# Payment Gateway Integration with BuildDesk

This document provides a guide on how to integrate a payment gateway into BuildDesk (CRM/Real Estate platform) for seamless collection and reconciliation of payments.

## 1. Integration Approaches

There are two primary approaches to integrating a payment gateway with BuildDesk:

A. Quick / Hosted Checkout (Payment Links)  
- Generate payment links directly from the gateway dashboard (Razorpay, BillDesk, Paytm, Stripe, etc.).  
- Share links via BuildDesk (email, WhatsApp, notes).  
- Use webhooks to automatically update payment status in BuildDesk.  
  
B. Full Integration (Embedded Checkout + Webhook)  
- Create orders via gateway API.  
- Use embedded checkout on your site/app.  
- Receive payment confirmation via gateway webhooks.  
- Automatically update BuildDesk leads/invoices via API.

## 2. Setup Steps (Both Approaches)

1. Choose gateway: Razorpay (developer-friendly), BillDesk (enterprise), Paytm, Stripe, etc.  
2. Register merchant account and get API credentials.  
3. Decide how payment data will be stored in BuildDesk (custom fields, API updates, or notes).  
4. Implement backend endpoints:  
 - /create-order → Creates gateway order.  
 - /webhook → Receives confirmation from gateway.  
5. Test thoroughly in sandbox before going live.

## 3. Quick Option: Payment Links

1. Create a payment link from the gateway dashboard.  
2. Paste the link into BuildDesk (lead notes, email, WhatsApp message).  
3. Configure a webhook endpoint to auto-update BuildDesk when payment is completed.  
4. Recommended for fast deployment and minimal development effort.

## 4. Full Integration Example (Razorpay)

Backend (Node/Express):  
- Use Razorpay SDK to create orders.  
- Implement webhook verification with signature check.  
- Map payments to BuildDesk leads/invoices.  
  
Frontend (React):  
- Use Razorpay Checkout script.  
- Collect payment via embedded form.  
- Send response to backend for verification.  
  
BuildDesk Integration:  
- Update lead/invoice with payment status via BuildDesk API.  
- Alternatively, store payment data in custom fields or notes.

## 5. Security and Compliance

- Always verify webhook signatures.  
- Do not store raw card details (use tokenization/hosted checkout).  
- Restrict API keys and keep secrets in environment variables.  
- Test thoroughly in sandbox before production.

## 6. Recommended Gateways

• Razorpay → Best for startups/SMEs in India, easy integration.  
• BillDesk → Common for large enterprises, utilities, and banks.  
• Paytm → Popular in India, good for UPI/wallet integration.  
• Stripe → International payments, strong developer ecosystem.