# 🧑‍💼 Subscription & Tenant Management

## ✨ Module Overview

The **Subscription & Tenant Management** module is the backbone of the SaaS’s customer lifecycle operations. It handles tenant provisioning, subscription plans, billing automation, quota assignment, and account lifecycle actions such as renewals, upgrades, or cancellations. It integrates closely with the Superadmin Operational Panel but is managed as a distinct module for clarity, extensibility, and future enhancements.

## 🔐 Core Functionalities

### 1. 🏢 Tenant Lifecycle Management

* Create a new tenant upon brand onboarding
* Assign default quotas, limits, modules, trial duration
* Auto-generate API keys, workspace UID, custom subdomain
* Enable/disable tenant without data loss
* Soft delete with recovery window (30 days)

**Tables:** - tenants - tenant\_status - tenant\_defaults

### 2. 📅 Subscription Plan Engine

* Define plans: Basic, Pro, Enterprise, Custom
* Set monthly/yearly pricing, included modules
* Define trial duration per plan
* Upgrade/downgrade logic with proration
* Apply coupon codes (manual or Stripe)
* Auto-renewal toggle per tenant

**Tables:** - subscription\_plans - plan\_modules - coupons - tenant\_subscriptions

### 3. 💳 Billing & Payment Integration

* Stripe (default), Paddle, SSLCommerz supported
* Webhook handler for payment success/failure
* Manual billing override (for offline clients)
* Show next billing date, payment method, invoice history
* Detect failed payments and auto pause
* VAT/GST calculation by country

**Tables:** - payment\_methods - invoices - billing\_logs

**Webhook Endpoints:** - /webhooks/stripe - /webhooks/paddle - /webhooks/manual\_invoice

### 4. ✅ Subscription Actions & Logs

* Admin panel for approve/cancel/pause/reactivate subscription
* View full audit log of who changed what and why
* Store reason notes for cancellations/refunds
* Force plan switch (with or without proration)

**Audit Tables:** - subscription\_audit - subscription\_transitions

### 5. ⚖️ Quota & Module Allocation

* Each plan/module has default limits:
  + AI generation counts (blogs, videos, replies)
  + Storage (MB/GB)
  + Monthly API usage
* Admin can override per tenant
* System auto-checks overuse and flags

**Tables:** - plan\_quotas - tenant\_quota\_overrides - usage\_flags

### 6. 🤹 Tenant Status Dashboard

* Filters: All, Active, Paused, Trial, Canceled
* Table view with:
  + Name + brand logo
  + Plan + start/end dates
  + Usage progress bar
  + Overdue warnings
  + Actions: Upgrade, Pause, Invoice
* Export as CSV or connect to admin report panel

## ✨ Optional Features

### A. 💊 Health Check Hooks

* Ping tenant domain for uptime
* Test FB/IG/Woo tokens periodically
* Alert admin of failure

### B. 💲 Auto Invoicing & Reminder Emails

* Generate PDF invoices via Stripe/Paddle
* Send reminder 7 days before billing date
* Suspend after 2 failed attempts with auto retry queue

### C. ⚖️ Plan Comparison Tool (for upgrades)

* Show visual diff of current vs Pro/Enterprise plan
* Benefits, modules, support levels
* “Upgrade now” CTA linked to Stripe portal

## 🖌️ How This Module Helps

* Gives full **control to the SaaS operator** over tenant status
* **Automates onboarding**, renewal, downgrade processes
* Helps with **financial forecasting** and quota enforcement
* Supports **flexible billing workflows** (online/offline/custom)
* Enables better **customer support tracking** with lifecycle logs

## ✅ Superadmin UI Suggestions

* Page: /admin/tenants
* Tabs: [All] [Active] [Trial] [Paused] [Canceled]
* Filter by date, plan, country, overdue status
* Dropdown per tenant row for:
  + View details
  + Edit plan/limits
  + Pause/Reactivate
  + View logs
  + Add note

## ⚒️ To-Do for Dev Team

* Build tenants CRUD backend with linked users
* Stripe webhook listener with fallback log
* Admin UI with plan editor, subscription logs
* Quota auto-checker + email alert system
* Optional: CSV export + connect to Superadmin Dashboard

## 🚀 Next: Connect with Superadmin Operational Panel, Support System, and API Usage Logs.

This document is now maintained as a separate file and linked in the master documentation index.