

KESCE

Rental Management System

Key Estate Subscription & Control Engine

System Architecture, Feature Reference & Operational Guide

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1. System Overview

KESCE — Key Estate Subscription & Control Engine — is a secure, web-based rental record-keeping and property management platform developed and maintained by Kesta-WebDesigns. The system is engineered to provide landlords, registered caretakers, and property agents with a centralised, structured environment in which to manage rental properties, track tenant payment cycles, administer bills, record expenses, and generate professional documentation.

KESCE addresses the operational challenges inherent in manual property management, including the loss of physical record books, inconsistent rent tracking, unstructured tenant data, and the absence of automated reporting. The platform consolidates all rental operations into a single, access-controlled dashboard that is accessible from any internet-connected device at any time.

Model	Subscription-based. New users receive a free trial period granting full platform access upon registration. Continued access is subject to an active subscription.
Access	Web browser — no installation required. Compatible with desktop, tablet, and mobile devices.
Design	KESCE is a landlord-facing management system. Tenants do not hold system accounts; all tenant records are maintained exclusively by authorised users.

2. Product Identity

Attribute	Detail
Full Name	KESCE Rental Management System
Abbreviation	KESCE — Key Estate Subscription & Control Engine
Developer	Kesta-WebDesigns
Platform Type	Web-based SaaS (Software as a Service)
Deployment	Cloud-hosted; browser-accessible
Target Market	Kenyan landlords, property agents, and caretakers
Document Type	Official Product Documentation
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3. System Architecture

KESCE is structured around a multi-tenant, role-based access model. Each registered user account operates in complete isolation — property records, tenant data, financial entries, and generated documents are scoped exclusively to the account holder and their authorised caretakers. No cross-account data visibility exists within the system.

Platform Layers	
Layer	Description
Presentation Layer	Responsive web interface, accessible via any standard browser. Optimised for mobile and desktop use without requiring application installation.
Application Layer	PHP-based server-side logic handling authentication, session management, data processing, rent cycle calculations, and PDF generation.
Data Layer	MySQL relational database. All user data, property records, tenant information, payment logs, and billing data are stored in structured, relational tables with referential integrity enforced at the database level.
Security Layer	Session-based authentication with subscription status enforcement. Inactive subscriptions automatically restrict dashboard access. User data is isolated per account.

4. User Roles & Access Control

KESCE implements a defined role hierarchy. Each role determines the scope of access and the operations permitted within the system.

Role	Account Type	Access Scope
Landlord	Self-registered	Full access. May add unlimited properties, manage all units and tenants, record payments, manage bills, track expenses, generate reports, assign caretakers, and manage account subscription.
Registered Caretaker	Self-registered	Full access equivalent to a Landlord on properties they register or are assigned to manage. May not assign other caretakers to their properties.
Assigned Caretaker	System-recorded only (no login)	Not a system user. Details are recorded by the landlord or registered caretaker for accountability and reference purposes. No dashboard access.

Note: Assigned Caretakers are not issued system credentials. Their details — name, contact, and assigned property — are maintained in the system record for accountability purposes only.

5. Core Modules

The following sections describe each functional module within KESCE, its purpose, operational behaviour, and key data points managed therein.

5.1 Property Management

The Property Management module serves as the foundational layer of the KESCE platform. All subsequent data — units, tenants, bills, expenses — is structured under properties registered by the user.

Capabilities:

- Register one or multiple properties within a single account.
- Define property-level attributes including name, location/address, number of units, base rent amount, deposit amount, and description.
- View a property summary dashboard showing occupancy status across all units.
- Edit or delete property records as required.

Note

There is no enforced limit on the number of properties a single user may register. The system supports portfolios of any size.

5.2 Unit Management

Units are the individual rentable spaces within a property (rooms, houses, apartments, or commercial spaces). Unit Management allows users to define the configuration of each property and manage the status of individual units independently.

Operation	Description
Add Units	Define unit names (e.g. Room 1, House A, Unit 3B), set individual rent amounts and deposit amounts independently of the property-level defaults.
Edit Units	Modify unit name, rent amount, or deposit amount at any time. Changes take effect from the point of modification without affecting historical records.
Assign Tenant	Link a registered tenant to a unit, transitioning its status from Vacant to Occupied.
Mark Vacant	Remove a tenant from a unit when they vacate. Bills and rent records are reset for the incoming tenant. Historical payment data is retained in logs.
Disable / Enable	Temporarily set a unit to Disabled status during renovation or when it is otherwise unavailable. A disabled unit does not appear in vacancy or occupancy calculations until re-enabled.
Delete Unit	Permanently remove a unit from the system. This action is irreversible and removes all associated records.

5.3 Tenant Management

Tenant Management is the primary operational module of KESCE. It provides users with a structured view of all active tenants under a given property, their occupancy details, payment status, and account history.

Tenant Record Fields:

- Full name and contact number.
- Move-in date (used as the basis for rent cycle calculations).
- Assigned unit.
- Deposit payment status (Paid / Not Paid) and deposit amount.
- Rent start date (may differ from move-in date if a rent cycle reset has been applied).

Operational Functions:

- Record rent payments, bill payments, and partial payments against a tenant's account.
- View the complete payment history log for any tenant.
- Monitor rent status — Active, Due, Overdue, or On Deposit.
- View the number of days remaining until the next rent payment is due.
- Vacate a tenant from a unit, resetting the unit for the next occupant.

**Design
Principle**

Tenants are not system users and do not hold accounts on the KESCE platform. All tenant-related data entry and management is performed exclusively by the landlord, registered caretaker, or assigned caretaker under their supervision.

5.4 Rent Tracking & Payment Cycle

KESCE maintains a continuous rent cycle for each occupied unit, calculated from the tenant's rent start date. The system determines, at any given moment, the current payment status, the number of months covered by payments received, and the expiry date of the current payment period.

Status	Condition
Active	Rent has been paid and the current payment period has not yet expired.
Due	The current payment period expires within the next three days.
Overdue	The payment period has expired and no payment has been received to cover the current cycle.
On Deposit	The user has flagged this tenant's outstanding rent as being drawn from their security deposit.

Rent Cycle Reset:

Where a landlord grants a rent-free period or renegotiates commencement terms with a tenant, the rent start date may be reset independently of the original move-in date. The system will recalculate all future payment cycles from the new start date. The original move-in date is preserved in the tenant record for reference.

5.5 Bills Management

The Bills Management module enables users to assign, track, and manage recurring or one-time charges in addition to base rent. Bills are tracked independently of rent payments and maintain their own payment status.

Bill Assignment Scope:

- Assign a bill to a specific unit only.
- Assign a bill to multiple selected units within a property.
- Assign a bill as a property-wide charge applicable to all units.

Bill Status	Meaning
Unpaid	The bill has been assigned but no payment has been recorded against it.
Partial	A payment has been recorded but the full bill amount has not been settled.
Paid	The full bill amount has been recorded as settled.

Bills are reflected on the tenant's account view and are included in the tenant statement PDF when generated. Users may edit, delete, or add new bills at any time.

5.6 Expense Tracking

The Expense Tracking module allows users to record property-related expenditures against specific properties and time periods. Expenses are categorised and stored against a month and year reference,

enabling users to review operational costs and generate expense reports.

- Log expenses with category, description, amount, and month/year reference.
- Filter expense records by month and year.
- Download a PDF expense report for any selected period.

5.7 Reports & Document Generation

KESCE provides on-demand PDF document generation for the following report types. All documents are generated dynamically from current system data at the time of request.

Report	Contents
Tenant Statement	Individual tenant report. Includes property and unit details, tenant information, rent payment history, current rent status, bill statuses, total amounts paid, expected totals, and payment rate. Includes a graphical payment progress indicator.
Vacancy Report	Lists all vacant units across all properties registered to the account, with unit name, property name, and monthly rent amount.
Expense Report	Itemised list of recorded expenses for a selected property and time period, with totals per category.

5.8 Notification System

The dashboard notification system surfaces tenant account exceptions that require the user's attention. Notifications are generated automatically based on real-time rent cycle calculations and user-defined statuses.

Notification Type	Trigger Condition
Overdue Tenants	Tenant's rent cycle has expired with no payment recorded to cover the current period.
Grace Period Cases	Tenant's due date has been exceeded but has only recently passed — flagged separately from long-term overdue cases.
On Deposit	User has flagged a tenant as drawing rent from their deposit amount. The deposit balance is tracked and displayed accordingly.

5.9 Caretaker Management

Users may assign a caretaker to any registered property for the purpose of day-to-day management. Caretaker assignments are structured as follows:

Caretaker Type	System Behaviour
Registered Caretaker	A system user with their own registered account. May be assigned to manage specific properties. Has full access to records, payment entry, bills, and report generation for their assigned property. Operates under their own credentials and session.
Assigned Caretaker	A named individual recorded against a property for accountability purposes. Does not hold a system account. Contact details and assignment are stored in the system record but no login credentials are issued.

5.10 Messaging & Support

KESCE provides a direct messaging channel between system users and the platform administrator. This channel supports issue reporting, feedback submission, and general platform enquiries.

- Users may compose and send messages directly to the system administrator from within the platform dashboard.
- File attachments are supported (images, PDF, Word, Excel, and plain text — maximum 5 MB per attachment).
- Incoming messages from the administrator are received in the user's inbox with read/unread status tracking.
- No automated responses or chatbot systems are employed. All communications are handled directly by the KESCE support team.

5.11 Subscription Management

Access to the KESCE platform is governed by a subscription model administered through the platform's management interface. The following provisions apply:

Provision	Detail
Free Trial	New registrants are granted a free trial period of seven (7) days from the date of registration, during which full platform access is available without payment.
Subscription Fee	A recurring monthly subscription fee is applied upon expiry of the trial period. The applicable fee amount is set and may be revised by the platform administrator.
Access Control	Upon subscription expiry, the user's dashboard access is automatically suspended. All data is retained and restored in full upon subscription renewal.
Subscription Stacking	Payments made while a subscription is still active extend the active period by the corresponding number of days. Active days accumulate and do not reset.

Renewal	Subscription renewal may be initiated at any time. Access is restored immediately upon confirmation of payment by the administrator.
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6. Tenant Statement Logic

The tenant statement is the primary financial document generated by the KESCE platform on a per-tenant basis. Its calculations are governed by the following logic:

Parameter	Calculation Method
Months Occupied	Derived from the number of complete calendar months elapsed since the tenant's move-in date (or rent start date, if a reset has been applied).
Total Expected	Months Occupied multiplied by the sum of monthly rent and all recurring bills assigned to the tenant's unit.
Total Paid	Sum of all recorded rent payments and bill payments logged against the tenant.
Payment Rate	Total Paid expressed as a percentage of Total Expected. Presented as a progress indicator within the generated PDF statement.
Rent Expiry Date	Calculated from the rent start date plus the number of complete months covered by payments received. This date determines the current rent status category.

7. Data Integrity & Security

- **Account Isolation:** All data is scoped to the individual user account. No cross-account data access is possible within the system architecture.
- **Session Management:** Access to the platform is enforced through PHP session authentication. Unauthenticated requests are redirected to the login interface.
- **Subscription Enforcement:** A subscription guard is applied to all dashboard-facing pages. Users with lapsed subscriptions are redirected to a renewal prompt and cannot access any platform features until the subscription is restored.
- **SQL Integrity:** Database operations use parameterised queries and prepared statements throughout the application layer to prevent SQL injection.
- **Data Retention:** Historical payment logs, tenant records, and financial data are preserved on the database even when units are vacated or subscriptions lapse. No user data is automatically purged.

8. System Constraints & Business Rules

Rule	Detail
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Tenant Access	Tenants are not issued system credentials and cannot log in to the KESCE platform under any circumstance. All tenant-related data is managed by authorised users only.
Caretaker Assignment	Registered Caretakers may not assign other caretakers to properties they manage. Only Landlord-type accounts may assign caretakers.
Unit Deletion	Deleting a unit is irreversible. All tenant, payment, and bill records associated with that unit are permanently removed.
Rent Cycle Basis	All rent cycle calculations use the rent start date as the reference point. Where no reset has been applied, this is equivalent to the move-in date.
Bill Independence	Bill payment status is tracked independently of rent. A tenant may be fully paid on rent while retaining outstanding bills, or vice versa.
Deposit Tracking	When a tenant is placed On Deposit, the system tracks the remaining deposit balance as payments are deducted, and reflects this in all reports and dashboard notifications.
Disabled Units	Units in Disabled status are excluded from vacancy and occupancy counts. They do not appear in vacancy reports or the available units list until re-enabled by the user.

9. Glossary of Terms

KESCE

Key Estate Subscription & Control Engine. The full name of the KESCE Rental Management System platform.

Landlord

A KESCE user type with full administrative access to all platform features. Typically the property owner.

Registered Caretaker

A KESCE user type with equivalent functional access to a Landlord on their assigned or registered properties. Self-registers on the platform.

Assigned Caretaker

A named individual recorded in the system against a specific property for accountability. Does not hold a system login account.

Unit

An individual rentable space within a property. Each unit is managed independently with its own rent, deposit, tenant, and bill records.

Rent Cycle

The recurring payment period defined by the tenant's rent start date and the number of months covered by payments received.

Rent Start Date

The reference date used for all rent cycle calculations. Defaults to the move-in date but may be reset independently by the user.

On Deposit

A tenant status indicating that outstanding rent is being drawn from the tenant's security deposit rather than a standard payment.

Subscription Guard

A platform-level access control mechanism that verifies active subscription status before granting access to any dashboard feature.

Bill

A recurring or one-time charge assigned to a unit or property, separate from base rent (e.g. water, electricity, service fee).

Tenant Statement

A system-generated PDF document summarising a tenant's occupancy details, payment history, bill statuses, and overall payment rate.

Payment Rate

The proportion of expected total payments received from a tenant, expressed as a percentage and visualised in the tenant statement.

Free Trial

A seven-day period of full platform access granted to all new registrants without requiring subscription payment.

Subscription Stacking

The behaviour whereby subscription days accumulate when payments are made before the existing subscription period expires.

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