



## React Testing Deep Dive

Explore Using Redux to Simplify Your Complex Data, Working with Redux Middleware, Handle Asynchronous Ops and More

www.triveratech.com

### Course Snapshot

- **Course: React Testing Deep Dive (TT4193)**
- **Duration:** 3 days
- **Audience & Skill-Level :** This is an introductory-level course for experienced web developers.
- **Delivery Options:** This course is available for **onsite private classroom presentation, live online virtual presentation**, or can be presented in a **blended learning format**. Please also ask about our **Self-Paced / Video / QuickSkills** or **Mini-Camp / Short Course** flexible delivery options.
- **Public Schedule:** This course has active dates on our live-online open enrollment **Public Schedule**.
- **Customizable:** This course agenda, topics and labs can be further adjusted to target your specific training skills objectives, tools and learning goals. Please ask for details.

### Overview

Redux is a JavaScript library that tames your unruly data. Redux manages your app's *state*. In every web app, data is critical. But while most JavaScript frameworks like Angular, Vue, and especially React are strong in presenting data, they are pretty weak in maintaining data.

To solve this issue, the people who brought us React introduced *Redux* to shore up that weakness. Redux is laser-focused on taking your extremely complex data needs and simplifying them so that React (or Angular or Vue or anything else) can focus on presenting that data. It will make your UI components extremely simple and easy to change when new requirements arise in the business.

**Redux Deep Dive** is a comprehensive, hands-on React and Redux training course designed to teach you every aspect of Redux required to enable you to add it to any project and simplify its data needs.

### Learning Objectives

Working in a hands-on learning environment, guided by our expert team, attendees will be able to:

- Simplify complex state management with the Redux library
- Use best practices for reducers, dispatchers, and action creators
- Explain and leverage reducer composition
- Understand when, how, and why to use Redux middleware
- Handle asynchronous operations with Redux -- including Ajax
- Integrate a Redux store into a React application

### Audience & Pre-Requisites

This fast-paced course is for intermediate skilled web developers **new to React** who have prior experienced working HTML5, CSS3 and JavaScript.

**Take Before:** Attendees should have experience with the topics in the following courses, or should have recently attended these as a pre-requisite:

- TT4003: Introduction to HTML5 / CSS3 & JavaScript Essentials

### TriveraTech's React Training Suite

- TT4190 Introduction to React | React Essentials – 3 days
- TT4193 Redux Deep Dive – 3 days
- TT4194 React Testing Deep Dive – 3 days
- TT4195 Mastering React | With Redux, Flux, Unit Testing, JSX & More – 5 days (TT4190 superset)
- TT4196 Intermediate React | Working with React Hooks

- TT4197 Advanced React – 2 days
- TT4198 Introduction to React Native – 3 days
- TT4199 Mastering React Native – 5 days
- TTDS6904 GraphQL with React – 3 days
- Please visit our site for the most current list of full stack / modern web development course titles, learning paths and programs.

**Enhanced Learning Services:** Please also ask about our **Pre-Training Class OnRamp & Prep / Primer offerings, Skills Gap Assessment Services, Case Studies, Knowledge Check Quizzes, Skills Immersion Programs & Camps, Collaborative Mentoring Services and Extended Learning Support & Post Training services.**

## Course Topics / Agenda

*Please note that this list of topics is based on our standard course offering, evolved from typical industry uses and trends. We will work with you to tune this course and level of coverage to target the skills you need most. Course agenda, topics and labs are subject to adjust during live delivery in response to student skill level, interests and participation.*

- 1. Getting Started**
  - Type and payload
  - Reducers are functions
  - Why we have them
  - The shape of a reducer
  - Tips in avoiding the worst Redux rookie mistakes
- 2. Redux intro**
  - The single responsibility principle
  - Why Redux?
  - Why Redux with React?
  - Its history and growth
  - The 4 concepts of Redux
  - State
  - Pure functions
  - Composition
  - Immutability
  - The parts of Redux
  - The big picture of Redux
- 3. Creating the store**
  - Installing and including Redux
  - The createStore() method
  - The simplest possible store
- 4. State and Subscriptions**
  - Single source of truth
  - Initializing state
  - What goes in state?
  - Why subscriptions?
  - How to subscribe in Redux
- 5. Actions and Reducers 101**
  - Actions are objects
  - The shape of actions
- 6. Actions**
  - Action Creators in a React Application
  - Dispatching Actions
  - Mapping Actions to prop Names
- 7. Advanced Actions**
  - Action constants
  - Action type enumerations
  - Action creators
  - Action creator enumerations
- 8. Reducer composition**
  - The problem: complex state => complex reducers
  - The solution: Create state slices
  - Creating reducers to handle slices
  - Combining reducers with Redux's built-in combineReducers
  - Doing it manually
  - Why manually is the right way
- 9. Redux Middleware**
  - The Open-Closed Principle
  - Introduction to middleware
  - The next() function
  - The required shape of middleware
  - Middleware's super-powers
  - Recipes and examples
  - Why you must register middleware and how to do it
- 10. Ajax with Redux**
  - The problem with async calls in Redux
  - The trick to making a good middleware function
  - Registering the middleware
  - Dispatching an Ajax call
  - Making RESTful API calls
  - How to process them into Redux and then into React
- 11. Redux-thunk (Time permitting)**
  - The need for a thunk
  - How redux-thunk fits that need
  - Installing and using redux-thunk properly
  - Dispatching Ajax calls with redux-thunk

## Student Materials & Lab Environment

All course software (limited versions, for course use only), digital courseware files or course notes, labs / data sets and solutions (as applicable) are provided for you in our “easy access / no install required” high-speed remote lab environment. Our tech team works with every student to ensure everyone is set up with working access and ready to go prior to every course start date, ensuring a smooth delivery and great hands-on experience. Please ask for details.

## For More Information

For more information about our dedicated training services, collaborative coaching services, courseware licensing options, public course schedule, training management services, partner programs, or to see our complete list of course offerings and special offers and discounts, please visit us at [www.triveratech.com](http://www.triveratech.com), email [Info@triveratech.com](mailto:Info@triveratech.com) or call us toll free at **844-475-4559**. Our pricing and services are always satisfaction guaranteed.

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