

## **.NET Application Publishing Guide**

### **Framework-Dependent vs Self-Contained Deployment**

#### **Before You Start (Prerequisites)**

**Step 1: Check if .NET SDK is Installed**

**Open your command prompt/terminal and type:**

**dotnet --version**

**Expected Result: You should see a version number like 8.0.100**

**Step 2: Make Sure Your Project Builds Navigate**

**to your project folder and run: dotnet build**

**Expected Result: Build should succeed with no errors**

**Step 3: Navigate to the Correct Folder**

**Important: You must be inside your project folder (where the .csproj file is) cd**

**ConsoleLearning**

**Warning: Do not run from the solution folder. Always go inside the project folder first.**

---

#### **Understanding the Two Publishing Methods**

##### **Method 1: Framework-Dependent Deployment (FDD)**

**Simple Explanation: Your app needs .NET to be already installed on the computer where it will run.**

**Advantages:**

- **Smaller file size (5-15 MB)**
- **Faster to publish**
- **Good for company servers**

**Disadvantages:**

- **Target computer must have .NET installed**
- 

##### **Method 2: Self-Contained Deployment (SCD)**

**Simple Explanation:** Your app includes everything it needs. No need to install .NET separately.

**Advantages:**

- Runs on any computer (even without .NET)
- Perfect for sharing with others
- Best for assignments/submissions

**Disadvantages:**

- Larger file size (70-150 MB)
- 

## **Method 1: Framework-Dependent Deployment (FDD)**

**When to Use This Method**

- You're running the app on your own computer
- Company servers that already have .NET installed
- You want smaller file sizes

**Step-by-Step Publishing**

**Step 1: Make sure you're in the project folder cd**

**ConsoleLearning**

**Step 2: Run the publish command dotnet**

**publish -c Release**

**Step 3: Find your published files Your files will be in this location:**

**bin/Release/net8.0/publish/**

**What Files Will You Get**

- **ConsoleLearning.dll** - Your main application file
- **ConsoleLearning.deps.json** - Dependency information
- **ConsoleLearning.runtimeconfig.json** - Runtime configuration

**How to Run Your Published App dotnet ConsoleLearning.dll**

**Remember: The computer must have .NET installed.**

---

## **Method 2: Self-Contained Deployment (SCD)**

### **When to Use This Method**

- **Submitting assignments/projects**
- **Sharing with friends who don't have .NET**
- **Creating desktop applications**
- **Target computer doesn't have .NET**

### **Step 1: Choose Your Target Operating System**

#### **Operating System Code to Use**

**Windows 64-bit    win-x64**

**Windows 32-bit    win-x86**

**Linux 64-bit        linux-x64**

**macOS 64-bit        osx-x64**

**Example: If you want to run on Windows 64-bit, use win-x64**

### **Step 2: Run the Publish Command**

**For Windows 64-bit: dotnet publish -c Release -r win-x64**

**--self-contained true**

**For Linux 64-bit:**

**dotnet publish -c Release -r linux-x64 --self-contained true**

### **Step 3: Find Your Published Files**

**Your files will be in:**

**bin/Release/net8.0/win-x64/publish/**

### **What Files Will You Get**

- **ConsoleLearning.exe - Your application (Windows)**
- **Many .dll files - .NET runtime files (included automatically)**

### **How to Run Your Published App**

**Windows: Just double-click ConsoleLearning.exe**

**Linux/macOS:**

**./ConsoleLearning**

**Note: Works even if .NET is NOT installed.**

---

## **Single-File Publishing**

### **What is This**

**Instead of many files, you get just ONE file that you can share easily. Framework-**

**Dependent Single File dotnet publish -c Release -p:PublishSingleFile=true Self-**

**Contained Single File (Recommended for Sharing) dotnet publish -c Release -r win-**

**x64 --self-contained true -p:PublishSingleFile=true**

**Result: One .exe file that contains everything. Perfect for sending via email or USB drive.**