

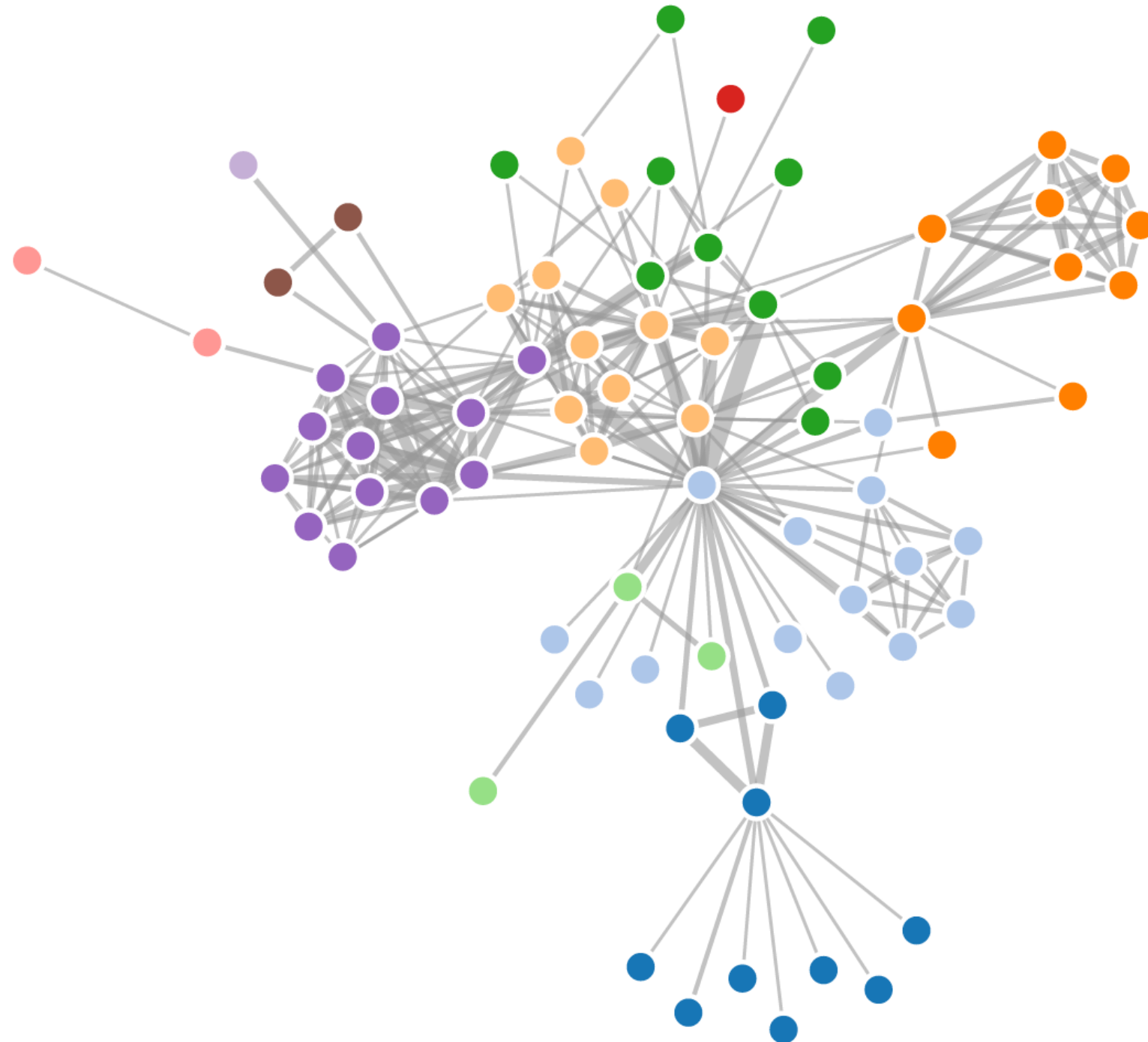
State Management with Redux



Hendrik Swanepoel

@hendrikswan www.tagtree.io

State Management is Complex



“A **pure function** is a function where the return value is only determined by its input values, without observable side effects.”

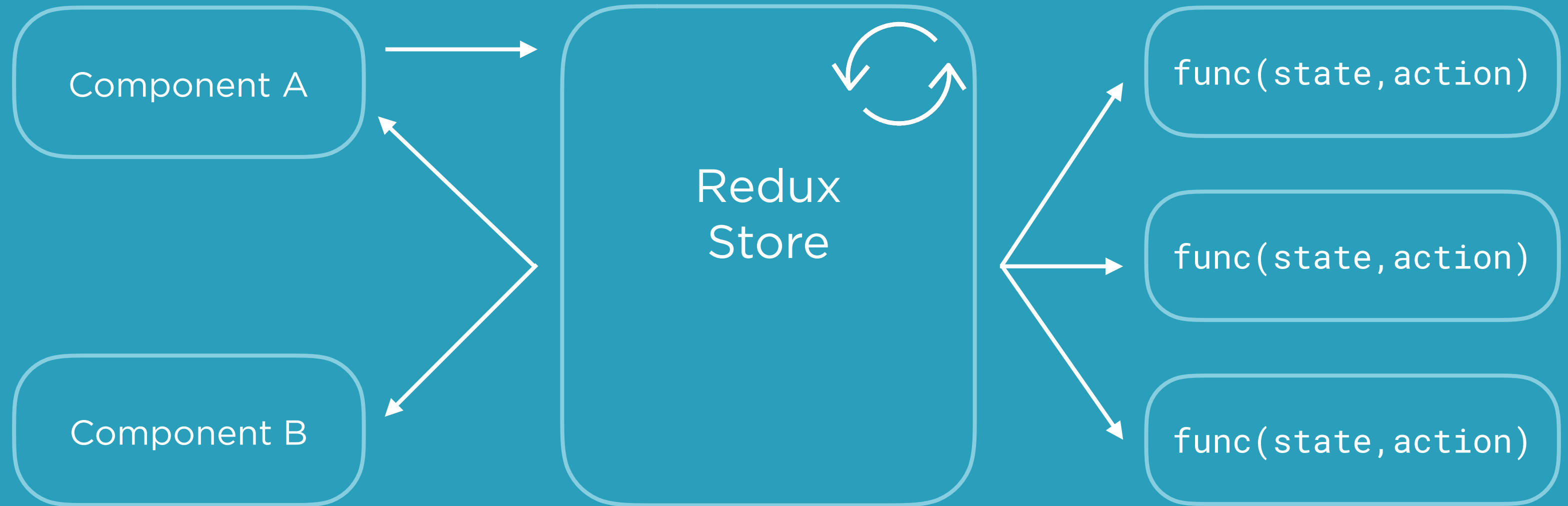
[sitepoint.com](https://www.sitepoint.com/pure-functions/)

```
function reducer(state, action)
{
  //calculate newState
  return newState;
}
```

```
redux.createStore(reducer);
```

- ◀ existing state and fired action
 - ◀ mutate state into new state
 - ◀ return new state
-
- ◀ create a store which gets used by react components

Redux Flow



Demo

Install Redux

Create a Redux store

Implement an action to add a todo

**Sync PluralTodo component's state with
Redux state**

Summary

Install Redux through NPM

Create a Redux store with initial state

Implement a switch statement to target actions

Mutate state, don't overwrite it!

Use Object.assign to mutate objects

Use .concat to add to mutate arrays

Use store.subscribe to update container state when store's state has been mutated

Demo

Mark a todo as done

Add a new action handler to the Redux store

Use Object.assign to mutate state

Filter out the done todo from todo array

Dispatch new action to todo store when user marks item as done

Summary

**Add a new action in todo store -
DONE_TODO**

**Use Object.assign to mutate state,
instead of overwriting**

**Filtering items from an array returns a
new array**

**Dispatch actions from container
component (PluralTodo)**

Demo

Toggle between showing a list of pending and done todos

Introduce a filter state variable in the todo store

Add a new action to toggle the filter state variable between pending and done

Use the Switch component to allow the user to toggle the filter

Mutate state to filter the todos based on the latest filter state variable

Summary

Toggle between showing a list of pending and done todos

Introduce a filter state variable in the todo store

Add a new action to toggle the filter state variable between pending and done

Use the Switch component to allow the user to toggle the filter

Mutate state to filter the todos based on the latest filter state variable

Thanks!