

Test Coverage Summary

This document provides a comprehensive overview of all implemented tests across the Strata, Stratahub, and Strataforge applications.

Overview

Application	Test Files	Test Functions
Strataforge	45	545
Stratahub	66	771
Strata	45	545
Total	156	1,861

Strataforge Tests

Features (18 files)

File	Test Functions	Description
features/activity/activity_test.go	21	Activity tracking and logging
features/announcements/announcements_test.go	14	Announcement management
features/authgoogle/authgoogle_test.go	10	Google OAuth authentication
features/dashboard/dashboard_test.go	6	Dashboard functionality
features/errors/errors_test.go	7	Error handling
features/files/files_test.go	22	File management
features/files/util_test.go	3	File utilities
features/health/health_test.go	6	Health check endpoints
features/heartbeat/heartbeat_test.go	8	Heartbeat monitoring
features/home/home_test.go	3	Home page
features/invitations/invitations_test.go	20	Invitation system
features/login/login_test.go	17	User login
features/logout/logout_test.go	6	User logout

File	Test Functions	Description
features/pages/pages_test.go	19	Page management
features/profile/profile_test.go	16	User profile
features/settings/settings_test.go	19	Application settings
features/status/status_test.go	11	Status endpoints
features/systemusers/systemusers_test.go	19	System user management

System (11 files)

File	Test Functions	Description
system/auth/auth_test.go	21	Authentication system
system/authutil/password_test.go	13	Password utilities
system/authz/authz_test.go	9	Authorization
system/htmlsanitize/htmlsanitize_test.go	8	HTML sanitization
system/inputval/inputval_test.go	16	Input validation
system/jsonutil/jsonutil_test.go	16	JSON utilities
system/network/ip_test.go	3	Network/IP utilities
system/normalize/normalize_test.go	6	Data normalization
system/status/status_test.go	3	Status utilities
system/tasks/runner_test.go	7	Task runner
system/timezones/timezones_test.go	8	Timezone handling
system/validators/validators_test.go	8	Data validators

Stores (16 files)

File	Test Functions	Description
store/activity/store_test.go	11	Activity store
store/announcement/announcementstore_test.go	12	Announcement store
store/audit/store_test.go	12	Audit log store
store/emailverify/emailverifystore_test.go	16	Email verification store
store/file/filestore_test.go	14	File store

File	Test Functions	Description
store/folder/folderstore_test.go	13	Folder store
store/invitation/invitationstore_test.go	13	Invitation store
store/logins/loginstore_test.go	11	Login records store
store/oauthstate/oauthstatestore_test.go	10	OAuth state store
store/pages/pagestore_test.go	10	Pages store
store/passwordreset/passwordresetstore_test.go	13	Password reset store
store/ratelimit/store_test.go	11	Rate limiting store
store/sessions/store_test.go	15	Sessions store
store/settings/settingsstore_test.go	6	Settings store
store/users/userstore_test.go	32	Users store

Stratahub Tests

Bootstrap (1 file)

File	Test Functions	Description
bootstrap/startup_test.go	5	Application startup

Features (28 files)

File	Test Functions	Description
features/about/handler_test.go	3	About page
features/activity/handler_test.go	7	Activity tracking
features/announcements/handler_test.go	11	Announcements
features/auditlog/handler_test.go	8	Audit logging
features/authgoogle/handler_test.go	9	Google OAuth
features/contact/handler_test.go	3	Contact page
features/dashboard/handler_test.go	10	Dashboard
features/groups/handler_test.go	12	Group management
features/health/handler_test.go	1	Health check
features/heartbeat/handler_test.go	8	Heartbeat
features/home/handler_test.go	5	Home page

File	Test Functions	Description
features/leaders/handler_test.go	10	Leader management
features/login/handler_test.go	7	User login
features/logout/handler_test.go	4	User logout
features/materials/handler_test.go	7	Materials management
features/members/handler_test.go	11	Member management
features/organizations/handler_test.go	12	Organization management
features/profile/handler_test.go	9	User profile
features/reports/handler_test.go	4	Reporting
features/resources/handler_test.go	7	Resource management
features/settings/handler_test.go	5	Settings
features/status/handler_test.go	8	Status
features/systemusers/handler_test.go	7	System users
features/terms/handler_test.go	3	Terms page
features/uploadcsv/csvutil/parser_test.go	40	CSV parsing
features/userinfo/handler_test.go	4	User information
features/workspaces/handler_test.go	5	Workspace management

System (17 files)

File	Test Functions	Description
system/auth/auth_test.go	11	Authentication
system/authutil/authutil_test.go	52	Auth utilities
system/authz/authz_test.go	15	Authorization
system/auditlog/logger_test.go	14	Audit logger
system/gates/gates_test.go	25	Feature gates
system/htmlsanitize/htmlsanitize_test.go	43	HTML sanitization
system/indexes/indexes_test.go	18	Database indexes
system/inputval/inputval_test.go	1	Input validation
system/inputval/validators_test.go	8	Input validators
system/normalize/normalize_test.go	7	Data normalization
system/orgutil/orgutil_test.go	24	Organization utilities

File	Test Functions	Description
system/paging/paging_test.go	6	Pagination
system/search/search_test.go	2	Search functionality
system/tasks/runner_test.go	7	Task runner
system/timezones/timezones_test.go	6	Timezone handling
system/txn/txn_test.go	2	Transactions
system/validators/validators_test.go	24	Validators
system/workspace/workspace_test.go	19	Workspace utilities
system/wsauth/wsauth_test.go	8	Workspace auth

Stores (21 files)

File	Test Functions	Description
store/activity/store_test.go	17	Activity store
store/audit/store_test.go	22	Audit store
store/coordinatorassign/coordinatorassignstore_test.go	13	Coordinator assignments
store/emailverify/store_test.go	21	Email verification
store/groups/groupstore_test.go	7	Groups store
store/logins/loginstore_test.go	3	Login records
store/materialassign/materialassignstore_test.go	21	Material assignments
store/materials/materialstore_test.go	20	Materials store
store/memberships/membershipstore_test.go	13	Memberships store
store/metrics/metricsstore_test.go	3	Metrics store
store/oauthstate/store_test.go	11	OAuth state
store/organizations/organizationstore_test.go	5	Organizations store
store/pages/pagestore_test.go	12	Pages store
store/resourceassign/resourceassignstore_test.go	10	Resource assignments

File	Test Functions	Description
store/resources/resourcestore_test.go	11	Resources store
store/sessions/store_test.go	17	Sessions store
store/settings/settingsstore_test.go	10	Settings store
store/users/userstore_test.go	14	Users store
store/workspaces/workspacestore_test.go	13	Workspaces store

Strata Tests

Features (18 files)

File	Test Functions	Description
features/activity/activity_test.go	21	Activity tracking
features/announcements/announcements_test.go	14	Announcements
features/authgoogle/authgoogle_test.go	10	Google OAuth
features/dashboard/dashboard_test.go	6	Dashboard
features/errors/errors_test.go	7	Error handling
features/files/files_test.go	22	File management
features/files/util_test.go	3	File utilities
features/health/health_test.go	6	Health check
features/heartbeat/heartbeat_test.go	8	Heartbeat
features/home/home_test.go	3	Home page
features/invitations/invitations_test.go	20	Invitations
features/login/login_test.go	17	User login
features/logout/logout_test.go	6	User logout
features/pages/pages_test.go	19	Page management
features/profile/profile_test.go	16	User profile
features/settings/settings_test.go	19	Settings
features/status/status_test.go	11	Status
features/systemusers/systemusers_test.go	19	System users

System (12 files)

File	Test Functions	Description
system/auth/auth_test.go	21	Authentication
system/authutil/password_test.go	13	Password utilities
system/authz/authz_test.go	9	Authorization
system/htmlsanitize/htmlsanitize_test.go	8	HTML sanitization
system/inputval/inputval_test.go	16	Input validation
system/jsonutil/jsonutil_test.go	16	JSON utilities
system/network/ip_test.go	3	Network utilities
system/normalize/normalize_test.go	6	Data normalization
system/status/status_test.go	3	Status utilities
system/tasks/runner_test.go	7	Task runner
system/timezones/timezones_test.go	8	Timezone handling
system/validators/validators_test.go	8	Validators

Stores (14 files)

File	Test Functions	Description
store/activity/store_test.go	11	Activity store
store/announcement/announcementstore_test.go	12	Announcements
store/audit/store_test.go	12	Audit store
store/emailverify/emailverifystore_test.go	16	Email verification
store/file/filestore_test.go	14	File store
store/folder/folderstore_test.go	13	Folder store
store/invitation/invitationstore_test.go	13	Invitation store
store/logins/loginstore_test.go	11	Login records
store/oauthstate/oauthstatestore_test.go	10	OAuth state
store/pages/pagestore_test.go	10	Pages store
store/passwordreset/passwordresetstore_test.go	13	Password reset
store/ratelimit/store_test.go	11	Rate limiting
store/sessions/store_test.go	15	Sessions store
store/settings/settingsstore_test.go	6	Settings store

File	Test Functions	Description
store/users/userstore_test.go	32	Users store

Test Categories

Authentication & Authorization

- Google OAuth integration tests
- Password hashing and validation
- Session management
- Role-based access control (RBAC)
- Workspace authentication

Data Storage

- MongoDB store operations (CRUD)
- Index management
- Rate limiting
- Audit logging

Feature Handlers

- HTTP handler tests
- Request/response validation
- Error handling

Utilities

- Input validation
- HTML sanitization
- JSON utilities
- Timezone handling
- Data normalization

Test Coverage Analysis

Current Status: All Tests Passing 

All Stratahub tests now compile and pass successfully. Coverage analysis below shows statement coverage for each package.

Stratahub Coverage by Package

Features Coverage

Package	Coverage	Status
features/about	62.5%	 Good

Package	Coverage	Status
features/activity	15.2%	⚠️ Low
features/announcements	32.6%	⚠️ Moderate
features/auditlog	62.4%	✅ Good
features/authgoogle	22.7%	⚠️ Low
features/contact	62.5%	✅ Good
features/dashboard	31.0%	⚠️ Moderate
features/groups	6.8%	⚠️ Low
features/health	47.6%	⚠️ Moderate
features/heartbeat	15.2%	⚠️ Low
features/home	43.3%	⚠️ Moderate
features/leaders	13.0%	⚠️ Low
features/login	12.1%	⚠️ Low
features/logout	57.6%	✅ Good
features/materials	7.4%	⚠️ Low
features/members	27.7%	⚠️ Low
features/organizations	29.9%	⚠️ Low
features/profile	63.5%	✅ Good
features/reports	24.0%	⚠️ Low
features/resources	9.5%	⚠️ Low
features/settings	8.5%	⚠️ Low
features/status	70.9%	✅ Good
features/systemusers	10.2%	⚠️ Low
features/terms	62.5%	✅ Good
features/uploadcsv/csvutil	47.6%	⚠️ Moderate
features/userinfo	87.5%	✅ Excellent
features/workspaces	12.7%	⚠️ Low

Stores Coverage

Package	Coverage	Status
store/activity	86.6%	✅ Excellent

Package	Coverage	Status
store/audit	78.9%	✓ Good
store/coordinatorassign	82.1%	✓ Excellent
store/emailverify	89.7%	✓ Excellent
store/groups	66.7%	✓ Good
store/logins	27.8%	⚠ Low
store/materialassign	84.2%	✓ Excellent
store/materials	78.2%	✓ Good
store/memberships	44.0%	⚠ Moderate
store/metrics	100.0%	✓ Complete
store/oauthstate	72.2%	✓ Good
store/organizations	25.6%	⚠ Low
store/pages	88.0%	✓ Excellent
store/resourceassign	65.1%	✓ Good
store/resources	63.4%	✓ Good
store/sessions	48.2%	⚠ Moderate
store/settings	92.0%	✓ Excellent
store/users	12.2%	⚠ Low
store/workspaces	72.0%	✓ Good

System Coverage

Package	Coverage	Status
system/auditlog	41.0%	⚠ Moderate
system/auth	45.0%	⚠ Moderate
system/authutil	96.4%	✓ Excellent
system/authz	28.2%	⚠ Low
system/gates	100.0%	✓ Complete
system/htmlsanitize	100.0%	✓ Complete
system/indexes	48.4%	⚠ Moderate
system/inputval	73.3%	✓ Good
system/normalize	100.0%	✓ Complete

Package	Coverage	Status
system/orgutil	48.1%	⚠️ Moderate
system/paging	65.5%	✓ Good
system/search	100.0%	✓ Complete
system/tasks	75.0%	✓ Good
system/timezones	78.8%	✓ Good
system/txn	27.3%	⚠️ Low
system/validators	51.3%	⚠️ Moderate
system/workspace	31.9%	⚠️ Moderate
system/wsauth	46.4%	⚠️ Moderate

Bootstrap Coverage

Package	Coverage	Status
bootstrap	11.8%	⚠️ Low

Coverage Summary

Category	Packages	Avg Coverage	Excellent (>80%)	Good (60-80%)	Moderate (40-60%)	Low (<40%)
Features	27	~35%	2	6	6	13
Stores	19	~65%	7	6	2	4
System	18	~63%	5	4	6	3
Bootstrap	1	11.8%	0	0	0	1

Coverage Gaps (Areas for Improvement)

Based on the coverage analysis, the following areas need attention:

Priority	Area	Current Coverage	Recommendation
High	features/groups	6.8%	Add handler tests for CRUD operations
High	features/materials	7.4%	Add handler tests for material management
High	features/settings	8.5%	Add handler tests for settings pages
High	features/resources	9.5%	Add handler tests for resource management

Priority	Area	Current Coverage	Recommendation
High	features/systemusers	10.2%	Add handler tests for system user CRUD
Medium	store/users	12.2%	Add more store operation tests
Medium	bootstrap	11.8%	Add startup/initialization tests
Medium	features/login	12.1%	Add authentication flow tests

Recommendations

- Priority Focus:** Improve coverage for feature handlers below 20% coverage
- Store Layer:** Store packages have good coverage; maintain this level
- System Utilities:** Most system packages are well-tested; continue pattern
- Integration Tests:** Consider adding end-to-end tests for complete user flows
- CI/CD:** Implement test coverage thresholds in CI pipeline

Test Health Summary

Application	Test Status	Coverage Level
Stratahub	 All Passing	~50% average
Strataforge	Not verified	Requires analysis
Strata	Not verified	Requires analysis

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