Integration Architecture and Operational Notes

This document describes the end-to-end integration between TopS.II (FastHelp) and Ameyo via APIcc and this PHP relay, including data flows, decision logic, state handling, and practical debugging steps.

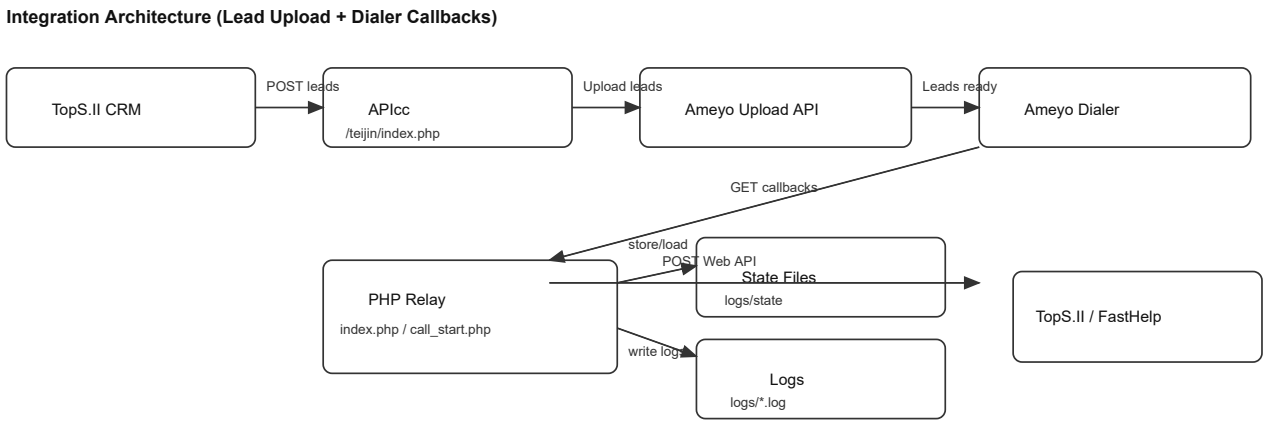
System overview

Before dialing starts, TopS.II uses APIcc to upload lead data into Ameyo. After that, Ameyo starts auto dialing based on dialer settings. During dialing, the relay receives GET callbacks from Ameyo, immediately returns a small JSON acknowledgment, and then asynchronously forwards the appropriate payload to TopS.II Web APIs.

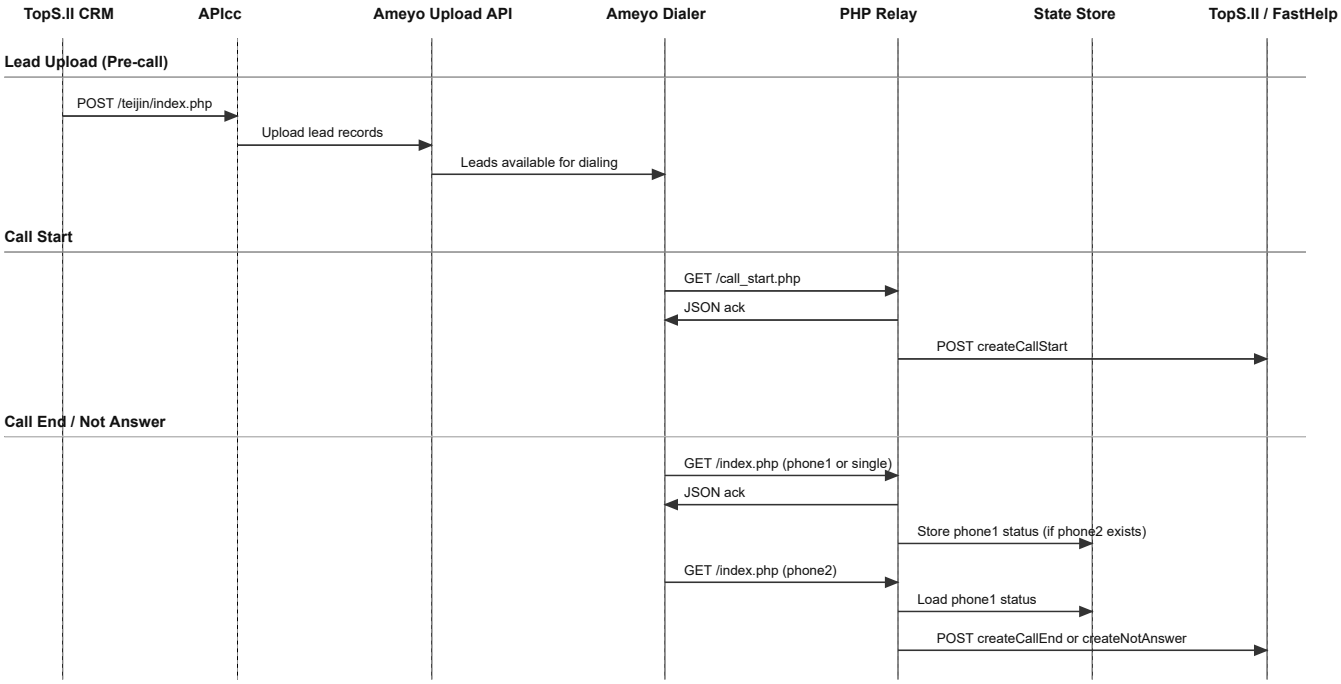
Key integrations:

- TopS.II CRM (lead source)
- APIcc (lead upload to Ameyo)
- Ameyo Upload API (lead ingestion)
- Ameyo Dialer (callback source)
- This PHP relay (routing, state, dedupe, logging)
- TopS.II / FastHelp Web APIs (createCallStart / createCallEnd / createNotAnswer)

Architecture diagram (image)



Sequence diagram (image)



Main components

- APIcc (lead upload)
  - Endpoint: `/teijin/index.php` (POST JSON, `X-API-Key`)
  - Uploads phone records into Ameyo before dialing starts.
- Ameyo Dialer
  - Sends GET callbacks per call attempt and call events.
  - Provides parameters like `unique_id`, `customerCRTId`, `shareablePhonesDialIndex`, `phoneList`, `systemDisposition`.
- PHP Relay
  - `index.php` -> `handle_index_request()` (Call End / Not Answer routing)
  - `call_start.php` -> `handle_call_start_request()` (Call Start)
  - Dedupe gate prevents duplicate upstream calls.
  - Phone1 state storage used to combine phone1+phone2 in two-phone flows.
- TopS.II / FastHelp API endpoints
  - `createCallStart.json`
  - `createCallEnd.json`
  - `createNotAnswer.json`

Pre-call lead upload flow (TopS.II -> APIcc -> Ameyo)

1. TopS.II (or a feeder system) sends leads to APIcc using the upload endpoint.
2. APIcc validates auth (`X-API-Key`) and ingests the lead data into Ameyo.
3. Once leads exist in Ameyo, the dialer starts auto dialing based on configured dialer rules.

APIcc upload summary:

- `POST /teijin/index.php`
- `Content-Type: application/json`
- `X-API-Key` header
- Body includes `customerRecords[]` with required `phone`, `unique_id`, `type` (leadId), optional `phone2`.

Primary flows

Call Start (`call_start.php`)

- Trigger: Ameyo sends call-start callback.
- Mapping:
  - `callId` from cs_unique_id`
  - `predictiveStaffId` from `userId`
  - `targetTel` from `phone`
- Action: Send `createCallStart` to TopS.II.

Call End / Not Answer (`index.php`)

Decision inputs:

- `systemDisposition`
- `shareablePhonesDialIndex`
- `phoneList` (JSON)
- `customerCRTId` (required for Call End)

Routing rules:

- Phone1 connected (`systemDisposition=CONNECTED` and `shareablePhonesDialIndex=0`):
  - Send `createCallEnd` with `subCtiHistoryId = customerCRTId`.
- Phone2 connected (`systemDisposition=CONNECTED` and `shareablePhonesDialIndex>=1`):
  - Send `createCallEnd` with phone1 errorInfo (from state) and `subCtiHistoryId = customerCRTId`.
- Not connected:
  - Single phone: send `createNotAnswer` immediately with `errorInfo1 = current status`.
  - Two phones:
    - Phone1 callback (dialIndex=0): store phone1 status and wait.
    - Phone2 callback (dialIndex>=1): combine stored phone1 status + current phone2 status and send `createNotAnswer`.

State handling (two-phone flow)

Purpose: Avoid DB timing issues by keeping phone1 status locally until phone2 arrives.

- State file stored under `logs/state/phone1_<hash>.json`
- Key: `customerId + callId`
- Fields: `customerId`, `callId`, `callTime`, `phone1Status`
- TTL: `PHONE1_STATE_TTL_SECONDS` (default 600s)
- Cleared after sending phone2-based upstream request

Dedupe gate

Purpose: Prevent multiple upstream calls for the same callback retry.

- Key: `crtObjectId + customerId + callId`
- Status:
  - `processing`: rejects duplicates for a short window
  - `processed`: rejects duplicates for a longer window
- TTL:
  - `REQUEST_PROCESSING_TTL_SECONDS` (default 30s)
  - `REQUEST_DEDUPE_TTL_SECONDS` (default 300s)

Configuration (env)

- `TEST_BASE_URL` / `PROD_BASE_URL`
- `TEST_API_KEY` / `PROD_API_KEY`
- `INDEX_ENV` (`TEST` or `PROD`)
- `ENABLE_REAL_SEND` (`true` to send upstream)
- `PHONE1_STATE_TTL_SECONDS`
- `REQUEST_PROCESSING_TTL_SECONDS`
- `REQUEST_DEDUPE_TTL_SECONDS`

Logging

Log files (daily):

- `logs/call_start-YYYY-MM-DD.log`
- `logs/call_end-YYYY-MM-DD.log`
- `logs/not_answer-YYYY-MM-DD.log`
- `logs/general-YYYY-MM-DD.log`

Each entry contains:

- `request_id` for correlation
- `query` payload from Ameyo
- `decision` with chosen flow and errorInfo values
- `upstream_request` / `http_client` / `upstream_response`
- `dedupe` if a retry was skipped
- `state` when phone1 is stored

Debugging checklist (CRM-side first)

1. Verify Ameyo callback inputs:
   - `unique_id`, `customerId`, `customerCRTId`, `shareablePhonesDialIndex`, `phoneList`
   - Confirm `systemDisposition` value
2. Confirm relay received the request:
   - Check `logs/not_answer-YYYY-MM-DD.log` or `logs/call_end-YYYY-MM-DD.log`
   - Use `request_id` to track a single flow
3. Check dedupe behavior:

    - Look for `dedupe | Skipped duplicate request`
4. Check phone1 state behavior (two-phone flow):
    - `state | Stored phone1 status; waiting for phone2`
    - On phone2 callback, confirm `phone1_state_used=true` in decision log
5. Check upstream send:
    - `upstream_request` contains payload and URL
    - `http_client` shows `http_code` and `error` if any
6. If upstream returns errors:
    - Confirm `customerCRTId` exists in CRM
    - Validate `callId`, `callTime`, `predictiveStaffId`, `targetTel`

Known edge cases and handling

- Duplicate callbacks from Ameyo:
    - Handled by dedupe gate; only first request is sent upstream.
- Phone2 arrives before phone1:
    - `errorInfo1` will be `UNKNOWN` (no phone1 state available).
- Phone2 never arrives:
    - Phone1 state expires after `PHONE1_STATE_TTL_SECONDS`.
- Missing `customerCRTId` on Call End:
    - Request is rejected with a clear error.

Change management notes

- Database lookups are intentionally removed to avoid timing inconsistencies.
- Phone1 status is sourced only from the phone1 callback and stored locally.
- NotAnswer does not include `subCtiHistoryId`.