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How a request flows

## How a request flows

A POST `/v1/checkouts` from a storefront in Berlin to the `eu-frankfurt` region, with timings representative of what we see at p50.

```
{"meta":"placeholder – this fenced block is rendered by the drawio escape hatch on the live server. The local app exposes an in-app editor for it."}
```

The hops:

1. **Storefront SDK** issues the HTTPS request. (~1 ms TLS terminate, browser-side.)
2. **Edge** (Cloudflare in the user's POP, Frankfurt for Berlin) does WAF + DDoS, holds the connection. (~3 ms.)
3. **Regional load balancer** routes to the API gateway. (~1 ms.)
4. **API gateway** authenticates the bearer token, applies rate limits, attaches the tenant context. (~2 ms.)
5. **Checkout service** validates the cart, calls Tax and Inventory in parallel, persists the session, signs the hosted-checkout URL. (~30 ms — the bulk of the budget.)
6. **PostgreSQL** writes the checkout session, commits. (~5 ms within the region.)
7. **Response** travels back through the gateway # LB # edge # SDK. (~5 ms aggregate.)

End-to-end p50 from Berlin is ~50 ms. p99 is dominated by tax calculation and ranges 80–140 ms.

## What can go wrong at each hop

Hop	Failure mode	What we do
Edge	DDoS	Cloudflare absorbs; legit traffic unaffected
Gateway	Rate limit exceeded	Return 429 with <code>Retry-After</code>

Checkout service	Tax service down	Fail open with a stub, flag the order for review
PostgreSQL primary	Failover (rare, ~30s)	Gateway returns 503 with <code>Retry-After: 5</code>
Response back	Network blip	SDK retries idempotently