

Azure Archival Installation Guide

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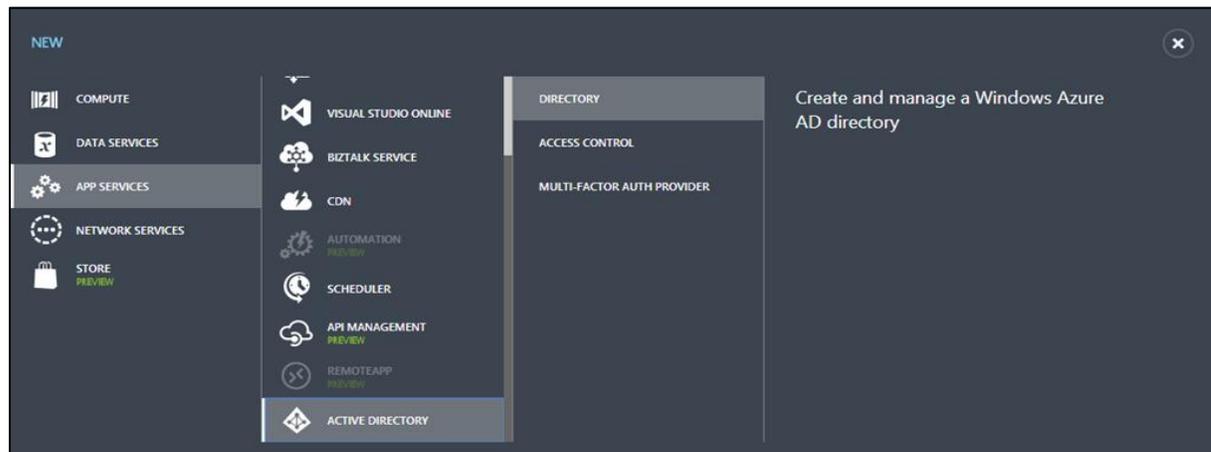
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1. Add Dynamics CRM Active Directory into Azure

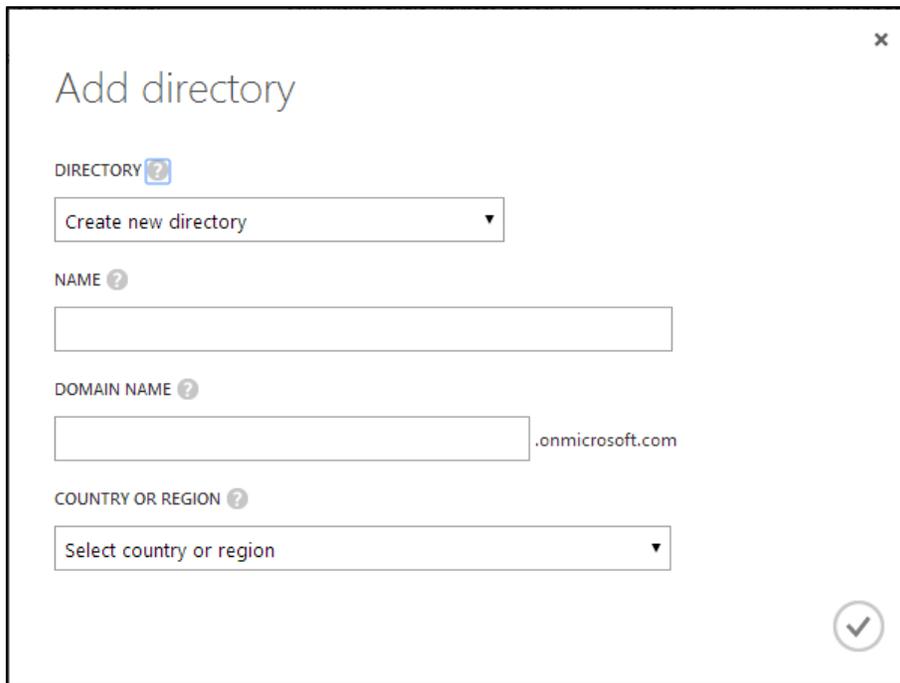
Dynamics CRM online uses active directory for its authentication. Dynamics CRM online active directory need to be added in Azure portal to generate **Application Id** for Dynamics CRM user.

Steps to Register Dynamics CRM Online to Azure Active Directory

- 1) Log on to the Microsoft Azure Management portal with your existing Azure account credentials. You must have an administrator permission. At this point, you can sign in with your existing Azure account with or without Office 365 subscription.
- 2) Click Active Directory on the left column of the page.
- 3) At the bottom of the screen on the New menu, select App Services > Active Directory > Directory > Custom Create.

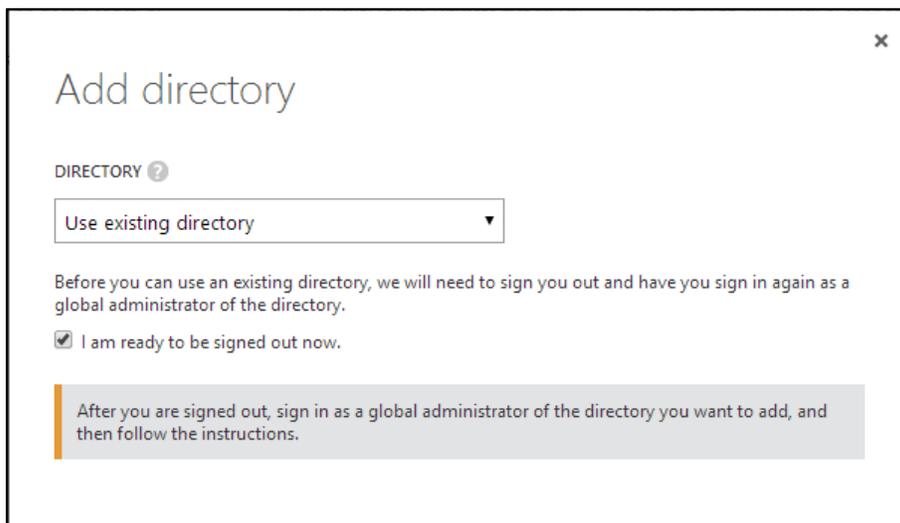


4) This will open a dialog to add a directory.



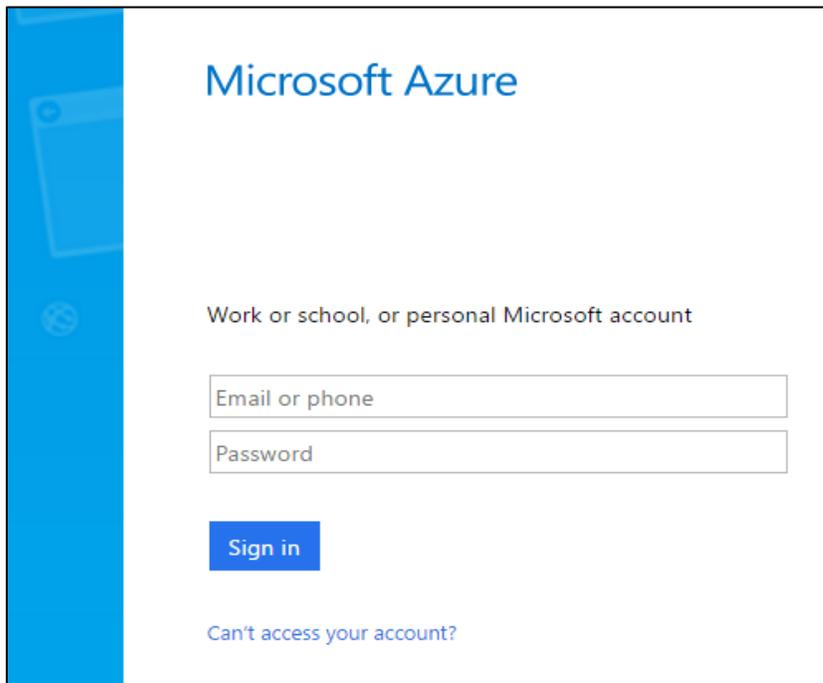
The screenshot shows a dialog box titled "Add directory" with a close button (x) in the top right corner. Below the title, there is a "DIRECTORY" label with a help icon (?). A dropdown menu is open, showing "Create new directory" with a downward arrow. Below this are three input fields: "NAME" with a help icon (?), "DOMAIN NAME" with a help icon (?) and ".onmicrosoft.com" text to its right, and "COUNTRY OR REGION" with a help icon (?). A dropdown menu for "COUNTRY OR REGION" shows "Select country or region" with a downward arrow. A checkmark icon is in the bottom right corner.

5) Selecting "Use existing directory" in "Directory" will require you to confirm sign out if already signed in.



The screenshot shows the same "Add directory" dialog box, but the dropdown menu now shows "Use existing directory" with a downward arrow. Below the dropdown, there is a message: "Before you can use an existing directory, we will need to sign you out and have you sign in again as a global administrator of the directory." Below this message is a checked checkbox with the text "I am ready to be signed out now." At the bottom, there is a grey box with a yellow vertical bar on the left containing the text: "After you are signed out, sign in as a global administrator of the directory you want to add, and then follow the instructions." The dialog box has a close button (x) in the top right corner.

- 6) Log in with your Office 365 account information. Please note that in order to associate your Office 365 account directory with Azure AD, you'll need to sign in with global administrator user of that Office 365 account.



- 7) Required O365 account's active directory will be added with Azure AD.

Azure Archival Deployment

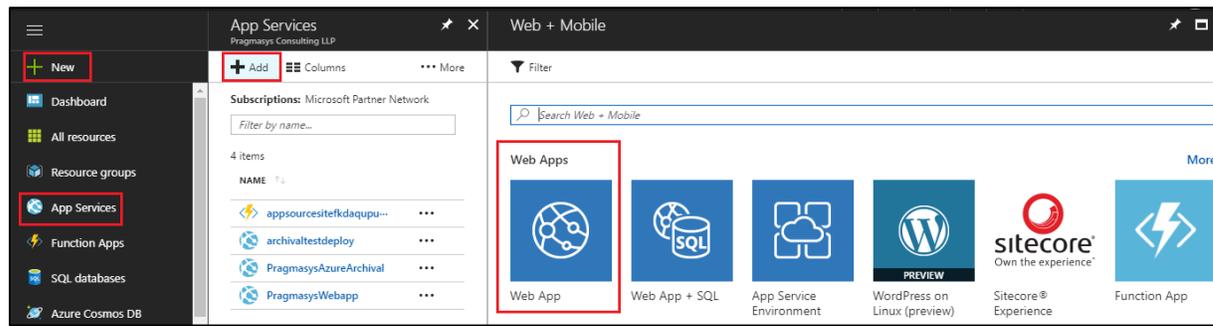
2. Azure Archival Deployment

2.1 Deploying MVC web application:

Below are the steps for deploying MVC web application:

1. Create Web App

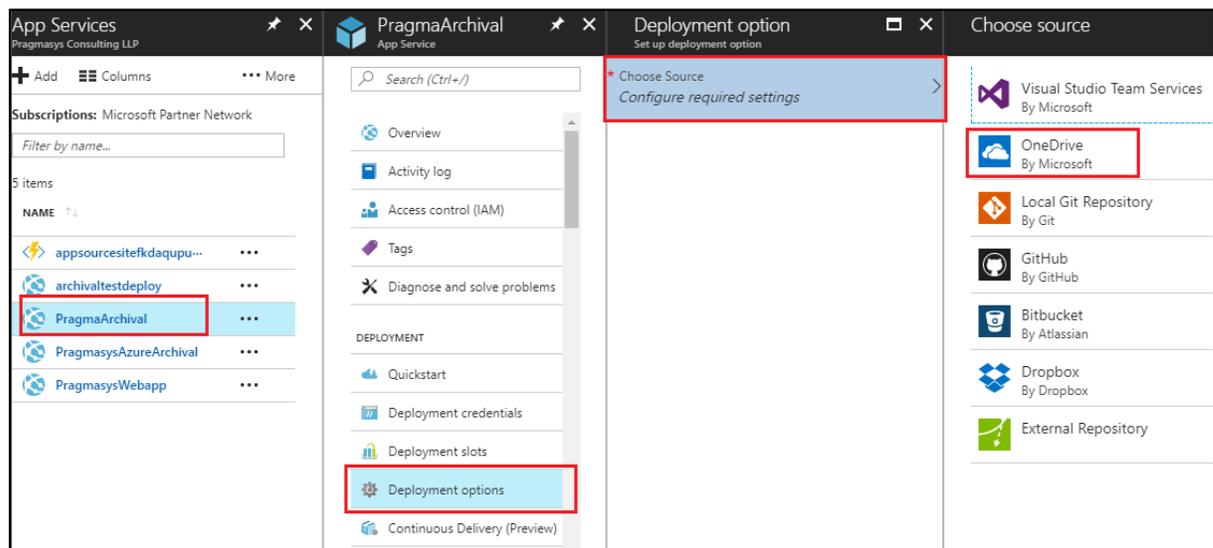
- 1.1 Go to AppServices -> Add -> Select Web App



1.2 Add your details and save the Web App

2. Select you newly created Web App

2.1 Go to Deployment Option -> Configure Required Settings -> Select OneDrive (Requirement: A OneDrive account is required for storing the web app solution)

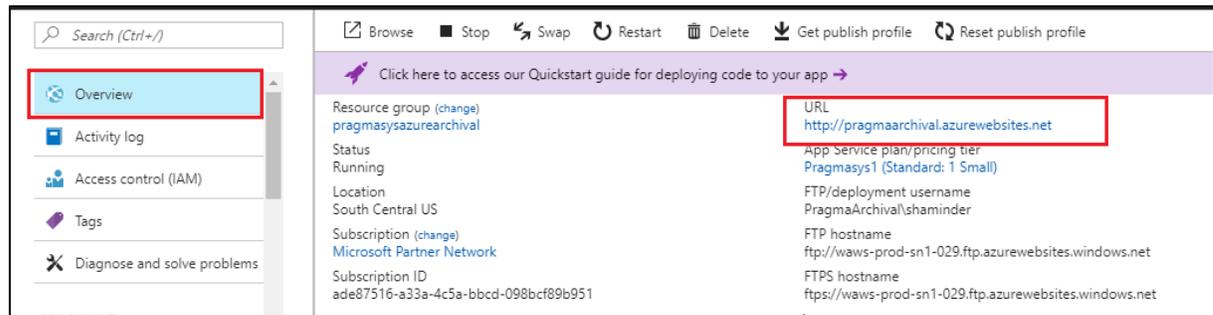


2.2 User need to authorize with OneDrive. It will create 'Apps' folder in your OneDrive account.

2.3 Log In to your OneDrive account and navigate to Files -> Apps -> Azure Web App and upload MVC web solution provided by Pragmasys. This will add your solution to your OneDrive account.

2.4 Navigate on Azure Portal to Deployment options -> OneDrive -> Select folder created in step 2.3 and this will sync the solution to our newly created Web App and will generate Azure URL for this app.

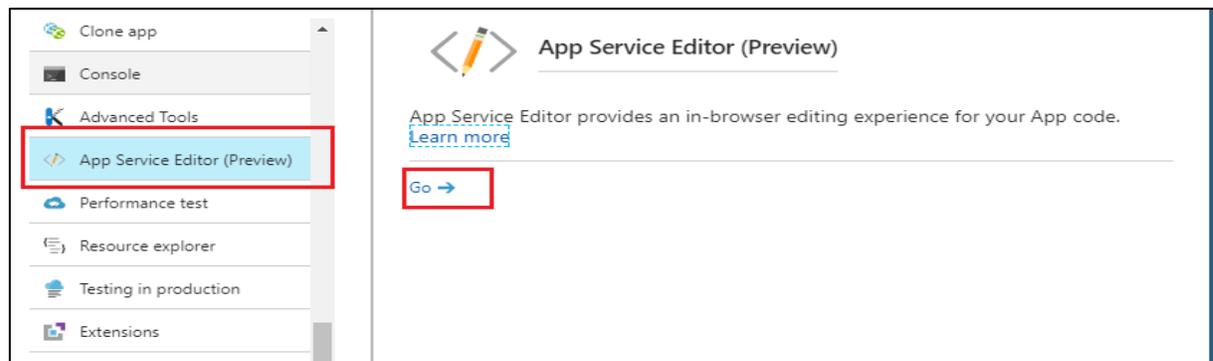
2.5 Navigate to your App and click on Overview.



Note: Copy and save this URL which we will use as Azure Id while creating Azure Configuration in MS CRM.

2.2 Setup config keys:

1. Navigate to App Service Editor -> click on Go. This will redirect you to Azure Web App root folder.



2. Now click on Web.config



```
14 <add type="Microsoft.WindowsAzure.Diagnostics.DiagnosticMonitorTraceListener, Microsoft.WindowsAzure.Diagnostics, Version
15 <filter type="" />
16 </add>
17 </listeners>
18 </trace>
19 </system.diagnostics>
20 <connectionStrings>
21 <add name="DefaultConnection" connectionString="Data Source=(LocalDb)\MSSQLLocalDB;AttachDbFilename=|DataDirectory|\aspnet-Az
22 </connectionStrings>
23 <appSettings>
24 <add key="ConnectAzureStorageTable" value="DefaultEndpointsProtocol=https;AccountName=pragmazaarearchival;AccountKey=J5K57nM/
25 <add key="OrganizationUrl" value="https://pragmazaarearchival.crm5.dynamics.com" />
26 <add key="ClientId" value="a83341eb-14d3-4361-afd4-a08a105e7fcb" />
27 <add key="ClientSecret" value="EYsV0LSmytGmoP2TE1vDygnMdUG6dkpAZf/y3W2yCgw=" />
28 <add key="AadInstance" value="https://login.microsoftonline.com/" />
29 <add key="TenantID" value="aa6c96db-46e4-41b7-b0f8-e9d817473c27" />
30 <add key="Ida:ClientId" value="9e02285b-70e7-411f-88d1-a9b156c7dd36" />
31 <add key="Ida:Tenant" value="pragmasys.in" />
32 <add key="Ida:Audience" value="https://pragmasys.in/7e64b830-86ed-44b0-b2de-a71e244aaba" />
33 <add key="Ida:Password" value="xtOqEjU9e6t17mm9L0FXVOMPWGRl3MC0zmt1Owt5XuA=" />
34 </appSettings>
35 <system.web>
36 <authentication mode="None" />
37 <compilation targetFramework="4.5.2" />
38 <httpRuntime targetFramework="4.5.2" />
39 <httpModules>
40 <add name="ApplicationInsightsWebTracking" type="Microsoft.ApplicationInsights.Web.ApplicationInsightsHttpModule, Microsoft
41 </httpModules>
42 </system.web>
43 <system.webServer>
```

3. Setup following config keys as displayed in the above screenshot

3.1 Key Definitions

- 3.1.1 OrganizationUrl - Address of CRM organization
- 3.1.2 ClientId - Add application Id obtained from section 3.1 step 4
- 3.1.3 ClientSecret - Add key obtained from section 3.1 step 7
- 3.1.4 AadInstance - It has value of <https://login.microsoftonline.com/>
- 3.1.5 TenantID - Add guid obtained from section 3.3 step 2
- 3.1.6 Ida:ClientId - Add application id from section 3.4 step 3
- 3.1.7 Ida:Tenant - It is the domain.
- 3.1.8 Ida:Audience - Add app id url from section 3.4 step 8
- 3.1.9 Ida:Password - Add key obtained from section 3.4 step 6
- 3.2.0 ConnectAzureStorageTable - Add connection string obtained from section 4 step 2

3. Add Application in Azure Directory

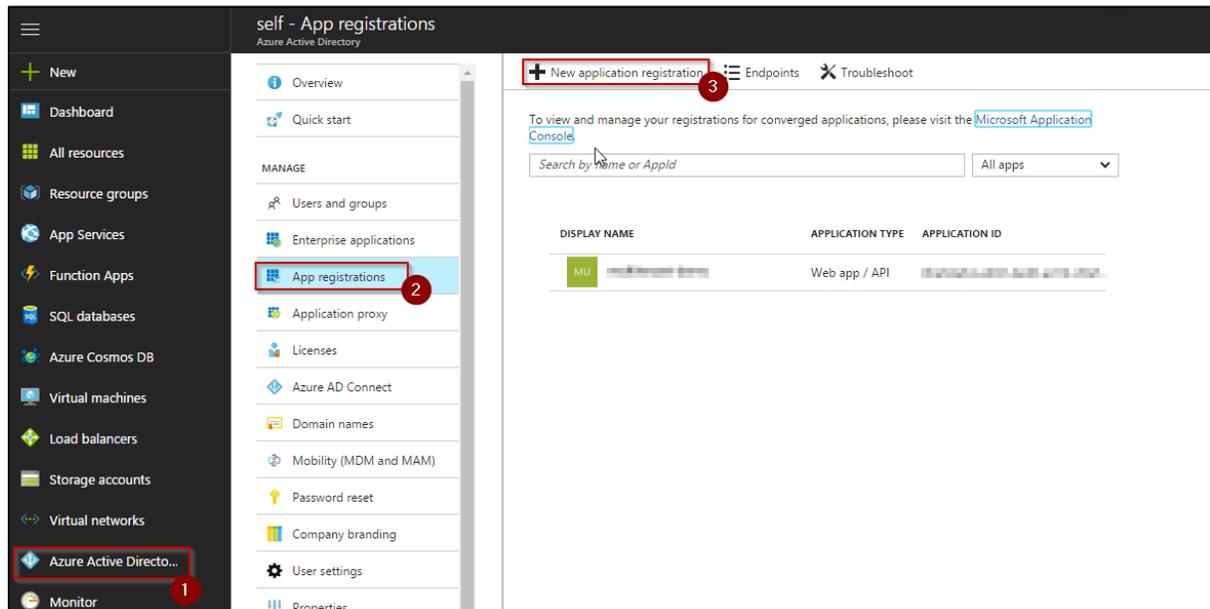
User needs to create the following two applications in Azure Active Directory.

- 1) **App 1:** For creating application user (user that will be used to connect to CRM from Azure) in CRM organization
- 2) **App 2:** For authenticating MVC web application

Below are the steps for creating application user in Azure AD.

3.1 Create application (App 1) for application user

1. Navigate to Azure Active Directory > App registrations > New application registration.



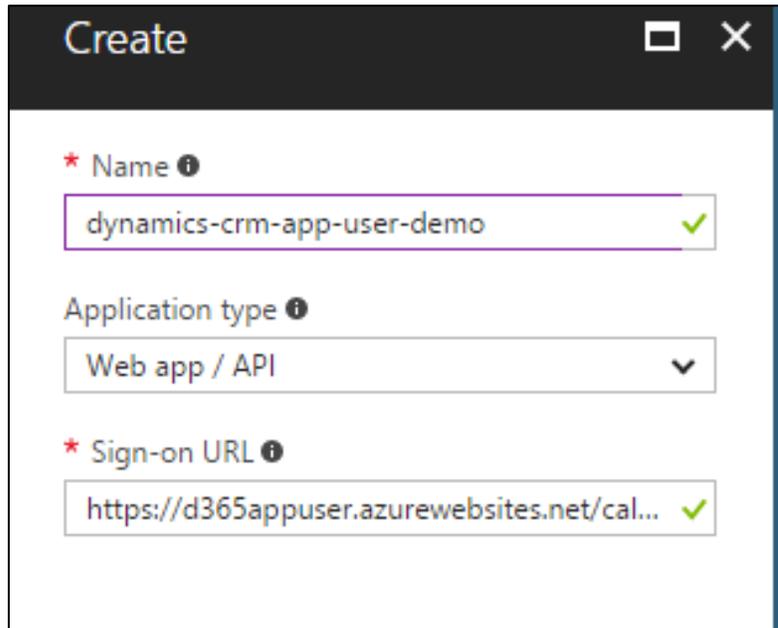
The screenshot displays the Azure Active Directory portal interface. The left sidebar contains a navigation menu with 'Azure Active Directory' highlighted (1). The main content area shows the 'App registrations' page, with 'App registrations' highlighted in the left sidebar (2). The 'New application registration' button is highlighted with a red box and a '3' in a red circle. The main content area shows a table with one application registration:

DISPLAY NAME	APPLICATION TYPE	APPLICATION ID
MU	Web app / API	XXXXXXXXXX-XXXX-XXXX-XXXX-XXXXXXXXXXXX

2. Enter Application Name, Set type as Web app / API and a valid sign-on URL.

Format required for Sign-on URL:

`https://<domainname>.azurewebsites.net/<appname1>`



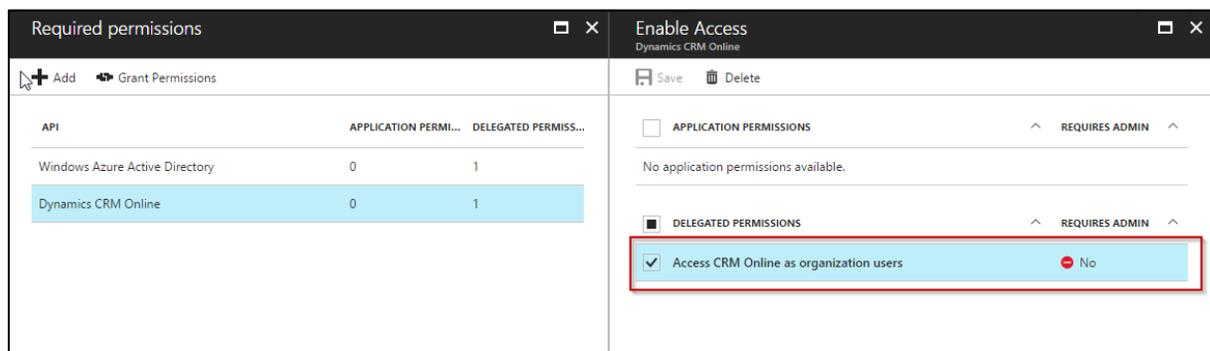
Create

* Name ⓘ
dynamics-crm-app-user-demo ✓

Application type ⓘ
Web app / API ▼

* Sign-on URL ⓘ
https://d365appuser.azurewebsites.net/cal... ✓

3. Add Dynamics CRM Online in Required Permissions and set the configuration as given in below screenshot.



Required permissions

API	APPLICATION PERMI...	DELEGATED PERMISS...
Windows Azure Active Directory	0	1
Dynamics CRM Online	0	1

Enable Access
Dynamics CRM Online

Save Delete

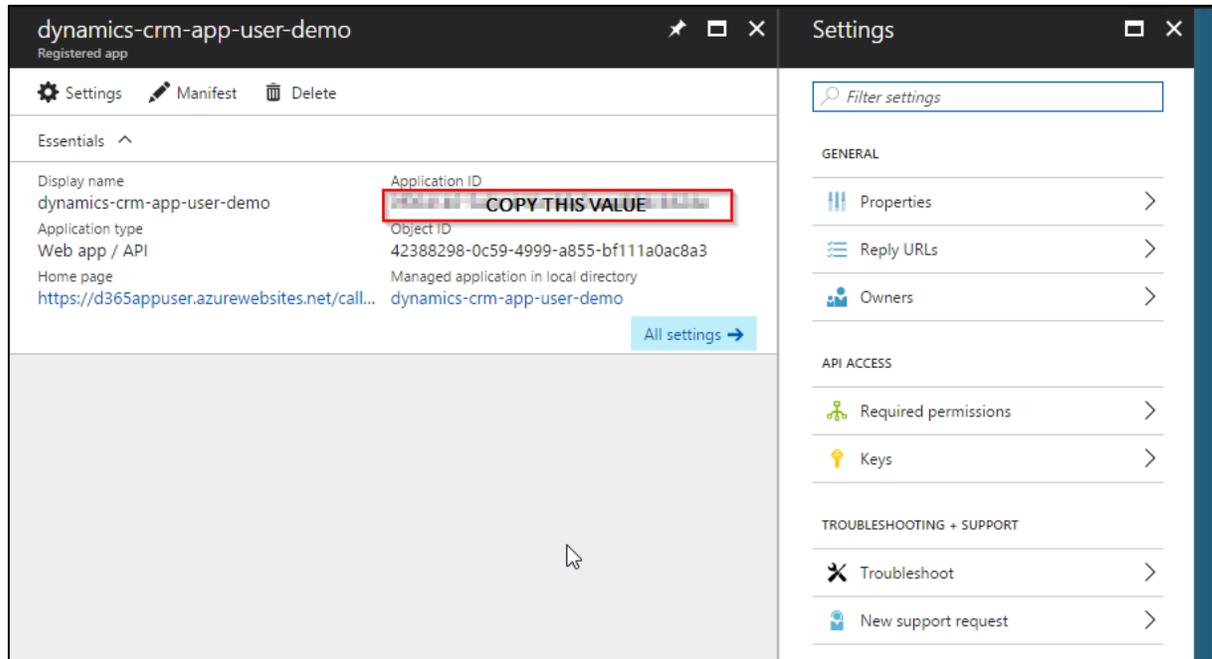
APPLICATION PERMISSIONS ^ REQUIRES ADMIN ^

No application permissions available.

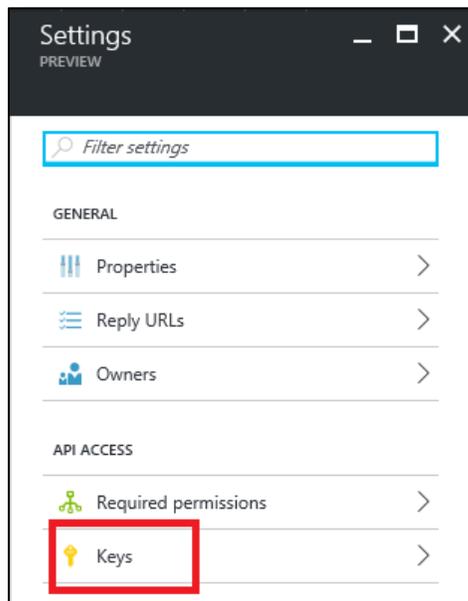
DELEGATED PERMISSIONS ^ REQUIRES ADMIN ^

Access CRM Online as organization users No

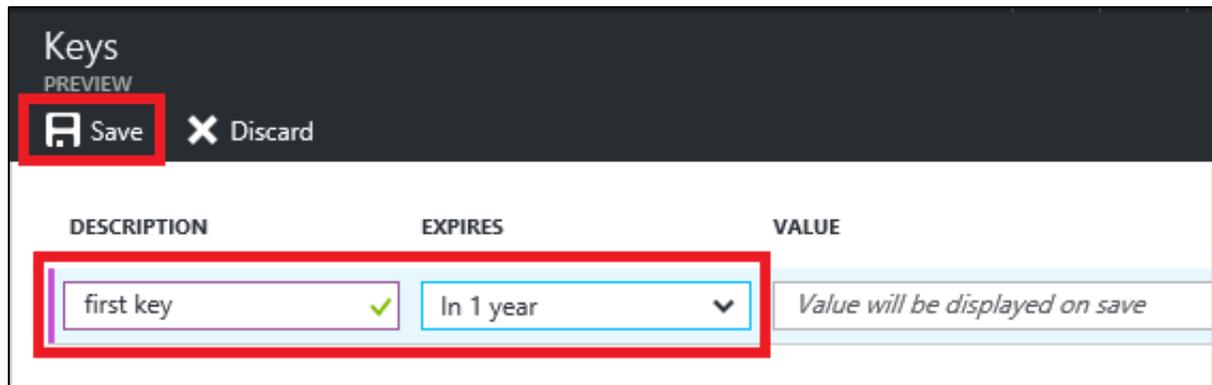
4. Copy Application ID. This Application Id will be used while setting up application user for Dynamics CRM organization.



5. To generate a Client Secret key, select Keys.



6. Provide a description of the key and duration for the key. Select Save.

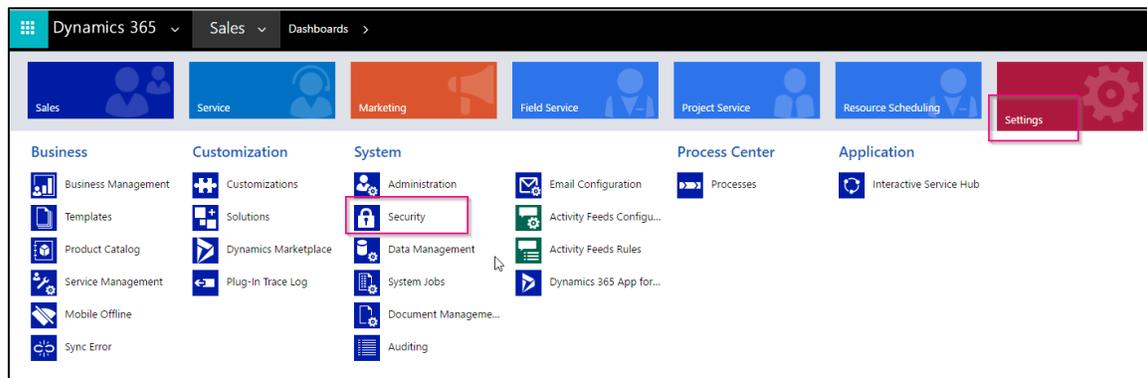


DESCRIPTION	EXPIRES	VALUE
first key ✓	In 1 year ▼	Value will be displayed on save

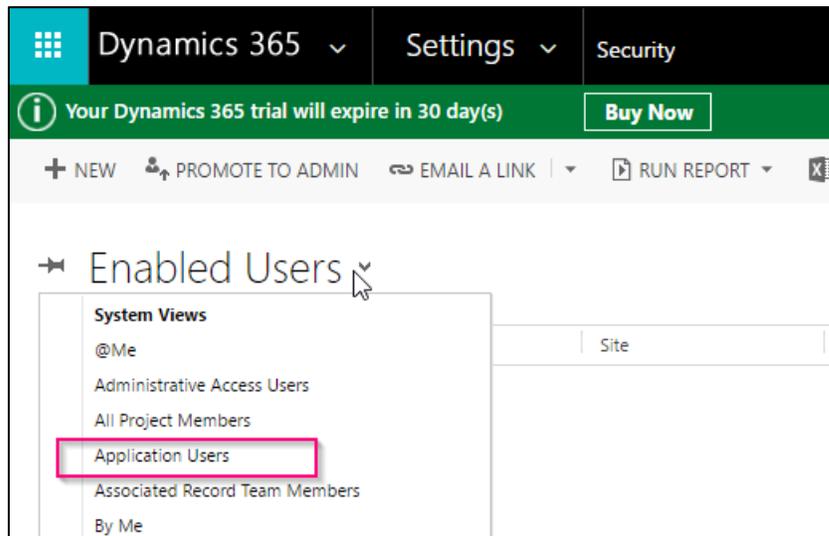
7. After saving the key, the value of the key is displayed.
Important: Copy this value and store it because you will not be able to retrieve the key later.

3.2 Creating Application User in Dynamics CRM

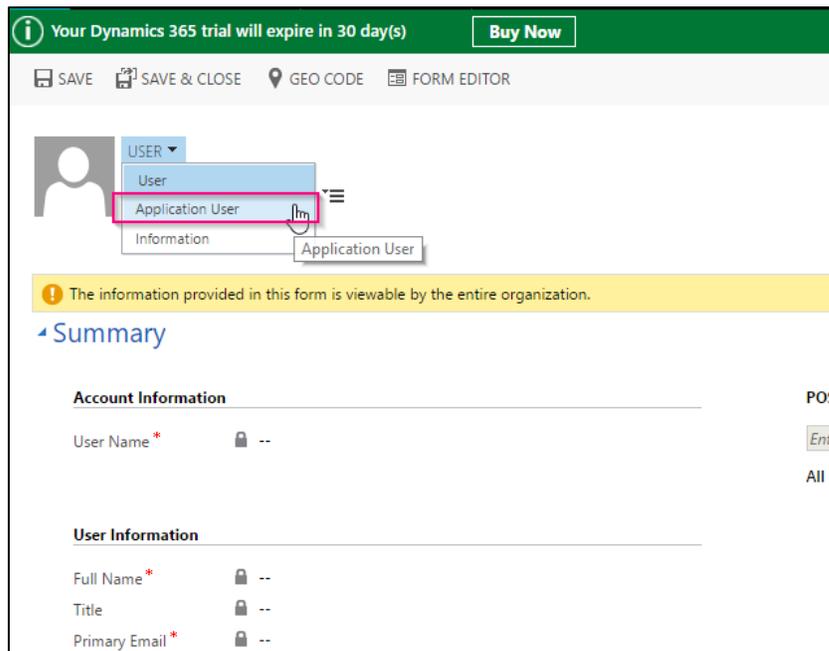
1. Login to Dynamics 365 and go to Settings -> Security -> Users



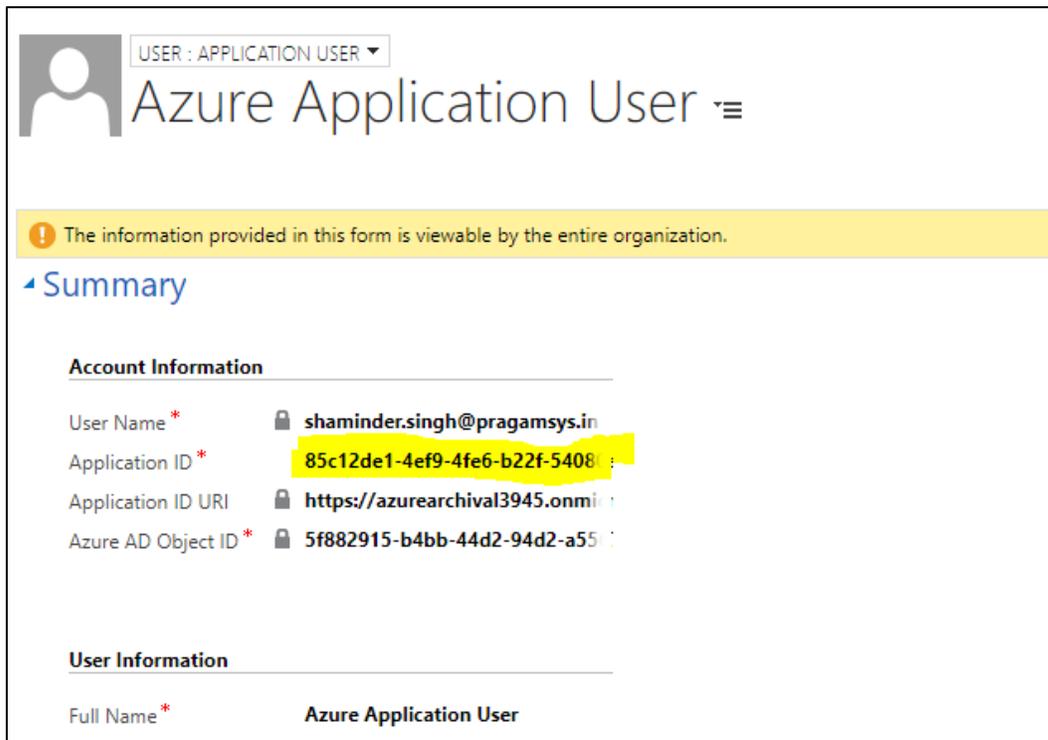
2. Select Application Users view



3. Click on **New** and select Application User form from drop down



4. Enter the copied Application Id from Step 4 in Section 3.1 into Application Id field.

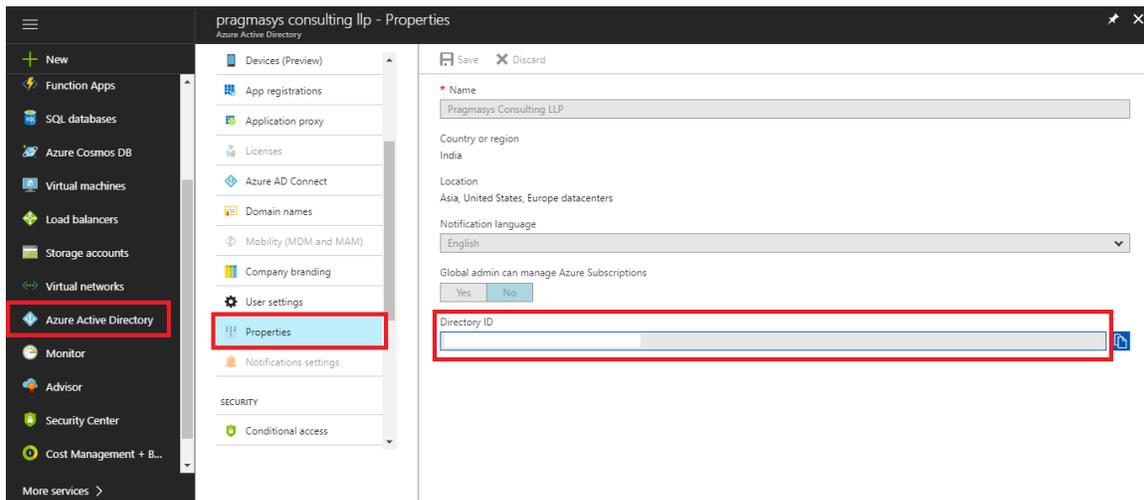


The screenshot shows the 'Azure Application User' creation form. At the top, there is a user selection dropdown set to 'USER : APPLICATION USER' and a profile icon. Below this is the title 'Azure Application User'. A yellow warning banner states: 'The information provided in this form is viewable by the entire organization.' Under the 'Summary' section, there are two sub-sections: 'Account Information' and 'User Information'. The 'Account Information' section lists: User Name* (shaminder.singh@pragamsys.in), Application ID* (85c12de1-4ef9-4fe6-b22f-5408...), Application ID URI (https://azurearchival3945.onmicrosoft.com/), and Azure AD Object ID* (5f882915-b4bb-44d2-94d2-a55...). The 'User Information' section lists: Full Name* (Azure Application User).

5. Enter username and save the record.
 - a. Create a copy of out of box System Administrator role and assign this newly created security role to the application user. **Important: Out of box security roles will not work with application user, it is required to have a custom role assigned to the application user.**

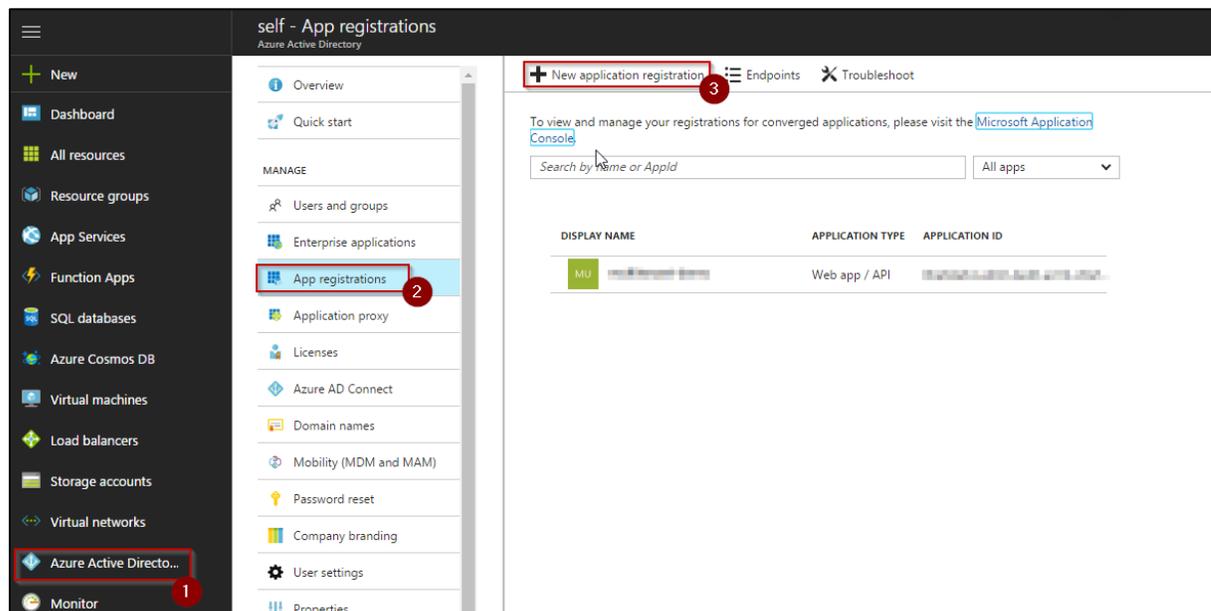
3.3 Get tenant ID

1. Login to your Azure Portal thru <https://portal.azure.com>
2. Navigate to Azure Active Directory -> Properties -> Delivery ID. This is your Tenant ID.



3.4 Creating application (App 2) for MVC authentication

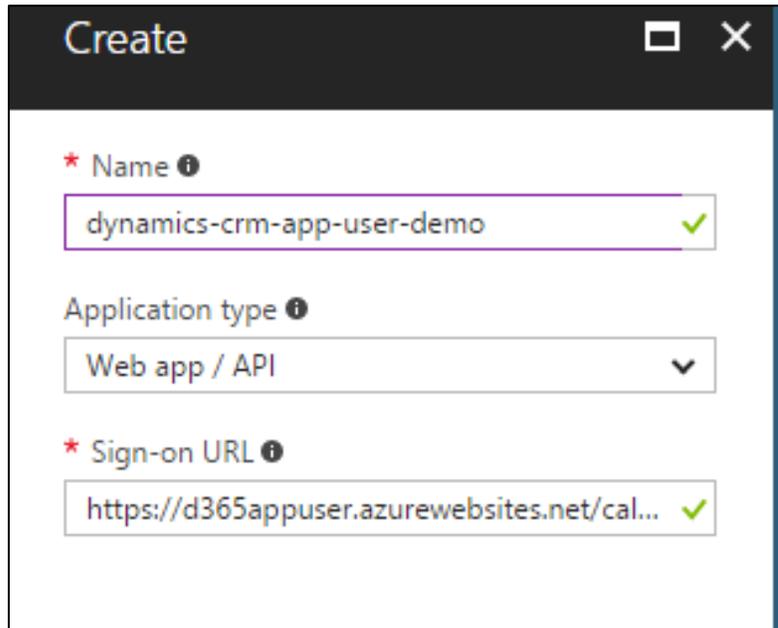
1. Navigate to Azure Active Directory > App registrations > New application registration.



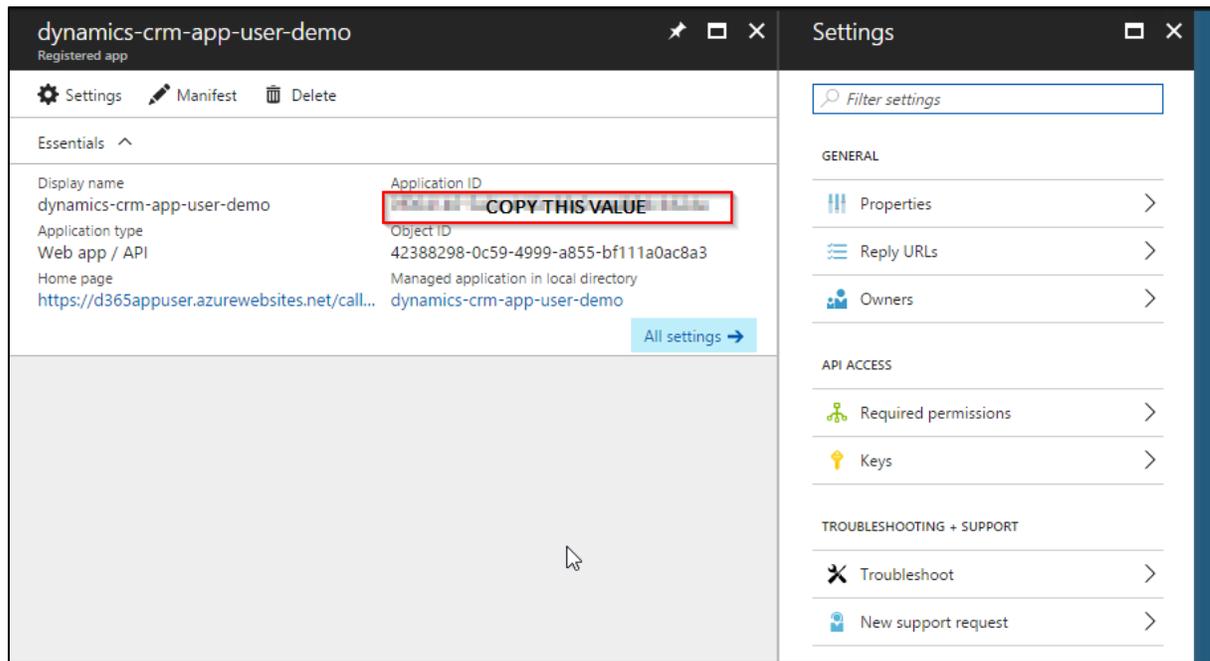
2. Enter Application Name, Set type as Web app / API and a valid sign-on URL.

Format required for Sign-on URL:

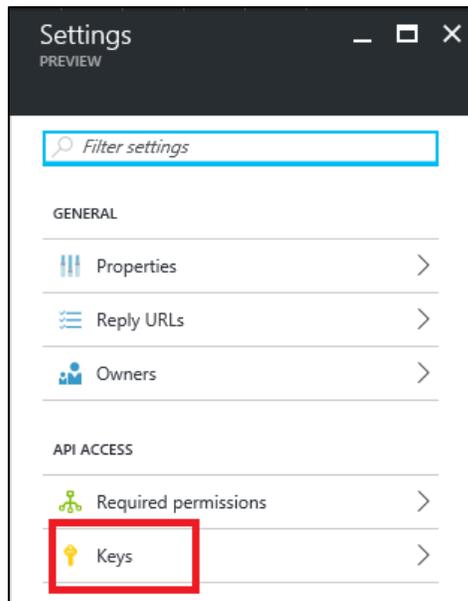
`https://<domainname>.azurewebsites.net/<appname2>`



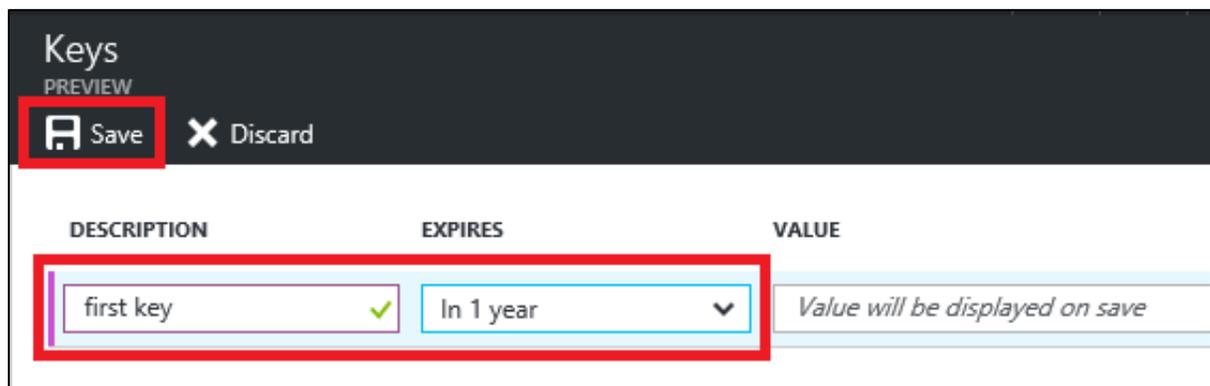
3. Copy Application ID. This Application Id will be used as config key in our Web App.



- To generate a Client Secret key, select Keys.

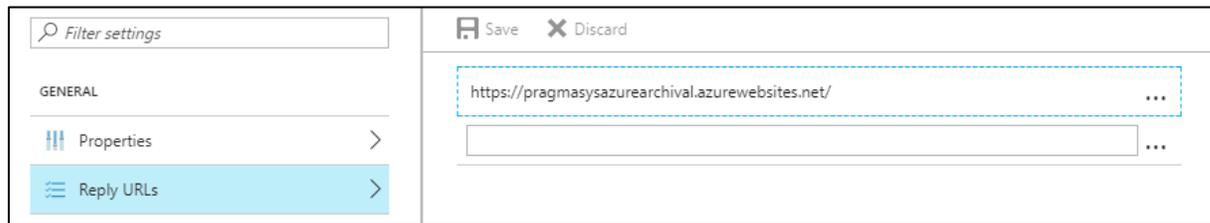


- Provide a description of the key and duration for the key. Select Save.

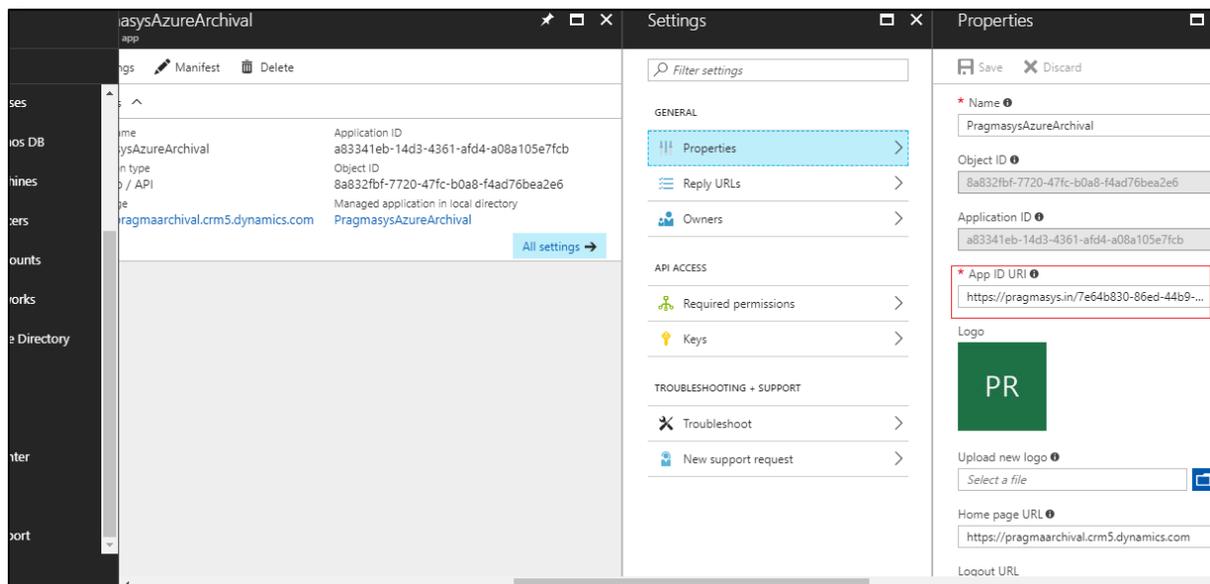


- After saving the key, the value of the key is displayed.
Important: Copy this value and store it because you will not be able to retrieve the key later.

7. Navigate to Reply URLs and add the Azure Web service URL we have created in section 2.1 and step 2.5. **Important: Make sure protocol entered here is https irrelevant of what was created in previous step.**

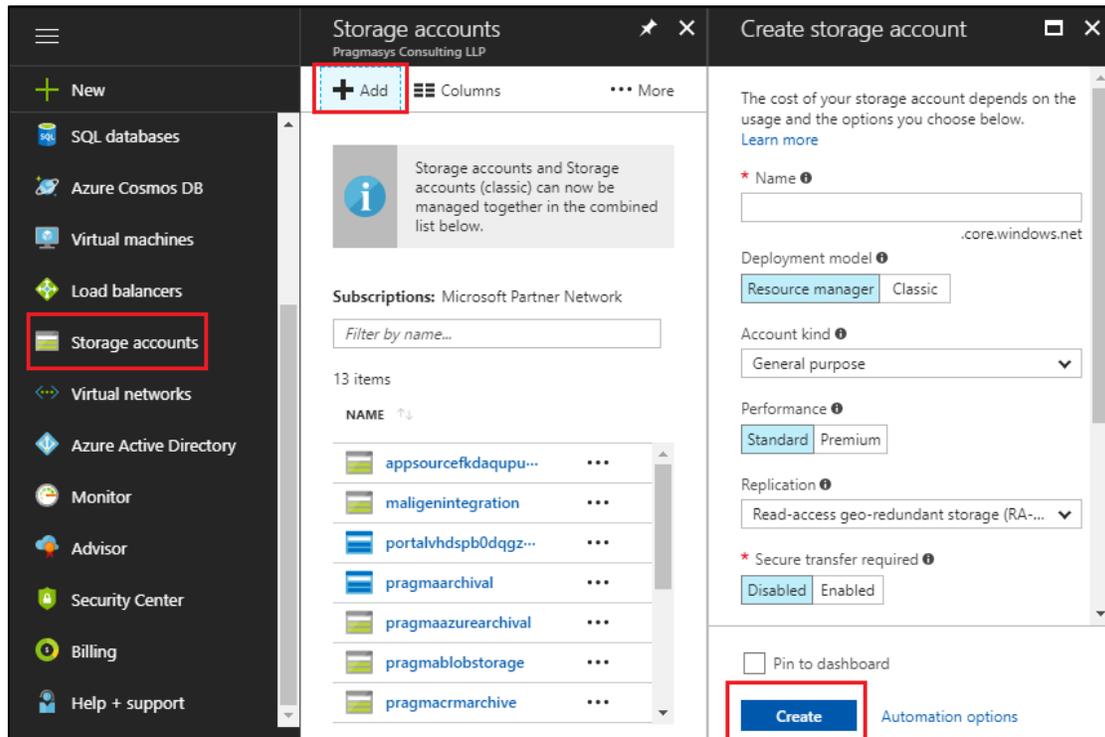


8. Copy App ID URL created from this application which we will use as config key in Web App.



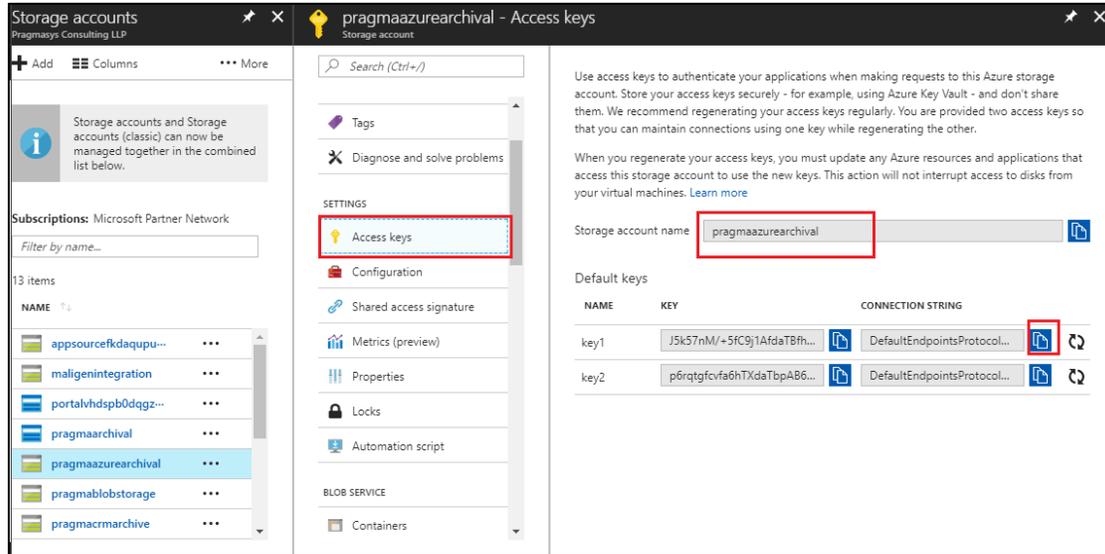
4. Create Storage Account

1. Go to Storage accounts -> click Add. Enter appropriate details and click on Create to create new Storage account.



The screenshot shows the Azure portal interface for creating a storage account. The left sidebar contains a navigation menu with 'Storage accounts' highlighted. The main content area is titled 'Storage accounts' and includes an 'Add' button (highlighted with a red box) and a list of existing storage accounts. The right-hand pane is titled 'Create storage account' and contains configuration options such as Name, Deployment model (Resource manager/Classic), Account kind (General purpose), Performance (Standard/Premium), Replication (Read-access geo-redundant storage), and Secure transfer required (Disabled/Enabled). The 'Create' button at the bottom right is highlighted with a red box.

2. Navigate to your newly created storage account. Click on Access Keys and copy Storage account name and first key which we will use as config key in Web App.

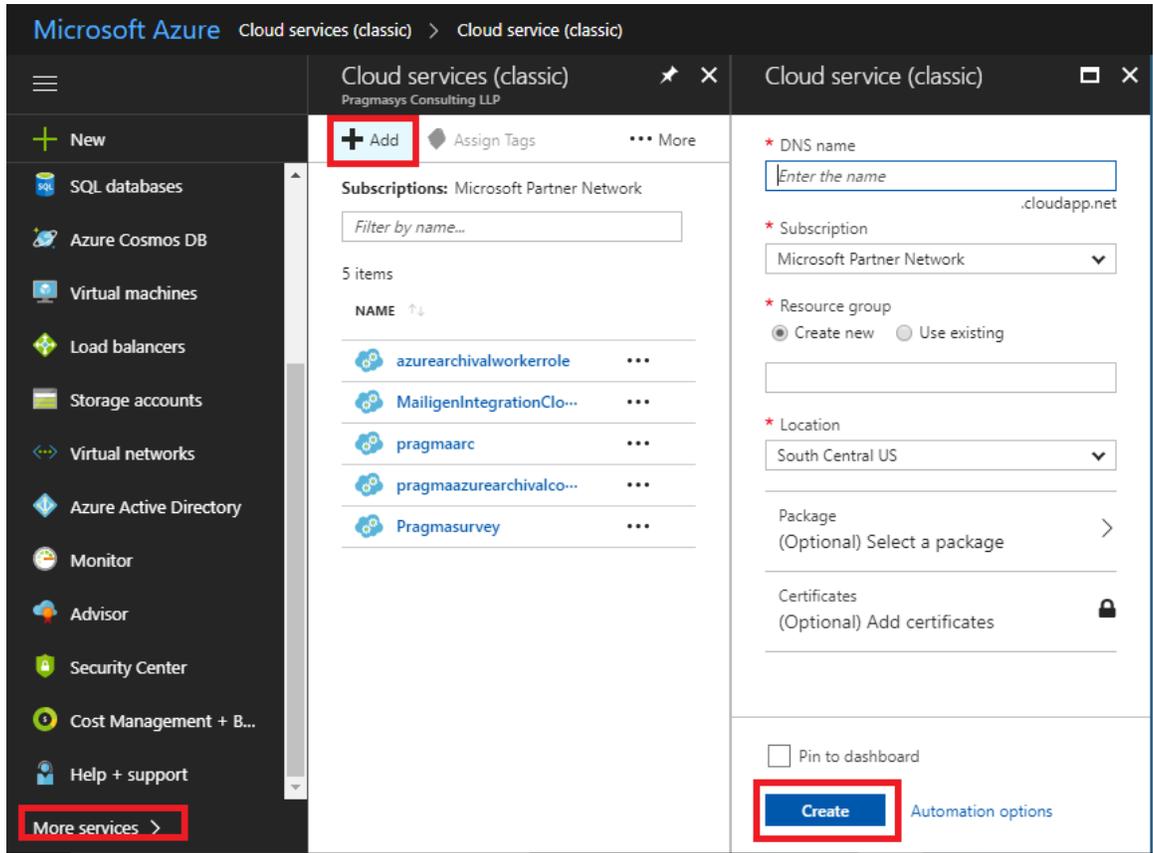


The screenshot shows the Azure portal interface. On the left, the 'Storage accounts' page lists several storage accounts, with 'pragmaazurearchival' selected. The main pane shows the 'Access keys' settings for this account. The 'Storage account name' field is highlighted with a red box. Below it, the 'Default keys' table is shown, with the first key's 'KEY' and 'CONNECTION STRING' columns highlighted by red boxes.

NAME	KEY	CONNECTION STRING
key1	J5k57nM/+5FC9j1AAdaT8fh...	DefaultEndpointsProtocol...
key2	p6rqtgfcvfa6hTX.daTbpAB6...	DefaultEndpointsProtocol...

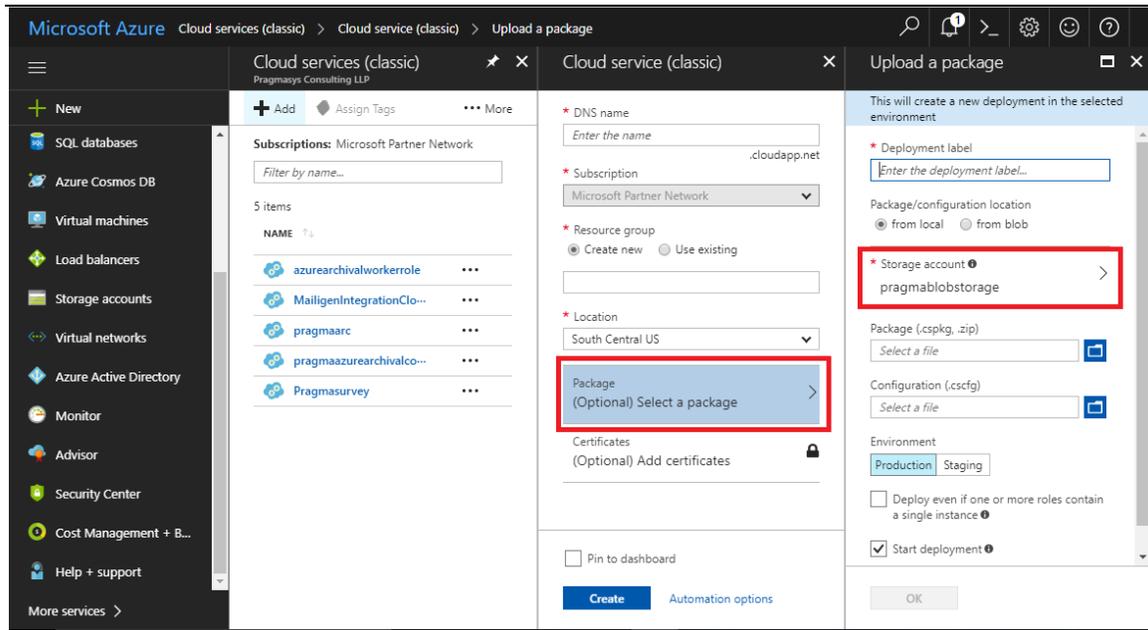
5. Deploying worker role

1. Login to Azure portal and navigate to More Services -> Cloud Service -> Enter appropriate details.



The screenshot displays the Microsoft Azure portal interface for creating a new Cloud Service (classic). The left-hand navigation pane shows various service categories, with 'More services >' highlighted in red. The main content area is titled 'Cloud services (classic)' and shows a list of existing services under the 'Subscriptions: Microsoft Partner Network' section. The 'Add' button at the top left of this section is highlighted in red. The right-hand pane shows the configuration details for a new Cloud Service (classic), including fields for DNS name, Subscription, Resource group, Location, Package, and Certificates. The 'Create' button at the bottom right of this pane is highlighted in red.

2. Add the storage account in cloud service from section 4 step 1



Microsoft Azure Cloud services (classic) > Cloud service (classic) > Upload a package

Cloud services (classic) Pragmasys Consulting LLP

Subscriptions: Microsoft Partner Network

Filter by name...

5 items

NAME	
azurearchivalworkerrole	...
MailigenIntegrationClo...	...
pragmaarc	...
pragmaazurearchivalco...	...
Pragmasurvey	...

* DNS name
Enter the name .cloudapp.net

* Subscription
Microsoft Partner Network

* Resource group
Create new Use existing

* Location
South Central US

Package (Optional) Select a package

Certificates (Optional) Add certificates

Pin to dashboard

Create Automation options

Upload a package

This will create a new deployment in the selected environment

* Deployment label
Enter the deployment label...

Package/configuration location
from local from blob

* Storage account
pragmablobstorage

Package (.cspkg, .zip)
Select a file

Configuration (.cscfg)
Select a file

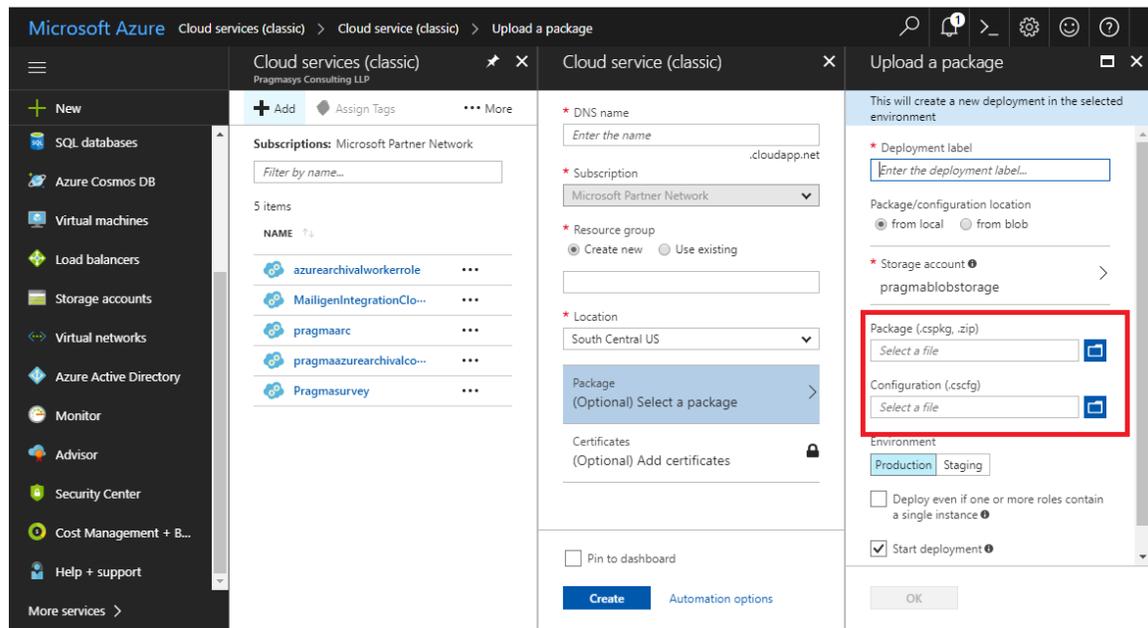
Environment
Production Staging

Deploy even if one or more roles contain a single instance

Start deployment

OK

3. Add the packages given by Pragmasys Consulting



Microsoft Azure Cloud services (classic) > Cloud service (classic) > Upload a package

Cloud services (classic) Pragmasys Consulting LLP

Subscriptions: Microsoft Partner Network

Filter by name...

5 items

NAME	
azurearchivalworkerrole	...
MailigenIntegrationClo...	...
pragmaarc	...
pragmaazurearchivalco...	...
Pragmasurvey	...

* DNS name
Enter the name .cloudapp.net

* Subscription
Microsoft Partner Network

* Resource group
Create new Use existing

* Location
South Central US

Package (Optional) Select a package

Certificates (Optional) Add certificates

Pin to dashboard

Create Automation options

Upload a package

This will create a new deployment in the selected environment

* Deployment label
Enter the deployment label...

Package/configuration location
from local from blob

* Storage account
pragmablobstorage

Package (.cspkg, .zip)
Select a file

Configuration (.cscfg)
Select a file

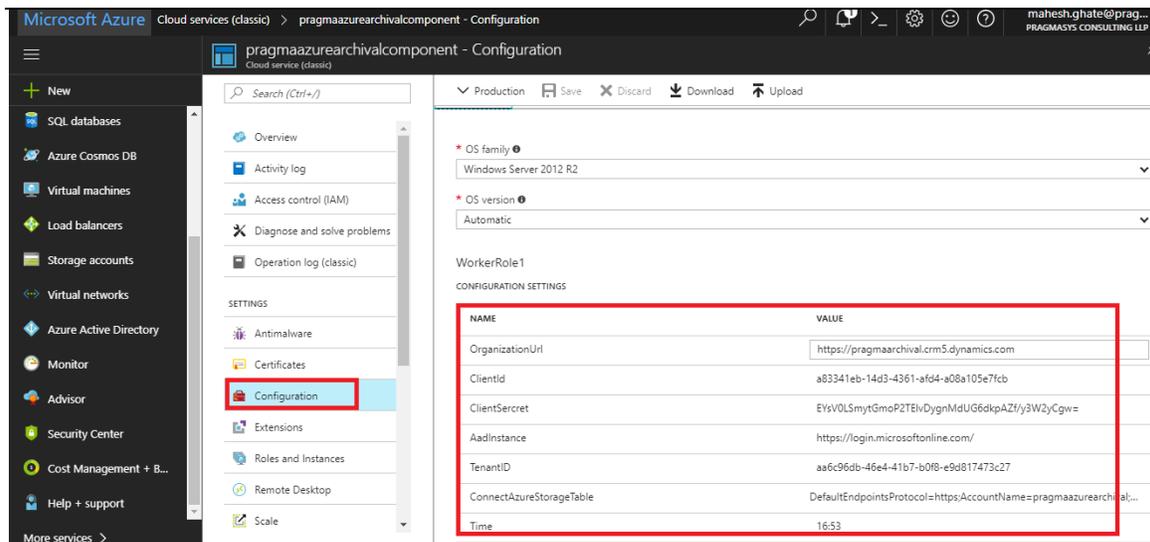
Environment
Production Staging

Deploy even if one or more roles contain a single instance

Start deployment

OK

4. Go to Configuration -> Set Configuration Keys



NAME	VALUE
OrganizationUrl	https://prigmaarchival.crm5.dynamics.com
Clientid	a83341eb-14d3-4361-afd4-a08a105e7fcb
ClientSecret	EYsV0LSmytGmoP2TElvDygnMdUG6dkpAZf/y3W2yCgw=
AadInstance	https://login.microsoftonline.com/
TenantID	aa6c96db-46e4-41b7-b0f8-e9d817473c27
ConnectAzureStorageTable	DefaultEndpointsProtocol=https;AccountName=prigmaazurearchival...
Time	16:53

3. Except time all the config keys are same as web app. Enter scheduled time that you want the worker role to execute and archive required data.