

North American DSUG 2019 - Getting Started With DSpace 7 Workshop

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This page is for attendees of the [2019 DSpace North American User Group Meeting](#) "Getting Started with DSpace 7" workshop. It provides links to resources, workshop preparation, etc.

Slides

- <https://tinyurl.com/na-dsug2019-dspace7>

Learning Objectives

- Learn about upcoming DSpace 7 release
- Overview of the Install & Upgrade processes
- Understand new features of this release, including demos of the new User Interface and REST API
- Learn the basics of branding / theming the new User Interface (hands-on)

Workshop Organizers

- [Tim Donohue](#) - DSpace Tech Lead at LYRASIS
- Based heavily on the [OR2019 Getting Started with DSpace 7 Workshops](#), which were co-taught with [Art Lowel \(Atmire\)](#) and [Andrea Bollini \(4Science\)](#)

Preparing for the workshop

Handons on the new DSpace UI

Optional Installation

During the code walkthrough, we will be working directly with the [dspace-angular](#) project (this is the DSpace 7 UI, built on [Angular](#)). However, don't worry. It's rather easy to install, and you **do not need to install the DSpace backend** (as we will be using the [public, demo REST API](#) as our backend).

Installing the DSpace 7 UI locally

(These instructions are based on the [dspace-angular README](#))

- **Git** :You'll want to have Git to simply clone and install our [dspace-angular](#) project (this is the in-development Angular UI for DSpace 7). If you don't have Git, you can choose to install either [GitHub Desktop](#) (which includes a GUI) or [just plain Git](#). Any version of Git is fine.
- **Node.js** (*version 8.x recommended*) : Required to build/run the Angular UI.
 - Note: Node.js will also automatically install [npm \(Node Package Manager\)](#). You shouldn't need to install that separately
- **Yarn** (*version 1.3.x or above*) : This is an easier to use, speedier package manager that works similar to npm (Node's package manager). It's currently required to build Angular UI.
- **dspace-angular**: You can now install [dspace-angular](#) (the DSpace 7 UI) using the command line.
 1. `git clone https://github.com/DSpace/dspace-angular.git` (Pulls down the code into a dspace-angular folder on your local computer)
 2. `cd dspace-angular` (Move into the newly created dspace-angular folder)
 3. `yarn install` (Install all local dependencies via yarn)
 4. `yarn run watch` (Build and startup the DSpace Angular UI, while watching code for new changes.)
 - a. Alternatively, you can also run "`yarn start`", but that command requires you restart to pick up local code changes.
 5. Assuming all went well, you should be able to go to <http://localhost:3000> in your web browser and see the DSpace 7 UI homepage.
- Now, to easily follow along with the workshop code changes step-by-step, you may wish to [create a branch for the workshop exercises](#)

That's it! Again, there is *no need* to have the DSpace backend running or install a database, Java, Tomcat or any of the other usual DSpace prerequisites.

Creating a branch for the exercises

To follow along with the exercises run the following git commands in the project directory to get the correct starting point

1. `git remote add workshop https://github.com/DSPACE-Labs/dspace-angular-workshops.git`
2. `git fetch --tags workshop` (Pulls down the dspace-angular-workshops code locally, including tags)
3. `git checkout na-dsug2019-start` (Checks out the starting point of the workshop, the "na-dsug-2019-start" tag)
4. `git checkout -b na-dsug2019-basic` (Creates a local branch named "na-dsug2019-basic" for you, based on that "na-dsug-2019-start" tag)

At certain points during the hands-on part we'll show a git tag that corresponds to the solution so far. If you'd like to sync up to that point, run the following:

1. Revert all existing files to their state at the start:
 - `git reset na-dsug2019-start --hard`
2. Remove any newly created files
 - `git clean -f -d`
3. Sync with the solution
 - `git merge $TAG_NAME`

Optional Development Tools

While not required, the following tools may make it easier to do basic development with the Angular UI.

- **Chrome web browser** : When developing an Angular application, all web browsers are *not* created equal. While you obviously should use other browsers to help test your application, Chrome has built in debugging/visualization tools that come in handy when doing Angular development. **Make sure you disable cache in your network tab and keep the inspect element open.**
- **An IDE** : If you wish to do much Angular development (especially for the "Advanced Workshop"), you may want an IDE (Integrated Development Environment) or an editor that understands the [TypeScript language](#). Here's a few we prefer. **Just choose ONE.** *If you have no strong preference, you may want to start with Visual Studio Code.*
 - **Visual Studio Code (Free)** : This is a TypeScript IDE from Microsoft (the makers of TypeScript). It's frequently used for Angular development, even by some of the main Angular developers, and provides an excellent [debugger for Chrome](#) (which you may also wish to install for easier debugging)
 - **IntelliJ (Requires a license)** : If you use IntelliJ already for other development work, **IntelliJ IDEA Ultimate** has TypeScript support. You could also use **WebStorm**, IntelliJ's Javascript IDE
 - **Atom.io (Free)** : This is an advanced text editor from the makers of GitHub. If you install the [Typescript language plugin](#), it acts a little more like a basic IDE for TypeScript / Angular (providing autocomplete and highlighting). However, be forewarned that it doesn't have the debugging capabilities of Visual Studio Code or IntelliJ.
 - Any other editor or IDE that provides either TypeScript or Angular 2 support.

Solution tags

Click on the commit hashes for each of the tags in the "releases" to see all code changes for each of the steps of the workshop:

<https://github.com/DSPACE-Labs/dspace-angular-workshops/releases>

Additional Resources

- [DSpace 7 UI Technology Stack](#) : Technology overview with link to tutorials on Angular, etc
- [DSpace 7 - Angular UI Development](#) : How to contribute to Angular UI
- [DSpace 7 REST Contract](#) : Details about available and planned endpoints, request and response format, error codes, etc.
- [DSpace 7 REST Coding practice](#) : Key classes and source code organisation of the JAVA REST API Backend
- [DSpace Release 7.0 Status](#) : Status of the release, demo sites, etc.
- Get more involved!
 - [DSpace 7 Working Group \(2016-2023\)](#) : The DSpace 7 development team. Anyone is welcome to attend meetings, even just to lurk & listen in.
 - [DSpace 7 Entities Working Group \(2018-19\)](#): The sub-team working on the Configurable Entities feature for DSpace 7. Anyone is welcome to attend meetings, even just to lurk & listen in.