DevOps Shack

100 NPM Errors, Solution and RCA

1. npm command not found

RCA: Node.js is not installed or not added to PATH.
 Solution:

- Install Node.js from nodejs.org.

Verify installation with:

`node -v`

`npm -v`

- Add Node.js to system PATH manually if necessary.

2. EACCES: permission denied

RCA: User lacks permissions to access global npm modules.
 Solution:

Use `sudo` (Linux/macOS):

`sudo npm install -g <package>`

Change npm directory ownerip:

```
sudo chown -R $(whoami) ~/.npm
```

3. ENOTFOUND registry.npmjs.org

RCA: DNS issues or incorrect proxy settings.
 Solution:

- Check internet connection.
- Use different DNS (e.g., Google DNS 8.8.8.8).

Configure npm proxy:

```
npm config set proxy http://proxy:port
```

```
npm config set https-proxy http://proxy:port
```

4. npm ERR! EAI_AGAIN

RCA: DNS resolution failure due to slow network.
 Solution:

- Restart the internet connection.
- Switch to a faster DNS service like Cloudflare (1.1.1.1).

Retry:

```
npm cache clean --force
```

```
npm install
```

5. npm ERR! code ECONNRESET

RCA: The connection to the npm registry was reset.
 Solution:

- Retry the command after a few minutes.
- Check internet speed.

Use a different registry:

```
npm config set registry http://registry.npmjs.org/
```

6. npm WARN deprecated

RCA: A package has been deprecated by the maintainer.
 Solution:

- Use an alternative package.
- Ignore warnings if necessary.

Check for updates:

```
npm outdated
```

```
npm update
```

7. ELIFECYCLE error

RCA: An issue occurred while running a package script.
 Solution:

- Check the package script causing failure.

Run the script manually to debug:

```
npm run <script-name>
```

● Ensure dependencies are installed properly.

8. EBUSY: resource busy

RCA: A process is locking a file or folder.
 Solution:

● Close any processes using the directory.
● Restart the system if needed.
● Run the install command again.

9. ENOSPC: System limit reached

RCA: Not enough space or system inotify watches exceeded.
 Solution:

● Free up disk space.

Increase inotify watches limit:

```
echo fs.inotify.max_user_watches=524288 | sudo tee -a /etc/sysctl.conf

sudo sysctl -p
```

10. Cannot find module '<module-name>'

RCA: The module is not installed or missing from node_modules.
 Solution:

Reinstall dependencies:

```
rm -rf node_modules package-lock.json
```

```
npm install
```

11. npm ERR! Cannot read property 'match' of undefined

RCA: Corrupt `package-lock.json` file.
 Solution:

Delete `package-lock.json` and reinstall dependencies:

```
rm package-lock.json
```

```
npm install
```

12. npm ERR! UNMET PEER DEPENDENCY

RCA: A package is missing a required peer dependency.
 Solution:

Manually install missing peer dependencies:

```
npm install <missing-package>
```

Use `--legacy-peer-deps`:

```
npm install --legacy-peer-deps
```

13. npm ERR! code ENOTEMPTY

RCA: The directory is not empty.
 Solution:

- **Remove the directory manually and retry.**

14. FATAL ERROR: Ineffective mark-compacts near heap limit

RCA: Memory limit exceeded.
 Solution:

Increase Node.js memory allocation:

```
NODE_OPTIONS="--max-old-space-size=4096" npm install
```

15. Error: Cannot find module 'typescript'

RCA: TypeScript is missing or not globally installed.
 Solution:

Install TypeScript:

```
npm install -g typescript
```

16. npm ERR! code EPERM

RCA: Permission issues in node_modules.
 Solution:

- **Run as admin (Windows) or use sudo (Linux/macOS).**

Reset file permissions:

```
sudo chown -R $(whoami) ~/.npm
```

17. npm ERR! network timeout

RCA: Slow internet connection or timeout issues.
 Solution:

Increase timeout settings:

```
npm config set fetch-retries 5
```

```
npm config set fetch-timeout 300000
```

18. npm ERR! package.json not found

RCA: The command is being run in the wrong directory.
 Solution:

- Ensure you are inside a valid Node.js project directory.

19. npm ERR! unexpected token JSON

RCA: package.json file is corrupt or incorrectly formatted.
 Solution:

- Validate JSON format using an online JSON validator.

20. npm ERR! cb() never called!

RCA: Corrupted npm cache.
 Solution:

Clear npm cache:

```
npm cache clean --force
```

21. npm ERR! code EEXIST

RCA: A file already exists where npm is trying to create one.
 Solution:

● **Manually delete the conflicting file or folder.**

Try running:

```
rm -rf node_modules package-lock.json
```

```
npm cache clean --force
```

```
npm install
```

22. npm ERR! code EINTEGRITY

RCA: Package integrity check failed due to corrupted cache.
 Solution:

Clear npm cache and reinstall dependencies:

```
npm cache clean --force
```

```
rm -rf node_modules package-lock.json
```

```
npm install
```

23. npm ERR! Cannot set property 'X' of undefined

RCA: Corrupt `package.json` or outdated npm version.
 Solution:

● Validate `package.json` format.

Update npm:

`npm install -g npm`

24. npm ERR! code MODULE_NOT_FOUND

RCA: A required module is missing from `node_modules`.
 Solution:

Run:

`npm install`

25. npm ERR! Error: EPERM: operation not permitted

RCA: File system permissions prevent npm from modifying files.
 Solution:

● Run as administrator (Windows) or use `sudo` on macOS/Linux.

26. npm WARN Local package.json exists, but node_modules missing

RCA: `node_modules` directory was deleted or moved.
 Solution:

Run:

`npm install`

27. npm WARN optional SKIPPING OPTIONAL DEPENDENCY

RCA: An optional dependency failed to install.
 Solution:

- Ignore if optional.
- Manually install missing dependencies.

28. npm ERR! cb() never called!

RCA: npm got stuck due to cache corruption.
 Solution:

Run:

`npm cache clean --force`

29. npm ERR! code Z_BUF_ERROR

RCA: Corrupt or incomplete downloaded package.
 Solution:

Run:

`npm cache clean --force`

`npm install`

30. npm ERR! tar.unpack untar error

RCA: A corrupted tarball was downloaded.

Solution:

Run:

```
npm cache clean --force
```

```
npm install
```

31. npm ERR! code ELSPROBLEMS

RCA: Lockfile contains issues preventing package installation.
 Solution:

Delete `package-lock.json` and run:

```
npm install
```

32. npm ERR! code ETIMEDOUT

RCA: Internet connection is too slow or unstable.
 Solution:

● Use a different network or VPN.

Increase npm fetch timeout:

```
npm config set fetch-timeout 60000
```

33. npm ERR! Maximum call stack size exceeded

RCA: Recursive dependency conflict.
 Solution:

Use **--legacy-peer-deps**:

npm install --legacy-peer-deps

34. npm ERR! Cannot find module 'fs'

RCA: The **fs** module is a built-in Node.js module and ould not be missing.
 Solution:

- Ensure correct Node.js installation.
- Reinstall Node.js if necessary.

35. npm ERR! code ENOENT

RCA: File or directory not found.
 Solution:

- Check if the correct working directory is being used.

36. npm ERR! code EISDIR

RCA: npm is trying to overwrite a directory with a file.
 Solution:

- Manually delete the directory and reinstall.

37. npm ERR! UNABLE_TO_GET_ISSUER_CERT_LOCALLY

RCA: Corporate or proxy-related SSL issue.
 Solution:

Disable strict SSL:

`npm config set strict-ssl false`

38. npm ERR! syscall rename

RCA: A package is in use and cannot be renamed.
 Solution:

 ● Close any programs using the file and retry.

39. npm ERR! Could not resolve dependency

RCA: A dependency conflict is preventing installation.
 Solution:

Try:

`npm install --legacy-peer-deps`

40. npm ERR! This is probably not a problem with npm itself

RCA: npm encountered an unexpected error.
 Solution:

 ● Restart npm and retry.

41. npm ERR! : 1: node: not found

RCA: Node.js is missing or incorrectly installed.
 Solution:

● **Reinstall Node.js.**

42. npm ERR! 403 Forbidden

RCA: npm authentication or permission issue.
 Solution:

Login to npm:

```
npm login
```

43. npm ERR! code EHOSTUNREACH

RCA: npm registry is unreachable.
 Solution:

● **Check the internet connection.**

44. npm ERR! missing script: start

RCA: No start script defined in package.json.
 Solution:

Add a start script:
 json

```
"scripts": {
  "start": "node index.js"
}
```

45. npm ERR! Maximum depth exceeded

RCA: Cyclic dependencies exist in `node_modules`.
 Solution:

Run:

`rm -rf node_modules package-lock.json`

`npm install`

46. npm ERR! Code 127

RCA: A missing binary dependency.
 Solution:

- Check if `node_modules/.bin` contains the necessary binaries.

47. npm ERR! cannot run in wd

RCA: Security settings prevent running scripts.
 Solution:

Run with:

`npm install --unsafe-perm`

48. npm ERR! ENOSELF

RCA: The package depends on itself.
 Solution:

- Check `package.json` and remove self-referencing dependencies.

49. npm ERR! EXDEV: cross-device link not permitted

RCA: Filesystem issues prevent renaming.
 Solution:

Run:

```
npm cache clean --force
```

```
npm install
```

50. npm ERR! Outdated npm version

RCA: Using an older npm version.
 Solution:

Update npm:

```
npm install -g npm
```

51. npm ERR! code ERR_SOCKET_TIMEOUT

RCA: The request to the npm registry took too long and timed out.
 Solution:

Increase timeout settings:

```
npm config set fetch-timeout 600000
```

Try running:

```
npm cache clean --force
```

npm install

52. npm ERR! Cannot find module 'express'

RCA: The module is missing from node_modules.
Solution:

Run:

npm install express

53. npm ERR! JSON.parse Unexpected token

RCA: package.json is malformed.
Solution:

 - **Validate and fix JSON syntax.**

54. npm ERR! code EINPROGRESS

RCA: An npm operation is already in progress.
Solution:

 - **Wait for the current operation to complete before running another.**

55. npm ERR! Invalid Version

RCA: A package version specified in package.json is incorrect.
Solution:

 - **Use valid semver versions (e.g., ^1.0.0).**

56. npm ERR! Invalid dependency type

RCA: An incorrect dependency type is specified in `package.json`.
Solution:

- **Use only valid dependency types like** `"dependencies"` **or** `"devDependencies"`.

57. npm ERR! Cannot read properties of undefined (reading 'name')

RCA: `package.json` **is missing a** `"name"` **field.**
Solution:

- **Add a** `"name"` **field in** `package.json`.

58. npm WARN skipping integrity check for tarball download

RCA: The tarball has been altered or corrupted.
Solution:

Run:

```
npm cache clean --force

npm install
```

59. npm ERR! self-signed certificate in certificate chain

RCA: npm registry SSL verification is failing due to a self-signed certificate.
 Solution:

Disable strict SSL:

`npm config set strict-ssl false`

60. npm WARN tar ENOENT

RCA: npm could not find a file during installation.
 Solution:

Clear npm cache and retry:

`npm cache clean --force`

`npm install`

61. npm ERR! extraneous package found

RCA: A package is installed but not listed in `package.json`.
 Solution:

Remove it manually or use:

`npm prune`

62. npm ERR! incorrect a512 integrity checksum

RCA: A package has a checksum mismatch.
 Solution:

Run:

```
npm cache clean --force

npm install
```

63. npm ERR! Error: No space left on device

RCA: Disk is full.
 Solution:

- Free up space and retry installation.

64. npm ERR! Cannot read properties of null (reading 'version')

RCA: package.json is missing a "version" field.
 Solution:

- Add a "version" field.

65. npm ERR! Missing write access to /usr/local/lib/node_modules

RCA: npm lacks write permissions to the global module directory.
 Solution:

Use sudo (macOS/Linux):

```
sudo npm install -g <package>
```

66. npm ERR! code ERESOLVE

RCA: Dependency conflicts between packages.
 Solution:

Use:

```
npm install --legacy-peer-deps
```

67. npm WARN deprecated package

RCA: A package has been deprecated by its maintainer.
 Solution:

  ● Look for an alternative package.

68. npm ERR! The engine "node" is incompatible with this module

RCA: The required Node.js version is different.
 Solution:

Use `nvm` to switch versions:

```
nvm use <version>
```

69. npm WARN unmet dependency

RCA: A required peer dependency is missing.
 Solution:

  ● Install missing dependencies.

70. npm ERR! fsevents not accessible

RCA: **fsevents** is a macOS-specific package that failed on other systems.
 Solution:

- Ignore the warning unless critical.

71. npm ERR! ENOLOCAL

RCA: A required package is not installed locally.
 Solution:

Run:

```
npm install
```

72. npm WARN missing script: build

RCA: No **"build"** script is defined in **package.json**.
 Solution:

- Add a **"build"** script.

73. npm ERR! Cannot find module 'jest'

RCA: Jest is missing from **node_modules**.
 Solution:

Run:

```
npm install jest
```

74. npm WARN old lockfile

RCA: `package-lock.json` was generated with an older npm version.
 Solution:

Delete `package-lock.json` and run:

`npm install`

75. npm ERR! Illegal operation on a directory

RCA: npm is treating a directory as a file.
 Solution:

* Remove the directory and reinstall.

76. npm WARN EACCES attempting to install globally

RCA: User lacks permissions to install globally.
 Solution:

Use:

`sudo npm install -g <package>`

77. npm ERR! Cannot find module 'nodemon'

RCA: Nodemon is not installed.
 Solution:

Run:

`npm install -g nodemon`

78. npm WARN No README data

RCA: The package does not have a README file.
 Solution:

  ● Ignore unless necessary.

79. npm ERR! No git binary found

RCA: Git is not installed or not in PATH.
 Solution:

  ● Install Git and restart the terminal.

80. npm ERR! ELOOP: too many symbolic links encountered

RCA: Cyclic symbolic links exist in the project.
 Solution:

  ● Remove redundant symlinks.

81. npm ERR! No matching version found for package

RCA: Requested package version does not exist.
 Solution:

Check available versions:

```
npm ow <package> versions
```

82. npm ERR! Code 65

RCA: Installation failed due to macOS permission
issues.

Solution:

- Run with sudo.

83. npm ERR! Ha sum mismatch

RCA: Corrupt package download.
Solution:

Run:

```
npm cache clean --force

npm install
```

84. npm WARN prefer global

RCA: A package is recommended to be installed globally.
Solution:

- Install it globally if needed.

85. npm ERR! EREMOTEIO

RCA: Remote I/O error while fetching a package.
Solution:

- Retry installation.

86. npm ERR! invalid json response

RCA: npm registry returned malformed JSON.
Solution:

- Use a different registry.

87. npm ERR! network getaddrinfo ENOTFOUND

RCA: DNS lookup failure.
 Solution:

Use Google DNS:

```
npm config set proxy http://8.8.8.8
```

88. npm ERR! EIO: i/o error, read

RCA: The file system encountered an input/output error.
 Solution:

Check disk health using:

```
fsck /dev/sdX    # Linux/macOS

chkdsk C: /f     # Windows
```

Retry:

```
npm cache clean --force

npm install
```

89. npm ERR! Cannot find module 'webpack'

RCA: Webpack is missing from node_modules.
 Solution:

Install Webpack:

```
npm install --save-dev webpack
```

90. npm WARN EBADENGINE

RCA: Installed Node.js version does not match the required engine version.
 Solution:

Use `nvm` to install the correct Node.js version:

`nvm install <required-version>`

`nvm use <required-version>`

91. npm ERR! Cannot install dependencies in a read-only file system

RCA: The directory is mounted as read-only.
 Solution:

Remount the directory with write permissions:

`mount -o remount,rw /`

92. npm WARN deprecated request@2.88.2

RCA: The `request` package is deprecated.
 Solution:

- Replace with `node-fetch` or `axios`.
- If necessary, use an alternative maintained package.

93. npm ERR! code EPUBLICONFLICT

RCA: Attempting to publi a package with a conflicting version.
 Solution:

Bump the version in `package.json` and retry:

`npm version patch`

`npm publi`

94. npm ERR! code ENOGIT

RCA: npm requires Git but it is not installed.
 Solution:

Install Git and retry:

`sudo apt install git  # Linux`

`brew install git      # macOS`

95. npm ERR! cb() never called!

RCA: npm encountered an internal error.
 Solution:

Clear the npm cache and reinstall dependencies:

`npm cache clean --force`

`npm install`

96. npm ERR! No valid versions available for package

RCA: The package may have been unpublied from npm registry.
 Solution:

● Use an alternative package.

Check available versions:

```
npm view <package> versions
```

97. npm WARN The package is missing a repository field

RCA: The repository field is missing in package.json.
 Solution:

Add a "repository" field in package.json:
 json

```
"repository": {

  "type": "git",

  "url": "https://github.com/your-repo.git"

}
```

98. npm ERR! No permission to access package

RCA: The user does not have access to a private package.
 Solution:

Authenticate with npm:

npm login

99. npm ERR! EPROTO

RCA: SSL/TLS issue while connecting to the npm registry.
 Solution:

Disable strict SSL checks:

npm config set strict-ssl false

100. npm ERR! code ENOLOCAL

RCA: A package is referenced locally but does not exist.
 Solution:

- **Ensure the local package is installed or remove the reference.**