Use the LibMan CLI with ASP.NET Core

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In this article

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The LibMan CLI is a cross-platform tool that's supported everywhere .NET Core is supported.

Prerequisites

- .NET Core 2.1 SDK or later

Installation

To install the LibMan CLI:

.NET Core CLI | Copy

```
dotnet tool install -g Microsoft.Web.LibraryManager.Cli
```

A .NET Core Global Tool is installed from the Microsoft.Web.LibraryManager.Cli NuGet package.

To install the LibMan CLI from a specific NuGet package source:

.NET Core CLI

```
dotnet tool install -g Microsoft.Web.LibraryManager.Cli --version 1.0.94-g606058a278 --add-source C:\Temp\
```

In the preceding example, a .NET Core Global Tool is installed from the local Windows machine's *C:\Temp\Microsoft.Web.LibraryManager.Cli.1.0.94-g606058a278.nupkg* file.

Usage

After successful installation of the CLI, the following command can be used:

Console

```
libman
```

To view the installed CLI version:

Console

```
libman --version
```

To view the available CLI commands:

Console

```
libman --help
```

The preceding command displays output similar to the following:

Console

```
 1.0.163+g45474d37ed

Usage: libman [options] [command]

Options:
  --help|-h  Show help information
  --version  Show version information

Commands:
  cache      List or clean libman cache contents
  clean      Deletes all library files defined in libman.json from the project
```

```
  init       Create a new libman.json
  install    Add a library definition to the libman.json file, and download the
             library to the specified location
  restore    Downloads all files from provider and saves them to specified
             destination
  uninstall  Deletes all files for the specified library from their specified
             destination, then removes the specified library definition from
             libman.json
  update     Updates the specified library

Use "libman [command] --help" for more information about a command.
```

The following sections outline the available CLI commands.

Initialize LibMan in the project

The `libman init` command creates a *libman.json* file if one doesn't exist. The file is created with the default item template content.

Synopsis

Console | Copy

```
libman init [-d|--default-destination] [-p|--default-provider] [--verbosity]
libman init [-h|--help]
```

Options

The following options are available for the `libman init` command:

- `-d|--default-destination <PATH>`

  A path relative to the current folder. Library files are installed in this location if no `destination` property is defined for a library in *libman.json*. The `<PATH>` value is written to the `defaultDestination` property of *libman.json*.

- `-p|--default-provider <PROVIDER>`

  The provider to use if no provider is defined for a given library. The `<PROVIDER>` value is written to the `defaultProvider` property of *libman.json*. Replace `<PROVIDER>` with one of the following values:

  - `cdnjs`
  - `filesystem`
  - `jsdelivr`
  - `unpkg`

- `-h|--help`

  Show help information.

- `--verbosity <LEVEL>`

  Set the verbosity of the output. Replace `<LEVEL>` with one of the following values:
  - `quiet`
  - `normal`
  - `detailed`

Examples

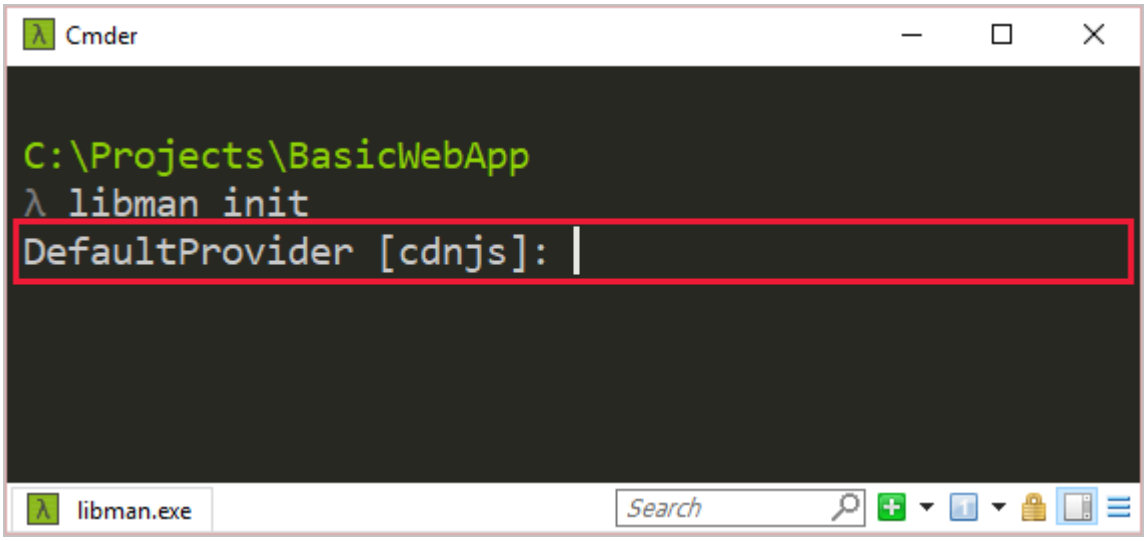
To create a *libman.json* file in an ASP.NET Core project:

- Navigate to the project root.
- Run the following command:

  Console | Copy

  ```
  libman init
  ```

- Type the name of the default provider, or press `Enter` to use the default CDNJS provider. Valid values include:
  - `cdnjs`
  - `filesystem`
  - `jsdelivr`
  - `unpkg`



A *libman.json* file is added to the project root with the following content:

JSON Copy

```
{
  "version": "1.0",
  "defaultProvider": "cdnjs",
  "libraries": []
}
```

Add library files

The `libman install` command downloads and installs library files into the project. A *libman.json* file is added if one doesn't exist. The *libman.json* file is modified to store configuration details for the library files.

Synopsis

Console Copy

```
libman install <LIBRARY> [-d|--destination] [--files] [-p|--provider] [--
verbosity]
libman install [-h|--help]
```

Arguments

`LIBRARY`

The name of the library to install. This name may include version number notation (for example, `@1.2.0`).

Options

The following options are available for the `libman install` command:

- `-d|--destination <PATH>`

  The location to install the library. If not specified, the default location is used. If no `defaultDestination` property is specified in *libman.json*, this option is required.

- `--files <FILE>`

  Specify the name of the file to install from the library. If not specified, all files from the library are installed. Provide one `--files` option per file to be installed. Relative paths are supported too. For example: `--files dist/browser/signalr.js`.

- `-p|--provider <PROVIDER>`

  The name of the provider to use for the library acquisition. Replace `<PROVIDER>` with one of the following values:
  - `cdnjs`
  - `filesystem`
  - `jsdelivr`
  - `unpkg`

  If not specified, the `defaultProvider` property in *libman.json* is used. If no `defaultProvider` property is specified in *libman.json*, this option is required.

- `-h|--help`

  Show help information.

- `--verbosity <LEVEL>`

  Set the verbosity of the output. Replace `<LEVEL>` with one of the following values:
  - `quiet`
  - `normal`
  - `detailed`

Examples

Consider the following *libman.json* file:

JSON Copy

```
{
  "version": "1.0",
  "defaultProvider": "cdnjs",
  "libraries": []
}
```

To install the jQuery version 3.2.1 *jquery.min.js* file to the *wwwroot/scripts/jquery* folder using the CDNJS provider:

Console Copy

```
libman install jquery@3.2.1 --provider cdnjs --destination
wwwroot/scripts/jquery --files jquery.min.js
```

The *libman.json* file resembles the following:

JSON Copy

```
{
  "version": "1.0",
  "defaultProvider": "cdnjs",
  "libraries": [
    {
      "library": "jquery@3.2.1",
      "destination": "wwwroot/scripts/jquery",
      "files": [
        "jquery.min.js"
      ]
    }
  ]
}
```

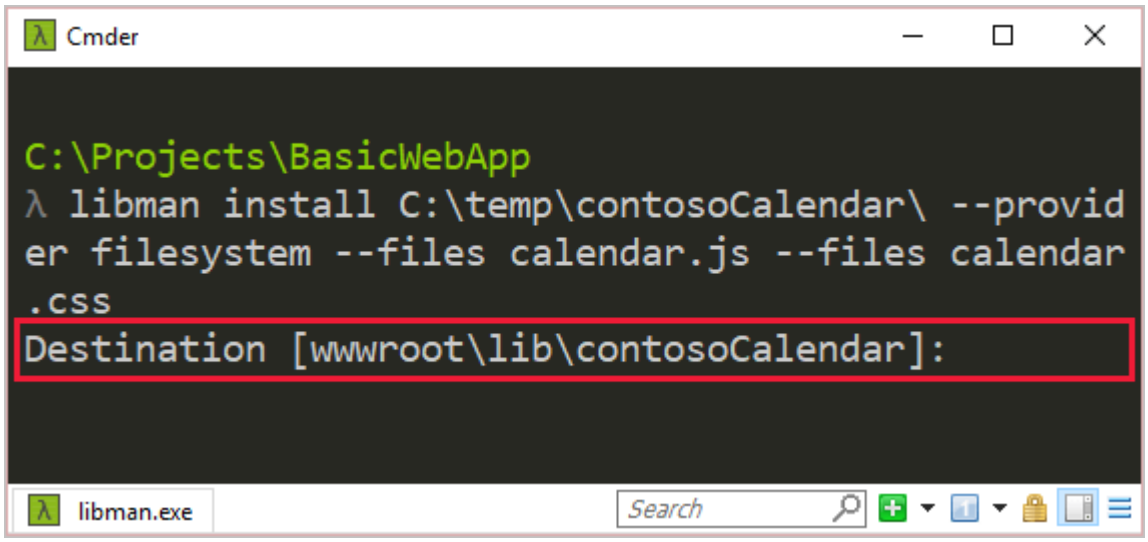
To install the *calendar.js* and *calendar.css* files from *C:\temp\contosoCalendar* using the file system provider:

Console Copy

```
libman install C:\temp\contosoCalendar\ --provider filesystem --files
calendar.js --files calendar.css
```

The following prompt appears for two reasons:

- The *libman.json* file doesn't contain a `defaultDestination` property.
- The `libman install` command doesn't contain the `-d|--destination` option.



After accepting the default destination, the *libman.json* file resembles the following:

JSON Copy

```
{
  "version": "1.0",
  "defaultProvider": "cdnjs",
  "libraries": [
    {
      "library": "jquery@3.2.1",
      "destination": "wwwroot/scripts/jquery",
      "files": [
        "jquery.min.js"
      ]
    },
    {
      "library": "C:\\temp\\contosoCalendar\\",
      "provider": "filesystem",
      "destination": "wwwroot/lib/contosoCalendar",
      "files": [
        "calendar.js",
        "calendar.css"
      ]
    }
  ]
}
```

Restore library files

The `libman restore` command installs library files defined in *libman.json*. The following rules apply:

- If no *libman.json* file exists in the project root, an error is returned.
- If a library specifies a provider, the `defaultProvider` property in *libman.json* is ignored.
- If a library specifies a destination, the `defaultDestination` property in *libman.json* is ignored.

Synopsis

Console | Copy

```
libman restore [--verbosity]
libman restore [-h|--help]
```

Options

The following options are available for the `libman restore` command:

- `-h|--help`

  Show help information.

- `--verbosity <LEVEL>`

  Set the verbosity of the output. Replace `<LEVEL>` with one of the following values:
  - `quiet`
  - `normal`
  - `detailed`

Examples

To restore the library files defined in *libman.json*:

Console | Copy

```
libman restore
```

Delete library files

The `libman clean` command deletes library files previously restored via LibMan. Folders that become empty after this operation are deleted. The library files' associated configurations in the `libraries` property of *libman.json* aren't removed.

Synopsis

Console | Copy

```
libman clean [--verbosity]
libman clean [-h|--help]
```

Options

The following options are available for the `libman clean` command:

- `-h|--help`

  Show help information.

- `--verbosity <LEVEL>`

  Set the verbosity of the output. Replace `<LEVEL>` with one of the following values:
  - `quiet`
  - `normal`
  - `detailed`

Examples

To delete library files installed via LibMan:

Console | Copy

```
libman clean
```

Uninstall library files

The `libman uninstall` command:

- Deletes all files associated with the specified library from the destination in *libman.json*.
- Removes the associated library configuration from *libman.json*.

An error occurs when:

- No *libman.json* file exists in the project root.
- The specified library doesn't exist.

If more than one library with the same name is installed, you're prompted to choose one.

Synopsis

Console | Copy

```
libman uninstall <LIBRARY> [--verbosity]
libman uninstall [-h|--help]
```

Arguments

`LIBRARY`

The name of the library to uninstall. This name may include version number notation (for example, `@1.2.0`).

Options

The following options are available for the `libman uninstall` command:

- `-h|--help`

  Show help information.

- `--verbosity <LEVEL>`

  Set the verbosity of the output. Replace `<LEVEL>` with one of the following values:

  - `quiet`

- `normal`
- `detailed`

Examples

Consider the following *libman.json* file:

JSON Copy

```
{
  "version": "1.0",
  "defaultProvider": "cdnjs",
  "libraries": [
    {
      "library": "jquery@3.3.1",
      "files": [
        "jquery.min.js",
        "jquery.js",
        "jquery.min.map"
      ],
      "destination": "wwwroot/lib/jquery/"
    },
    {
      "provider": "unpkg",
      "library": "bootstrap@4.1.3",
      "destination": "wwwroot/lib/bootstrap/"
    },
    {
      "provider": "filesystem",
      "library": "C:\\temp\\lodash\\",
      "files": [
        "lodash.js",
        "lodash.min.js"
      ],
      "destination": "wwwroot/lib/lodash/"
    }
  ]
}
```

- To uninstall jQuery, either of the following commands succeed:

Console Copy

```
libman uninstall jquery
```

Console Copy

```
libman uninstall jquery@3.3.1
```

- To uninstall the Lodash files installed via the `filesystem` provider:

Console | Copy

```
libman uninstall C:\temp\lodash\
```

Update library version

The `libman update` command updates a library installed via LibMan to the specified version.

An error occurs when:

- No *libman.json* file exists in the project root.
- The specified library doesn't exist.

If more than one library with the same name is installed, you're prompted to choose one.

Synopsis

Console | Copy

```
libman update <LIBRARY> [-pre] [--to] [--verbosity]
libman update [-h|--help]
```

Arguments

`LIBRARY`

The name of the library to update.

Options

The following options are available for the `libman update` command:

- `-pre`

Obtain the latest prerelease version of the library.

- `--to <VERSION>`

  Obtain a specific version of the library.

- `-h|--help`

  Show help information.

- `--verbosity <LEVEL>`

  Set the verbosity of the output. Replace `<LEVEL>` with one of the following values:
  - `quiet`
  - `normal`
  - `detailed`

Examples

- To update jQuery to the latest version:

  Console | Copy

  ```
  libman update jquery
  ```

- To update jQuery to version 3.3.1:

  Console | Copy

  ```
  libman update jquery --to 3.3.1
  ```

- To update jQuery to the latest prerelease version:

  Console | Copy

  ```
  libman update jquery -pre
  ```

Manage library cache

The `libman cache` command manages the LibMan library cache. The `filesystem` provider doesn't use the library cache.

Synopsis

Console

Copy

```
libman cache clean [<PROVIDER>] [--verbosity]
libman cache list [--files] [--libraries] [--verbosity]
libman cache [-h|--help]
```

Arguments

`PROVIDER`

Only used with the `clean` command. Specifies the provider cache to clean. Valid values include:

- `cdnjs`
- `filesystem`
- `jsdelivr`
- `unpkg`

Options

The following options are available for the `libman cache` command:

- `--files`

  List the names of files that are cached.

- `--libraries`

  List the names of libraries that are cached.

- `-h|--help`

  Show help information.

- `--verbosity <LEVEL>`

Set the verbosity of the output. Replace `<LEVEL>` with one of the following values:

- `quiet`
- `normal`
- `detailed`

Examples

- To view the names of cached libraries per provider, use one of the following commands:

Console Copy

```
libman cache list
```

Console Copy

```
libman cache list --libraries
```

Output similar to the following is displayed:

Console Copy

```
Cache contents:
---------------
unpkg:
    knockout
    react
    vue
cdnjs:
    font-awesome
    jquery
    knockout
    lodash.js
    react
```

- To view the names of cached library files per provider:

Console Copy

```
libman cache list --files
```

Output similar to the following is displayed:

Console Copy

```
Cache contents:
---------------
unpkg:
    knockout:
        <list omitted for brevity>
    react:
        <list omitted for brevity>
    vue:
        <list omitted for brevity>
cdnjs:
    font-awesome
        metadata.json
    jquery
        metadata.json
        3.2.1\core.js
        3.2.1\jquery.js
        3.2.1\jquery.min.js
        3.2.1\jquery.min.map
        3.2.1\jquery.slim.js
        3.2.1\jquery.slim.min.js
        3.2.1\jquery.slim.min.map
        3.3.1\core.js
        3.3.1\jquery.js
        3.3.1\jquery.min.js
        3.3.1\jquery.min.map
        3.3.1\jquery.slim.js
        3.3.1\jquery.slim.min.js
        3.3.1\jquery.slim.min.map
    knockout
        metadata.json
        3.4.2\knockout-debug.js
        3.4.2\knockout-min.js
    lodash.js
        metadata.json
        4.17.10\lodash.js
        4.17.10\lodash.min.js
    react
        metadata.json
```

Notice the preceding output shows that jQuery versions 3.2.1 and 3.3.1 are cached under the CDNJS provider.

- To empty the library cache for the CDNJS provider:

Console Copy

```
libman cache clean cdnjs
```

After emptying the CDNJS provider cache, the `libman cache list` command displays the following:

Console

```
Cache contents:
---------------
unpkg:
    knockout
    react
    vue
cdnjs:
    (empty)
```

- To empty the cache for all supported providers:

Console

```
libman cache clean
```

After emptying all provider caches, the `libman cache list` command displays the following:

Console

```
Cache contents:
---------------
unpkg:
    (empty)
cdnjs:
    (empty)
```

Additional resources

- Install a Global Tool
- Use LibMan with ASP.NET Core in Visual Studio
- LibMan GitHub repository