

"In the modern era, software is commonly delivered as a service: called web apps, or software-as-a-service. The twelve-factor app is a methodology for building software-as-a-service apps. . . ." — <https://12factor.net/>

I. Codebase

One codebase tracked in revision control, many deploys

Tiki Wiki CMS Groupware ("Tiki") is tracked in two version control systems: Git and SVN (deprecated), currently Git is the default.

Tiki uses the same codebase with different releases. A major branch is done only once per major version (4.x, 5.x, 6.x, etc.) about 4-6 weeks before the planned official release of x.0. For minor versions, the work is done in the current branch.

II. Dependencies

Explicitly declare and isolate dependencies

Tiki uses [Composer](#) to manage the dependencies. All dependencies are declared in [vendor_bundled/composer.json](#) and to extend some Tiki features it is possible to install via [Packages](#) using the UI, these additional dependencies are also managed by composer.

III. Config

Store config in the environment

Tiki does not store config as constants in the code and uses different environment files. The `db/local.php` file stores some config settings but, it's also possible to extend configurations between environments, see [System Configuration](#) for more information.

IV. Backing services

Treat backing services as attached resources

Tiki makes no distinction between local and third-party services. Tiki is able to swap out, for instance, [SMTP](#) service without code changes and local MySQL database by a third party using configuration files.

V. Build, release, run

Strictly separate build and run stages

Tiki strictly separates build and run stages storing new releases as `<number>.x`, for example, `22.x`.

VI. Processes

Execute the app as one or more stateless processes

Tiki has data that needs to be persistent; however, that data is stored in a stateful backing service like database, Memcached or expiring sessions.

VII. Port binding

Export services via port binding

Because Tiki uses PHP, probably the code is being executed using PHP-FPM which exposes a binding port to communicate with Apache/NginX.

VIII. Concurrency

Scale out via the process model

Tiki does not rely on daemonize processes or write PID files, in fact it uses system processes to handle the requests and background tasks.

IX. Disposability

Maximize robustness with fast startup and graceful shutdown

For a web application like Tiki, this factor is achieved automatically, since PHP-FPM handles system signals like SIGTERM or QUIT out-of-the-box closing existing connections and refusing newer ones when the process stops.

X. Dev/prod parity

Keep development, staging, and production as similar as possible

Tiki uses continuous deployment, making the code being pushed and the production code almost identical and available to use by other developers. See: [Sync Dev-Prod Servers](#)

XI. Logs

Treat logs as event streams

Tiki does not have a single log file that can be used as a stream, but depending on some tasks log files are created (like index rebuild) or other operations/actions are logged in the database as action logs, used to track user activity on the basis of a single user or multiple users, groups or categories.

XII. Admin processes

Run admin/management tasks as one-off processes

Tiki offers administrative and maintenance tasks (see [console.php](#)), such as:

- Running database migrations
- Running a console command
- Running one-time scripts

The admin processes run in an identical environment as the regular long-running processes of the app, and they run against a release, using the same codebase and config as any process run against that release. The admin code is included in the version control system.