

# **GSMA Common Testing Issues for CAMARA TSC**

# Common testing issues

## A range of authorization methods being implemented

- Across current tested implementations: Client Credentials (70%), Authorization Code (15%), CIBA (15%)
- SIM Swap has all three flows across tested implementations
- Within same flow types – there are different input parameters and client authentication methods implemented
- Risk: Increasing variations over time. Operator inexperience with non client credential flows.
- Request: Standardisation and publication of Identity & Consent Management guidelines (Security Profile) by June

## API Base Path in specification not being followed - `{apiRoot}/{basePath}/{resource}`

- e.g. SIM Swap default base path is “/sim-swap/v0” -> “<https://example.com/example-segment/sim-swap/v0/retrieve-date>”
- Operators have been implementing custom base paths e.g. <https://example.com/simswap/camara/v1/retrieve-date>
- Request: Explicitly mandate that specification base paths should be followed in documentation

## Expected behaviours are in Design Guidelines but not in specification i.e. X-Correlator behaviour. Implementers are not reading the design guidelines.

- Issue: Gap between guidelines and specification. Are implementers expected to read Design Guidelines? Should there be Implementation Guidelines?
- Request: Improve API in-line documentation to point to relevant documentation or state expected logical behaviour.

## JSON fields are not implemented nor validated according to specification

- Pattern matching, number ranges, optional and mandatory inputs – not compliant with specification
- Clear misalignment.
- Request: Clearer guidelines on minimum standards for field validation and schema compliance

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## Additional parameters added to API requests

- e.g. “X-API-KEY” header, custom JSON fields
- Clear misalignment. No TSC action requested.

## Custom error structures returned in response

- CAMARA uses an “ErrorInfo” schema to represent Error responses (3 fields: status, code, message)
- Operators have been returning custom error schemas
- Clear misalignment. No TSC action requested.

## Difficulties aligning with Error structure in “401 Unauthorized” cases against Resource server

- Architectural challenges – difficulties in accessing/intercepting the authorization flow validation during a resource request
- Issue raised by one Operator: <https://github.com/camaraproject/Commonalities/issues/128>
- Operators have found a solution eventually
- Request: Maintain strong standardisation

## Custom error message guidance

- Are error messages standardized or can they be custom?
- Request: Resolve <https://github.com/camaraproject/Commonalities/issues/113> / and <https://github.com/camaraproject/Commonalities/issues/157>

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## Differing response codes for same error scenario – specifically for “404 Not Found” cases

- Specification contains “404 Not Found” example for a request for an unknown identifier
- Operators that implement a three-legged flow are not able to align; access token is tied to a specific device identifier therefore 403 return instead
- Request: Clarity in Design Guidelines – are response code examples in specification mandatory to follow or are they recommended?

## Error code not yet defined for unsupported device identifier (Phone Number, IPv4, IPv6, Network Access Identifier)

- Ongoing discussion: <https://github.com/camaraproject/Commonalities/issues/127>
- Request: Resolve issue and include in Design Guidelines

## Variance in supported device identifiers (Phone Number, IPv4, IPv6, Network Access Identifier)

- Device object can contain 1 of 4 optional identifiers. Operators can implement any of the identifiers.
- Potential friction point in federation / aggregation
- Ongoing discussions: <https://github.com/camaraproject/Commonalities/issues/127>
- Request: To support interoperability. Possibly case-by-case recommended identifier.

## Operators not always developing to latest standards (Old versions being used)

- Possibly transient issue – may need release management guidance