ACS SECURITY SYSTEM

LICENSE FUNCTIONAL TEST

1.Purpose

This document defines the **functional testing framework** for the ACS Licensing System. It validates that license generation, activation, renewal, and enforcement operate correctly and securely, in alignment with the designed licensing architecture.

The primary goals are:

- Ensure licenses are **hardware-bound**
- Prevent unauthorized reuse or tampering
- Validate secure activation and renewal

2.Scope

The functional test covers:

- Client-side license request creation
- Server-side license generation
- Client-side license activation
- License renewal process
- Hardware and registry-based validation
- Tamper detection and enforcement

3.Pre-Requisites

- ACS installed on a client machine
- Access to organization license server and database
- Windows Registry access enabled
- Running Licensing services
- Network connectivity between client and server

4.Test Scenarios

4.1 License Request Creation

Objective:

Verify that, post-installation, the client generates and submits a valid license request.

Process:

- ACS installation collects hardware identifiers
- A unique installation key is generated

- Request is sent to the organization server

Expected Outcome:

- Record created in **client_lic_request_info**
- Status marked *Pending*
- All hardware and system fields populated correctly

4.2 License Request Creation

Objective:

Confirm secure creation and storage of the installation key.

Validation Point:

HKEY_LOCAL_MACHINE\SOFTWARE\AcsSecurity

Expected Outcome:

- Key exists and is not user-modifiable
- Matches the value used during license generation

4.3 License Generation

Objective:

Validate correct license creation using approved client data.

Process:

- Select pending request
- Generate license with defined modules and limits
- Store in client table

Expected Outcome:

- Encrypted license created
- Client record updated
- Status marked *Active*

4.4 License Generation

Objective:

Ensure license activates only on the intended system.

Validation Checks:

- Hardware identifiers
- Registry secret key
- Server-side records

Expected Outcome:

- Successful activation on correct system

- ACS services start
- Any mismatch blocks activation

4.5 Tamper Protection

Test Cases:

- License copied to another system
- Registry key modified
- Hardware mismatch

Expected Outcome:

- License validation fails
- ACS access blocked

4.6 License Generation

Objective:

Validate secure renewal without reinstalling ACS.

Process:

- Submit renewal request
- Update expiry, modules, limits
- Import renewed license

Expected Outcome:

- License updated successfully
- Machine binding unchanged
- Continued system operation

5.Conclusion

Functional testing confirms that:

- Each license is bound to a single system
- Unauthorized usage is prevented
- Registry-based security is effective
- Renewal is seamless and secure