



# CONTROL PANEL VENDOR APPLICATION OVERVIEW

Multi-tenant application model

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## CONTROL PANEL VENDOR APPLICATION

### CREATE A MICROSOFT PARTNER CENTER SERVICE PRINCIPAL

Create a Microsoft Partner Center service principal in the Control Panel vendor's tenant, where the multitenant application is going to be created.

In a PowerShell window, run the following admin commands.

1. Install the AzureAD module.
  - `Install-Module "AzureAD"`
2. Run `Connect-AzureAD`, this will prompt for a user name and password. Please enter the tenant admin credentials.
  - `Connect-AzureAD`
3. Create a Microsoft Partner Center service principal.
  - `New-AzureADServicePrincipal -DisplayName "Microsoft Partner Center" -AppId fa3d9a0c-3fb0-42cc-9193-47c7ecd2edbd`

### CREATE A MULTI-TENANT APPLICATION ON THE CONTROL PANEL VENDOR'S TENANT.

Please make sure that the following application properties are set for the newly created multi-tenant application.

1. Have an **Application type** of "Web app / API"
2. The **Home page** URL must be your application redirect URL, which will show the consent success to the partner and collect a refresh token
3. Add a key to the web application

The screenshot displays the Azure AD application settings for a 'CPV Application'. The interface is divided into three main sections: 'CPV Application', 'Settings', and 'Properties'.

- CPV Application:** Shows the application's metadata, including the display name 'CPV Application', application type 'Web app / API', and home page. It also lists the application ID, object ID, and notes that it is a managed application in the local directory.
- Settings:** A navigation menu with categories like 'GENERAL', 'API ACCESS', and 'TROUBLESHOOTING + SUPPORT'. The 'Properties' option is currently selected.
- Properties:** The 'GENERAL' tab is active, showing fields for Name, Object ID, Application ID, App ID URI, Logo (with a green 'CA' logo), Home page URL, Logout URL, Terms of service URL, and Privacy statement URL. The application type is 'Web app / API' and it is configured as 'Multi-tenanted'.

## APPLICATION PERMISSIONS

Please make sure the following permissions are set for the multi-tenant application

1. Windows Azure Active Directory
  - a. There should not be any direct **Application Permissions** to the multi-tenant application.
  - b. **Delegated Permissions** are to be set to access Active Directory as the signed in user.

**Required permissions**

+ Add Grant permissions

API	APPLICATION PERMI...	DELEGATED PERMIS...
Windows Azure Active Directory	0	2
Microsoft Partner Center	0	1

**Enable Access**  
Windows Azure Active Directory

Save Delete

APPLICATION PERMISSIONS REQUIRES ADMIN

- Read directory data Yes
- Read and write domains Yes
- Read and write directory data Yes
- Read and write devices Yes
- Read all hidden memberships Yes
- Manage apps that this app creates or owns Yes
- Read and write all applications Yes
- Read and write domains Yes

DELEGATED PERMISSIONS REQUIRES ADMIN

- Access the directory as the signed-in user No
- Read directory data Yes
- Read and write directory data Yes
- Read and write all groups Yes
- Read all groups Yes
- Read all users' full profiles Yes
- Read all users' basic profiles No
- Sign in and read user profile No
- Read hidden memberships Yes

## 2. Microsoft Partner Center

- a. Grant **Access Partner Center** permissions under **Delegated Permissions**.

**Required permissions**

+ Add Grant permissions

API	APPLICATION PERMI...	DELEGATED PERMIS...
Windows Azure Active Directory	0	2
Microsoft Partner Center	0	1

**Enable Access**  
Microsoft Partner Center

Save Delete

APPLICATION PERMISSIONS REQUIRES ADMIN

No application permissions available.

DELEGATED PERMISSIONS REQUIRES ADMIN

- Access Partner Center No

### CONSENT LINK

Present the partner with the consent link and have them login with their service account to approve the Control Panel vendor application to act on behalf of the service account.

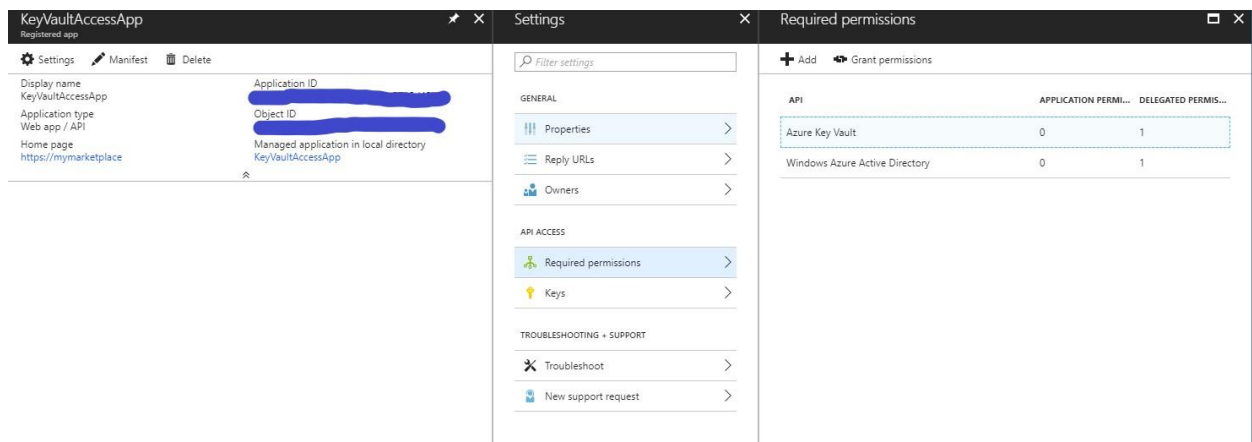
[https://login.microsoftonline.com/common/oauth2/authorize?&client\\_id=<CPVApplicationId>&response\\_type=code&redirect\\_url=https://<CPVApplicationUrl which collects refreshtoken>](https://login.microsoftonline.com/common/oauth2/authorize?&client_id=<CPVApplicationId>&response_type=code&redirect_url=https://<CPVApplicationUrl which collects refreshtoken>)

## KEY VAULT SETUP

### CREATE A NEW WEB APPLICATION IN CONTROL PANEL VENDOR TENANT

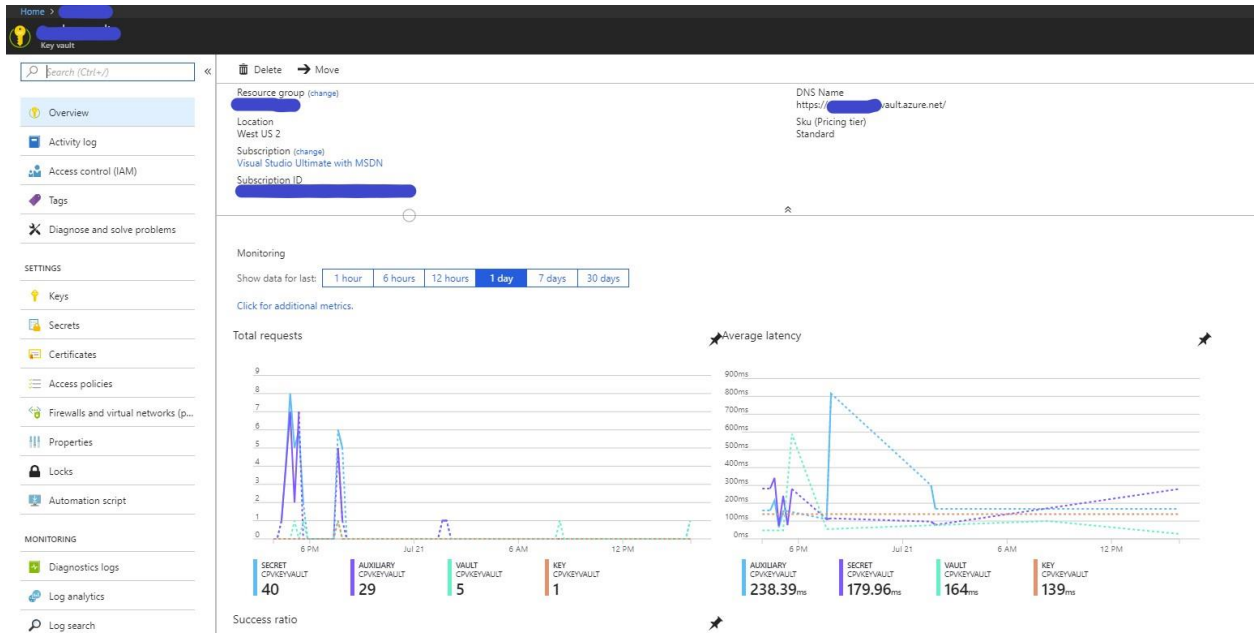
If you are using Azure Key Vault:

1. Add a key to the web application
2. Set application permissions in the **Required Permissions** tab
  - a. For an **Azure Key Vault** app, under the **Delegated Permissions** section, select **Have full access to the Azure Key Vault service**
  - b. For a **Windows Azure Active Directory** app, under the **Delegated Permissions** section, select **Sign in and read user profile**



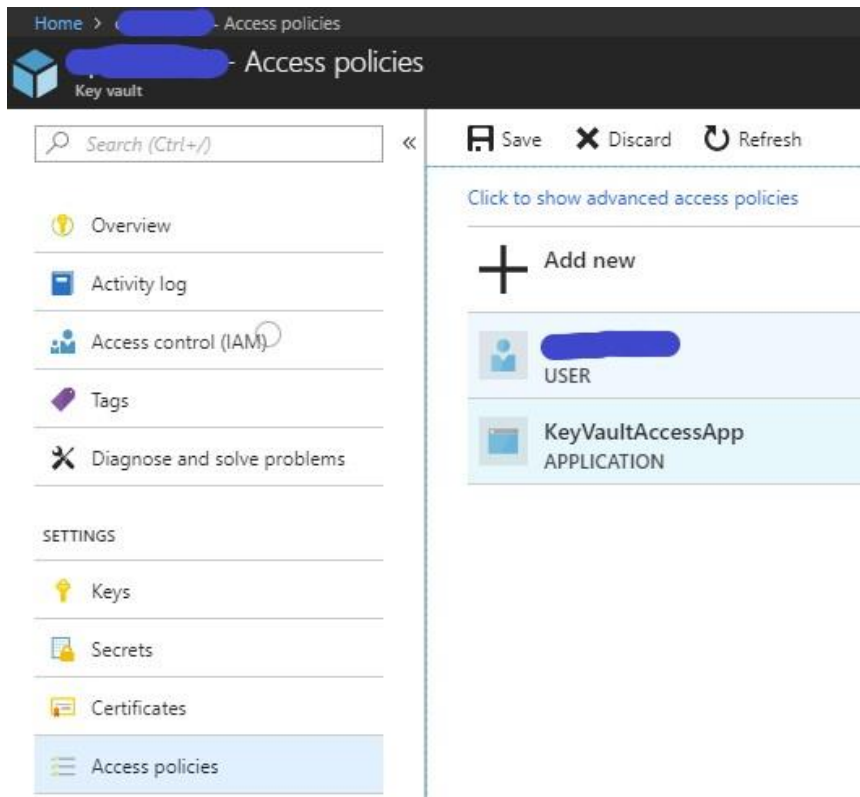
## AZURE KEY VAULT SETUP

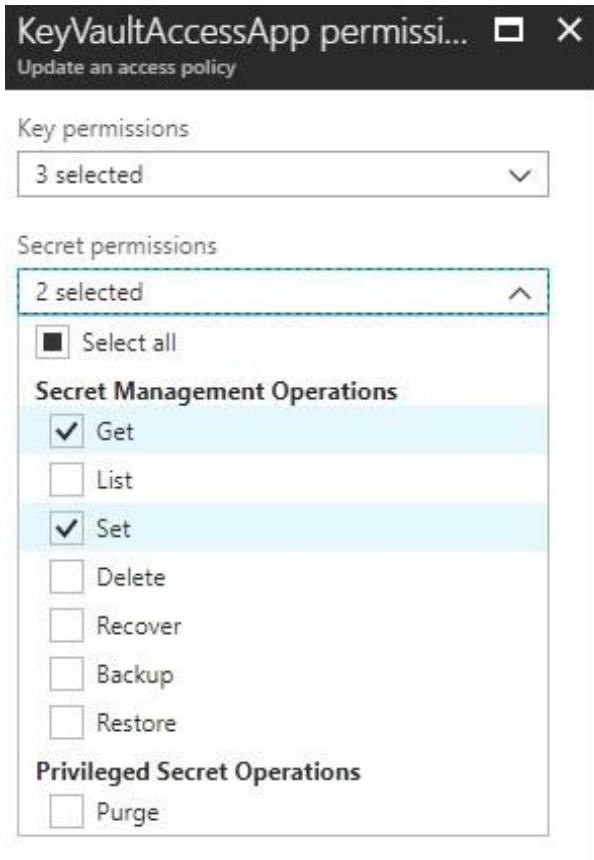
Create the Azure Key Vault with the appropriate <key-vault-name> and it will result in a DNS name like: <https://<key-vault-name>.vault.azure.net>



## AZURE KEY VAULT ACCESS

In the access policies of the key vault, add the **KeyVaultAccessApp** with permissions to only manage the **Get** and **Set** aspects of a **Secret**.





## PROTOTYPE CONFIGURATION

### PROTOTYPE HAS TWO APPLICATIONS:

1. **Partner Consent:** Represents a web application designed to accept consent from a CSP partner and show a success message.
  - a. This application will setup consent and capture the refresh token of the consented user.
  - b. The consented user's refresh token is used for generating the access token for the Control Panel vendor application.
2. **Control Panel vendor application:** Represents a primary Control Panel vendor application which calls Partner Center APIs and graph APIs to perform commerce and user actions on behalf of the partner
  - a. This application retrieves the access token for a specific audience (Partner Center APIs or graph) before calling respective APIs using the refresh token that is stored securely in the key vault

## CONFIGURATIONS



## PARTNER CONSENT APPLICATION:

The web.config file has the following sections called out. Please update the values with corresponding application IDs and secrets. For your primary application, please use "certificate" as the web application secret instead of plain secrets because it will provide an additional layer of security.

```
<!-- AppID that represents Control panel vendor application -->
<add key="ida:CPVApplicationId" value="CPVApplicationIdValue" />
<!--
Please use certificate as your client secret and deploy the certificate to your environment.
The following application secret is for sample application only. please do not use secret
directly from the config file.
-->
<add key="ida:CPVApplicationSecret" value="CPVApplicationSecretValue" />

<!-- AppID that is given access for keyvault to store the refresh tokens -->

<add key="ida:KeyVaultClientId" value="KeyVaultClientIdValue" />
<!--
Please use certificate as your client secret and deploy the certificate to your environment.
The following application secret is for sample application only. please do not use secret
directly from the config file.
-->
<add key="ida:KeyVaultClientSecret" value="KeyVaultClientSecretValue" />

<!-- AAD instance: Global is .com, for different national clouds it changes German cloud:
.de, China cloud: .cn -->
<add key="ida:AADInstance" value="https://login.microsoftonline.com/" />
```

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## CONTROL PANEL VENDOR APPLICATION:

The app.config file has the following sections called out. Please update the values with the corresponding application IDs and secrets. For your primary application, please use "certificate" as the web application secret instead of plain secrets because it will provide an additional layer of security.

```
<!-- AppID that represents Control panel vendor application -->
<add key="ida:CPVApplicationId" value="CPVApplicationIdValue" />
<!--
Please use certificate as your client secret and deploy the certificate to your environment.
The following application secret is for sample application only. please do not use secret
directly from the config file.
-->
<add key="ida:CPVApplicationSecret" value="CPVApplicationSecretValue" />

<!-- AppID that is given access for keyvault to store the refresh tokens -->

<add key="ida:KeyVaultClientId" value="KeyVaultClientIdValue" />
<!--
Please use certificate as your client secret and deploy the certificate to your environment.
The following application secret is for sample application only. please do not use secret
directly from the config file.
-->
<add key="ida:KeyVaultClientSecret" value="KeyVaultClientSecretValue" />

<!-- AAD instance: Global is .com, for different national clouds it changes German cloud:
.de, China cloud: .cn -->
<add key="ida:AADInstance" value="https://login.microsoftonline.com/" />
```