

Upgrading React Native projects

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React Native EU
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I'm Pavlos.

pvinis on almost everything online.

I work with Sense Health making NiceDay

I love upgrading!

I am involved with:

- upgrade-helper
- rn-diff-purge
- react-native PRs

People love React Native

😐 Upgrading 😐

People love **fresh** React Native

Upgrading React Native projects



- Past: painful 😭
- Present: pretty good 😊
- Future: awesome 😃

Past: painful 😭

You need to know all:

- JS/TS
- iOS
- Android

iOS

- ObjC/Swift
- Complicated `xcodeproj` files and `schemes` and `configs`
- Multiple ways to link libraries: `carthage`, `cocoapods`, `manual`
- Xcode

Android

- Java/Kotlin
- `gradle` scripts
- Android Studio

Expo exists

- It's awesome
- It helps people build apps without the need to go native
 - ...until you need to go native

Upgrading react on the web meant:

- Change the version number
- yarn install
- Does it work? 😊

Upgrading react native meant:

- Change the version number
- yarn install
- Does it work? 😊
- Fix native stuff
- Does it work now? 😊
- Upgrade libraries
- Does it work yet? 😏
- Link libraries native stuff
- Does it work, please? 😩
- Google things, ask for help
- Why don't you work already? 😭

"Can't avoid it, let's automate it"

- react-native upgrade
- rnpm upgrade
- react-native-git-upgrade
- rn-diff repo

I never liked using any of the automated tools 😅

I only used `rn-diff`, upgrading manually

Present: pretty good 😊

rn-diff-purge

- Stood on the shoulders of the people and repos before me
- Tries to eliminate previous problems
- I wanted this for my projects

rn-diff-purge

- Keeps a list of diffs `from` → `to` every release
- Generated by a script

rn-diff-purge

- Start a new `branch` for each release
- init a new project based on the `template`
- diff and `store` as a patch file

rn-diff-purge

- Base of our current upgrade flow
- People already used the idea for `laravel` and `ignite` bowser
- Soon a `template` repo on GitHub, ready to be cloned and reused

upgrade-helper

- Started as `purge-web`, just pointing to the `diff` file
- Allows to choose a `from` and a `to` release
- Gives all the changes of the `init template`
- Uses `rn-diff-purge`
- Steadily becoming more awesome

upgrade-helper

- Better visuals
- Github-like diff views
- See raw files and download
- File folding
- Links to release notes
- Notes explaining changes
- Logo and party popper 
- Support for rc releases

`npx react-native upgrade (cli)`

- Just run `npx react-native upgrade`
- Uses `rn-diff-purge`
- Tries to `apply` the diff

It might not work because of differences between the template and each project

Future: awesome 😊

- Autolinking and standardization of some tools
- `rn-diff-purge` diff generation on CI
- Investigating into tools like `xcodegen`, to decouple and make easier

Tips

- Manual does not mean `slow`, it means `careful`
- Be `mindful` of `what changed`
- `Pick and choose` your changes
- Try to `stay up to date`
- Try not to `jump` too many versions
- `xcodeproj` needs some care while being changed for now

Upgrade flow

- Get notification for new release
- Read the release notes and change log
- Try npx react-native upgrade
- Get diff from upgrade-helper
- Go file-by-file and make the changes manually
- Start with config and js stuff, then iOS, then Android native
- Make sure any custom additions and modules are compatible and working
- Test to make sure things still work
- Use hooks or whatever cool new feature is in that new release or rc 💪

Conclusion

- Upgrading has gotten better, simpler, more mature and it will keep improving
- It might always be a manual process, or it might be automatic
- People used to say "upgrading is hard"
- Now people say "that specific thing was hard while upgrading"

Wonderful people so far

@ncuillery @lucasbento @kelset @cpojer @thymikee @turnrye @grabbou @brentvatne @watadarkstar @iamrestrepo @mausworks
@KevinHu2014 @vinnyA3 @Jeanmsilva89 @RubenSandwich @Luckyuke @nirre7 @guhungry ...

- RN Core team
- RN Contributors community
- Sense Health

Wonderful people of tomorrow

@your_name_here

<https://github.com/react-native-community>

<https://github.com/react-native>

- Make PRs
- Test out PRs
- Create issues
- Answer issues

For questions:

Find me at the coffee break or on twitter

Thank you ❤



Thank you ❤

- [@ me](https://twitter.com/pvinis)
- [video of me upgrading and explaining](https://youtube.com/watch?v=wBp5_E7dsEY)
- [this talk](https://github.com/pvinis/talk-upgrading-react-native)
- niceday.app (app we work on)
- pvin.is (my blog, 🚧)
- pavlos.dev (my portfolio, 🚧)

Extra links

- github.com/pvinis/template-diff-purge (template of the purge way)
- github.com/guhungry/laravel-diff-purge (uses the purge way)
- github.com/nirre7/ignite-bowser-diff-purge (uses the purge way)