



SRE Best Practices for API Design

Navendu Pottekkat




About Me

Developer Advocate at API7.ai

Contributor to Apache APISIX

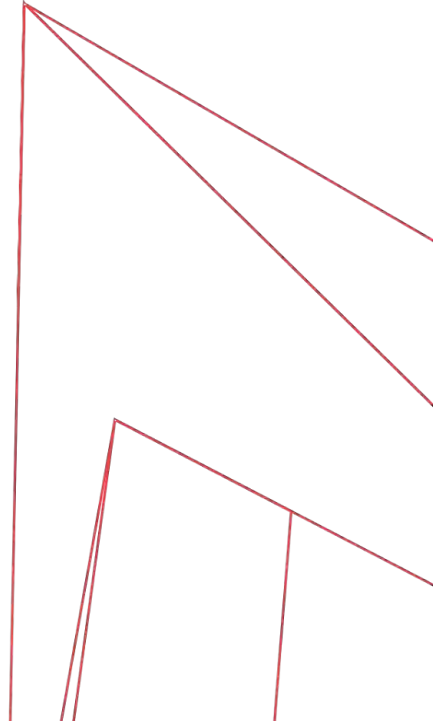
Former CNCF **Maintainer**

GSoC and LFX **Mentor**

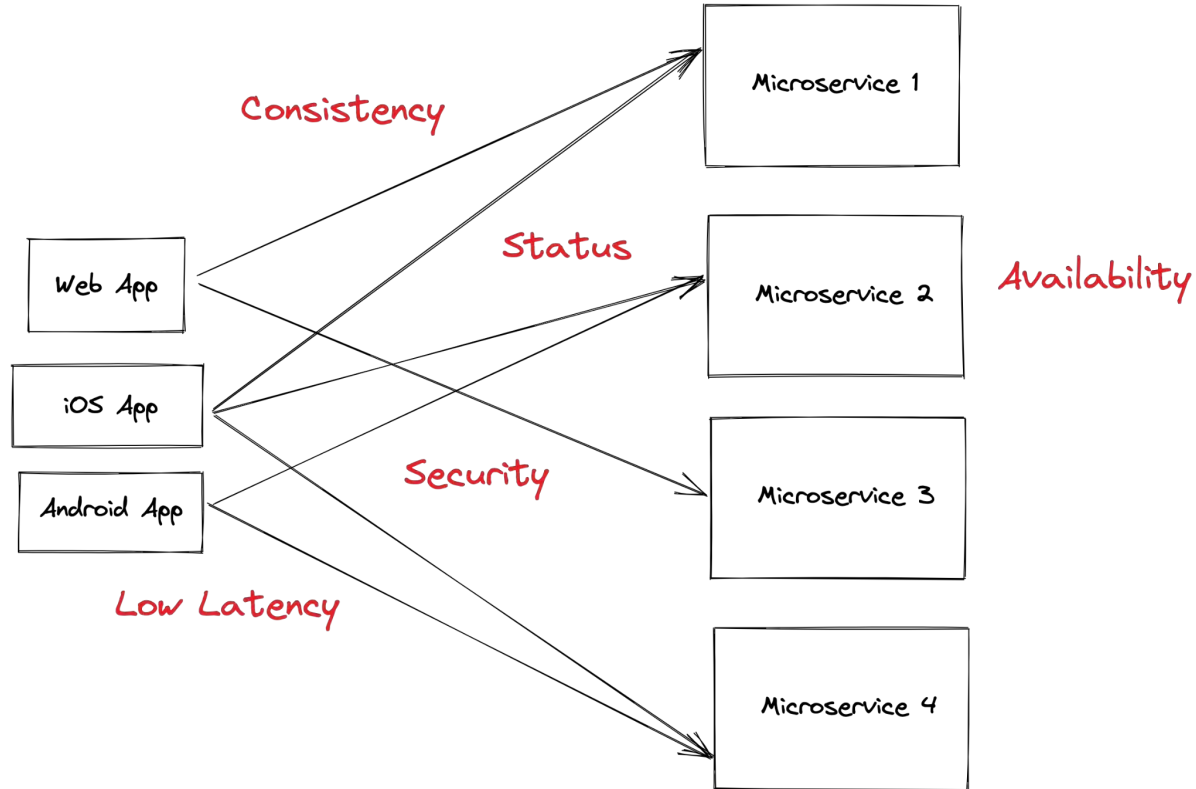
 **sudo_navendu**



Reliability of APIs



Reliability of APIs

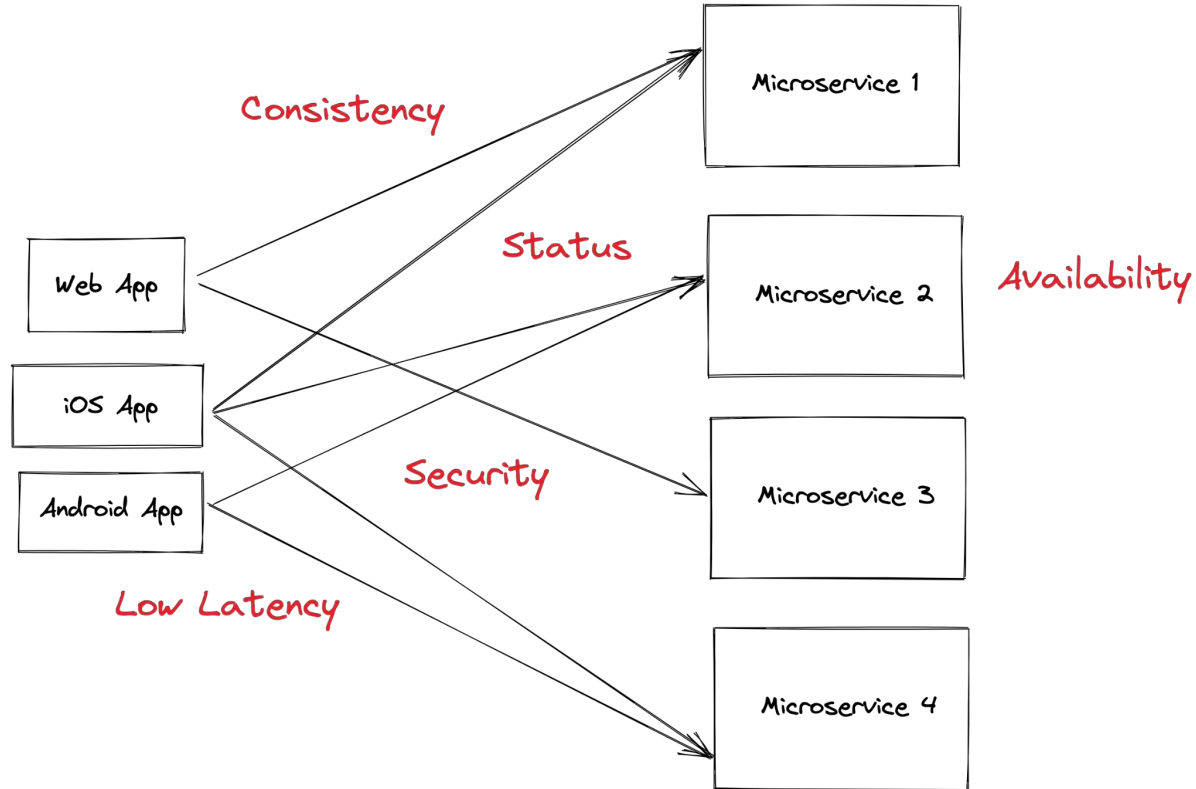




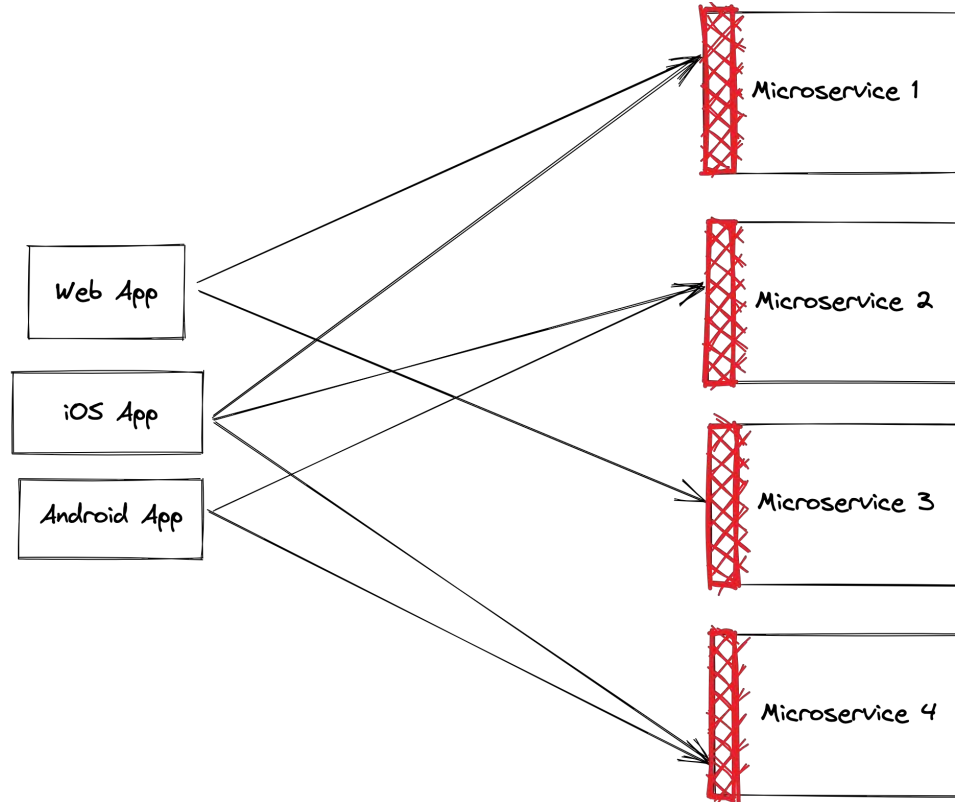
Problem with Traditional API Architectures



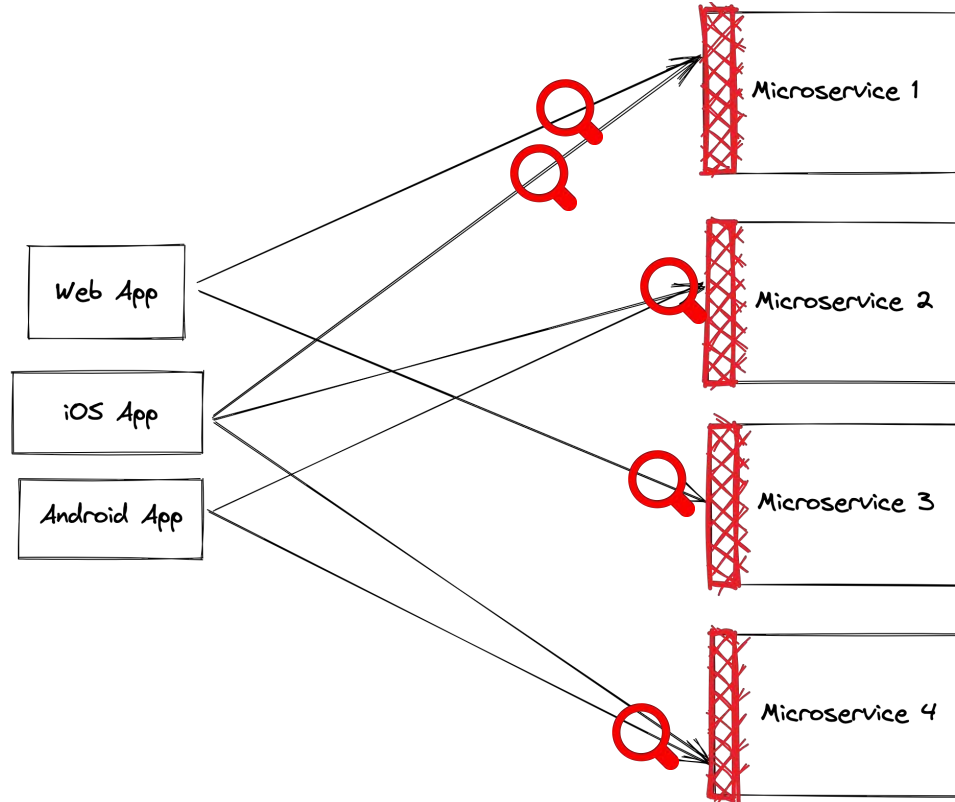
Problem with Traditional API Architectures



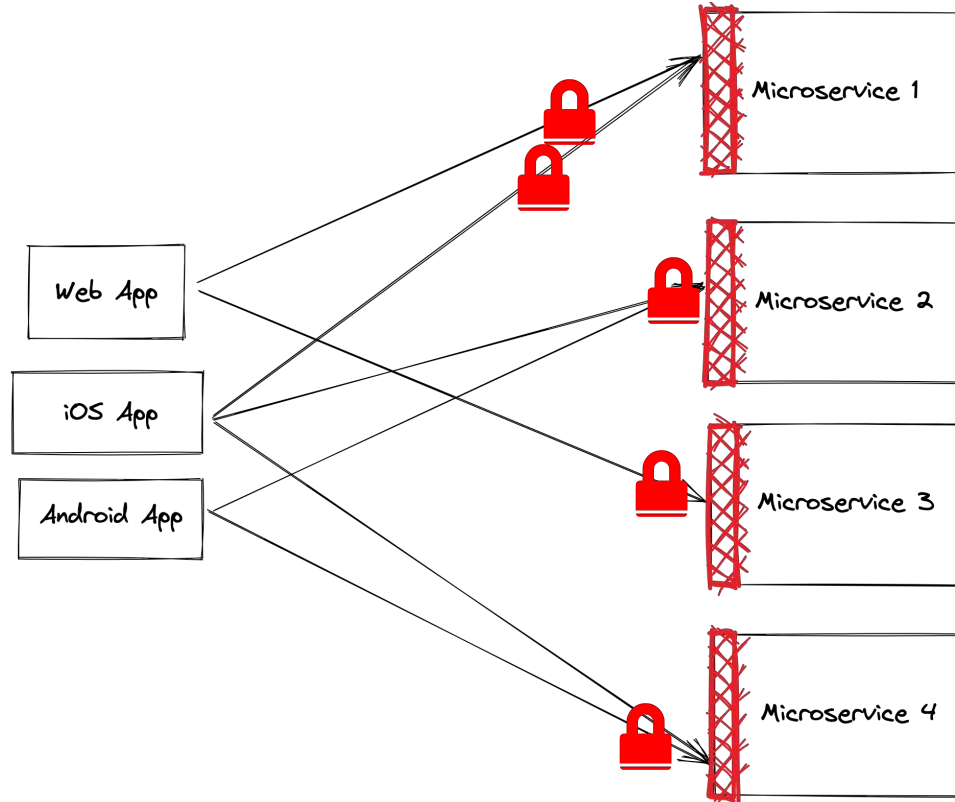
Problem with Traditional API Architectures



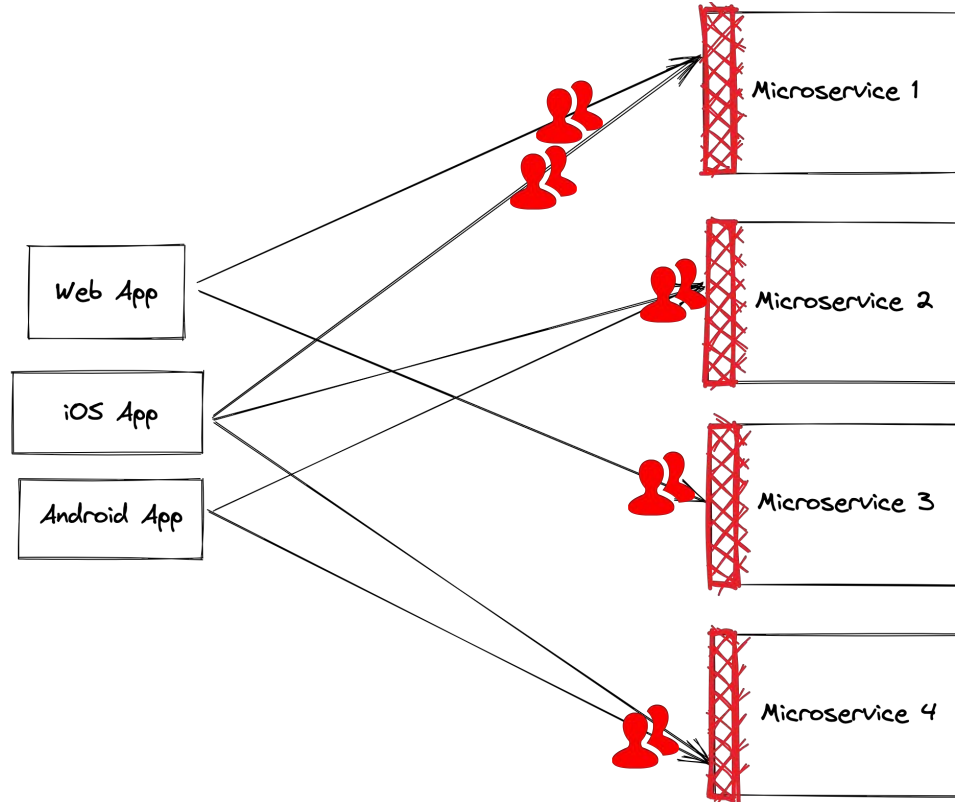
Problem with Traditional API Architectures



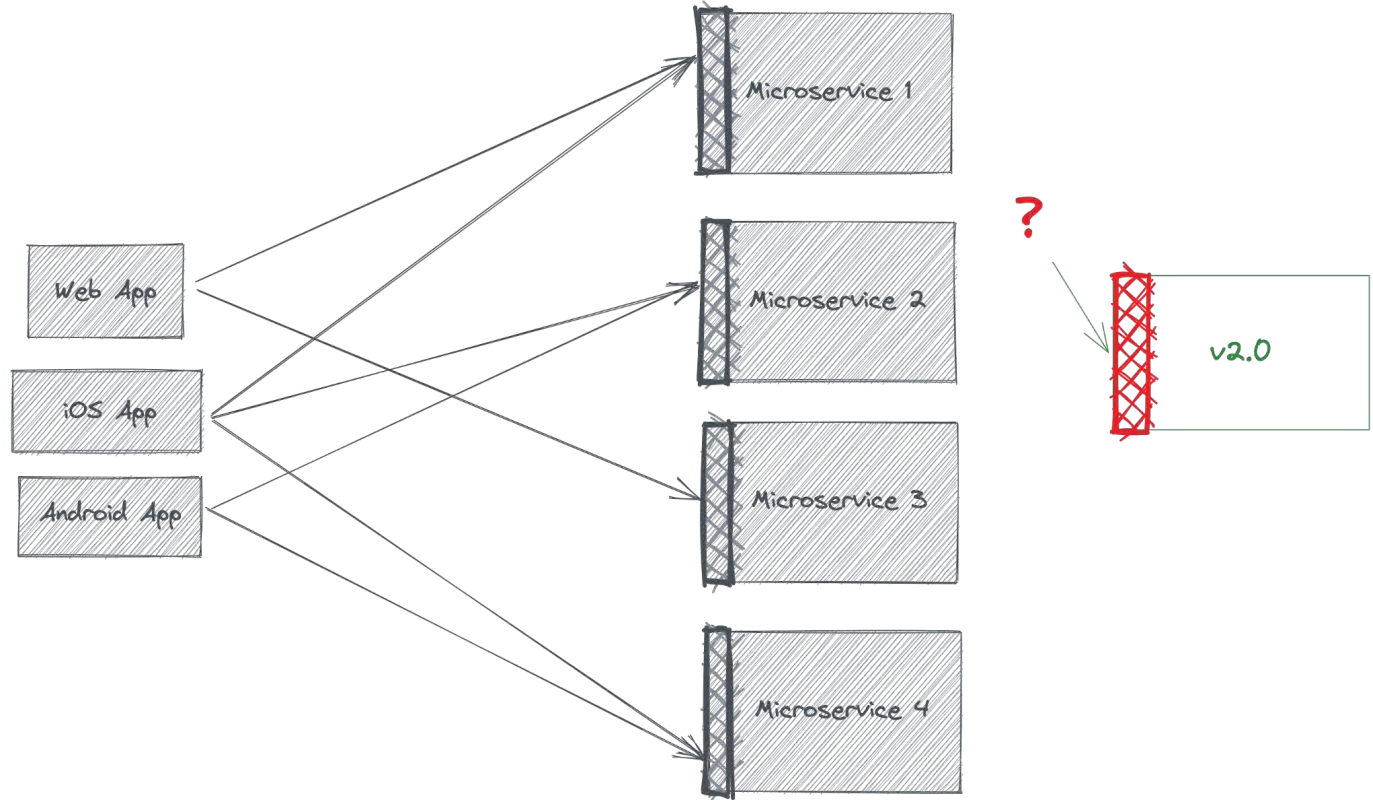
Problem with Traditional API Architectures



Problem with Traditional API Architectures

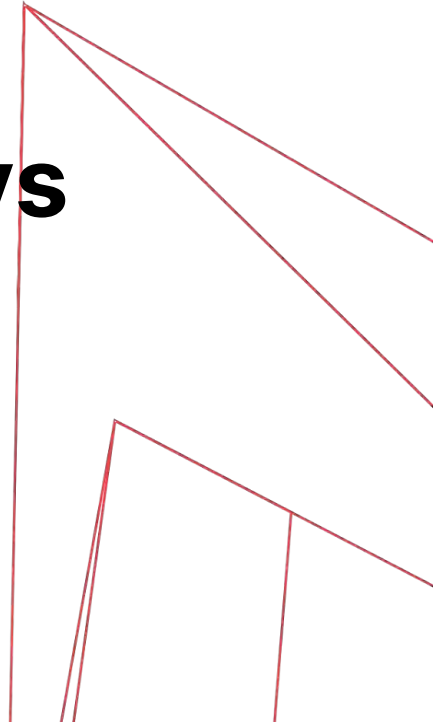


Problem with Traditional API Architectures

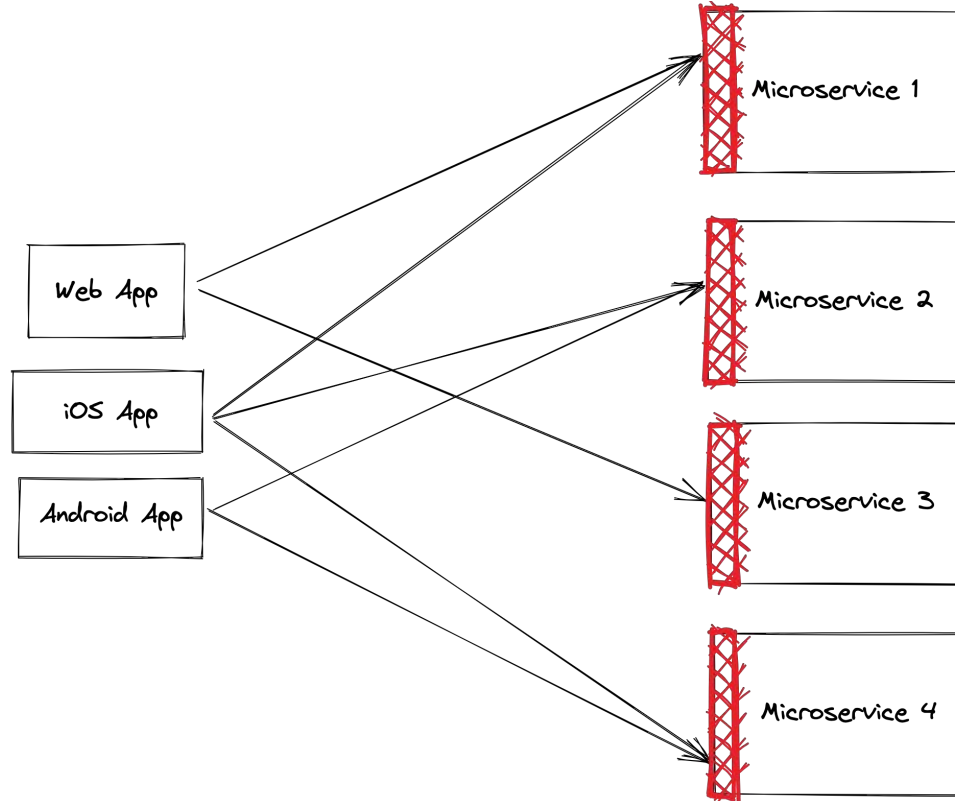




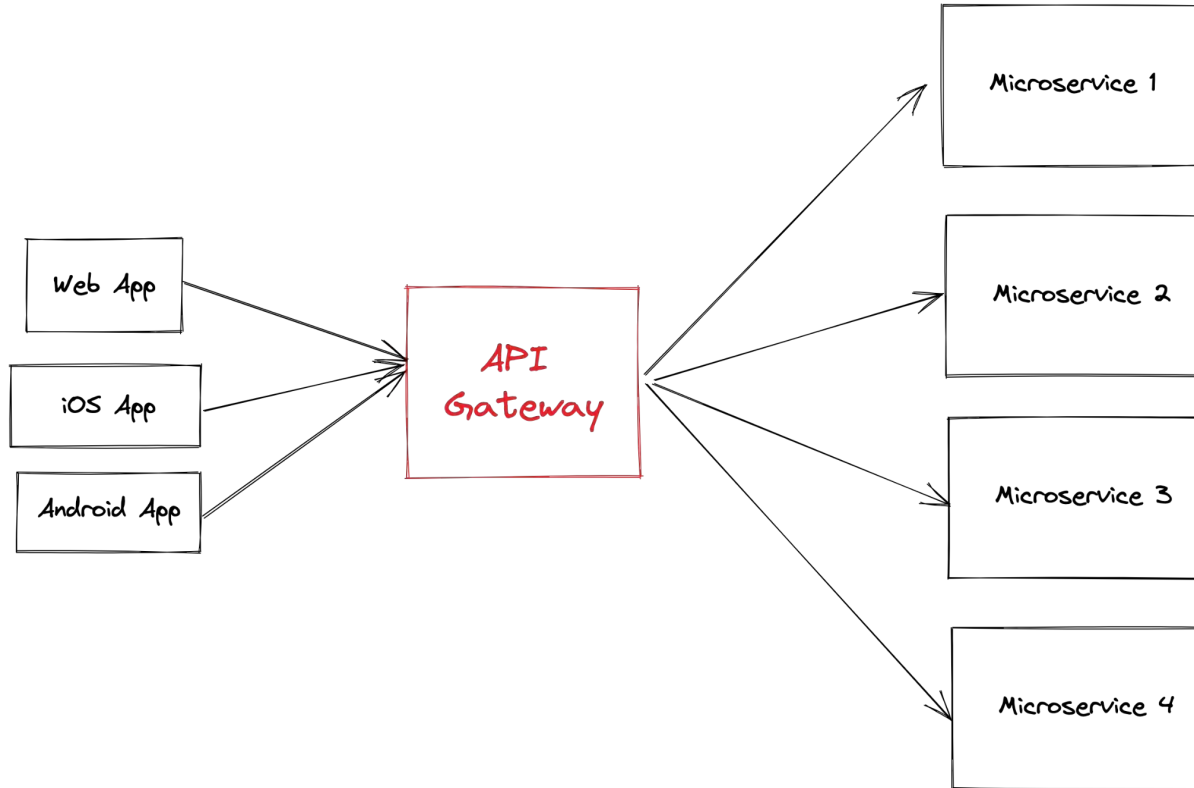
Evolving to API Gateways



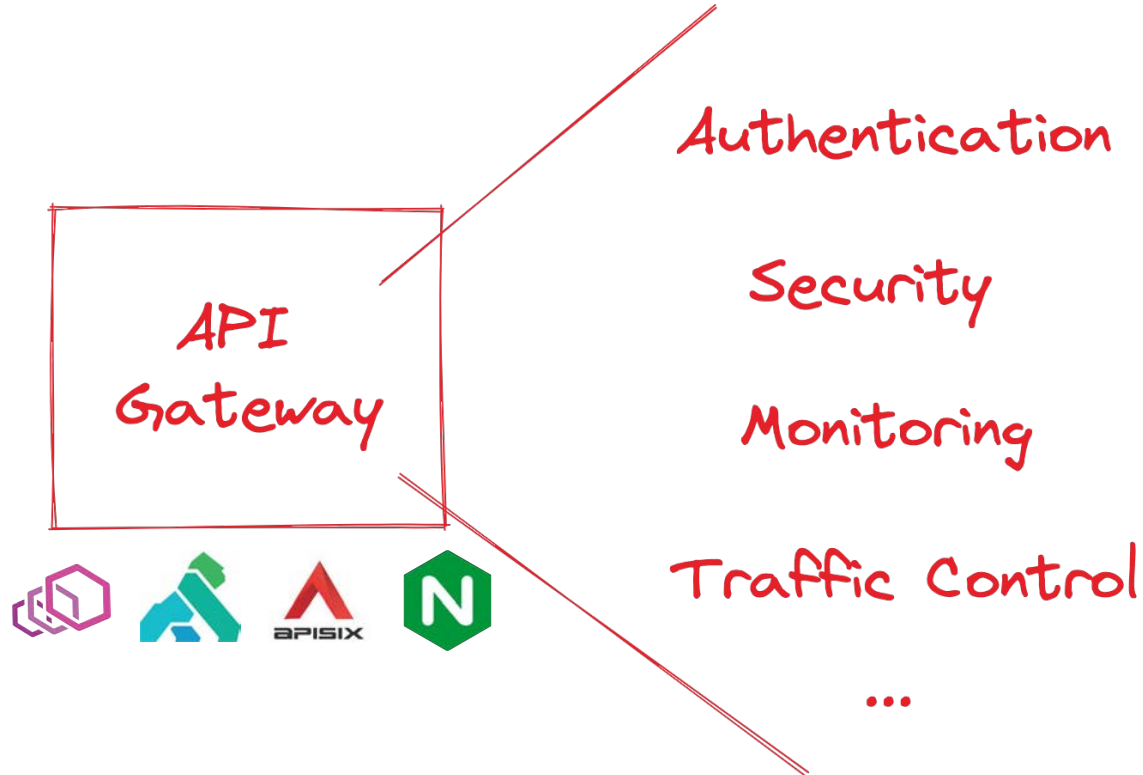
Evolving to API Gateways



Evolving to API Gateways



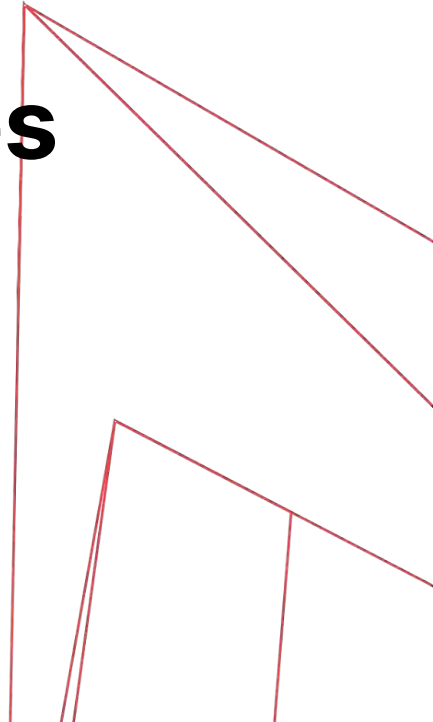
Evolving to API Gateways





Reliability Best Practices

with API Gateways



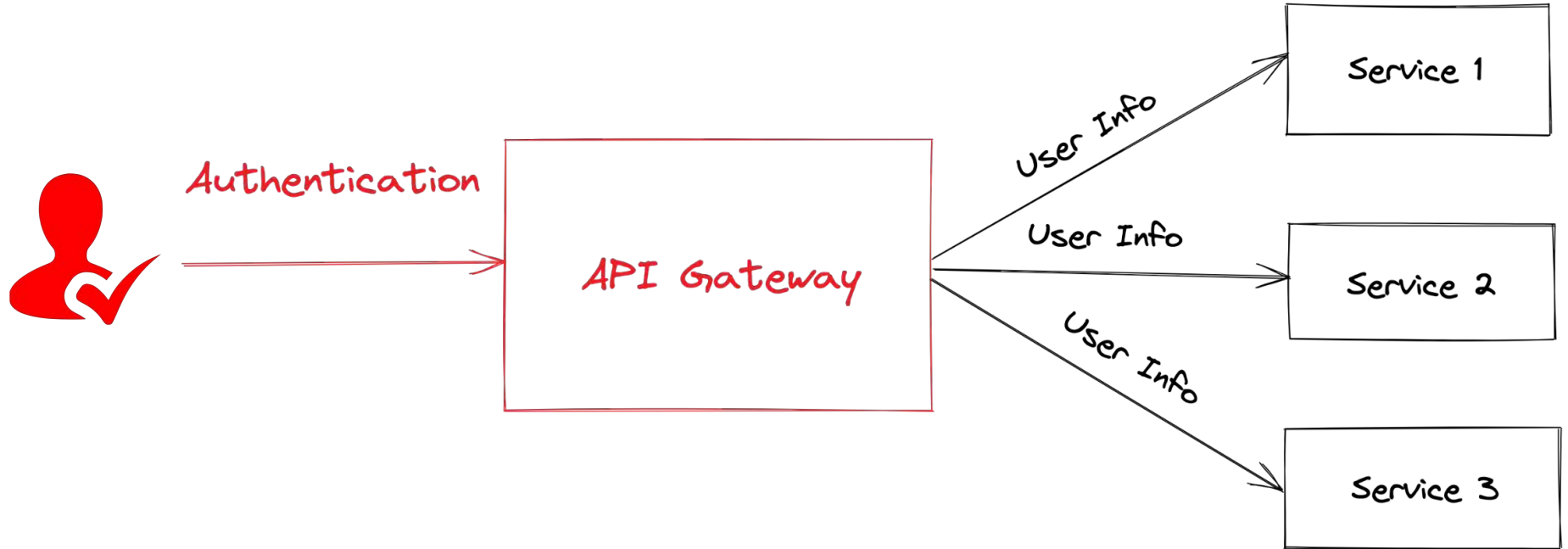


Authentication and Security



Authentication and Security

User Authentication



Authentication and Security

Rate Limiting

Reject/Delay



Too Many Requests!



Monitoring and Observability



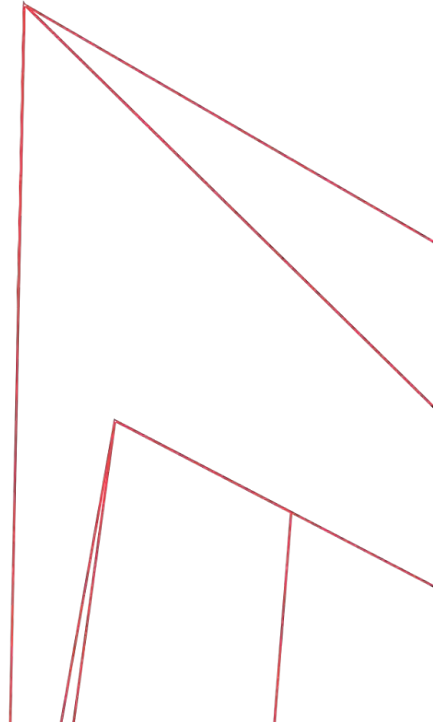
Monitoring and Observability

Tracing, Logging, and Metrics



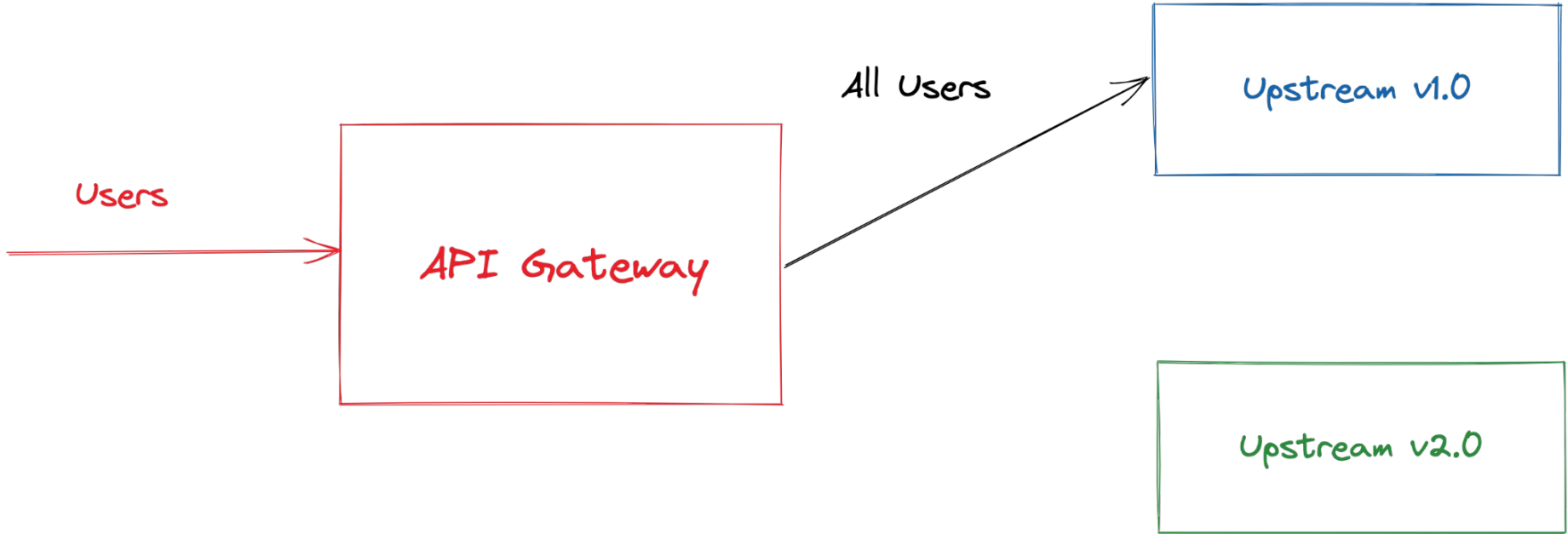


Version Control and Zero Downtime



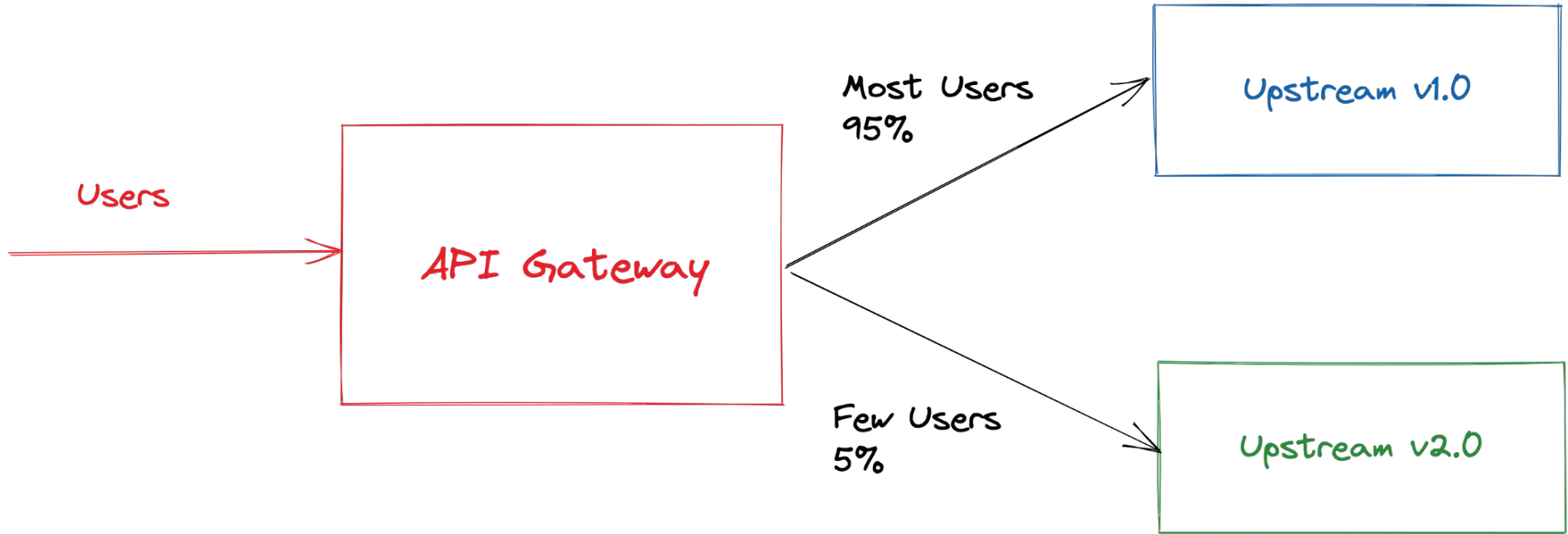
Version Control and Zero Downtime

Canary Release



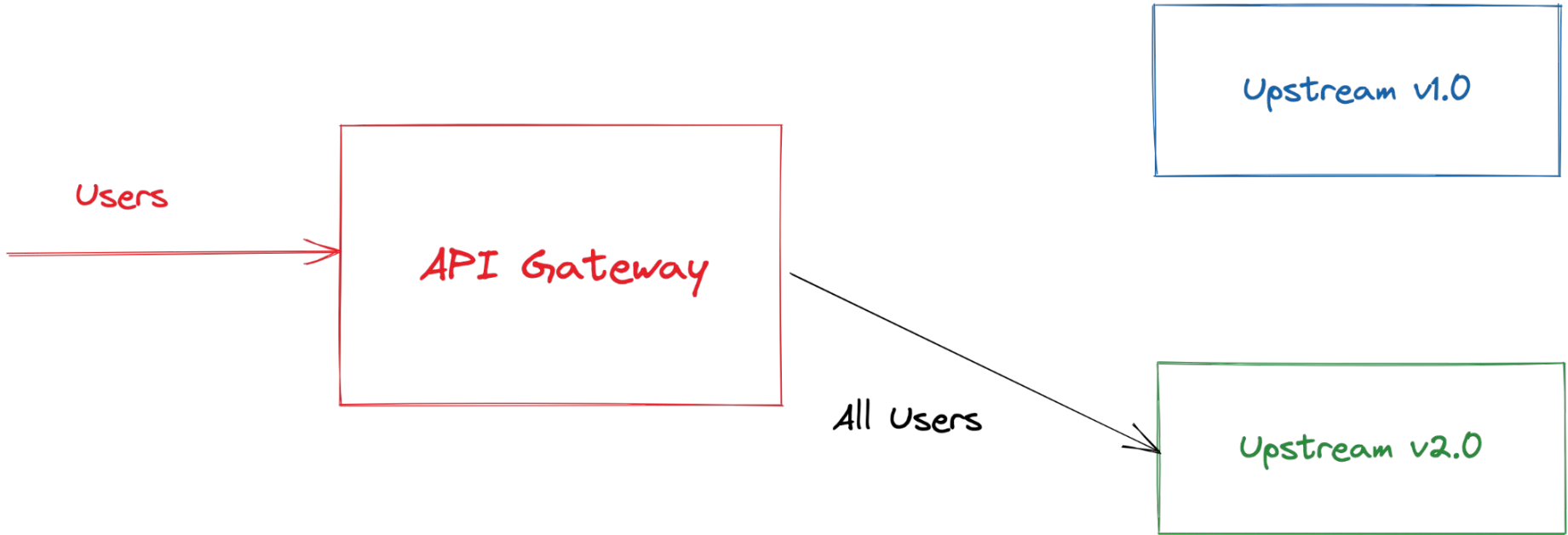
Version Control and Zero Downtime

Canary Release



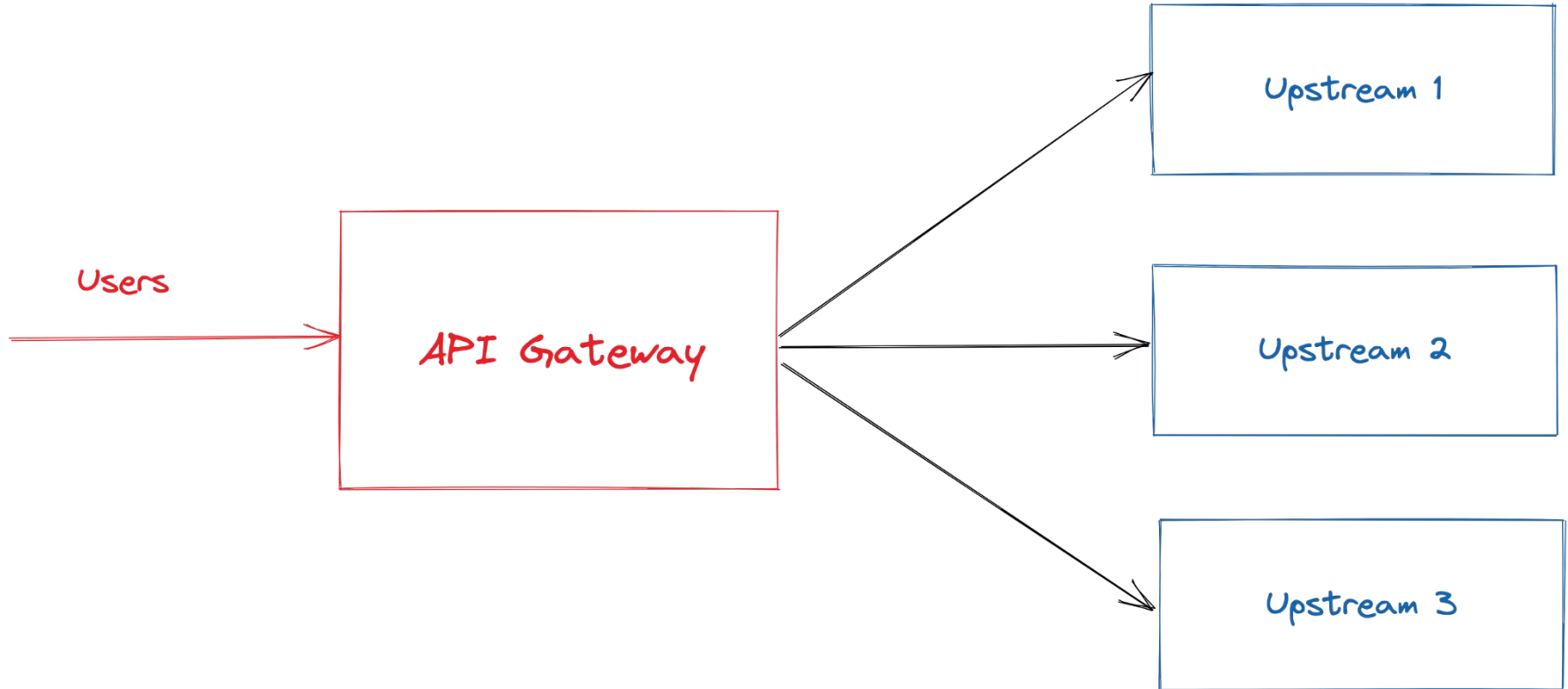
Version Control and Zero Downtime

Canary Release



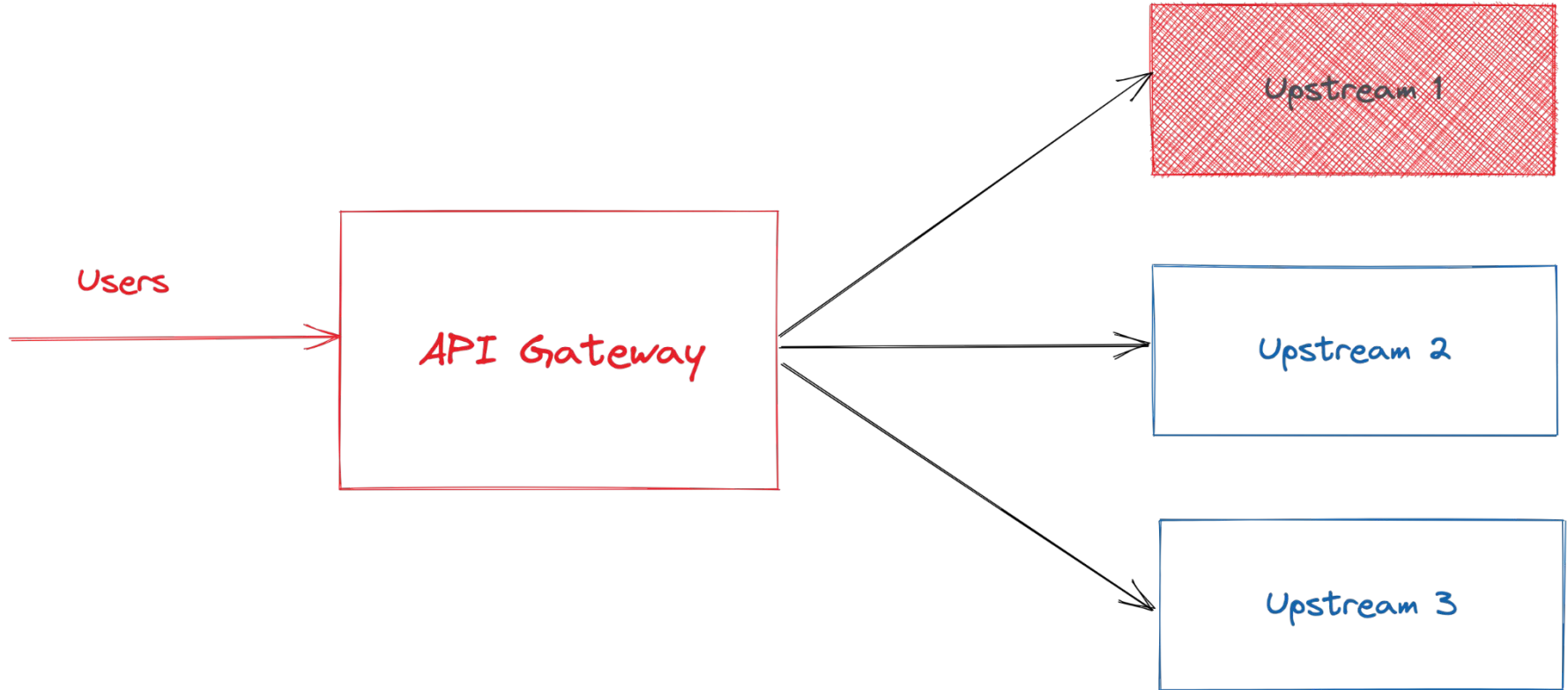
Version Control and Zero Downtime

Circuit Breaking



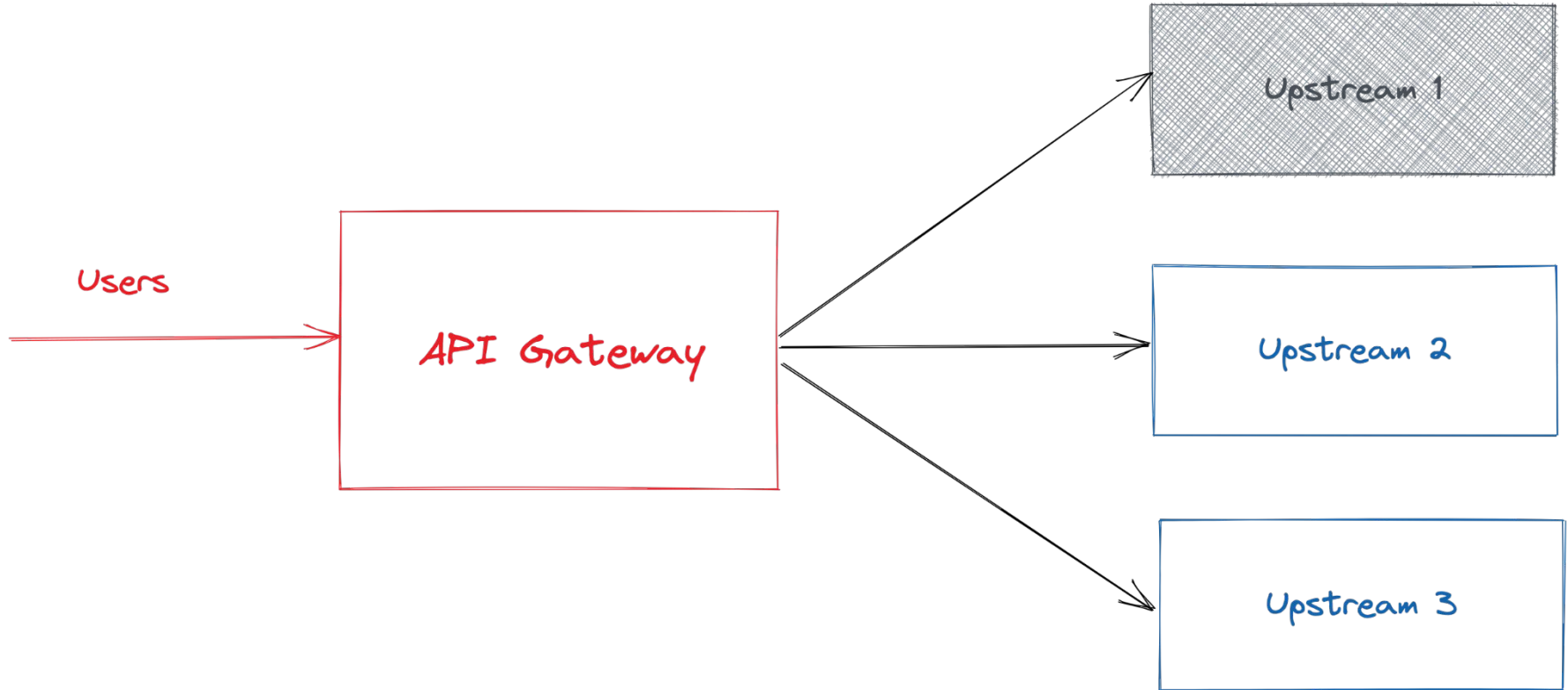
Version Control and Zero Downtime

Circuit Breaking



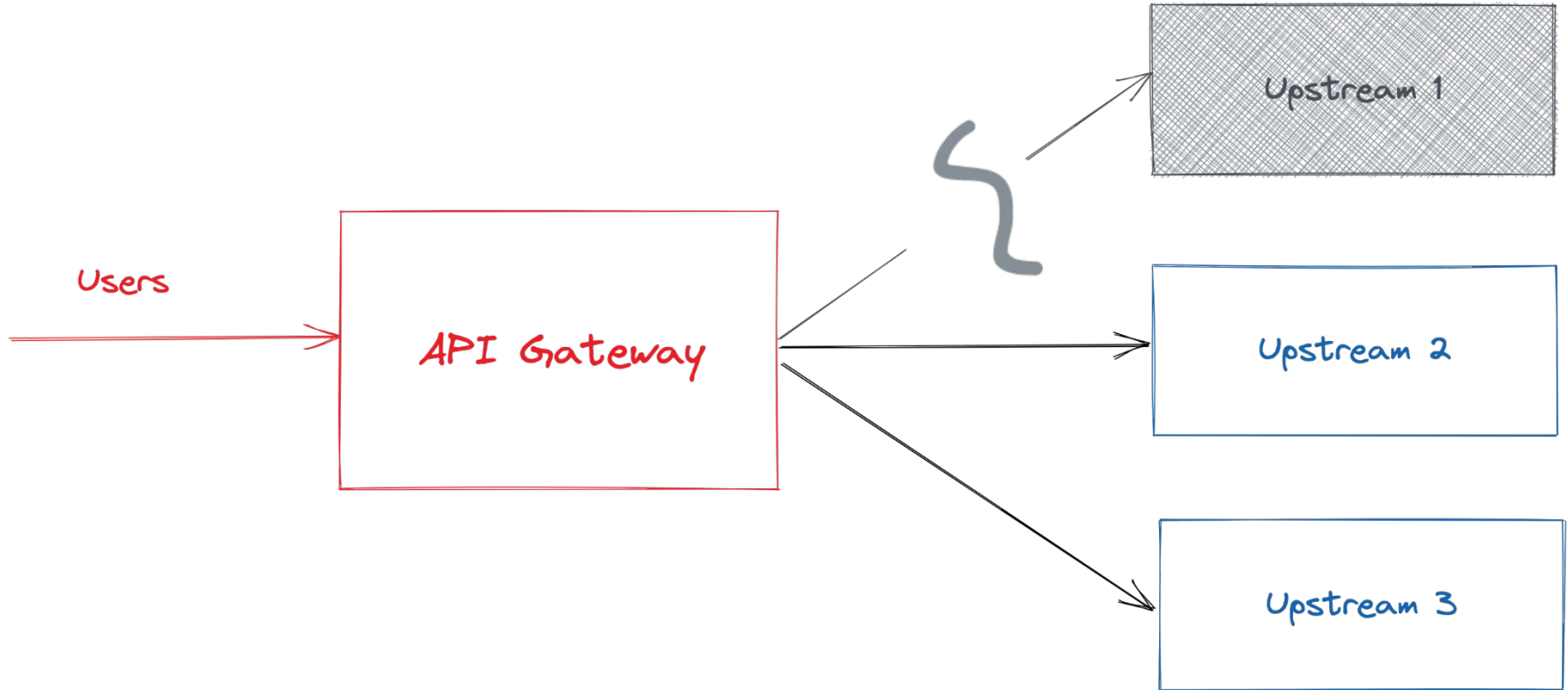
Version Control and Zero Downtime

Circuit Breaking



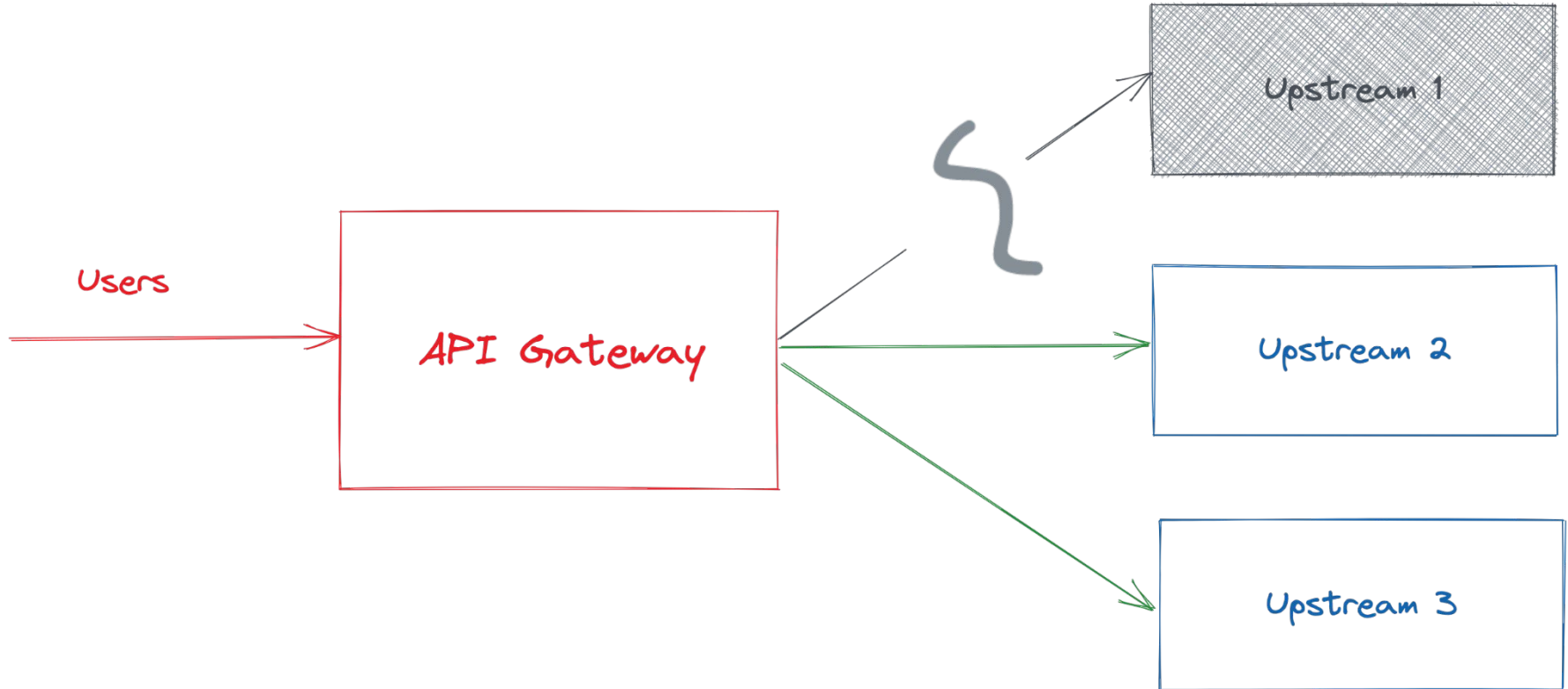
Version Control and Zero Downtime

Circuit Breaking



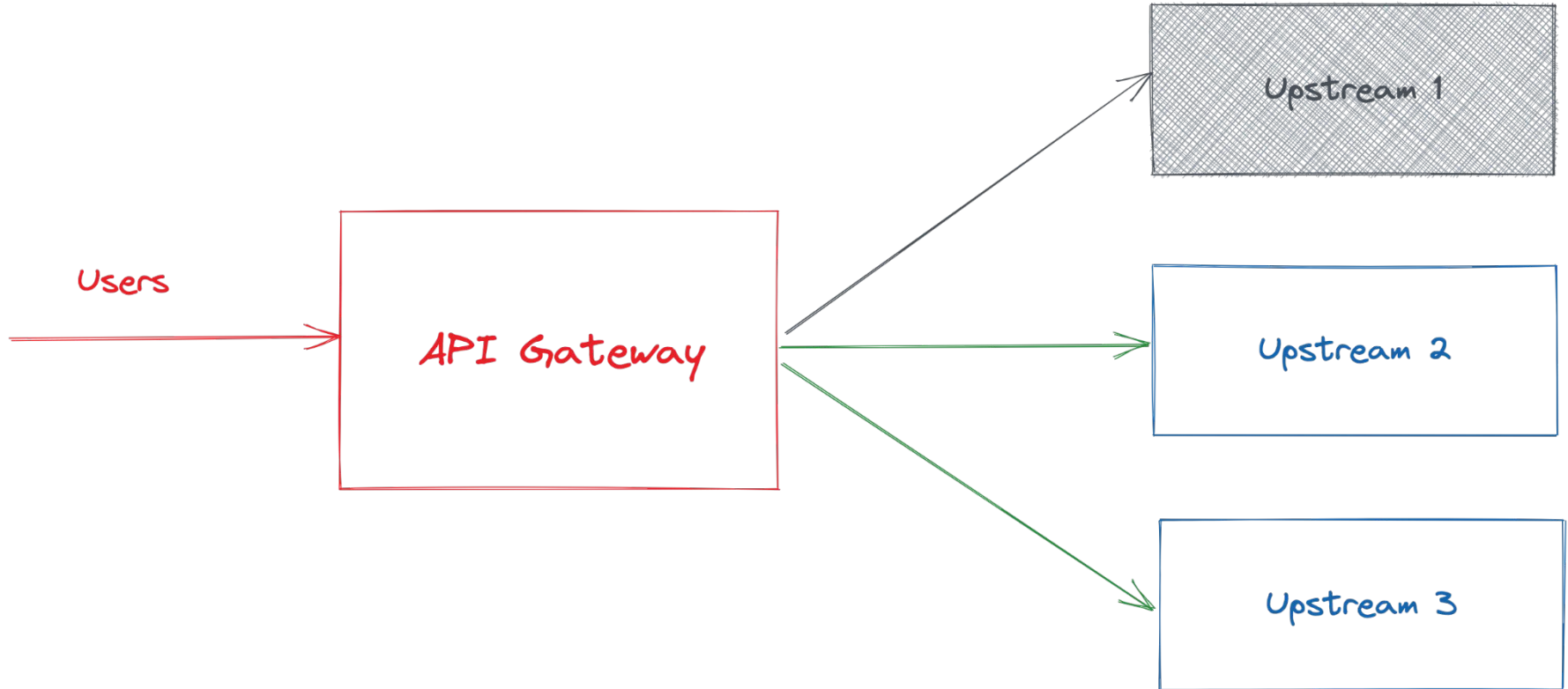
Version Control and Zero Downtime

Circuit Breaking



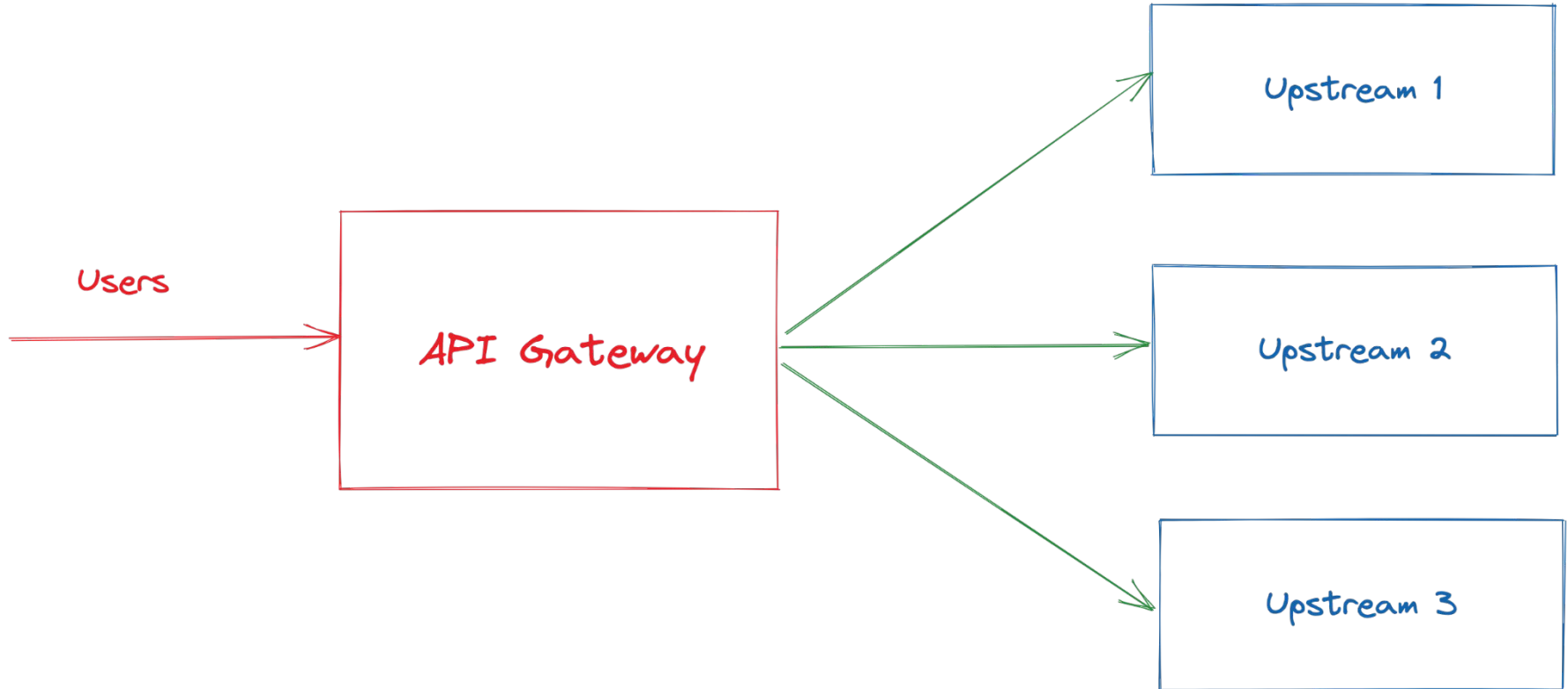
Version Control and Zero Downtime

Circuit Breaking



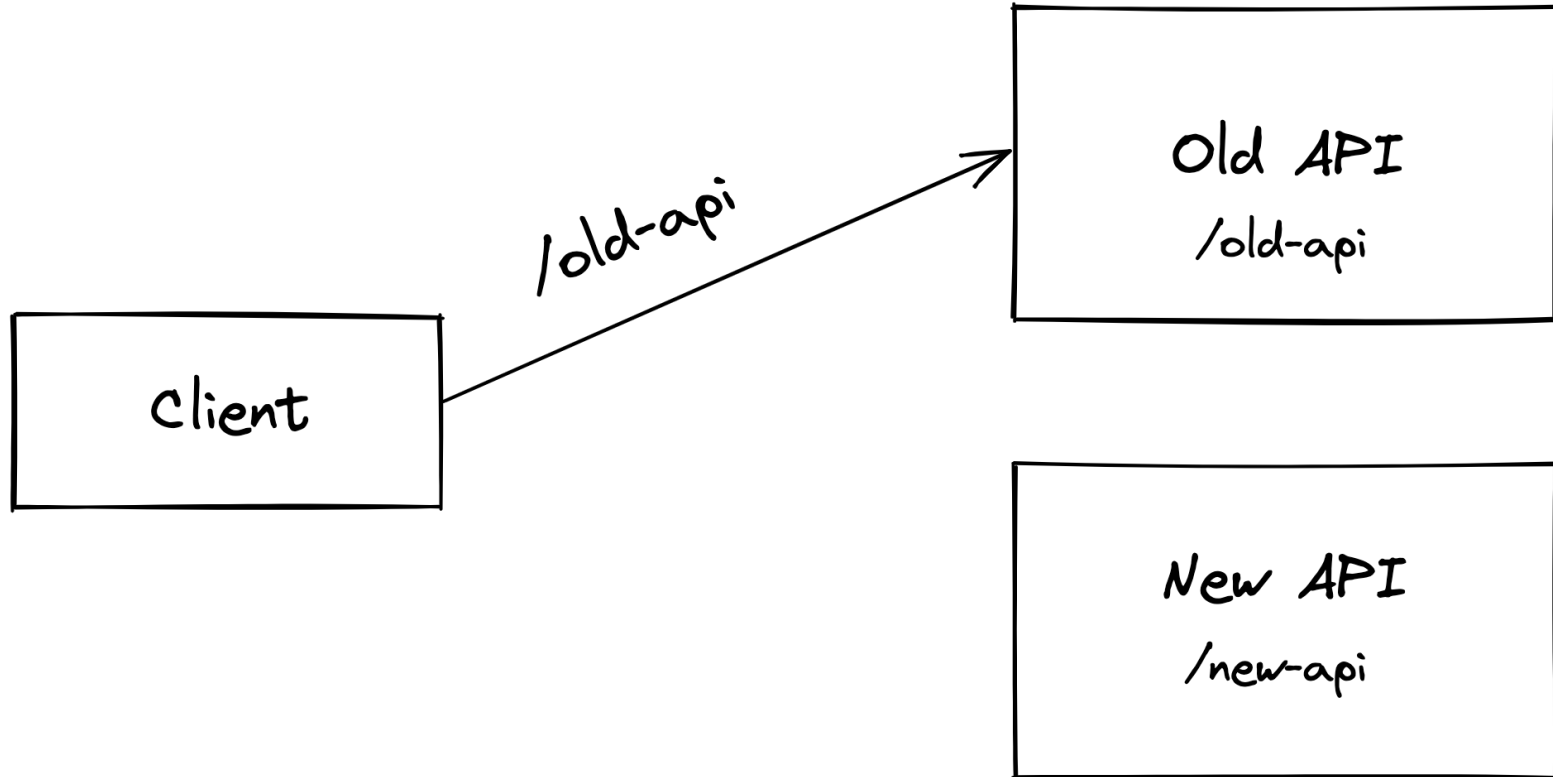
Version Control and Zero Downtime

Circuit Breaking



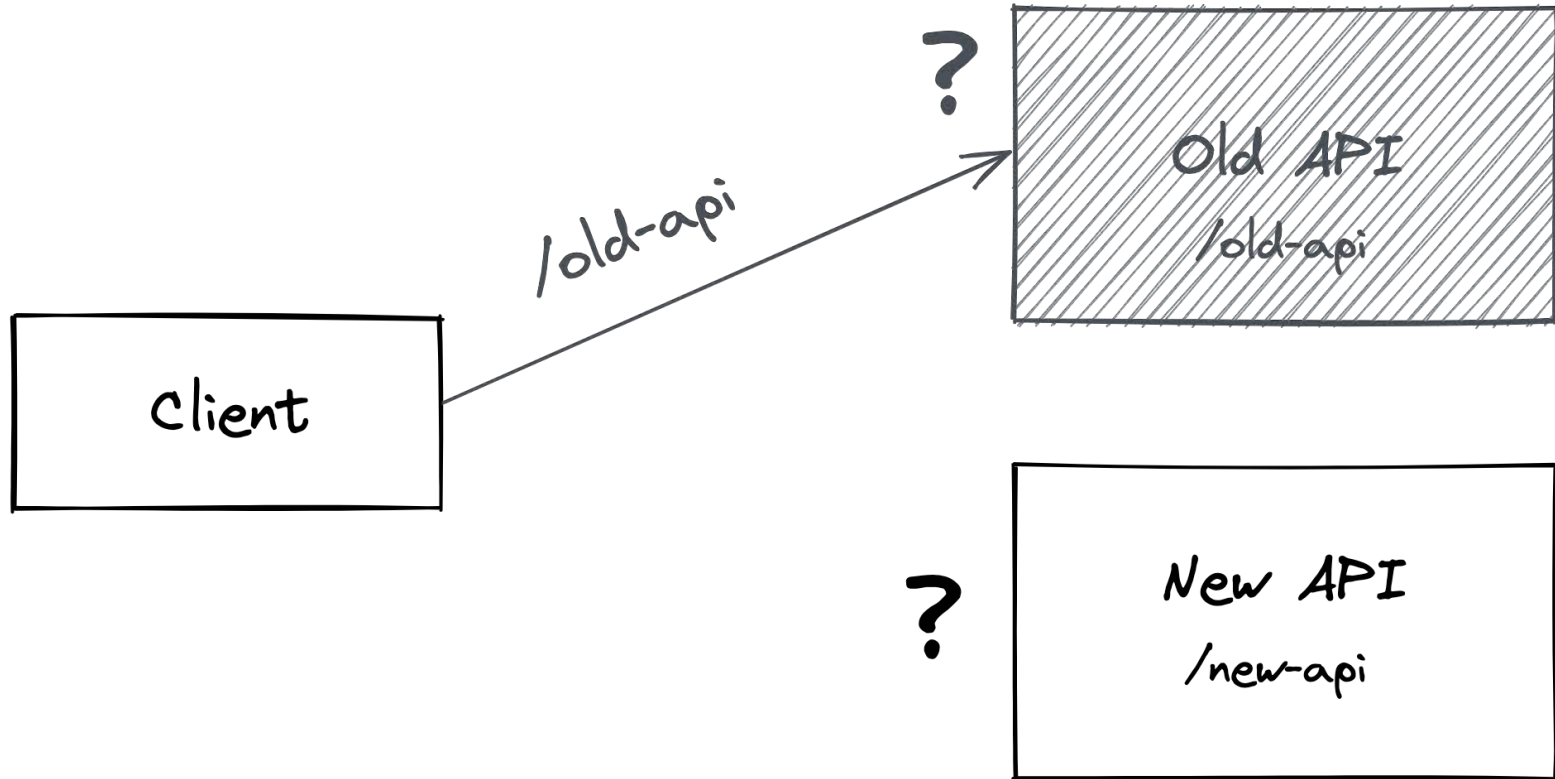
Version Control and Zero Downtime

Changing Path/ Redirect



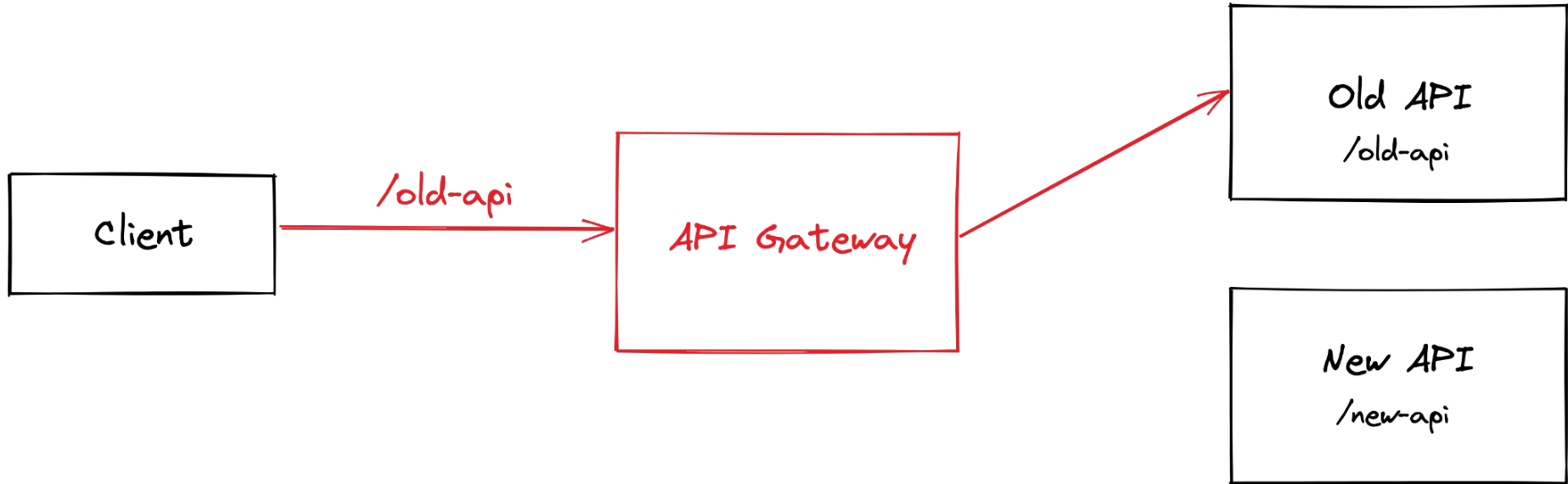
Version Control and Zero Downtime

Changing Path/ Redirect



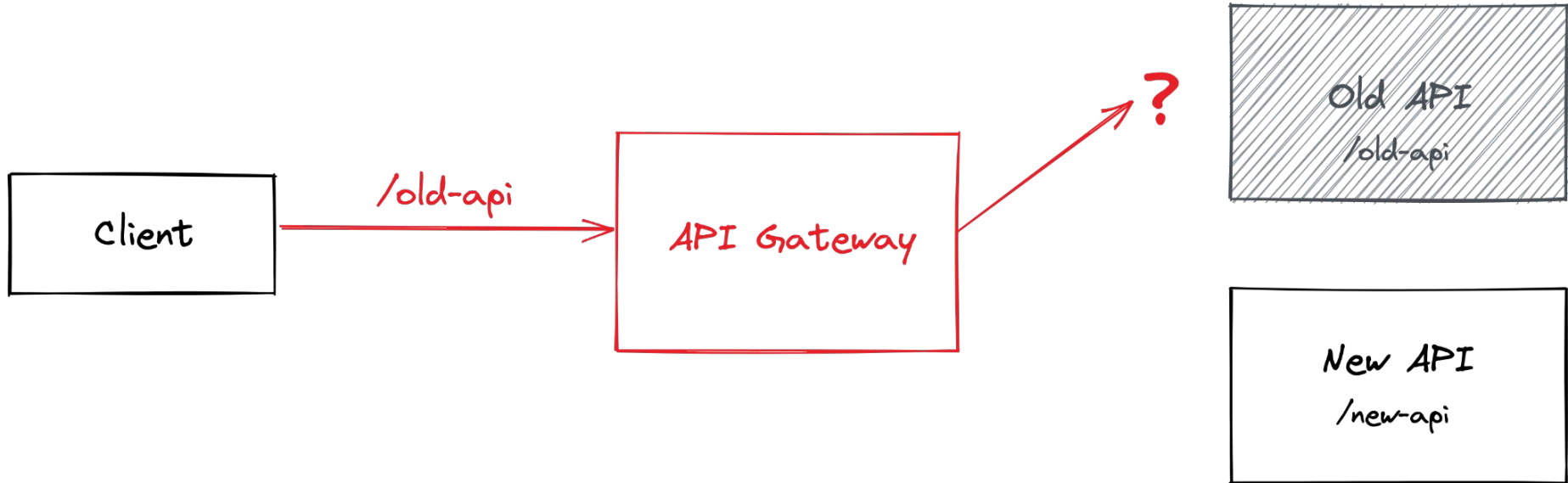
Version Control and Zero Downtime

Changing Path/ Redirect



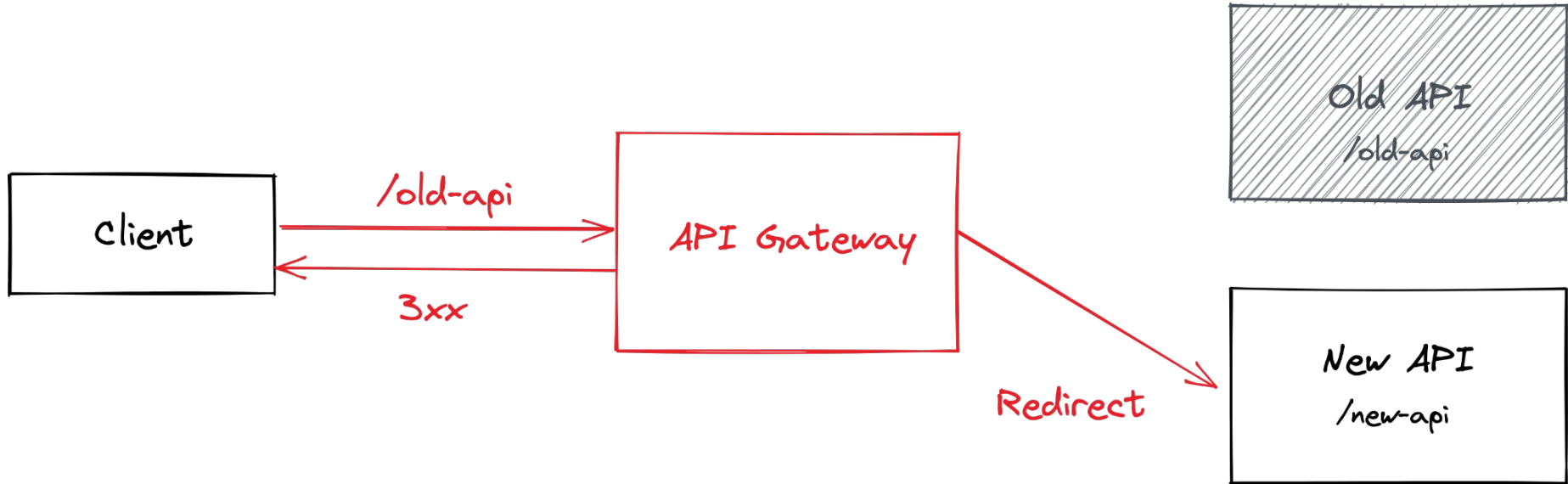
Version Control and Zero Downtime

Changing Path/ Redirect



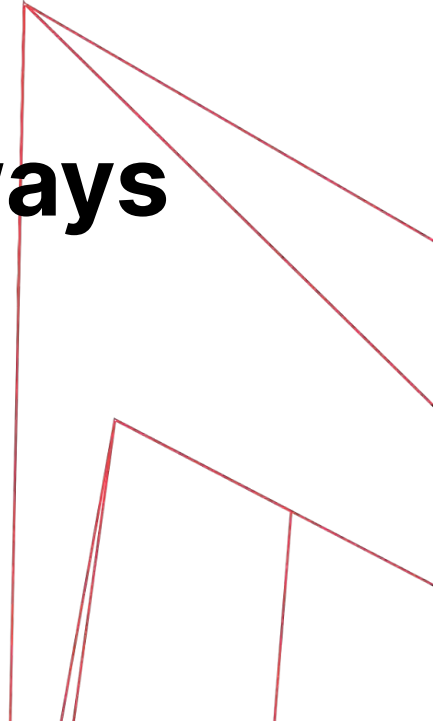
Version Control and Zero Downtime

Changing Path/ Redirect





Summary and **Key** Takeaways





Summary and **Key** Takeaways

Reliability of APIs is **more than just the uptime**

It is also about

Consistency

Availability

Low latency

Security

Status



Summary and **Key** Takeaways

API gateways **overcome** the issues of traditional API architectures

Best practices in

Authentication and Security

Monitoring and Observability

Version Control and Zero Downtime



Learn More

apisix.apache.org