World of Workflows Business Edition

World of Workflows Business Edition can be downloaded from here: latest release

Installation Instructions

Installing Pre-requisites

These instructions assume that you have administrative rights to your Windows Server.

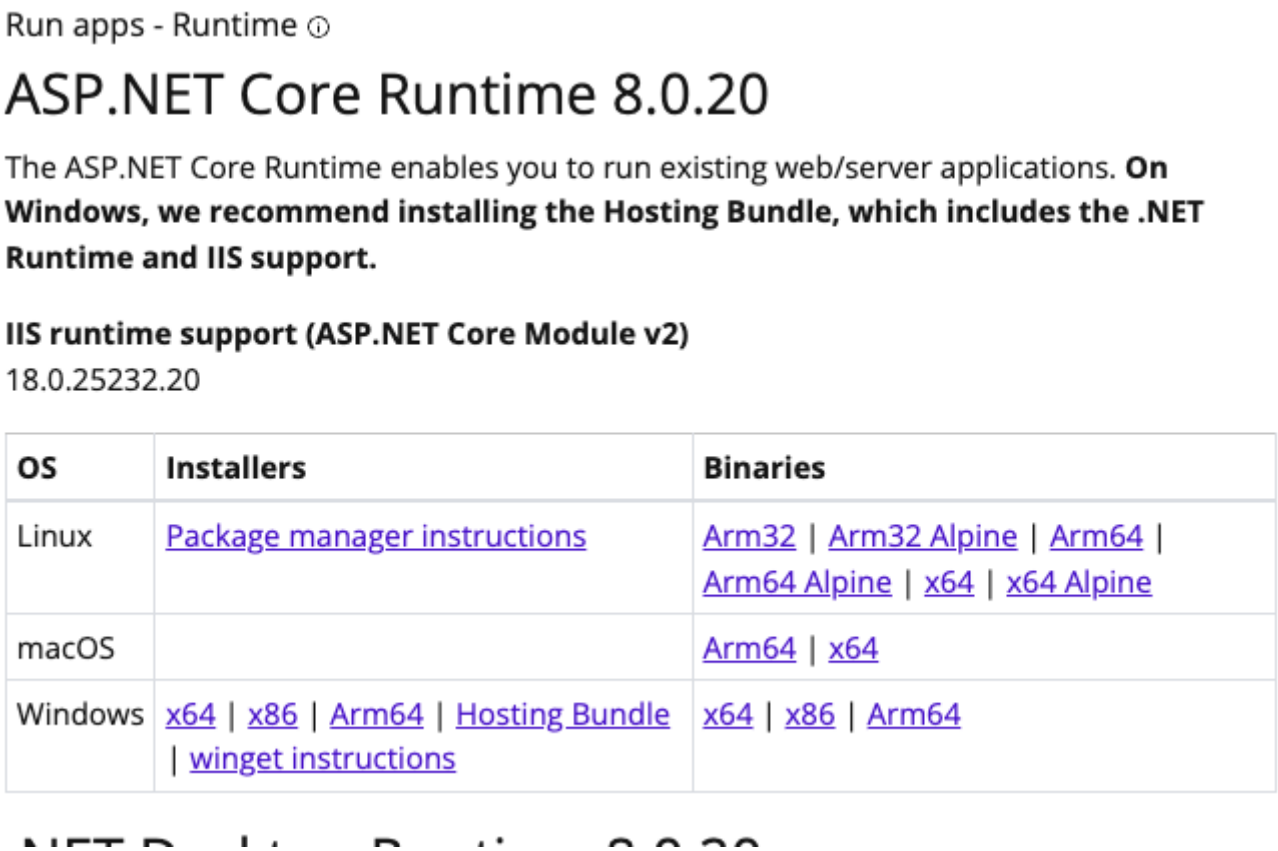
1. Install IIS (if not already installed)

1. Open Server Manager → Manage → Add Roles and Features.
2. Choose Role-based or feature-based installation.
3. Under Server Roles, check `Web Server (IIS)`
4. Under Role Services, include:
   • Web Server →
   Application Development →
   • ASP.NET (both versions if available, e.g., ASP.NET 4.8)
   • .NET Extensibility
   • ISAPI Extensions & Filters • Security → • Request Filtering
   • Common HTTP Features → • Static Content, • Default Document
5. Complete installation and reboot if required.

2. Install the .NET 8 Hosting Bundle

On your Windows Server:

```
1.  Download the .NET 8 Hosting Bundle from Microsoft:  [ Download .NET 8
Hosting Bundle](https://dotnet.microsoft.com/en-us/download/dotnet/8.0)
```



Run apps - Runtime ⓘ

ASP.NET Core Runtime 8.0.20

The ASP.NET Core Runtime enables you to run existing web/server applications. **On Windows, we recommend installing the Hosting Bundle, which includes the .NET Runtime and IIS support.**

IIS runtime support (ASP.NET Core Module v2)
18.0.25232.20

OS	Installers	Binaries
Linux	Package manager instructions	Arm32 | Arm32 Alpine | Arm64 | Arm64 Alpine | x64 | x64 Alpine
macOS		Arm64 | x64
Windows	x64 | x86 | Arm64 | Hosting Bundle | winget instructions	x64 | x86 | Arm64

```
2.  Run the installer — it will:
•   Install the .NET Runtime.
•   Install the ASP.NET Core Module for IIS (so IIS can reverse-proxy to
Kestrel).
•   Register the module automatically with IIS.
3.  Reboot the server after installation.
```

Installing World of Workflows

1. Download World of Workflows Business Edition

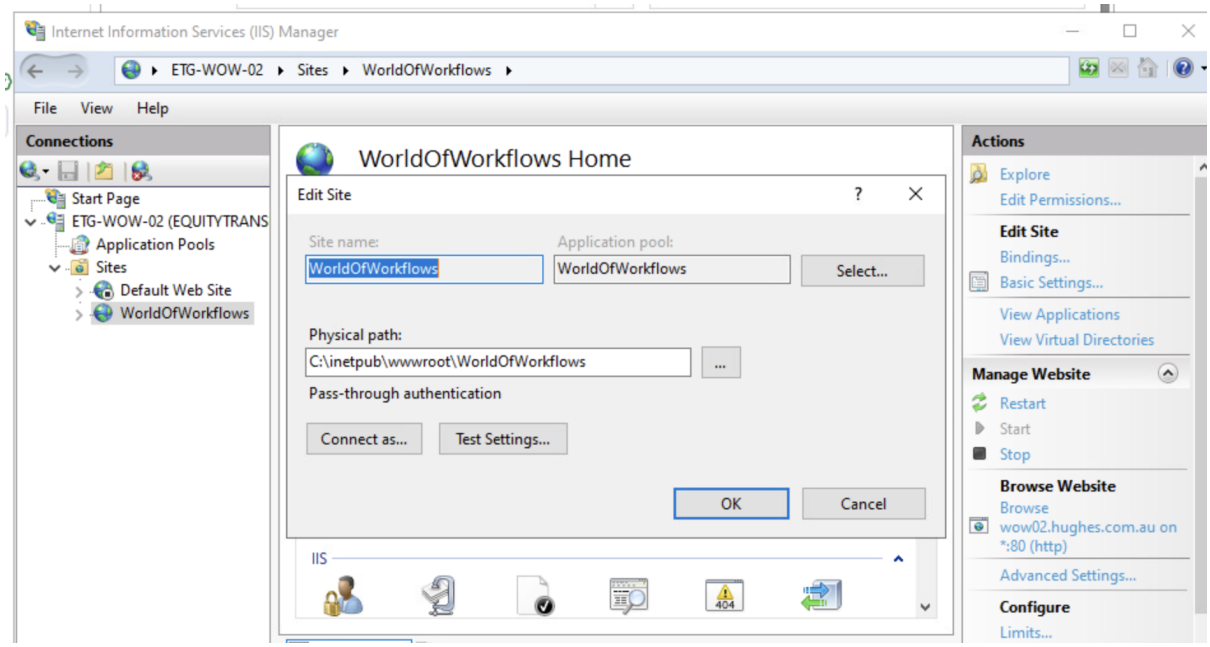
   Download the latest code from here: latest release. Choose the file WorldOfWorkflowsBE-<version>-win-x64.zip

2. Extract the .zip contents to a permanent folder, e.g.:
   `C:\inetpub\wwwroot\WorldOfWorkflows`

3. Make sure the folder has Read & Execute permissions for the IIS AppPool user (IIS_IUSRS).

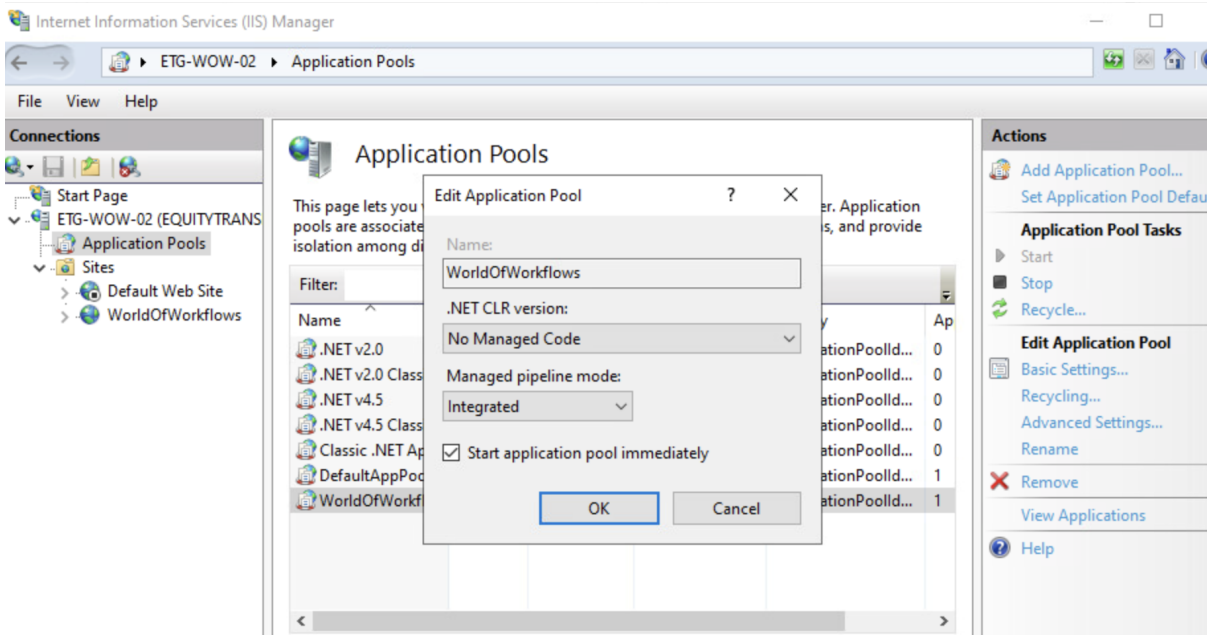
4. Configure IIS Site

   1. Open IIS Manager → Right-click Sites → Add Website.
      - Site name: WorldOfWorkflows
      - Physical path: C:\inetpub\wwwroot\WorldOfWorkflows



• Binding: http on port 80 (or another port if 80 is used). • HostName: set the server's hostname - eg wow.yourdomain.com.

2. IIS will create an Application Pool:
   • Set .NET CLR Version to No Managed Code
   (ASP.NET Core doesn't run on the IIS CLR — it runs on Kestrel).



3. Ensure the Identity of the App Pool (ApplicationPoolIdentity by default) has Read/Write access to the app folder if the app logs or writes files.

4. Stop the `Default Web Site` site

{: .key }
Note: the Site name is also used by IIS to create an Application Pool.
A `local` user is created called `IIS AppPool\<sitename>`. This is the user you will need to grant access to `C:\inetpub\wwwroot\WorldOfWorkflows` and the database folder.

5. Verify Web.Config The World fo Workflows Business Edition .zip should already include a web.config with an `<aspNetCore />` section. If you need to, update the logging to be enabled, like this:

```
<?xml version="1.0" encoding="utf-8"?>
<configuration>
  <location path="." inheritInChildApplications="false">
    <system.webServer>
      <handlers>
        <add name="aspNetCore" path="*" verb="*"
modules="AspNetCoreModuleV2" resourceType="Unspecified" />
      </handlers>
      <aspNetCore processPath=".\HubOneWorkflowsApp.Server.exe"
stdoutLogEnabled="true" stdoutLogFile=".\logs\stdout"
hostingModel="inprocess" />
    </system.webServer>
  </location>
</configuration>
```

6. Create a logs folder
   Create the folder `C:\inetpub\wwwroot\WorldOfWorkflows\logs` if you enabled log output in `web.config`

7. Grant read/write access to the logs folder

8. Update appsettings.json
   Here is a sample `appsessings.json` file. There are a number of items you will need to update:

   1. The ConnectionStrings section contains the location and filename of your two World of Workflows databases.
      - the Elsa database holds the Workflow definitions and any workflow instance logs.
      - the WorldOfWorkflows

```
  "ConnectionStrings": {
      "Elsa": "Data Source=D:\\Data\\WoWWorkflows.db",
      "WorldOfWorkflows": "Data
Source=D:\\Data\\WoWData.db;cache=shared"
   },
```

   2. The ClientConfiguration contains details on how authentication is set up within AzureAD. The `Authority` will need to be set with your Azure Subscriptions Tenant Id.
      The `ClientId` will need to be changed to your App Registration's Client Id

```
"WorldOfWorkflows": {
 "ClientConfiguration": {
   "WorldOfWorkflows": {
     "Server": {
       "Scopes": {
         "Default": [
           "api://xxxxxxxx-xxxx-xxxx-xxxx-xxxx/.default"
```

```
          ]
        }
      }
    },
    "AzureAd": {
      "Authority": "https://login.microsoftonline.com/xxxxxxxx-xxxx-
  xxxx-xxxx-xxxx",
      "ValidateAuthority": true,
      "ClientId": "xxxxxxxx-xxxx-xxxx-xxxx-xxxx"
    }
  }
```

3. Add your server web url name to the `Cors` setting, and any other servers you want to be able to access your server

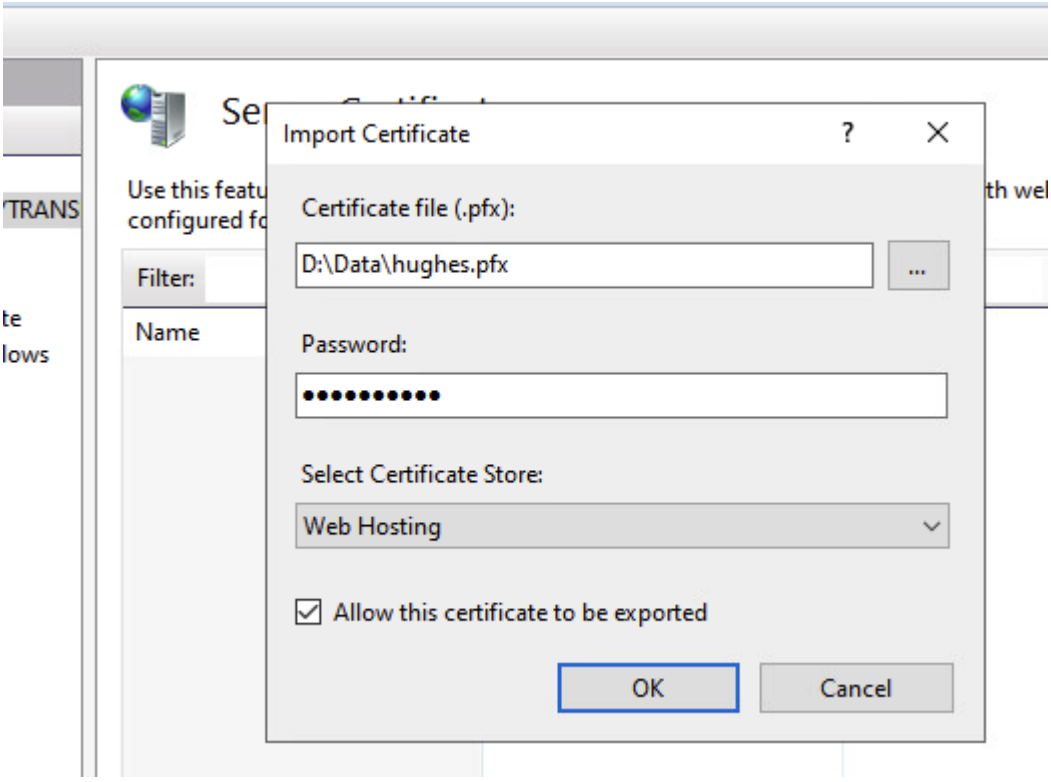
```
  "Cors": {
     "AllowedOrigins":[ "https://xxx.domain.com","http://localhost"]
   },
```

9. Add your server web url name to the `Kestrel.Enpoints.Public.Url` setting and set your https certificate filename and password.

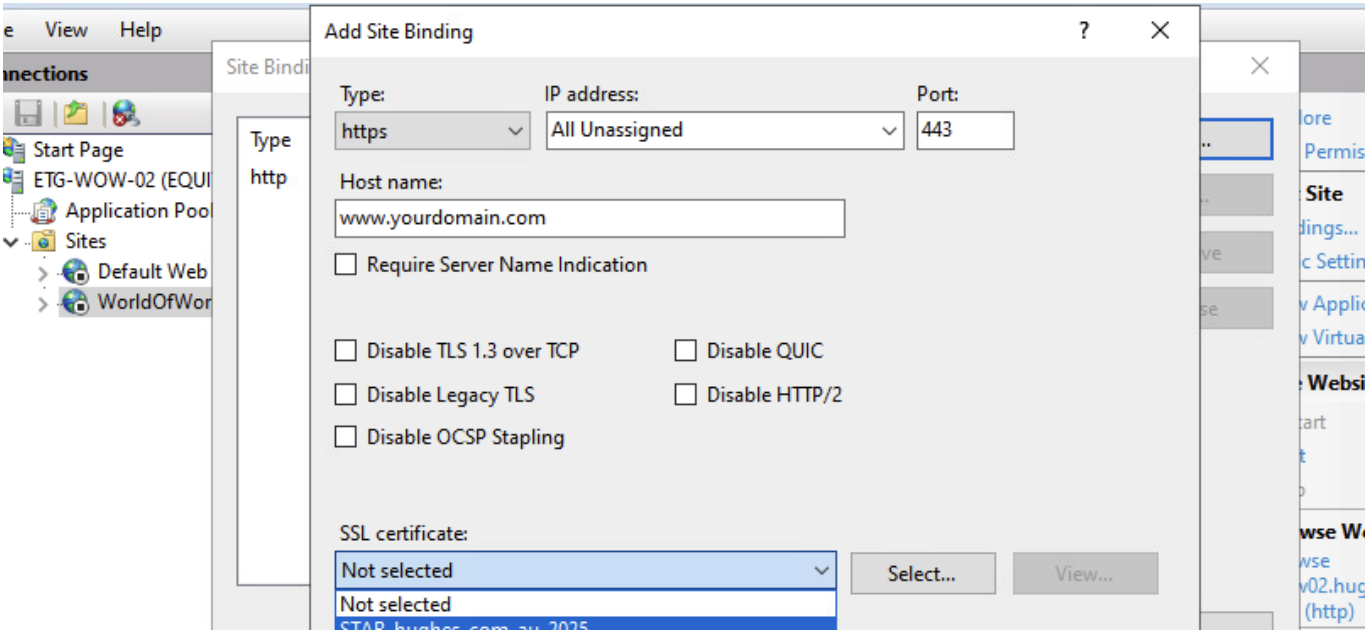
```
  "Kestrel": {
     "Endpoints": {
        "Public": {
        "Url": "https://wow.xxx.com.au:443",
        "Protocols": "Http1",
        "Certificate": {
              "Path": "D:\\Data\\xxx.pfx",
              "Password": "xxx"
           }
        }
     }
  }
```

Set up web site for HTTPS / SSL

Import your ssl certificate into the IIS system. Open IIS and go to the server settings. Find `Server Certificates` and import your .pfx file. You will need to know the password.



Next, go the bindings on your World of Workflows website and add HTTPS:

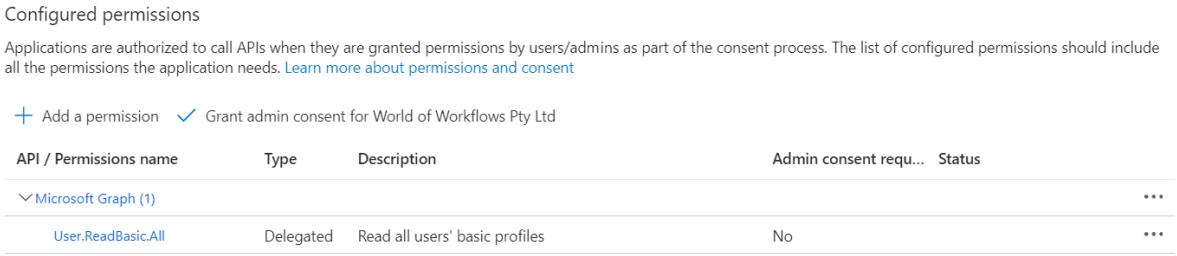


Granting Permission to access the World of Workflows Admin page

Granting permissions in World of Workflows requires you first to configure the Server Entra Id Application and then assign permissions.

1. **Setting up Server Application**
    1. You only need perform this once
    2. Navigate to Azure Portal --> Entra Id --> App Registrations
    3. Click **All Applications**
    4. Search for the Server application configured in step iv. above.

5. Click **API Permissions**

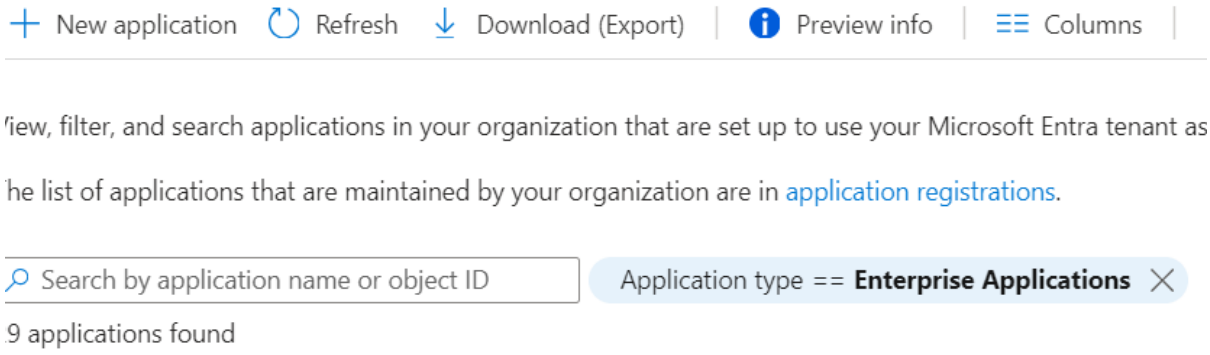


6. Click **Add a permission**
7. Click **Microsoft Graph**
8. Click **Delegated Permissions**
9. Select **email, offline_access, openid and profile**
10. Click **Add Permissions**
11. Click **Grant Admin Consent**
12. Click **Yes**

2. **Granting Permissions**

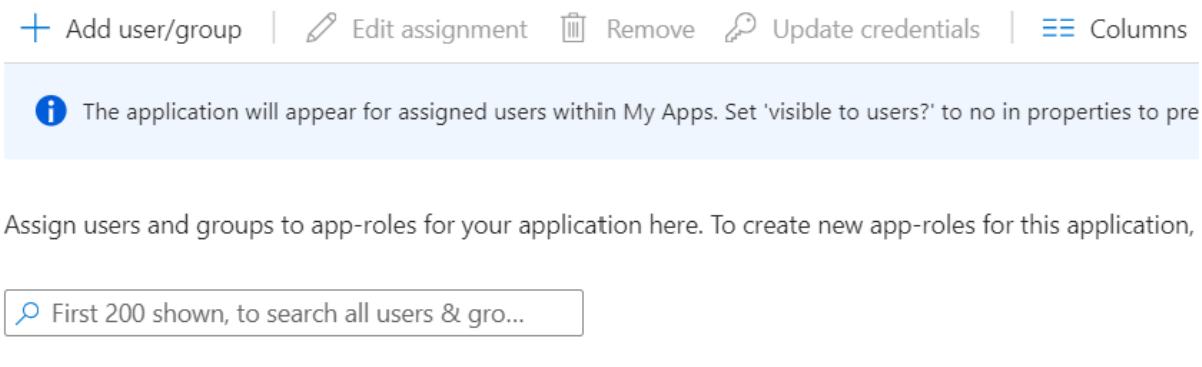
1. Navigate to Azure Portal --> Entra Id --> Enteprrise Applications

2. Click **X** next to Application type == Enteprrise Applications.

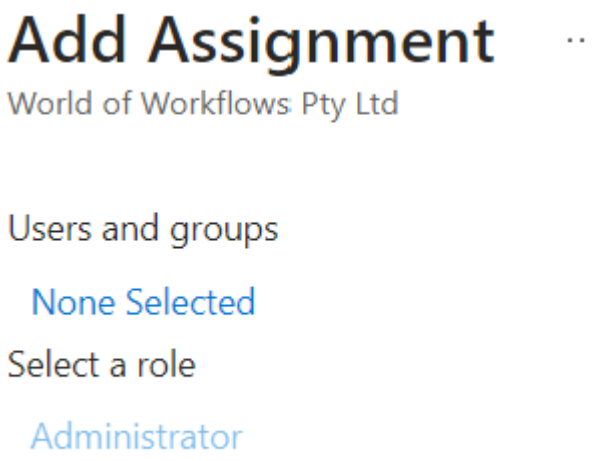


3. Search for and select the server applcation congfigured in step iv above.

4. Under **Manage**, choose **Users and Groups**

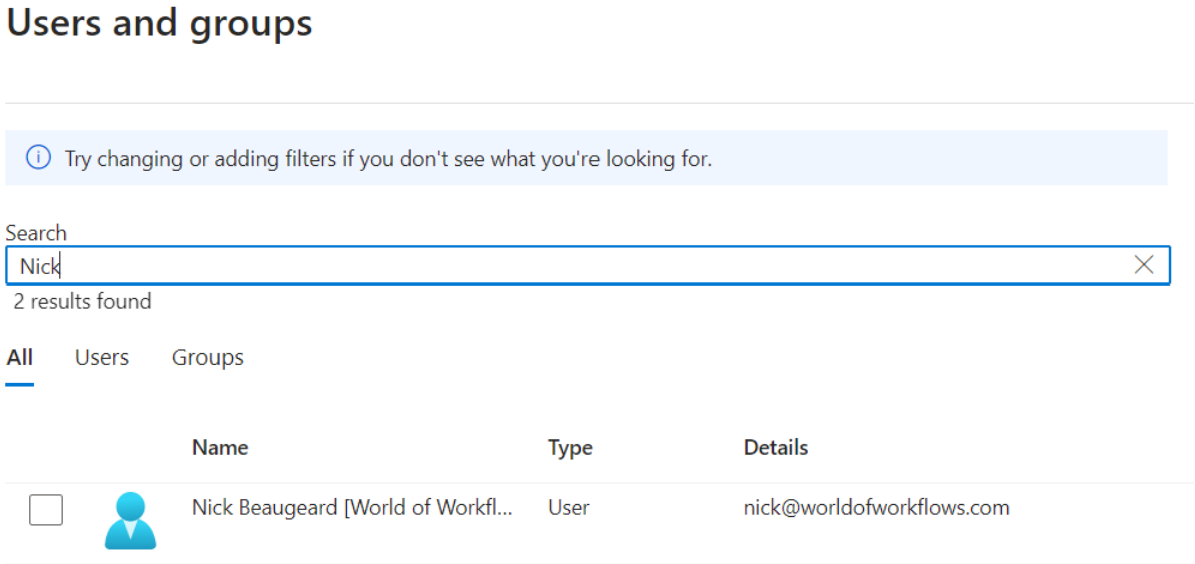


5. Click **Add user/group**



6. Click **None Selected**

7. Search for and select the User you want to grant permissions to



8. Click **Select**

9. Click **Assign**. *Administrator is the only role available in this version*

Now you can navigate to your new server and login.

Install a SQLite database tool

eg sqlitebrowser.org/dl