

# DougTunes Canonical Rules v4.16

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This document is the single source of truth for how DougTunes works, how it is installed, and what “official behavior” means. If code and canon disagree, code must be changed (or canon updated) before shipping.

## Core concepts

- DougTunes is a web request/queue system plus a host laptop responsible for local playback and local files (commercials).
- A separate agent runner is a local scheduled task (not on the web server) that pings server endpoints to keep state fresh and run background work.
- Canon is the single source of truth. If code and canon disagree, either change code or update canon before shipping.

## Roles

- USER: can Join, Search, Request, Vote.
- ADMIN: can unlock admin UI pages and use admin-only endpoints.

## Directory structure

### Server (web)

- /api
- /assets
- /config (secrets.php)
- /db (schema.sql, seed.sql)
- /lib (bootstrap.php, auth.php, db.php, response.php)
- /pages (admin\_setup.php, admin\_host\_pair.php, admin\_host\_register.php, admin\_agent\_pair.php, admin\_agent\_register.php, admin\_agent\_tick.php, admin\_heartbeat.php, host.php, host\_tick.php, join.php, queue.php, queue\_add.php, queue\_list.php, search.php, search\_api.php, settings\_ping.php, status.php, vote\_add.php)
- /storage (cache, logs, uploads)

### Local (Doug/admin laptop)

- C:\MyApplications\Doug Tunes\local\agent (agent\_tick.ps1, install\_tasks.ps1, agent\_key.txt)
- C:\MyApplications\Doug Tunes\local\host (host\_tick.ps1, host\_key.txt) [naming may vary; key file is required]

## Admin access and gating

- All admin UI pages must begin with: `require_once __DIR__ . '/../lib/bootstrap.php';`  
`dt_require_admin();`
- `dt_require_admin()` lives in `/lib/auth.php` and is loaded by bootstrap when present.
- Basement mode unlock: `DT_ADMIN_KEY` (in `config/secrets.php`) can be supplied once per session via `?k=...` or header `X-DT-ADMIN-KEY`. On success, the server sets `$_SESSION['dt_is_admin']=true` and redirects to remove the key from the URL.
- Admin pages must not redeclare `dt_require_admin()` locally (it causes fatal redeclare errors).
- Tick/heartbeat endpoints are not browser-authenticated; they use key headers (`X-DT-KEY`) and must not depend on admin unlock.

## Pairing and keys

- Pairing pages are admin-only and generate long random keys.
- Agent key and Host key are separate values even though the request header name is the same (`X-DT-KEY`).
- Keys are stored on the local machine in a plain-text file (`agent_key.txt` / `host_key.txt`) used by scheduled tasks; never commit these to the repo.
- Agent key is stored on the server in `dt_settings` with `key_name='AGENT_TICK_KEY'`. The admin pairing UI may show a masked key by default and reveal on demand.

## Header handling

- On shared hosting, custom headers may arrive under multiple server variables. Key-authenticated endpoints must read `X-DT-KEY` robustly (check `$_SERVER HTTP_*`, `REDIRECT_HTTP_*`, and `getallheaders()`).

## Heartbeat and state

- `/pages/admin_heartbeat.php` (POST, host key) updates `dt_state.host_last_seen_utc`.
- `/pages/admin_agent_tick.php` (POST, agent key) updates `dt_state.agent_last_seen_utc`.
- `/pages/status.php` returns `dt_state` plus derived health: `host_state` and `agent_state` (OFFLINE/STALE/ONLINE).
- When `host_state` is OFFLINE, `requests_open` must be 0 and `requests_open_reason` must be 'HOST\_OFFLINE'.

## Commercials

- Goal: commercials are controlled by Doug in the web admin UI, without editing code.
- State fields: `dt_state.commercials_enabled` (0/1), `dt_state.next_commercial_after` (int, songs between commercials).

- Setting (source of truth): `dt_settings.COMMERCIAL_FREQUENCY_SONGS` (int).
- Admin UI upserts `dt_settings.COMMERCIAL_FREQUENCY_SONGS` and mirrors it into `dt_state.next_commercial_after`.
- Behavior: If `commercials_enabled=0`, no commercials. If `commercials_enabled=1`, host inserts a commercial when `songs_since_last_commercial` reaches `next_commercial_after` and then resets the counter. If `next_commercial_after=0`, insertion by count never triggers (commercials remain toggled ON but effectively disabled).

## Installer approach

- Two installers: (A) Local installer (Doug/admin laptop) places scripts, creates Scheduled Task(s), stores key file after pairing. (B) Web admin setup wizard (`/pages/admin_setup.php`) provides click-through steps: Pair Host, Pair Agent, configure commercials, view status.

## Change log

- v4.16 (2025-12-27): Added centralized admin gate (`/lib/auth.php`) with session unlock via `DT_ADMIN_KEY`; standardized admin page header (bootstrap + `dt_require_admin`). Added robust header parsing guidance for X-DT-KEY on shared hosting. Formalized agent key storage in `dt_settings.AGENT_TICK_KEY` and masked/reveal behavior for pairing UI. Clarified status behavior: requests are closed when host is offline (`requests_open_reason='HOST_OFFLINE'`).
- v4.15 (2025-12-27): Commercial frequency configurable via `/pages/admin_setup.php` and `dt_settings.COMMERCIAL_FREQUENCY_SONGS`; value mirrored into `dt_state.next_commercial_after`.