ploy .NET apps to Raspberry Pi

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syment of .NET apps to Raspberry Pi is identical to that of any other platform. Your can run as *self-contained* or *framework-dependent* deployment modes. There are stages to each strategy. For more information, see .NET application publishing iew.

ploying a framework-dependent app

ploy your app as a framework-dependent app, complete the following steps:

Ensure SSH is enabled on your Raspberry Pi. If needed, refer to *Enable SSH* in the Raspberry Pi documentation .

Install .NET on the Raspberry Pi using the dotnet-install scripts. Complete the following steps from a Bash prompt on the Raspberry Pi (local or SSH):

a. Run the following command to install .NET:



① Note

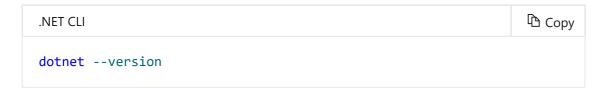
This installs the latest version. If you need a specific version, replace the --channel Current parameter with --version <VERSION>, where <VERSION> is the specific build version.

b. To simplify path resolution, add a DOTNET_ROOT environment variable and add the .dotnet directory to \$PATH with the following commands:

```
Bash

echo 'export DOTNET_ROOT=$HOME/.dotnet' >> ~/.bashrc
echo 'export PATH=$PATH:$HOME/.dotnet' >> ~/.bashrc
source ~/.bashrc
```

c. Verify the .NET installation with the following command:



Verify the displayed version matches the version you installed.

Publish the app on the development computer as follows, depending on development environment.

- If using Visual Studio, deploy the app to a local folder. Before publishing, select Edit in the publish profile summary and select the Settings tab. Ensure that Deployment mode is set to Framework-dependent and Target runtime is set to Portable.
- If using the .NET CLI, use the dotnet publish command. No additional arguments are required.

Using an SFTP client , copy the files from the publish location on the development computer to a new folder on the Raspberry Pi.

For example, to use the scp command to copy files from the development computer to your Raspberry Pi, open a command prompt and execute the following:



Where:

- The -r option instructs scp to copy files recursively.
- /publish-location/ is the folder you published to in the previous step.
- pi@raspberypi is the user and host names in the format
 <username>@<hostname>.
- /home/pi/deployment-location/ is the new folder on the Raspberry Pi.



Recent versions of Windows have OpenSSH, which includes scp, pre-installed.

From a Bash prompt on the Raspberry Pi (local or SSH), run the app. To do this, set the deployment folder as the current directory and execute the following command (where *HelloWorld.dll* is the entry point of the app):

```
.NET CLI

dotnet HelloWorld.dll
```

ploying a self-contained app

ploy your app as a self-contained app, complete the following steps:

Ensure SSH is enabled on your Raspberry Pi. If needed, refer to *Enable SSH* in the Raspberry Pi documentation .

Publish the app on the development computer as follows, depending on development environment.

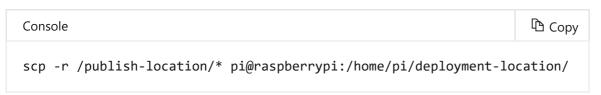
- If using Visual Studio, deploy the app to a local folder. Before publishing, select Edit in the publish profile summary and select the Settings tab. Ensure that Deployment mode is set to Self-contained and Target runtime is set to linux-arm.
- If using the .NET CLI, use the dotnet publish command with the -r linuxarm argument:

```
.NET CLI

dotnet publish -r linux-arm
```

Using an SFTP client , copy the files from the publish location on the development computer to a new folder on the Raspberry Pi.

For example, to use the scp command to copy files from the development computer to your Raspberry Pi, open a command prompt and execute the following:



Where:

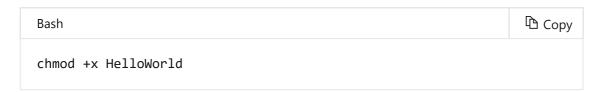
- /publish-location/ is the folder you published to in the previous step.
- pi@raspberypi is the user and host names in the format
 <username>@<hostname>.
- /home/pi/deployment-location/ is the new folder on the Raspberry Pi.



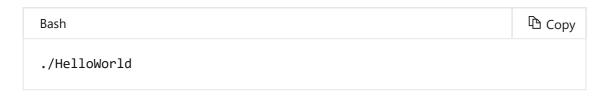
Recent versions of Windows have OpenSSH, which includes scp, pre-installed.

From a Bash prompt on the Raspberry Pi (local or SSH), run the app. To do this, set the current directory to the deployment location and complete the following steps:

a. Give the executable *execute* permission (where Helloworld is the executable file name).



b. Run the executable.



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