

# Secure Call Verification — Verify Bank-Initiated Calls

## Purpose

Let the app confirm whether an incoming/recent call was genuinely initiated by the bank—helping stop voice phishing and number spoofing.

## System architecture

1. **Bank Call Center** reports each outbound call to the Secure Call backend.
2. **Secure Call Backend** records the call data.
3. Mobile App + SDK queries the backend and displays verification status.

## Server-to-server API (ReportCall)

**Endpoint:** `POST /api/v1/ReportCall`

**Fields:** `phone_number` (req), `uid` (req), `call_reason` (opt), `call_team` (opt), `call_agent` (opt)

## Example (curl)

```
curl -X POST "https://securecall.example.com/api/v1/ReportCall" \  
-H "Authorization: Bearer <your_token>" \  
-H "Content-Type: application/json" \  
-d '{  
  "phone_number": "+15551234567",  
  "uid": "123456789",  
  "call_reason": "Verify Transaction",  
  "call_team": "Fraud Department",  
  "call_agent": "John Smith"  
}
```

## Android SDK integration

### Permission (AndroidManifest.xml):

```
<uses-permission android:name="android.permission.READ_PHONE_STATE"/>
```

If missing, `CheckCallStatus()` returns `UNKNOWN`.

## SDK method

```
val result = collectorAgent.CheckCallStatus()
```

## Statuses

- `CALL_APPROVED` — Legitimate bank-initiated call (active or recent)
- `UNAPPROVED_RECENT_CALL` — Recent call detected but not reported → potential fraud
- `NO_RECENT_CALL` — No active/recent call
- **UNKNOWN** — Insufficient info (incompatibility or missing permission)

## Sample returns

Legitimate:

```
{
  "STATUS": "CALL_APPROVED",
  "CALL_REASON": "Verify Transaction",
  "CALL_TEAM": "Fraud Department",
  "CALL_AGENT": "John Smith"
}
```

## Unapproved:

```
{ "STATUS": "UNAPPROVED_RECENT_CALL" }
```

## No call:

```
{ "STATUS": "NO_RECENT_CALL" }
```

## UI recommendations

- `CALL_APPROVED` → Green banner: “This call is verified.” (show agent + reason)
- `UNAPPROVED_RECENT_CALL` → Yellow warning: “Be cautious—possible fraud.”
- **UNKNOWN** → Gray info: “Unable to verify call status.”

## End-to-end example

1. Agent calls customer and backend sends `ReportCall`.
2. Customer opens the app during the call.
3. App invokes `CheckCallStatus()` and receives `CALL_APPROVED`.
4. App shows green banner with agent/team/reason.

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