# Testing and Results

The file sharing server underwent extensive testing to ensure its functionality, performance, and security. This section outlines the testing methodologies, key results, and supporting evidence for each test case.

## 1. Functional Testing

The following table summarizes the functional test cases, expected outcomes, actual results, and includes placeholders for relative hyperlinks to screenshots.

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| --- | --- | --- | --- | --- |
| Feature | Test Case Description | Expected Outcome | Actual Outcome | Evidence |
| User Registration | Register a new user with valid credentials. | User registered successfully. | Pass | View Screenshot |
| User Registration | Register with an existing username. | Duplicate registration rejected. | Pass | View Screenshot |
| User Login | Login with valid credentials. | Session token returned. | Pass | View Screenshot |
| User Login | Login with incorrect credentials. | Access denied with error message. | Pass | View Screenshot |
| File Upload | Upload a valid file. | File encrypted and saved successfully. | Pass | View Screenshot |
| File Upload | Upload with invalid session token. | Upload denied with session error. | Pass | View Screenshot |
| File Download | Download an existing file. | Encrypted file sent and decrypted. | Pass | View Screenshot |
| File Download | Download a non-existing file. | File not found error. | Pass | View Screenshot |
| File Integrity | Upload a file and compare checksums. | Checksums match; integrity validated. | Pass | View Screenshot |
| File Integrity | Modify file during transfer. | Checksum mismatch; transfer rejected. | Pass | View Screenshot |