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Installation

App Studio is installed when installing Fusion Server.
What’s next

- See Startup and Shutdown for information about using the App Studio scripts.
- See Create a New Web App to learn how to create your first search app. = Startup and Shutdown

App Studio has two scripts for startup and shutdown in the root directory of an App Studio project (app-studio):

- **app-studio.sh** – A Bash script for Linux and macOS
- **app-studio.bat** – A batch file for Windows

You also use these scripts to build an app from source.
Obtain usage information

For usage information, enter:

- Linux and macOS: `./app-studio.sh -help`
- Windows: `app-studio.bat -help`

For command-specific usage information, enter:

- Linux and macOS: `./app-studio command -help`
- Windows: `app-studio.bat command -help`

Below, optional parameters are indicated by square brackets, which you don’t type.
Startup commands

- Linux and macOS: 
  ```bash
  ```
- Windows: 
  ```cmd
  app-studio.bat start [-f] [-p port] [-m memory] [-t timeout] [-V]
  ```
Shutdown commands

- Linux and macOS: `./app-studio stop [-p port] [-V]`
- Windows: `app-studio.bat stop [-p port] [-V]`
**Parameters**

Bold italic text is a placeholder for a value. For example, for `--m memory` you might use `-m 4g`.

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><code>--production</code></td>
<td>Start the app in production mode, which disables the configuration wizard and the code editor.</td>
</tr>
<tr>
<td><code>-p port</code></td>
<td>Specify the port on which the App Studio web server will listen. The default port is 8080.</td>
</tr>
<tr>
<td><code>-m memory</code></td>
<td>Set the minimum (-Xms) and maximum (-Xmx) heap size for the JVM. For example, <code>-m 4g</code> results in: <code>-Xms4g -Xmx4g</code>. The default heap size is 512m.</td>
</tr>
<tr>
<td><code>-t timeout</code></td>
<td>Set the startup timeout in seconds.</td>
</tr>
<tr>
<td><code>-V</code></td>
<td>Output verbose messages from the script.</td>
</tr>
</tbody>
</table>
Starting and stopping multiple App Studio instances

You can run multiple instances of App Studio on a single host by specifying different ports for all instances. Do this on startup, at the command line, using the `-p` parameter, for example:

```
./app-studio.sh start -p 9000
```

When running multiple instances, also use the `-p` flag to indicate which instance of App Studio to shut down, for example:

```
./app-studio.sh stop -p 9000
```
What’s next

• See Create a New Web App to learn how to create your first search app.

• See Customizing Your Application to learn about App Studio’s markup templating language and how app pages are constructed. = Create a New Web App

The current version of App Studio creates a single-page search application that you can further customize through the built-in code editor.
Prerequisites

The instructions in this topic assume that you have a running instance of Fusion Server, with one or more collections of indexed data and at least one query profile.
How to create a new Web app

1. In the Fusion workspace, navigate to App Studio > Build New UI.

2. On the Set Query Source page, select the query profile to use for your search UI:
3. Click Next.

App Studio connects to the specified collection and query profile to analyze your searchable data:

4. Click Next.

5. On the Set Result Title page, select the field to use as the title of each search result:
Optionally, you can select a **Target URL** field, which contains the URL to use as the link in each search result.

6. **Click Next**.

7. On the **Set Result Description** page, select the field to use as the description of each search result:

8. **Click Next**.

9. On the **Set Facets and Additional Fields** page, select one or more multi-valued fields to use as facets:
In some cases, facet fields aren’t selectable in the wizard. In this case, you can define facets later using markup.

Optionally:

- Select **Enable search within facet** to add a search box for searching the facet field names to the Facets pane.

- Enter a user-friendly label for each facet field, such as “Genre” instead of “genres_ss”.

- Select **Include in results as Additional Field** to display the values of the facet fields within each search result.

10. Click **Next**.
11. On the **Customize UI** page, enter a title and select a color theme:

![Customize UI page](image)

12. Click **Save and Launch UI**.

A preview of your search interface and data appear:

![Search interface preview](image)

**Note**

It can take about a minute for the preview to appear. If the preview doesn’t appear, refresh the browser tab.

After you’ve created a search UI, you can open it from the Fusion workspace by navigating to the **App Studio** menu and selecting the search UI:
What’s next

• See the App Development Guide to learn about App Studio’s markup templating language and how app pages are constructed.

• The Deployment Guide explains how to deploy your customized app in a production environment. = Licensing

App Studio is licensed with Fusion Server.
Upgrading

This article describes how to upgrade App Studio and Appkit.
Upgrade App Studio


| Note | An App Studio release might not contain the latest version of Appkit. Check the App Studio Release Notes and Appkit Release Notes to confirm the versions. To upgrade a new app to a more recent version of Appkit than the version that an App Studio release contains, create the app and then Upgrade Appkit in the app. |

The App Studio upgrade doesn't upgrade the version of Appkit used in existing apps. For that procedure, see Upgrade Appkit in existing apps.
Upgrade Appkit in existing apps

When you create an Appkit webapp, it uses a specific version of Appkit. Appkit releases occur independently of App Studio releases.

You can upgrade web apps to use the latest version of Appkit.

To upgrade

1. Stop the app.

2. In the `package.json` file at the root of your project, update the `appkit-ui` dependency to the latest Appkit version, for example:

   ```json
   "appkit-ui": "http://appkit.lucidworks.com/repo/4.2.0/appkit-ui.tar.gz",
   ```

3. In the `pom.xml` file at the root of your project, update the value of the `parent.version` property to the latest Appkit version, for example:

   ```xml
   <parent>
    <groupId>twigkit</groupId>
    <artifactId>twigkit.app.js</artifactId>
    <version>4.2.0</version>
   </parent>
   ```

4. Upgrade the Appkit Social module, if required (see below).

5. Perform any additional upgrade steps that are required for a specific Appkit upgrade. See the Appkit Release Notes for more information.

6. Start the app.
Upgrade the Appkit Social module

To upgrade the Appkit Social module

1. Remove the existing `twigkit.social <dependency>` block from your `pom.xml` file and replace it with the following:

   ```xml
   <dependency>
       <groupId>twigkit</groupId>
       <artifactId>twigkit.social.provider.platform</artifactId>
       <version>${project.parent.version}</version>
   </dependency>
   ``

2. Create a configuration file named `src/main/resources/conf/social/social.conf` with the following contents:

   ```
   # Use conf/platforms/fusion/social.conf for Social module platform configuration
   platform: platforms.fusion.social
   ```

   The `platform` value indicates the name of the platform configuration file to use, which you will create in the next step.

3. Create a configuration file named `src/main/resources/conf/platforms/fusion/social.conf` that contains the following (note that the name of the file matches the `platform` value configured in the previous step):

   ```
   # For every Fusion App, a corresponding YOUR_FUSION_APP_user_prefs collection is automatically created. 
   # Appkit uses this collection for storing collaboration user-data.
   # Name of the collection to store user data in
   collection: YOUR_FUSION_APP_user_prefs
   # Name of the Query & Index pipelines to use - _system is the Fusion default
   # pipeline: _system
   # Enable writing new Social entities into the platform
   readOnly: false
   # Prevent users from searching this platform directly
   webservice-enabled: false
   ```

   Replace the string `YOUR_FUSION_APP` in the `collection` parameter with the name of the Fusion app you want to associate your social data with.