As discussed, I have outlined the steps to migrate our Angular project from using Karma and Jasmine for unit testing to Jest. This transition aims to enhance our testing efficiency and provide a more modern and streamlined testing experience.

**Steps for Migration:**

1. **Remove Karma Configuration**
   * **Uninstall Karma and related packages:**
   * npm uninstall @types/karma karma karma-chrome-launcher karma-jasmine karma-jasmine-html-reporter jasmine-core jasmine-spec-reporter
   * **Delete karma.conf.js:**
   * rm karma.conf.js
2. **Delete Test Configuration from angular.json**
   * Open angular.json.
   * Remove the test section under the architect section of our Angular application.
3. **Install Jest and Related Packages**
4. npm install @types/jest jest jest-preset-angular --save-dev
5. **Update package.json Scripts**

Add the following scripts in package.json:

"scripts": {

 "test": "jest",

 "test:coverage": "jest --coverage",

 "test:watch": "jest --watch"

}

1. **Add Jest Configuration to package.json**

Also, add the Jest configuration in package.json:

"jest": {

 "preset": "jest-preset-angular",

 "setupFilesAfterEnv": [

   "<rootDir>/src/setup.jest.ts"

 ],

 "testPathIgnorePatterns": [

   "<rootDir>/node\_modules/",

   "<rootDir>/dist/"

 ],

 "globals": {

   "ts-jest": {

     "tsconfig": "<rootDir>/tsconfig.spec.json",

     "stringifyContentPathRegex": "\\.html$"

   }

 }

}

1. **Create setup.jest.ts**

Create a new file named setup.jest.ts in the src directory and add the following import:

import 'jest-preset-angular/setup-jest';

1. **Update tsconfig.spec.json**

Update tsconfig.spec.json to include Jest types and the setup file:

{

 "extends": "./tsconfig.json",

 "compilerOptions": {

   "outDir": "./out-tsc/spec",

   "types": [

     "jest",

     "node"

   ]

 },

 "files": [

   "src/setup.jest.ts"

 ],

 "include": [

   "src/\*\*/\*.spec.ts",

   "src/\*\*/\*.d.ts"

 ]

}

**Final Package Configuration**

Here is an example of how the updated package.json should look:

{

 "name": "your-angular-project",

 "version": "0.0.0",

 "scripts": {

   "ng": "ng",

   "start": "ng serve",

   "build": "ng build",

   "watch": "ng build --watch --configuration development",

   "test": "jest",

   "test:coverage": "jest --coverage",

   "test:watch": "jest --watch"

 },

 "private": true,

 "dependencies": {

   // Project dependencies

 },

 "devDependencies": {

   "@angular-devkit/build-angular": "~0.1102.4",

   "@angular/cli": "~11.2.4",

   "@angular/compiler-cli": "~11.2.5",

   "@types/jest": "^26.0.20",

   "jest": "^26.6.3",

   "jest-preset-angular": "^8.3.2",

   // Other dev dependencies

 },

 "jest": {

   "preset": "jest-preset-angular",

   "setupFilesAfterEnv": [

     "<rootDir>/src/setup.jest.ts"

   ],

   "testPathIgnorePatterns": [

     "<rootDir>/node\_modules/",

     "<rootDir>/dist/"

   ],

   "globals": {

     "ts-jest": {

       "tsconfig": "<rootDir>/tsconfig.spec.json",

       "stringifyContentPathRegex": "\\.html$"

     }

   }

 }

}

This comprehensive setup ensures our Angular project is configured to use Jest for testing, providing a more efficient and streamlined approach.

Please let me know if you have any questions or need further assistance.