

Android Cast — exposed services catalog

Exposed services catalog — URLs, APIs, validation — 2026-06-10

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Source: 20260610_SERVICES.md — section links work in PDF viewers that support internal anchors.

Validation snapshot

Run: `examples/crash_reporter/backend/scripts/validate_be_services.sh`

Check	URL / target	2026-06-10
Hub	<code>/app/androidcast_project/</code>	■ HTTP 200
Crashes console	<code>.../crashes/</code>	■ HTTP 302 → login
Graphs	<code>.../graphs/</code>	■ HTTP 302 → login
Builder	<code>.../build/</code>	■ HTTP 302 → login
Git	<code>.../git/</code>	■ HTTP 200
OTA channel	<code>/v0/ota/channel/stable.json</code>	■■ HTTP 404 (FE proxy OK; artifact or BE location missing)
Crash upload	<code>.../crashes/api/upload.php</code> GET	■ HTTP 400 (expects POST JSON)
Heartbeat	<code>.../crashes/api/heartbeat.php</code> GET	■ HTTP 405 (expects POST)
Graph upload	<code>.../graphs/api/graph_upload.php</code> GET	■ HTTP 400 (expects POST)
Two-factor	<code>.../crashes/two-factor</code>	■ HTTP 302 → login (no pending session)

Alerts — may need follow-up patch

- OTA:** Public returns **404**; BE direct `curl -H 'Host: apps.f0xx.org' http://artc0.../v0/ota/channel/stable.json` returned HTML lander redirect (not JSON). Confirm BE listen 80 has location `^~ /v0/ota/` **before** catch-all, and publish `stable.json` under `ota-artifacts/v0/ota/channel/`.
- 2FA:** Fixed in repo — `completeTotpLogin()` no longer clears pending session on wrong code; login redirects to `/two-factor` when pending. **Sync BE** (`Auth.php`, `index.php`, `two_factor_challenge.php`, `app.css`).

Hub landing

Web: https://apps.f0xx.org/app/androidcast_project/

Marketing multipage shell; left nav links to Console, Git, Issues, Tickets, Graphs, Remote access, Builder. Shared session cookie `ac_crash_sess` path `/app/androidcast_project`.

Kind	Path	Notes
Static/PHP	<code>index.php</code>	Hub landing
CSS/JS	<code>hub.css</code> , <code>hub-landing.css</code> , <code>assets/hub-*.js</code>	Theme + i18n
Crashes assets	<code>.../crashes/assets/css/app.css</code>	Shared console theme

No device ingest on hub root.

Console home

Web: https://apps.f0xx.org/app/androidcast_project/crashes/?view=home (auth required)

Landing cards: Issues, New issue, Tickets, New ticket, Graphs; quick links to all services.

Issues (crash reports)

Web: https://apps.f0xx.org/app/androidcast_project/crashes/?view=reports

Triage anonymous crash JSON; grouped/by-time views; tag editor; tree expand.

Related endpoints

Method	Endpoint	Auth	Purpose
POST	<code>.../crashes/api/upload.php</code>	None	Device crash ingest (JSON or gzip JSON)
GET	<code>.../crashes/api/reports.php</code>	Session	List/filter reports (console JS)
POST	<code>.../crashes/api/report_tags.php</code>	Session	Update report tags
POST	<code>.../crashes/api/report_view ed.php</code>	Session	Mark report viewed
GET	<code>.../crashes/api/tag_catalog.php</code>	Session	Tag suggestions
GET	<code>.../crashes/api/diag.php</code>	Optional	Diagnostics (may 403 at edge)

Upload via curl

`BASE=https://apps.f0xx.org/app/androidcast_project/crashes`
`SAMPLE=examples/crash_reporter/sample_crash_java.json`

```
RID="manual-$(date +%s)"
jq --arg rid "$RID" '.report_id = $rid' "$SAMPLE" | \
curl -sS -X POST "$BASE/api/upload.php" \
-H 'Content-Type: application/json' --data-binary @-
Gzip upload smoke: examples/crash_reporter/backend/scripts/test_gzip_upload.sh
```

Bulk / synthetic issues

- Optional payload fields: ingest.source, ingest.client_id, ingest.run_id — see OPEN_API.md.
- Loop upload.php with varied report_id / fingerprints for load tests.
- Tag harness traffic synthetic via console or report_tags.php.

Tickets

Web: https://apps.f0xx.org/app/androidcast_project/crashes/?view=tickets
Roadmap / QA tasks; workflow tags (ticket vs issue meta).

Related endpoints

Method	Endpoint	Auth	Purpose
GET	.../crashes/api/tickets.php	Session	List tickets
POST	.../crashes/api/ticket_create.php	Session	Create ticket/issue
POST	.../crashes/api/ticket_update.php	Session	Update fields/tags
POST	.../crashes/api/ticket_tags.php	Session	Tag catalog ops
POST	.../crashes/api/ticket_comments.php	Session	Comments
POST	.../crashes/api/ticket_upload.php	Session	Attachment upload
GET	.../crashes/api/ticket_attachments.php	Session	List attachments
GET	.../crashes/api/ticket_attachment.php	Session	Download attachment

Create via UI

- Issues view: **New issue** → ticket_create.js → ticket_create.php with issue meta tag.
- Tickets view / home: **New ticket** → same API with ticket meta tag.

Create via curl (session cookie)

```
BASE=https://apps.f0xx.org/app/androidcast_project/crashes
JAR=/tmp/ac-cookie.txt
curl -sS -c "$JAR" -b "$JAR" -X POST -d 'username=admin&password=admin' "$BASE/login" -o /dev/null
curl -sS -b "$JAR" -X POST -H 'Content-Type: application/json' \
-d '{"title":"API test","brief":"from curl","body":"","tags":[{"id":"ticket","label":"ticket","bg":"#6366f1"},{"id":"open","label":"open","bg":"#f0f0f0"}]}' \
"$BASE/api/ticket_create.php"
```

Graphs

Web: https://apps.f0xx.org/app/androidcast_project/graphs/
Session metrics dashboards (user / slug / platform scopes); drag-reorder bricks; empty-session notice when no graph_upload data.

Related endpoints

Method	Endpoint	Auth	Purpose
GET	.../graphs/api/graphs.php?days=14	Session	Aggregated metrics JSON
POST	.../graphs/api/graph_upload.php	Device/session	Ingest graph_session NDJSON/JSON

Graphs PHP routes through crashes public/index.php (?view=graphs).

Fake session data (dev / BE)

```
php examples/crash_reporter/backend/scripts/generate_fake_graph_sessions.php \
--devices=100 --per-device=6 --out=/tmp/sessions.ndjson

php examples/crash_reporter/backend/scripts/ndjson_to_graph_sql.php /tmp/sessions.ndjson | \
ssh alpine-be 'mariadb androidcast_crashes'

API smoke: examples/crash_reporter/backend/scripts/test_graphs_api.sh
```

Remote access

Web: https://apps.f0xx.org/app/androidcast_project/crashes/?view=remote_access (RBAC: remote_access_view)

Operator console: whitelist devices, open WireGuard or RSSH sessions.

Related endpoints

Method	Endpoint	Auth	Purpose
POST	.../crashes/api/remote_access.php?action=...	Session	whitelist, open_session, dashboard, ...
POST	.../crashes/api/heartbeat.php	None	Device RA poll (heartbeat.type=ra)

Device flow: app polls heartbeat.php → operator uses console → next poll returns connect payload.

Smoke: CRASHES_BASE=https://apps.f0xx.org/app/androidcast_project/crashes

examples/crash_reporter/backend/scripts/test_remote_access_api.sh

Prod checklist: examples/crash_reporter/backend/scripts/verify_remote_access_prod.sh

RBAC / access control

Web: https://apps.f0xx.org/app/androidcast_project/crashes/?view=rbac (admin)

Related endpoints

Method	Endpoint	Auth	Purpose
GET/POST	.../crashes/api/rbac.php	Session	Roles, memberships, lockouts
GET/POST	.../crashes/api/users.php	Session	User admin

Smoke: examples/crash_reporter/backend/scripts/test_rbac_api.sh

APK builder

Web: https://apps.f0xx.org/app/androidcast_project/build/

Docker CI: trigger builds, stream logs, OTA artifact option.

Related endpoints

Method	Endpoint	Auth	Purpose
GET	.../build/api/health.php	Session	Docker/socket health
GET	.../build/api/builds.php	Session	Build history
POST	.../build/api/build_trigger.php	Session	Start build
GET	.../build/api/build_log.php?id=	Session	Log tail
POST	.../build/api/build_actions.php	Session	Cancel / rerun

Shared login with crashes (ac_crash_sess). See BUILD_DEPLOY.md.

Git (Gitea)

Web: https://apps.f0xx.org/app/androidcast_project/git/

FE proxies to <http://artc0.intra.raptor.org:3000/> (Gitea). Canonical git remote: `git://f0xx.org/android_cast.`

No Android Cast PHP on this path.

OTA updates

Web channel: <https://apps.f0xx.org/v0/ota/channel/stable.json>

Device setting: ota.base_url in examples/settings.json → <https://apps.f0xx.org/v0/ota/channel/stable.json>.

Layout

See OTA.md: `v0/ota/channel/{stable,staging,...}.json` → manifest → .otapkg / .otabundle.zip.

Publish (operator)

```
./scripts/generate-ota-v0.sh app/build/outputs/apk/release/app-release.apk \
  https://apps.f0xx.org ./out/ota staging
```

```
OTA_DEPLOY_TARGET=... ./scripts/deploy-ota-staging.sh
```

BE mount: `.../androidcast_project/ota-artifacts/v0/` — prepare-be-ota-mount.sh.

Status 2026-06-10: FE /v0/ota/ → BE :80 configured; channel file **not yet served** (404 / lander) — publish artifacts + verify BE nginx location ^~ /v0/ota/.

Heartbeat (device)

Web: none (app service only)

Endpoint: POST https://apps.f0xx.org/app/androidcast_project/crashes/api/heartbeat.php

JSON body with heartbeat object: session stats, remote-access poll (type: ra), etc.

```
curl -sS -X POST -H 'Content-Type: application/json' \
  -d '{"heartbeat":{"type":"ping","device_id":"test-device"}}' \
  https://apps.f0xx.org/app/androidcast_project/crashes/api/heartbeat.php
```

Auth & account security

Page		URL
Login		.../crashes/login
Register		.../crashes/register
Two-factor challenge		.../crashes/two-factor
Account security (TOTP enroll)		.../crashes/account-security
Email verify		.../crashes/verify-email?token=
Method	Endpoint	Purpose
POST	.../crashes/api/auth_register.php	Registration API

TOTP verify script: examples/crash_reporter/backend/scripts/verify_auth_totp.php

Flow doc: 20260607-2FA-email-mobile-auth-flow.md

URL shortener

Web: <https://s.f0xx.org> · **Admin:** .../crashes/?view=short_links (RBAC: company owner/admin)

Kind	Path	Notes
Health	GET /api/v1/health	JSON status: ok, DB ping
Shorten	GET/POST /api/v1/shorten	Bearer token required
QR	GET /api/v1/qr/{slug}.png	PNG (libqrencode-tools on BE)
Redirect	GET /{slug}	302 → origin; 410 if expired
Admin UI	.../crashes/?view=short_links	Mint/revoke bearers, list links (session RBAC)

Spec: specs/20100611_3_url_shortener.md · code: <backend/url-shortener/>

```
curl -fsS https://s.f0xx.org/api/v1/health
```

```
export BEARER=... BASE=https://s.f0xx.org backend/url-shortener/scripts/demo_curl.sh
```

```
CRASHES_BASE=https://apps.f0xx.org/app/androidcast_project/crashes ./examples/crash_reporter/backend/scripts/test_short_links_api.sh
```

Non-HTTP services

Service	Access	Used by
WireGuard	ra.apps.f0xx.org:45340/udp	Remote access lab mode
RSSH bastion	ra.apps.f0xx.org:443/tcp	Reverse SSH alpha mode
Cast LAN	UDP/TCP :41235, discovery :41234	Screen mirror (no BE)
MQTT OTA (optional)	mqtt://host:port/v0/ota/...	Retained topic payloads

Validation scripts

Script	Purpose
validate_be_services.sh	Public HTTP smoke (this doc's snapshot)
test_gzip_upload.sh	Crash upload plain + gzip
test_graphs_api.sh	Graphs JSON API
test_remote_access_api.sh	RA whitelist + session
test_rbac_api.sh	RBAC API
test_rssh_api.sh	RSSH mode API
test_tags_api.sh	Report tag API
verify_remote_access_prod.sh	Prod RA checklist

FE nginx template: examples/crash_reporter/backend/nginx/fe/apps.conf

Regenerate FE patch: <scripts/generate-fe-nginx-patch.sh>