manually, check the check box next to As an on-demand process. Finally, click the Activate button to enable this workflow and start monitoring for changes in the background (this workflow will only apply to future changes and will not be performed on existing records).

- After installing the Esri Maps solution, you can manually run a workflow to update all existing records with location information. To manually run a workflow that has been enabled as an on-demand process, use the navigation pane to browse to the entity type defined in the workflow (Accounts, Leads, etc.). Select the records to run the workflow upon, and click the Run Workflow button from the ribbon. Select the process you want to run and click OK. The process will run in the background and update the selected records.

To delete a Locate workflow, return to the Workflow Gallery by clicking on Esri Maps in the navigation pane and selecting Workflow Gallery. Hover the cursor over the workflow you want to delete until an X appears in the upper right corner. Click the X and click Yes to confirm you want to delete the workflow.
**Note:** A subscription to ArcGIS is required for geocoding addresses in Esri Maps for Dynamics CRM. See Service Credits Overview for more information on the ArcGIS platform and credit usage.
Delete the Esri Maps solution

Uninstall or delete Esri Maps for Dynamics CRM by following the instructions in this topic.

**Note:** You can not uninstall Esri Maps unless all Locate workflows are deleted first. To delete a Locate workflow, click Esri Maps in the navigation pane and click on Workflow Gallery. Hover the mouse over the workflow to be deleted and click the X that appears in the upper right corner.

Steps:

1. Log in to Microsoft Dynamics CRM as an Administrator or other user that has the System Customizer role.
2. Click on **Settings** in the navigation pane.
3. Expand the **Customization** section in the **Settings** pane and click **Solutions**.
4. Click the check box to the left of EsriMaps.
5. Click **Delete**.
6. Click **OK** on the **Uninstall Solution** page.