MyCRM

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eMap – Adding On-Demand Geocoding to a Custom Entity

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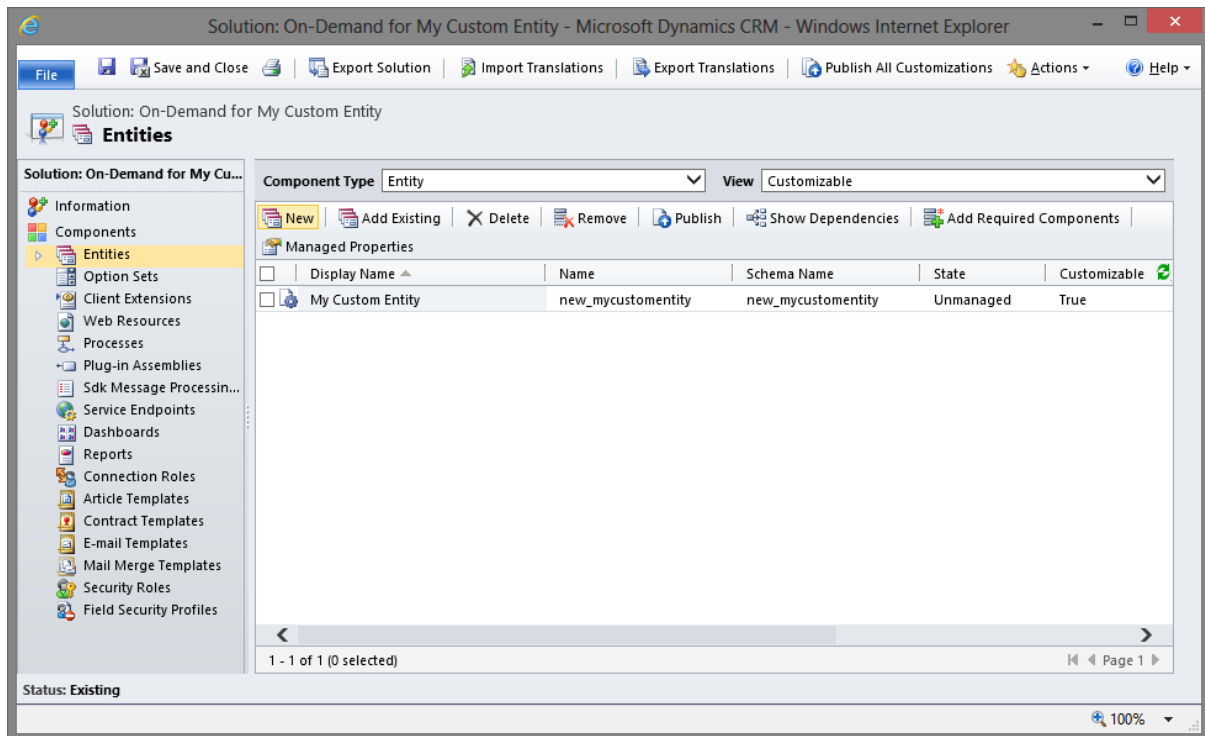# Step 1 – Export the entity that the On-Demand button is to be installed on

- Go to Settings -> Customizations -> Solutions
- Create a New solution, using something like the following:
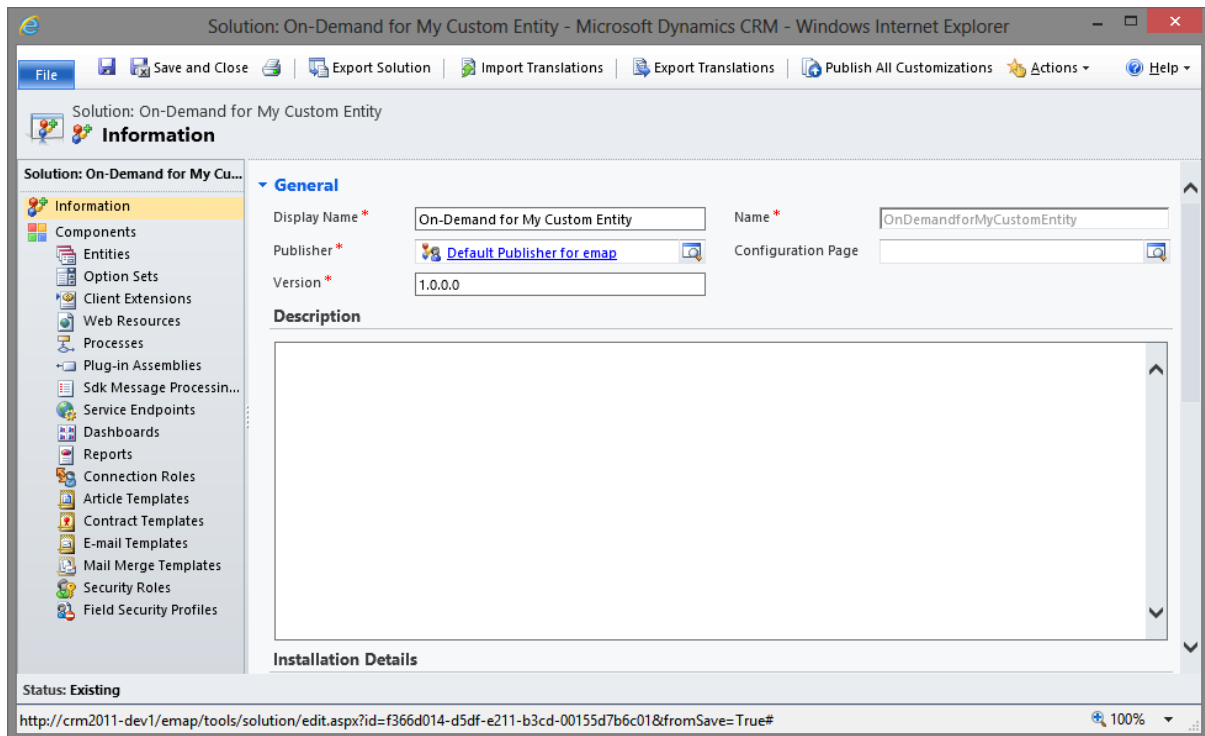
The solution name, publisher and version don't really matter for our purposes.

- Add the entity you wish to install your On-Demand button on (Components -> Add Existing -> Entity):

- Export the solution – click next, next, export leaving all options default.
- Save the solution zip file somewhere accessible.

Step 2 – Extract the solution contents

- Extract the resulting .zip file to a new folder. You should now have three xml files:
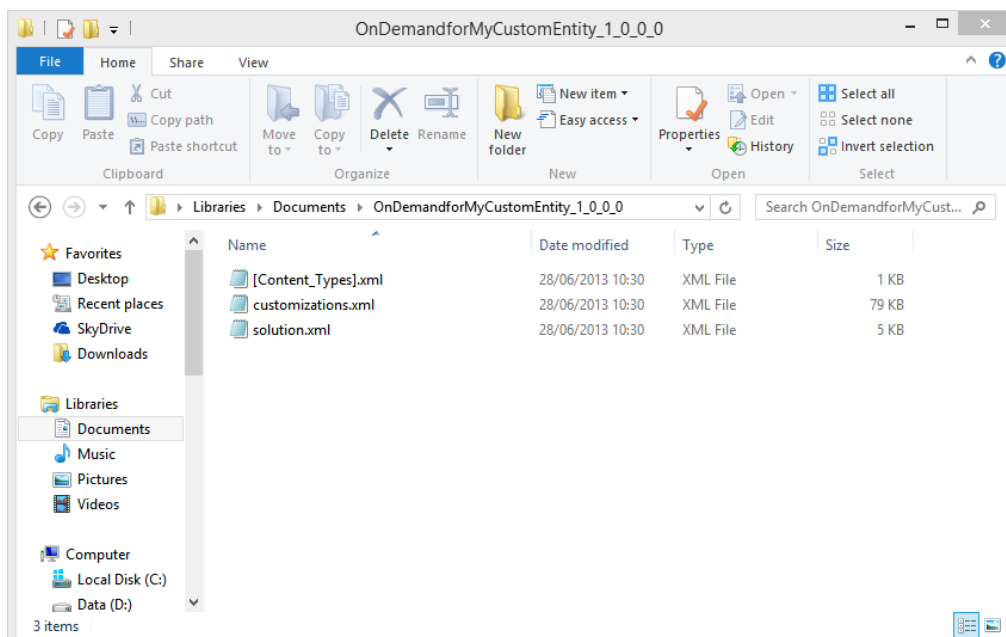
- Open **customizations.xml** in your favourite text editor.
- Because we only want to change the entity ribbon settings, we can delete the **EntityInfo, FormXml** and **SavedQueries** XML nodes. This means deleting everything inside and including the <EntityInfo>…</EntityInfo>, <FormXml>…</FormXml> and <SavedQueries>…</SavedQueries> tags.
- We can also clear out the EntityRelationships node, as we don't need to change anything there.
- Your **customizations.xml** file should now look something like the following:

```xml
<ImportExportXml xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <Entities>
    <Entity>
      <Name LocalizedName="My Custom Entity" OriginalName="My Custom Entity">new_mycustomentity</Name>
      <ObjectTypeCode>10002</ObjectTypeCode>
      <RibbonDiffXml>
        <CustomActions />
        <Templates>
          <RibbonTemplates Id="Mscrm.Templates"></RibbonTemplates>
        </Templates>
        <CommandDefinitions />
        <RuleDefinitions>
          <TabDisplayRules />
          <DisplayRules />
          <EnableRules />
        </RuleDefinitions>
        <LocLabels />
      </RibbonDiffXml>
    </Entity>
  </Entities>
  <Roles></Roles>
  <Workflows></Workflows>
  <FieldSecurityProfiles></FieldSecurityProfiles>
  <Templates />
  <EntityMaps />
  <OrganizationSettings />
  <optionsets />
  <Languages>
    <Language>1033</Language>
  </Languages>
</ImportExportXml>
```

Step 3 – Inserting and changing the On-Demand Ribbon XML

- Here is the XML required for the On-Demand Geocoding ribbon button:

```xml
<RibbonDiffXml>
  <CustomActions>
    <CustomAction
Id="myce.Mscrm.Form.#EntityName#.MainTab.Geocoding.CustomAction"
Location="Mscrm.Form.#EntityName#.MainTab.Groups._children" Sequence="80">
      <CommandUIDefinition>
        <Group Command="Mscrm.Enabled"
Description="$LocLabels:myce.Mscrm.Form.#EntityName#.MainTab.Geocoding.Title"
Id="myce.Mscrm.Form.#EntityName#.MainTab.Geocoding" Sequence="80"
Template="Mscrm.Templates.3"
Title="$LocLabels:myce.Mscrm.Form.#EntityName#.MainTab.Geocoding.Title">
          <Controls
Id="myce.Mscrm.Form.#EntityName#.MainTab.Geocoding.Controls">
            <Button Command="myce.#EntityName#.Geocoding.FormCommand"
Id="myce.#EntityName#.Geocoding.FormButton"
Image32by32="$webresource:myce_/images/geocode_large.png"
LabelText="$LocLabels:myce.#EntityName#.Geocoding.FormButton.LabelText" Sequence="20"
TemplateAlias="o1"
ToolTipTitle="$LocLabels:myce.#EntityName#.Geocoding.FormButton.ToolTipTitle"
ToolTipDescription="$LocLabels:myce.#EntityName#.Geocoding.FormButton.ToolTipDescripti
on" />
          </Controls>
        </Group>
      </CommandUIDefinition>
    </CustomAction>
    <CustomAction
Id="myce.Mscrm.Form.#EntityName#.MainTab.MaxSize.19.CustomAction"
Location="Mscrm.Form.#EntityName#.MainTab.Scaling._children" Sequence="80">
      <CommandUIDefinition>
        <MaxSize GroupId="myce.Mscrm.Form.#EntityName#.MainTab.Geocoding"
Id="myce.Mscrm.Form.#EntityName#.MainTab.MaxSize.19" Sequence="80" Size="Large" />
      </CommandUIDefinition>
    </CustomAction>
    <CustomAction
Id="myce.Mscrm.Form.#EntityName#.MainTab.Scale.20.CustomAction"
Location="Mscrm.Form.#EntityName#.MainTab.Scaling._children" Sequence="190">
      <CommandUIDefinition>
        <Scale GroupId="myce.Mscrm.Form.#EntityName#.MainTab.Geocoding"
Id="myce.Mscrm.Form.#EntityName#.MainTab.Scale.20" Sequence="190" Size="Popup" />
      </CommandUIDefinition>
    </CustomAction>
    <CustomAction
Id="myce.Mscrm.HomepageGrid.#EntityName#.MainTab.Geocoding.CustomAction"
Location="Mscrm.HomepageGrid.#EntityName#.MainTab.Groups._children" Sequence="55">
      <CommandUIDefinition>
        <Group Command="Mscrm.Enabled"
Description="$LocLabels:myce.Mscrm.HomepageGrid.#EntityName#.MainTab.Geocoding.Title"
Id="myce.Mscrm.HomepageGrid.#EntityName#.MainTab.Geocoding" Sequence="55"
Template="Mscrm.Templates.3"
Title="$LocLabels:myce.Mscrm.HomepageGrid.#EntityName#.MainTab.Geocoding.Title">
          <Controls
Id="myce.Mscrm.HomepageGrid.#EntityName#.MainTab.Geocoding.Controls">
            <Button Command="myce.#EntityName#.Geocoding.GridCommand"
Id="myce.#EntityName#.Geocoding.GridButton"
```

```xml
Image32by32="$webresource:myce_/images/geocode_large.png"
LabelText="$LocLabels:myce.#EntityName#.Geocoding.GridButton.LabelText" Sequence="10"
TemplateAlias="o1"
ToolTipTitle="$LocLabels:myce.#EntityName#.Geocoding.GridButton.ToolTipTitle"
ToolTipDescription="$LocLabels:myce.#EntityName#.Geocoding.GridButton.ToolTipDescripti
on" />
                </Controls>
              </Group>
            </CommandUIDefinition>
          </CustomAction>
          <CustomAction
Id="myce.Mscrm.HomepageGrid.#EntityName#.MainTab.MaxSize.18.CustomAction"
Location="Mscrm.HomepageGrid.#EntityName#.MainTab.Scaling._children" Sequence="75">
            <CommandUIDefinition>
              <MaxSize
GroupId="myce.Mscrm.HomepageGrid.#EntityName#.MainTab.Geocoding"
Id="myce.Mscrm.HomepageGrid.#EntityName#.MainTab.MaxSize.18" Sequence="75"
Size="Large" />
            </CommandUIDefinition>
          </CustomAction>
          <CustomAction
Id="myce.Mscrm.HomepageGrid.#EntityName#.MainTab.Scale.19.CustomAction"
Location="Mscrm.HomepageGrid.#EntityName#.MainTab.Scaling._children" Sequence="190">
            <CommandUIDefinition>
              <Scale GroupId="myce.Mscrm.HomepageGrid.#EntityName#.MainTab.Geocoding"
Id="myce.Mscrm.HomepageGrid.#EntityName#.MainTab.Scale.19" Sequence="190" Size="Popup"
/>
            </CommandUIDefinition>
          </CustomAction>
        </CustomActions>
        <Templates>
          <RibbonTemplates Id="Mscrm.Templates"></RibbonTemplates>
        </Templates>
        <CommandDefinitions>
          <CommandDefinition Id="myce.#EntityName#.Geocoding.FormCommand">
            <EnableRules>
              <EnableRule Id="myce.#EntityName#.Geocode.Form.EnableRule" />
            </EnableRules>
            <DisplayRules />
            <Actions>
              <JavaScriptFunction FunctionName="Geocode_Click"
Library="$webresource:myce_/emap/odg/scripts/ribbon.js">
                <CrmParameter Value="PrimaryItemIds" />
                <CrmParameter Value="PrimaryEntityTypeName" />
              </JavaScriptFunction>
            </Actions>
          </CommandDefinition>
          <CommandDefinition Id="myce.#EntityName#.Geocoding.GridCommand">
            <EnableRules>
              <EnableRule Id="myce.#EntityName#.Geocode.Grid.EnableRule" />
            </EnableRules>
            <DisplayRules />
            <Actions>
              <JavaScriptFunction FunctionName="Geocode_Click"
Library="$webresource:myce_/emap/odg/scripts/ribbon.js">
                <CrmParameter Value="SelectedControlSelectedItemIds" />
                <CrmParameter Value="SelectedEntityTypeName" />
              </JavaScriptFunction>
            </Actions>
          </CommandDefinition>
        </CommandDefinitions>
        <RuleDefinitions>
```

```xml
          <TabDisplayRules />
          <DisplayRules />
          <EnableRules>
            <EnableRule Id="myce.#EntityName#.Geocode.Form.EnableRule">
              <FormStateRule State="Existing" Default="false" InvertResult="false" />
            </EnableRule>
            <EnableRule Id="myce.#EntityName#.Geocode.Grid.EnableRule">
              <SelectionCountRule AppliesTo="SelectedEntity" Minimum="1"
Default="false" />
            </EnableRule>
          </EnableRules>
        </RuleDefinitions>
        <LocLabels>
          <LocLabel Id="myce.#EntityName#.Geocoding.FormButton.LabelText">
            <Titles>
              <Title description="Geocode" languagecode="1033" />
            </Titles>
          </LocLabel>
          <LocLabel Id="myce.#EntityName#.Geocoding.FormButton.ToolTipDescription">
            <Titles>
              <Title description="Perform a geocode on this entity"
languagecode="1033" />
            </Titles>
          </LocLabel>
          <LocLabel Id="myce.#EntityName#.Geocoding.FormButton.ToolTipTitle">
            <Titles>
              <Title description="Geocode" languagecode="1033" />
            </Titles>
          </LocLabel>
          <LocLabel Id="myce.#EntityName#.Geocoding.GridButton.LabelText">
            <Titles>
              <Title description="Geocode" languagecode="1033" />
            </Titles>
          </LocLabel>
          <LocLabel Id="myce.#EntityName#.Geocoding.GridButton.ToolTipDescription">
            <Titles>
              <Title description="Geocode" languagecode="1033" />
            </Titles>
          </LocLabel>
          <LocLabel Id="myce.#EntityName#.Geocoding.GridButton.ToolTipTitle">
            <Titles>
              <Title description="Perform a geocode on the selected entity(ies)"
languagecode="1033" />
            </Titles>
          </LocLabel>
          <LocLabel Id="myce.Mscrm.Form.#EntityName#.MainTab.Geocoding.Title">
            <Titles>
              <Title description="Geocoding" languagecode="1033" />
            </Titles>
          </LocLabel>
          <LocLabel Id="myce.Mscrm.HomepageGrid.#EntityName#.MainTab.Geocoding.Title">
            <Titles>
              <Title description="Geocoding" languagecode="1033" />
            </Titles>
          </LocLabel>
        </LocLabels>
      </RibbonDiffXml>
```

- You should replace all instances of #EntityName# with the system name for your entity, in this case **new_mycustomentity**.

- Once the find/replaces are complete, you should copy and paste the On-Demand ribbon XML and replace the <RibbonDiffXml> node in your solution's **customizations.xml** file. In this example, the final **customizations.xml** file would look as follows:

```xml
<ImportExportXml xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance">
  <Entities>
    <Entity>
      <Name LocalizedName="My Custom Entity" OriginalName="My Custom
Entity">new_mycustomentity</Name>
      <ObjectTypeCode>10002</ObjectTypeCode>
      <RibbonDiffXml>
        <CustomActions>
            <CustomAction
Id="myce.Mscrm.Form.new_mycustomentity.MainTab.Geocoding.CustomAction"
Location="Mscrm.Form.new_mycustomentity.MainTab.Groups._children" Sequence="80">
              <CommandUIDefinition>
                <Group Command="Mscrm.Enabled"
Description="$LocLabels:myce.Mscrm.Form.new_mycustomentity.MainTab.Geocoding.Title"
Id="myce.Mscrm.Form.new_mycustomentity.MainTab.Geocoding" Sequence="80"
Template="Mscrm.Templates.3"
Title="$LocLabels:myce.Mscrm.Form.new_mycustomentity.MainTab.Geocoding.Title">
                  <Controls
Id="myce.Mscrm.Form.new_mycustomentity.MainTab.Geocoding.Controls">
                    <Button
Command="myce.new_mycustomentity.Geocoding.FormCommand"
Id="myce.new_mycustomentity.Geocoding.FormButton"
Image32by32="$webresource:myce_/images/geocode_large.png"
LabelText="$LocLabels:myce.new_mycustomentity.Geocoding.FormButton.LabelText"
Sequence="20" TemplateAlias="o1"
ToolTipTitle="$LocLabels:myce.new_mycustomentity.Geocoding.FormButton.ToolTipTitle"
ToolTipDescription="$LocLabels:myce.new_mycustomentity.Geocoding.FormButton.ToolTipDes
cription" />
                  </Controls>
                </Group>
              </CommandUIDefinition>
            </CustomAction>
            <CustomAction
Id="myce.Mscrm.Form.new_mycustomentity.MainTab.MaxSize.19.CustomAction"
Location="Mscrm.Form.new_mycustomentity.MainTab.Scaling._children" Sequence="80">
              <CommandUIDefinition>
                <MaxSize
GroupId="myce.Mscrm.Form.new_mycustomentity.MainTab.Geocoding"
Id="myce.Mscrm.Form.new_mycustomentity.MainTab.MaxSize.19" Sequence="80" Size="Large"
/>
              </CommandUIDefinition>
            </CustomAction>
            <CustomAction
Id="myce.Mscrm.Form.new_mycustomentity.MainTab.Scale.20.CustomAction"
Location="Mscrm.Form.new_mycustomentity.MainTab.Scaling._children" Sequence="190">
              <CommandUIDefinition>
                <Scale
GroupId="myce.Mscrm.Form.new_mycustomentity.MainTab.Geocoding"
Id="myce.Mscrm.Form.new_mycustomentity.MainTab.Scale.20" Sequence="190" Size="Popup"
/>
              </CommandUIDefinition>
            </CustomAction>
            <CustomAction
Id="myce.Mscrm.HomepageGrid.new_mycustomentity.MainTab.Geocoding.CustomAction"
Location="Mscrm.HomepageGrid.new_mycustomentity.MainTab.Groups._children"
Sequence="55">
              <CommandUIDefinition>
```

```xml
                        <Group Command="Mscrm.Enabled"
Description="$LocLabels:myce.Mscrm.HomepageGrid.new_mycustomentity.MainTab.Geocoding.T
itle" Id="myce.Mscrm.HomepageGrid.new_mycustomentity.MainTab.Geocoding" Sequence="55"
Template="Mscrm.Templates.3"
Title="$LocLabels:myce.Mscrm.HomepageGrid.new_mycustomentity.MainTab.Geocoding.Title">
                          <Controls
Id="myce.Mscrm.HomepageGrid.new_mycustomentity.MainTab.Geocoding.Controls">
                            <Button
Command="myce.new_mycustomentity.Geocoding.GridCommand"
Id="myce.new_mycustomentity.Geocoding.GridButton"
Image32by32="$webresource:myce_/images/geocode_large.png"
LabelText="$LocLabels:myce.new_mycustomentity.Geocoding.GridButton.LabelText"
Sequence="10" TemplateAlias="o1"
ToolTipTitle="$LocLabels:myce.new_mycustomentity.Geocoding.GridButton.ToolTipTitle"
ToolTipDescription="$LocLabels:myce.new_mycustomentity.Geocoding.GridButton.ToolTipDes
cription" />
                          </Controls>
                        </Group>
                      </CommandUIDefinition>
                  </CustomAction>
                  <CustomAction
Id="myce.Mscrm.HomepageGrid.new_mycustomentity.MainTab.MaxSize.18.CustomAction"
Location="Mscrm.HomepageGrid.new_mycustomentity.MainTab.Scaling._children"
Sequence="75">
                      <CommandUIDefinition>
                        <MaxSize
GroupId="myce.Mscrm.HomepageGrid.new_mycustomentity.MainTab.Geocoding"
Id="myce.Mscrm.HomepageGrid.new_mycustomentity.MainTab.MaxSize.18" Sequence="75"
Size="Large" />
                      </CommandUIDefinition>
                  </CustomAction>
                  <CustomAction
Id="myce.Mscrm.HomepageGrid.new_mycustomentity.MainTab.Scale.19.CustomAction"
Location="Mscrm.HomepageGrid.new_mycustomentity.MainTab.Scaling._children"
Sequence="190">
                      <CommandUIDefinition>
                        <Scale
GroupId="myce.Mscrm.HomepageGrid.new_mycustomentity.MainTab.Geocoding"
Id="myce.Mscrm.HomepageGrid.new_mycustomentity.MainTab.Scale.19" Sequence="190"
Size="Popup" />
                      </CommandUIDefinition>
                  </CustomAction>
              </CustomActions>
              <Templates>
                  <RibbonTemplates Id="Mscrm.Templates"></RibbonTemplates>
              </Templates>
              <CommandDefinitions>
                  <CommandDefinition Id="myce.new_mycustomentity.Geocoding.FormCommand">
                      <EnableRules>
                          <EnableRule Id="myce.new_mycustomentity.Geocode.Form.EnableRule"
/>
                      </EnableRules>
                      <DisplayRules />
                      <Actions>
                          <JavaScriptFunction FunctionName="Geocode_Click"
Library="$webresource:myce_/emap/odg/scripts/ribbon.js">
                              <CrmParameter Value="PrimaryItemIds" />
                              <CrmParameter Value="PrimaryEntityTypeName" />
                          </JavaScriptFunction>
                      </Actions>
                  </CommandDefinition>
                  <CommandDefinition Id="myce.new_mycustomentity.Geocoding.GridCommand">
```

```xml
            <EnableRules>
                <EnableRule Id="myce.new_mycustomentity.Geocode.Grid.EnableRule"
/>
            </EnableRules>
            <DisplayRules />
            <Actions>
                <JavaScriptFunction FunctionName="Geocode_Click"
Library="$webresource:myce_/emap/odg/scripts/ribbon.js">
                    <CrmParameter Value="SelectedControlSelectedItemIds" />
                    <CrmParameter Value="SelectedEntityTypeName" />
                </JavaScriptFunction>
            </Actions>
        </CommandDefinition>
    </CommandDefinitions>
    <RuleDefinitions>
        <TabDisplayRules />
        <DisplayRules />
        <EnableRules>
            <EnableRule Id="myce.new_mycustomentity.Geocode.Form.EnableRule">
                <FormStateRule State="Existing" Default="false"
InvertResult="false" />
            </EnableRule>
            <EnableRule Id="myce.new_mycustomentity.Geocode.Grid.EnableRule">
                <SelectionCountRule AppliesTo="SelectedEntity" Minimum="1"
Default="false" />
            </EnableRule>
        </EnableRules>
    </RuleDefinitions>
    <LocLabels>
        <LocLabel Id="myce.new_mycustomentity.Geocoding.FormButton.LabelText">
            <Titles>
                <Title description="Geocode" languagecode="1033" />
            </Titles>
        </LocLabel>
        <LocLabel
Id="myce.new_mycustomentity.Geocoding.FormButton.ToolTipDescription">
            <Titles>
                <Title description="Perform a geocode on this entity"
languagecode="1033" />
            </Titles>
        </LocLabel>
        <LocLabel Id="myce.new_mycustomentity.Geocoding.FormButton.ToolTipTitle">
            <Titles>
                <Title description="Geocode" languagecode="1033" />
            </Titles>
        </LocLabel>
        <LocLabel Id="myce.new_mycustomentity.Geocoding.GridButton.LabelText">
            <Titles>
                <Title description="Geocode" languagecode="1033" />
            </Titles>
        </LocLabel>
        <LocLabel
Id="myce.new_mycustomentity.Geocoding.GridButton.ToolTipDescription">
            <Titles>
                <Title description="Geocode" languagecode="1033" />
            </Titles>
        </LocLabel>
        <LocLabel Id="myce.new_mycustomentity.Geocoding.GridButton.ToolTipTitle">
            <Titles>
                <Title description="Perform a geocode on the selected entity(ies)"
languagecode="1033" />
            </Titles>
```
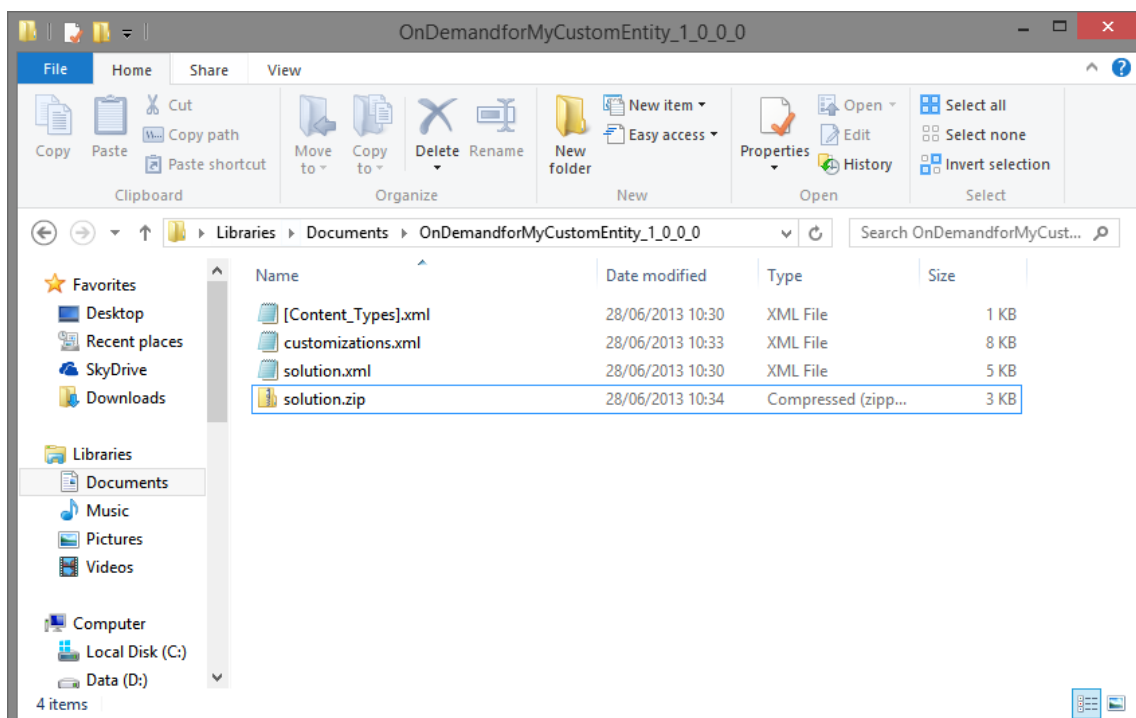
```
        </LocLabel>
        <LocLabel Id="myce.Mscrm.Form.new_mycustomentity.MainTab.Geocoding.Title">
            <Titles>
                <Title description="Geocoding" languagecode="1033" />
            </Titles>
        </LocLabel>
        <LocLabel
Id="myce.Mscrm.HomepageGrid.new_mycustomentity.MainTab.Geocoding.Title">
            <Titles>
                <Title description="Geocoding" languagecode="1033" />
            </Titles>
        </LocLabel>
    </LocLabels>
  </RibbonDiffXml>
 </Entity>
</Entities>
<Roles></Roles>
<Workflows></Workflows>
<FieldSecurityProfiles></FieldSecurityProfiles>
<Templates />
<EntityMaps />
<OrganizationSettings />
<optionsets />
<Languages>
   <Language>1033</Language>
</Languages>
</ImportExportXml>
```

Step 4 – Re-import the solution

- Save the **customizations.xml** file.
- Zip up the three solution files into a new solution zip:

- In CRM, import the solution using all default settings.
- The import should complete successfully. If not, you can save the import log file to get a better idea of what went wrong.
- Once the solution is imported, you must **Publish all Customizations**.
- Your custom entity should now have the On-Demand Geocode button.
- You may delete the new solution from CRM as it is no longer needed. The On-Demand Geocode button will remain.

Removing On-Demand Geocode from the custom entity

If you wish to remove the On-Demand Geocode ribbon button from the custom entity after using the above instuctions, please follow the following steps:

- If you still have the unzipped solution files, you can use those to create a new solution for uninstallation.
- If not, please follow Step 1 of the installation instructions above to produce a new solution containing your custom entity.
- Open the **customizations.xml** file in a text editor.
- Replace the entire <RibbonDiffXml> node with the following xml:

```xml
<RibbonDiffXml>
  <CustomActions />
  <Templates>
    <RibbonTemplates Id="Mscrm.Templates"></RibbonTemplates>
  </Templates>
  <CommandDefinitions />
  <RuleDefinitions>
    <TabDisplayRules />
    <DisplayRules />
    <EnableRules />
  </RuleDefinitions>
  <LocLabels />
</RibbonDiffXml>
```

- Save the **customizations.xml** file.
- Zip up and import the solution as per Step 4 of the installation instructions. Make sure you Publish all Customizations, and you may delete the solution thereafter.