Synadia

Financial Services Event Architectures

NATS for real-time, resilient messaging

Synadia

Speaker

Bruno Baloi
Principal Solutions Strategist
Synadia

Agenda

- Evolution Of Banking
- The Synadia Platform
- BaaS
- Pervasive Banking
- Payments
- CapitalMarkets
- WAM
- Digital Currencies
- Fraud Detection
- Governance
- Standards compliance
- Customers
- Summary

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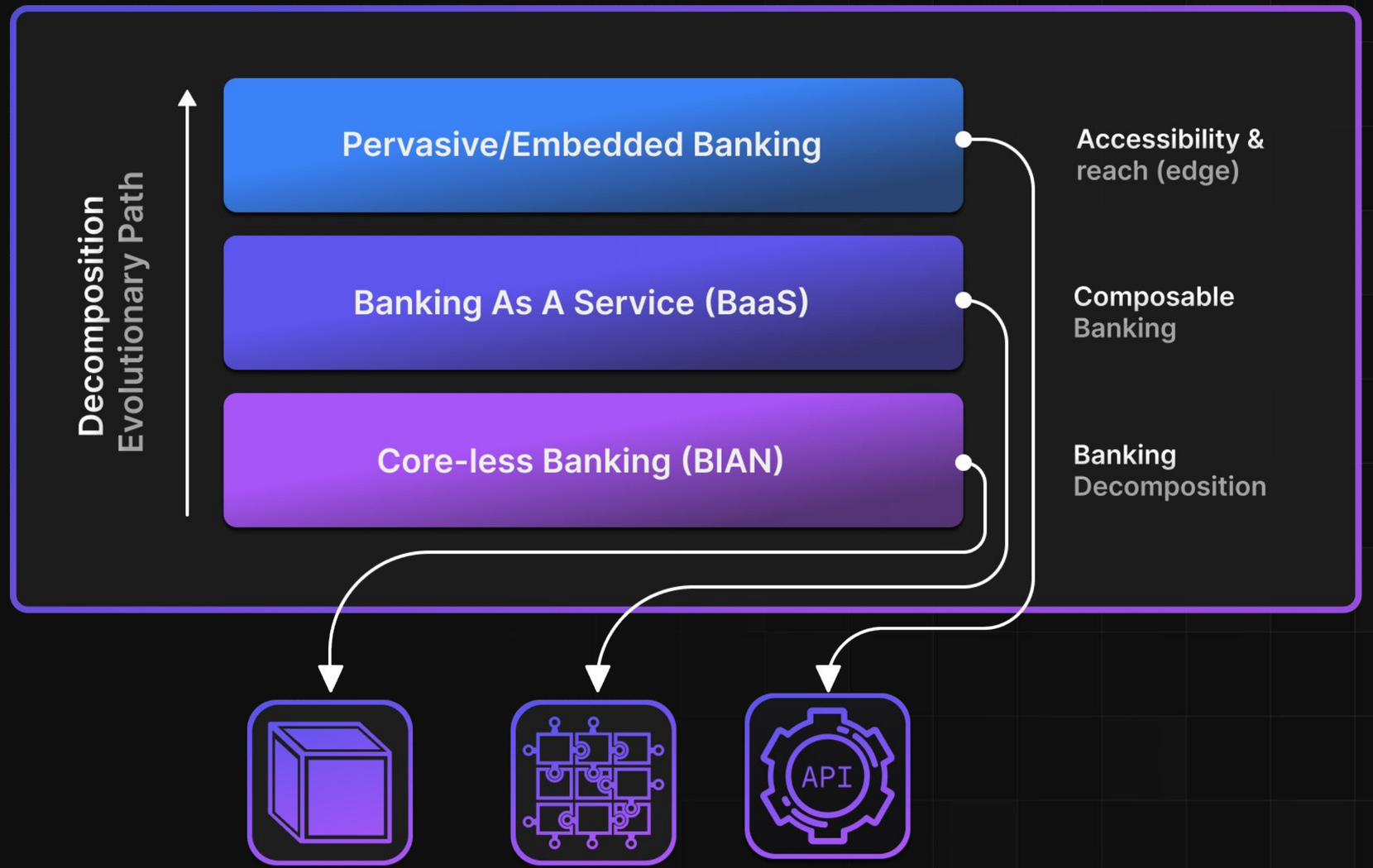
Evolution of Banking



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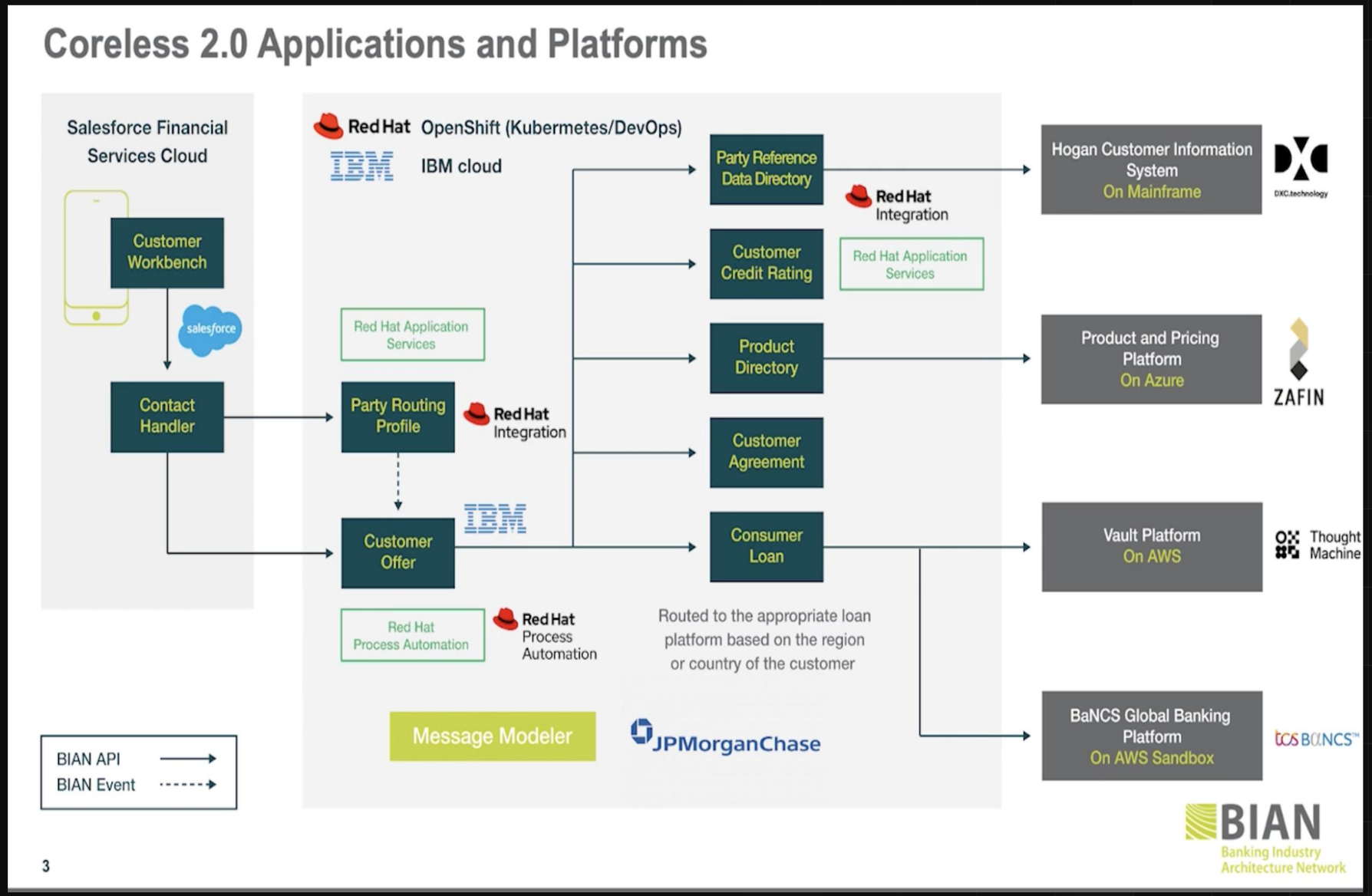
Evolution of Banking



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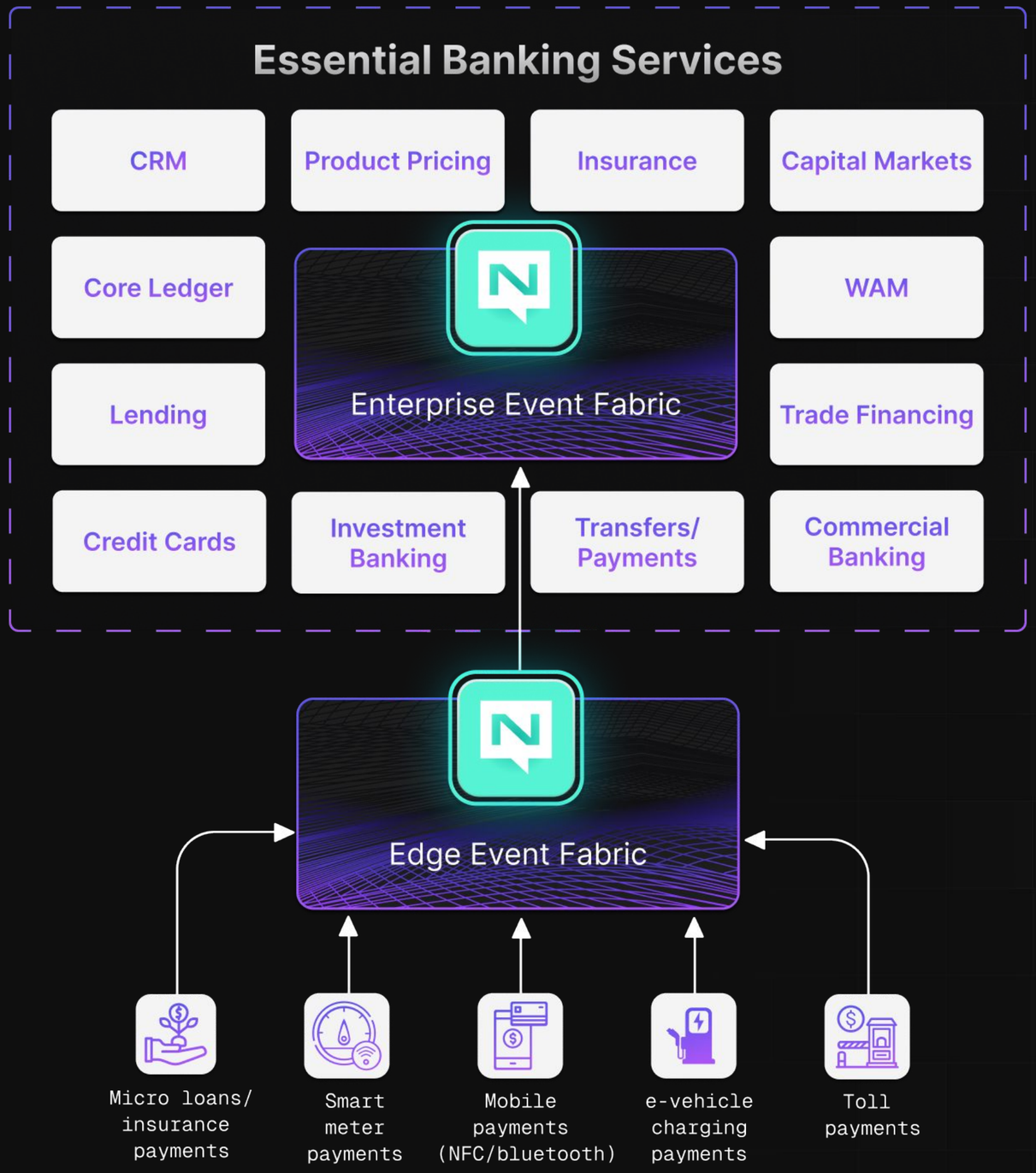

Event Banking

- Long running transactions
- High fan-out scenarios
- Customer data aggregation across geographies & business domains
- Fraud detection
- Etc.

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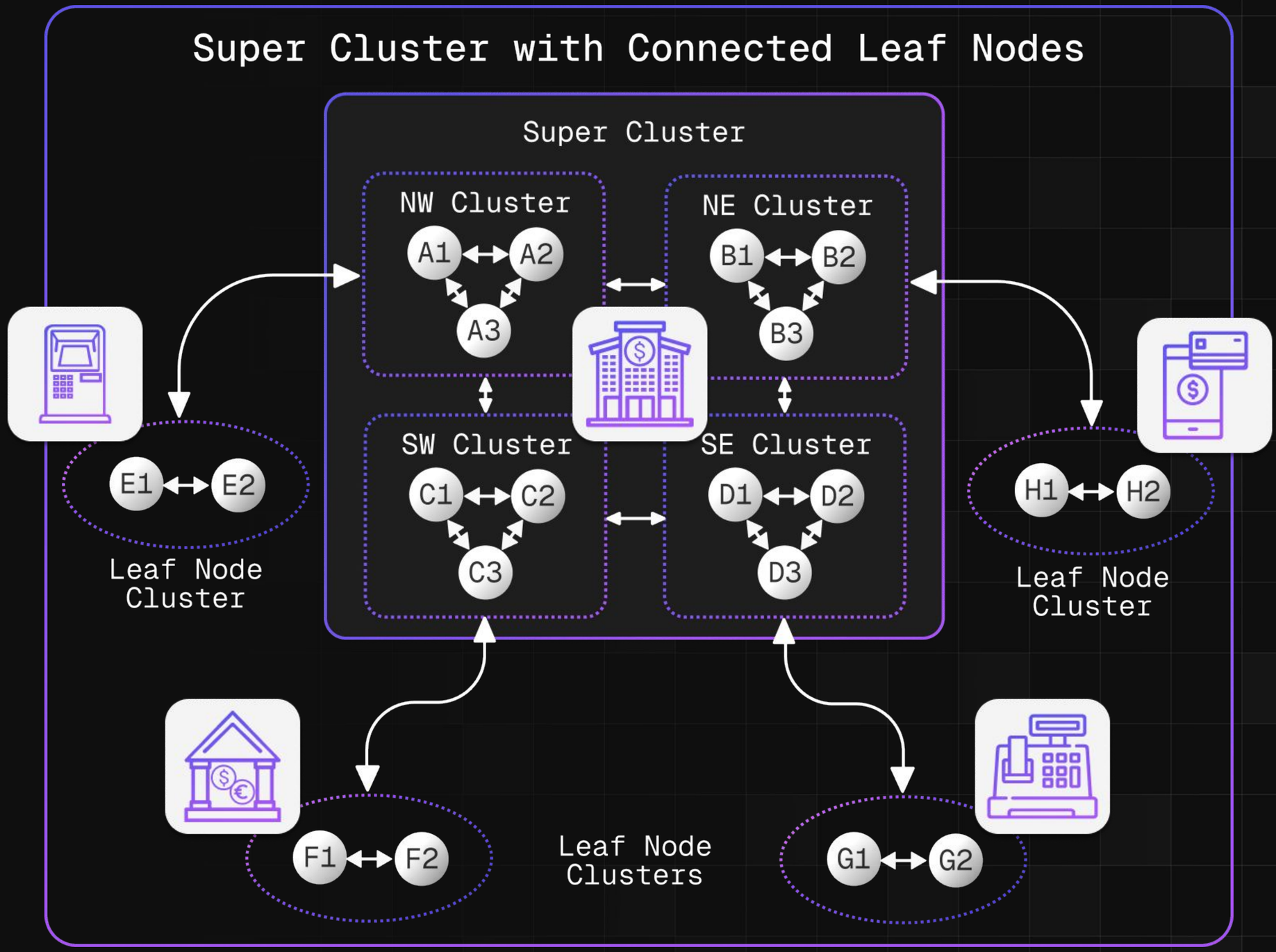
Synadia Platform

Event Fabric



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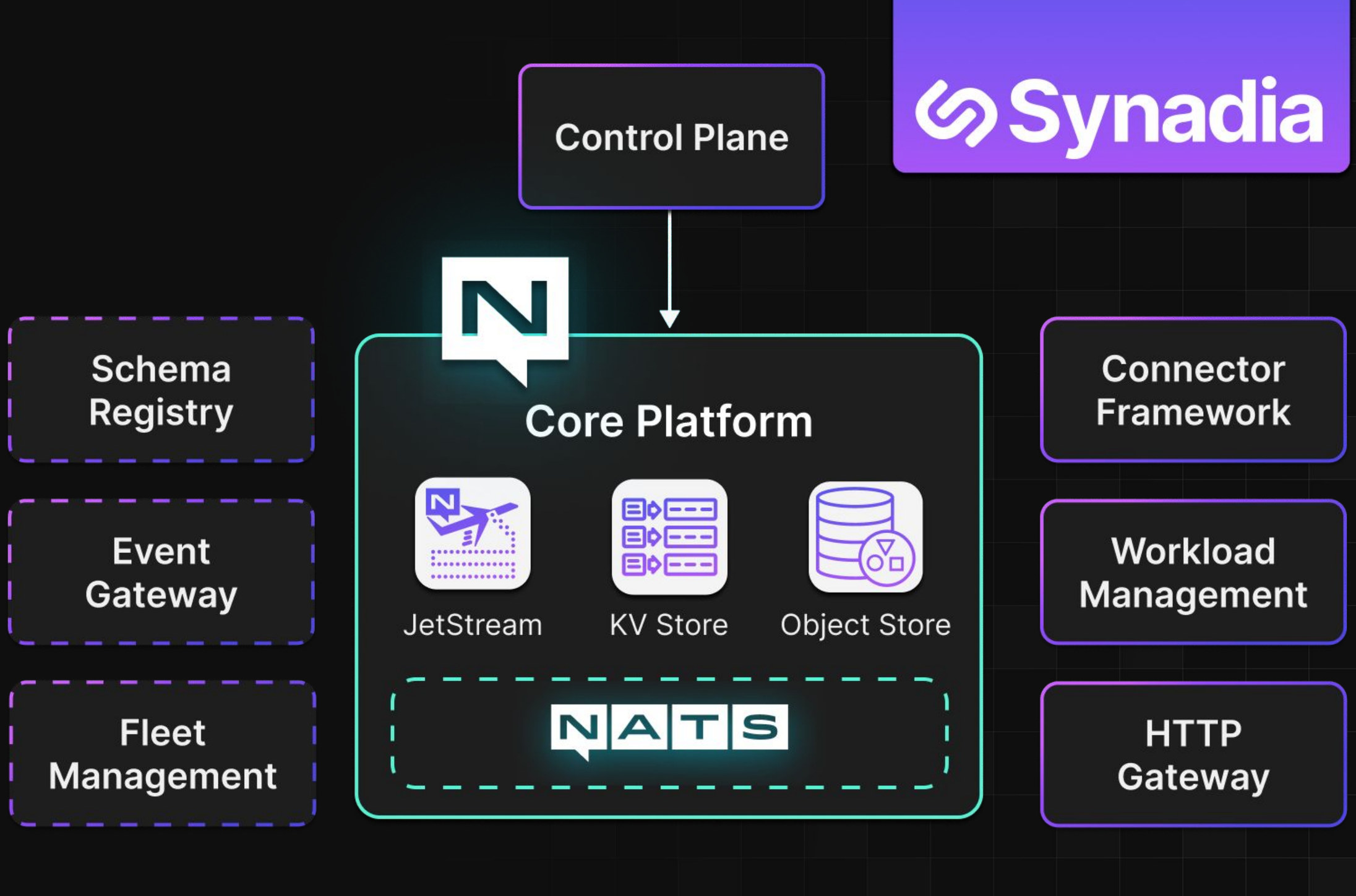
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Control Plane
Schema Registry
Event Gateway
Fleet Management
Core Platform
JetStream
KV Store
Object Store
NATS
Connector Framework
Workload Management
HTTP Gateway

Pervasive Banking – *Banking anywhere, never at a bank...*

Challenges

- Visibility/Mgmt
- Security
- Edge logic

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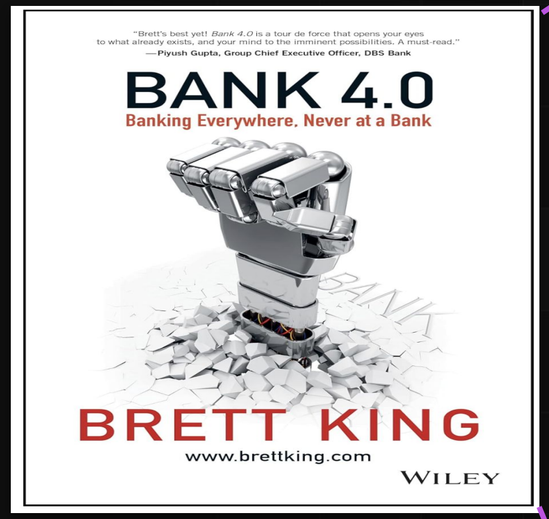
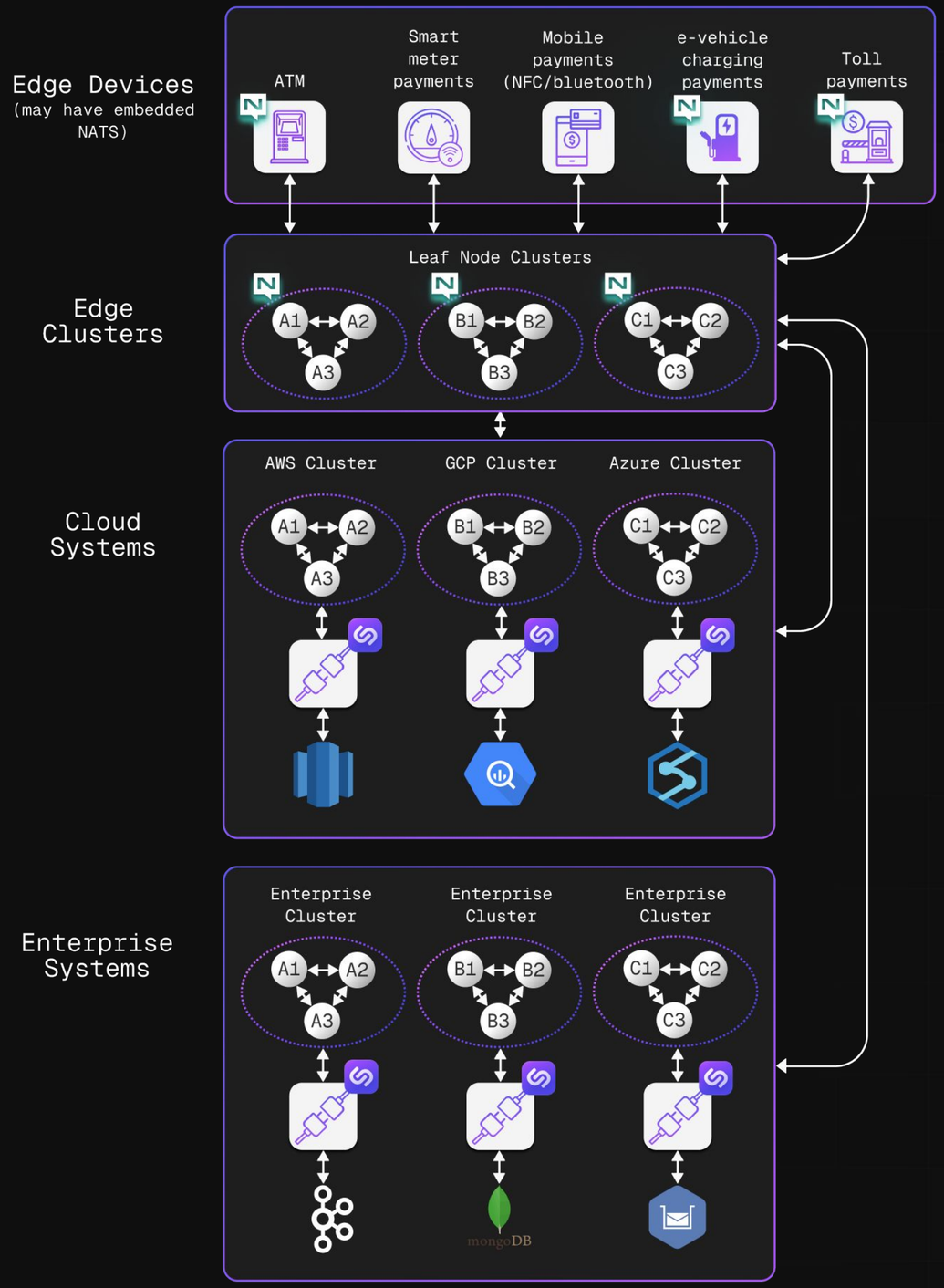
- Control Plane
- Core NATS
- JetStream
- Connectors
- Security



Pervasive Banking



Challenges

- Visibility/Mgmt
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- Control Plane
- Core NATS
- JetStream
- Connectors
- Security

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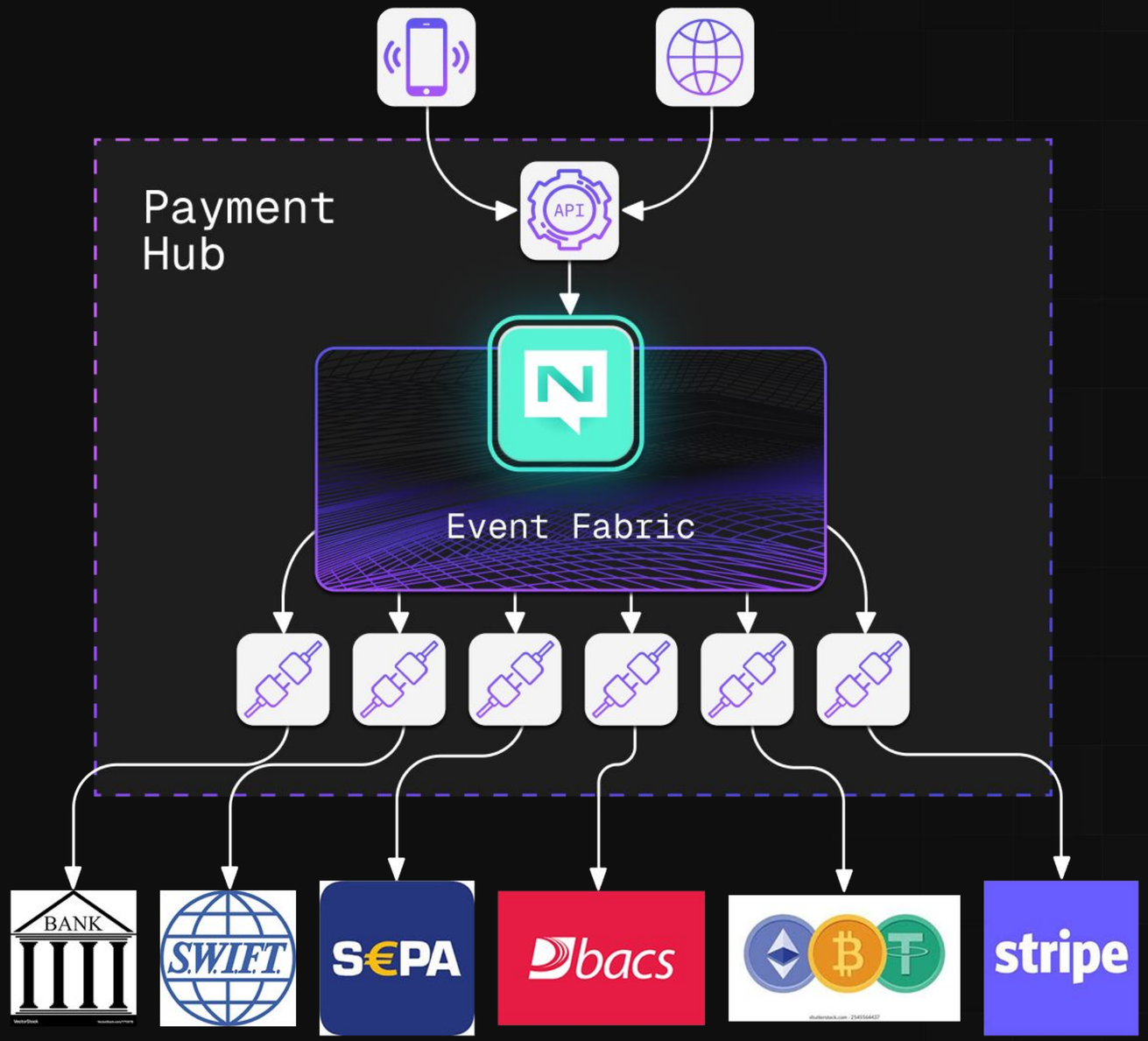
Payments Orchestration



Challenges

- Scalability
- Security
- Integration

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- Core NATS
- JetStream
- KVStore
- Connectors
- PCI Compliance

Edge Payments – Embedded

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Smart Meters

Smart Appliances

Connected Vehicles

Smart Healthcare

AgriTech

Challenges

- Scalability
- Security
- Extensibility
- Integration

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- Embeddable NATS
- Edge streaming + store/forward
- Leaf node architecture
- Decentralized security
- Connectivity & visibility

Capital Markets

Front End

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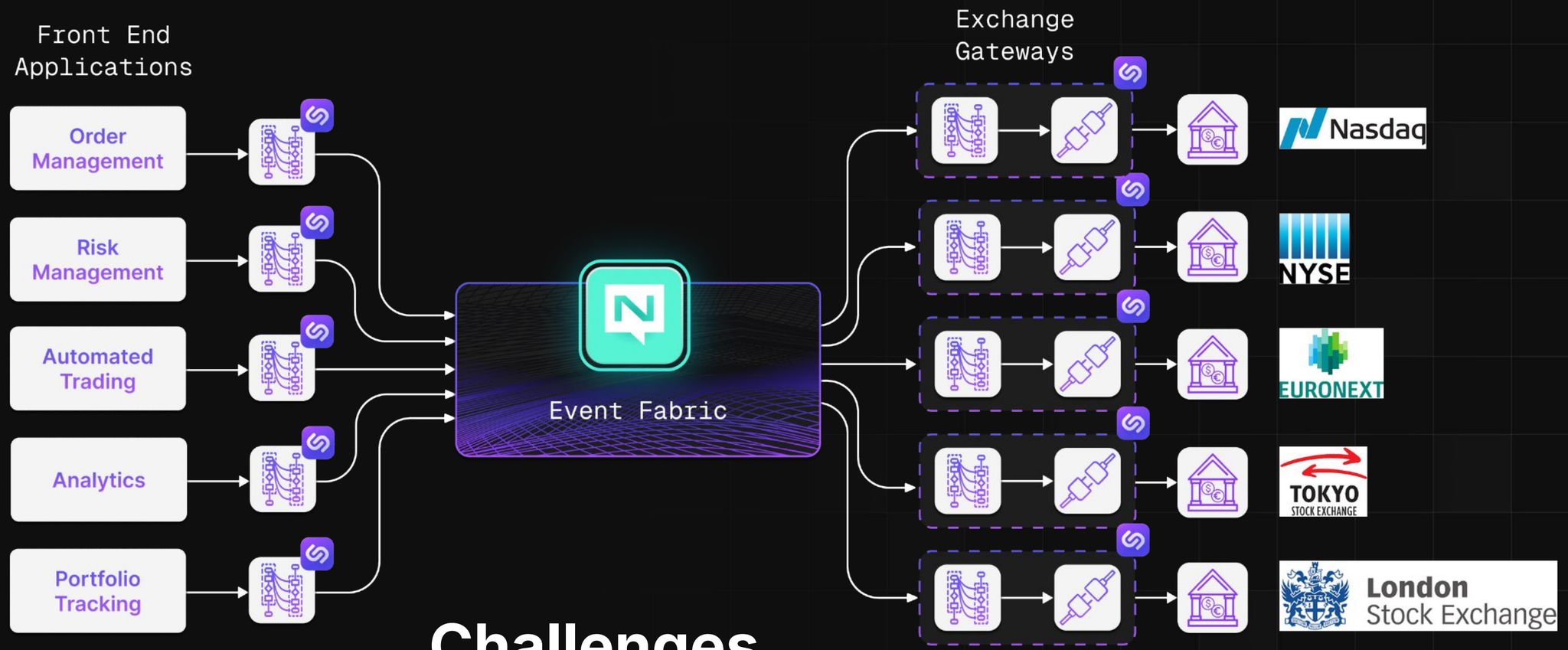
- Core NATS
- JetStream
- Connectors
- Workload Management



Challenges

- Speed
- Diversity of data
- Processing & distribution

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Capital Markets

Back End

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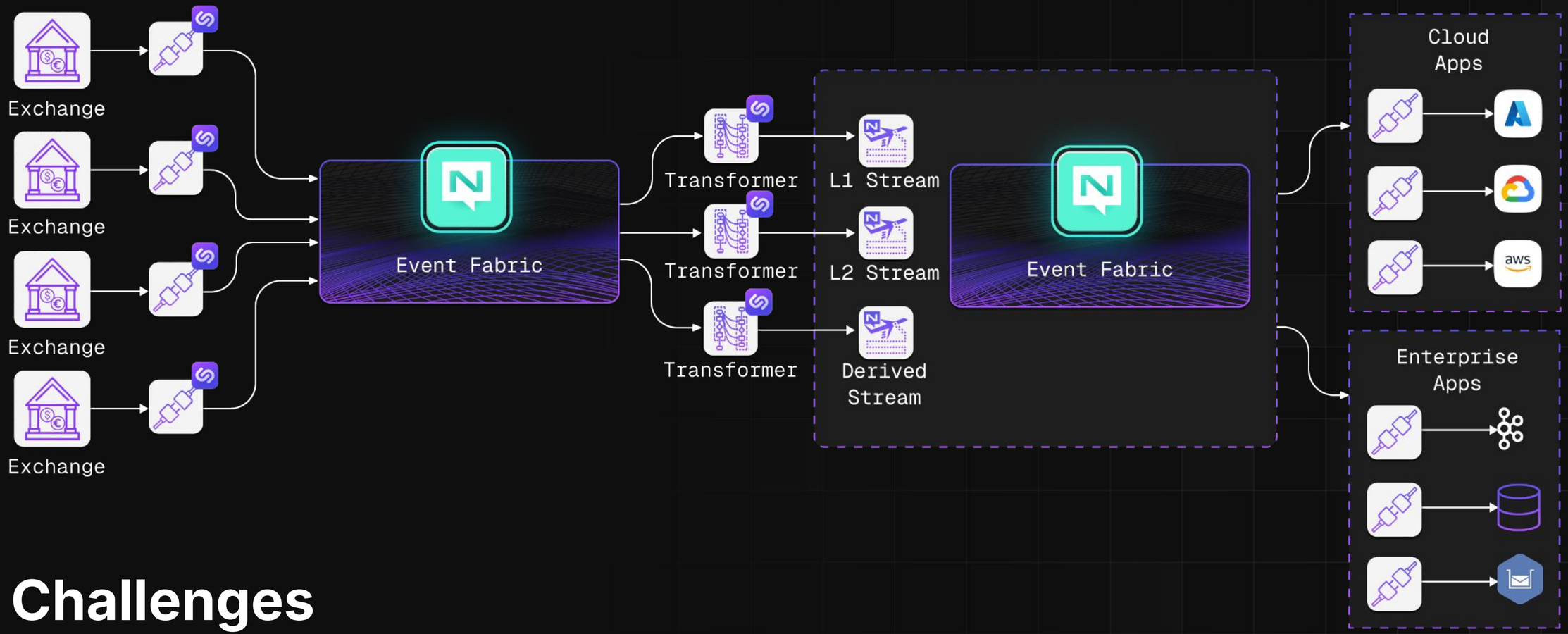
- Core NATS
- JetStream
- Connectors
- Workload Management



Challenges

- Speed
- Diversity of data
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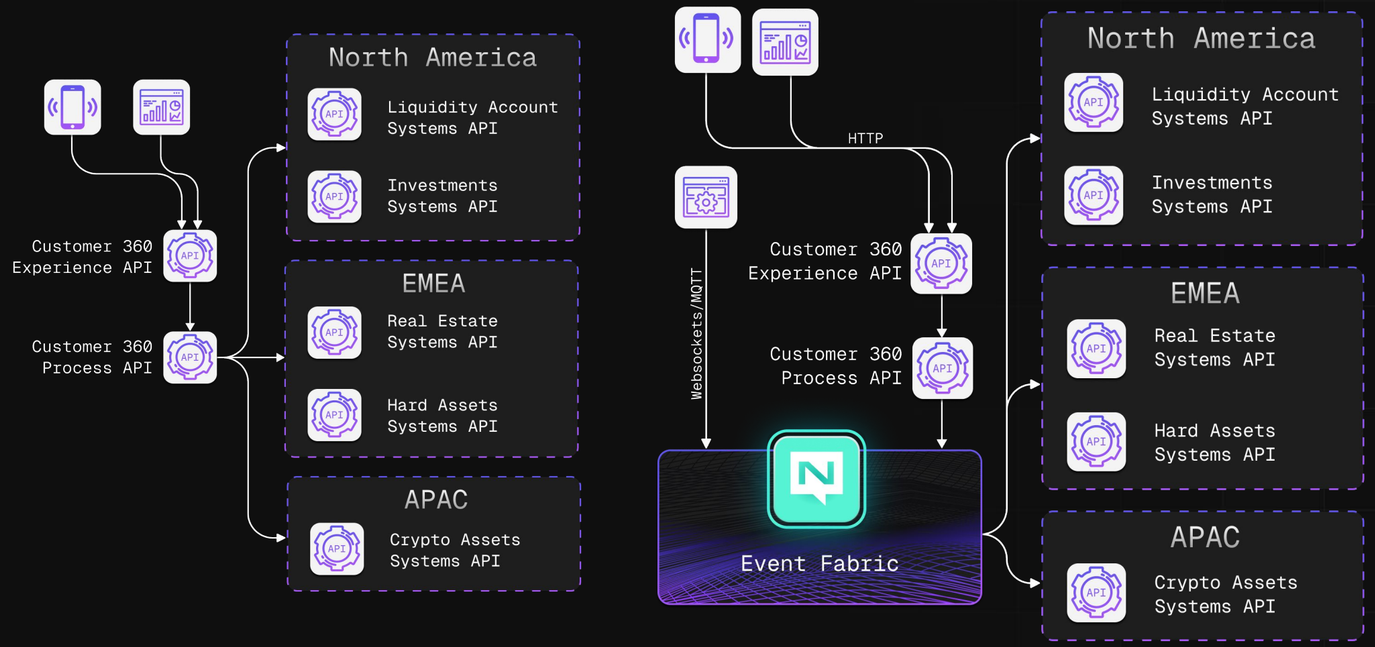
gWAM



Challenges

- Data Aggregation
- Speed Differential

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- Core NATS
- JetStream
- Connectors
- Security

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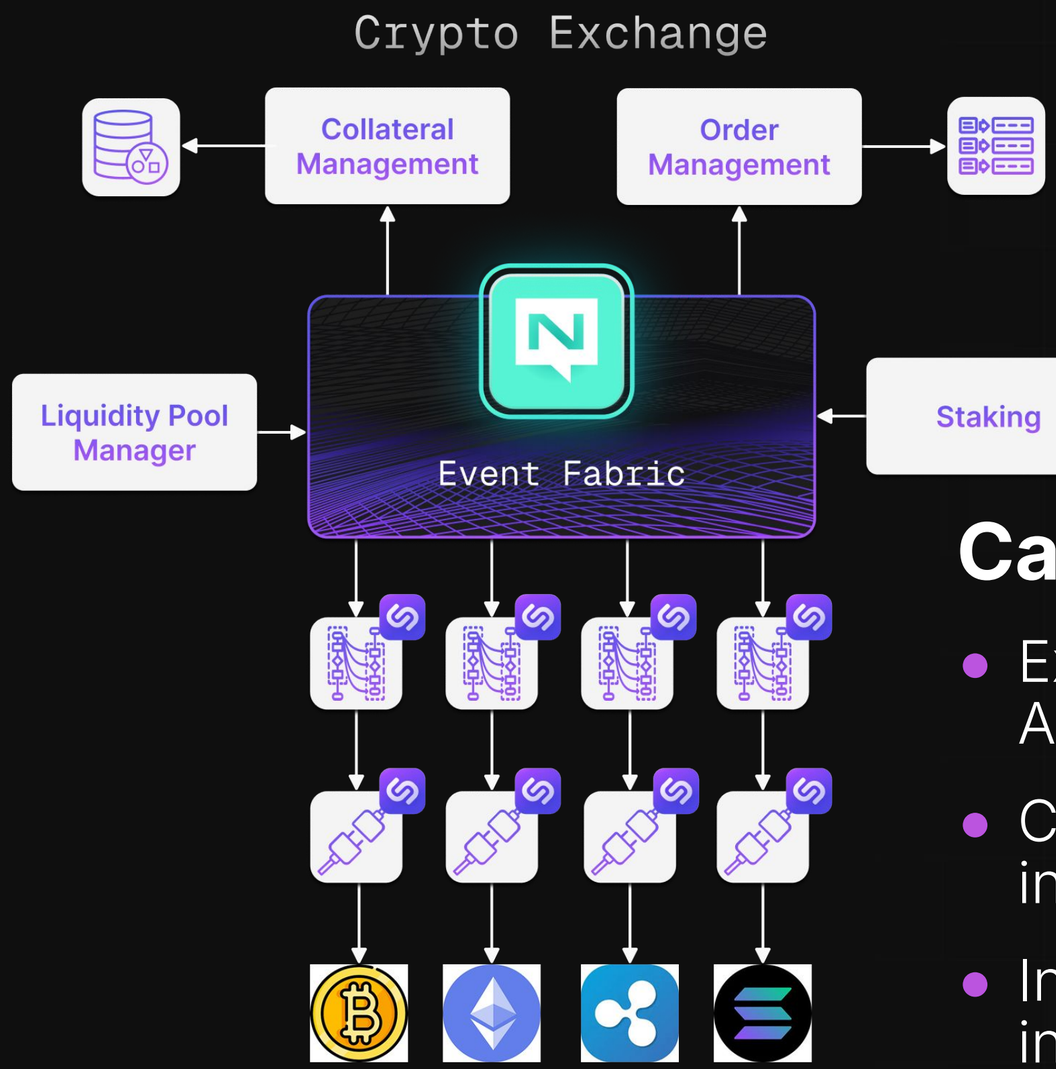
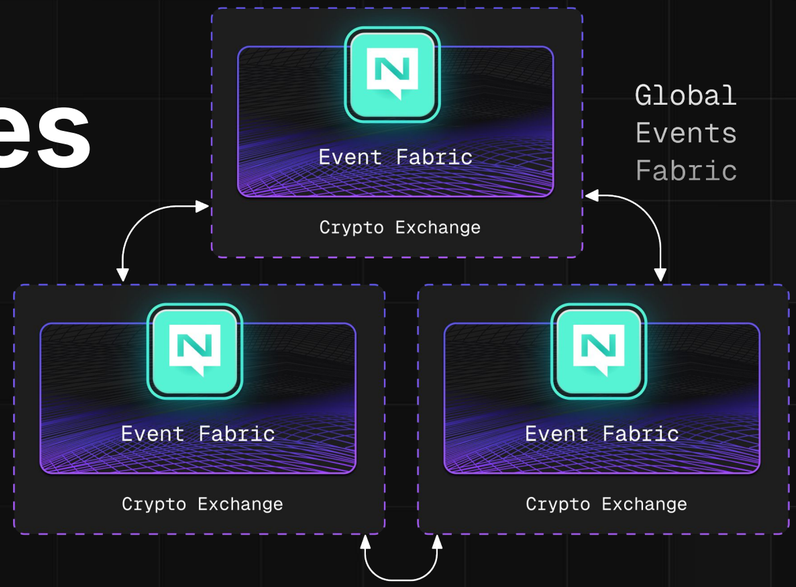
Digital/Cryptocurrencies





Categories

- Exchange Architecture
- Cross-chain interactions
- Inter-exchange interaction

Use Cases

- Consensus management
- Collateral Management
- Multiledger-Spread mgmt
- **BaaS+Crypto**

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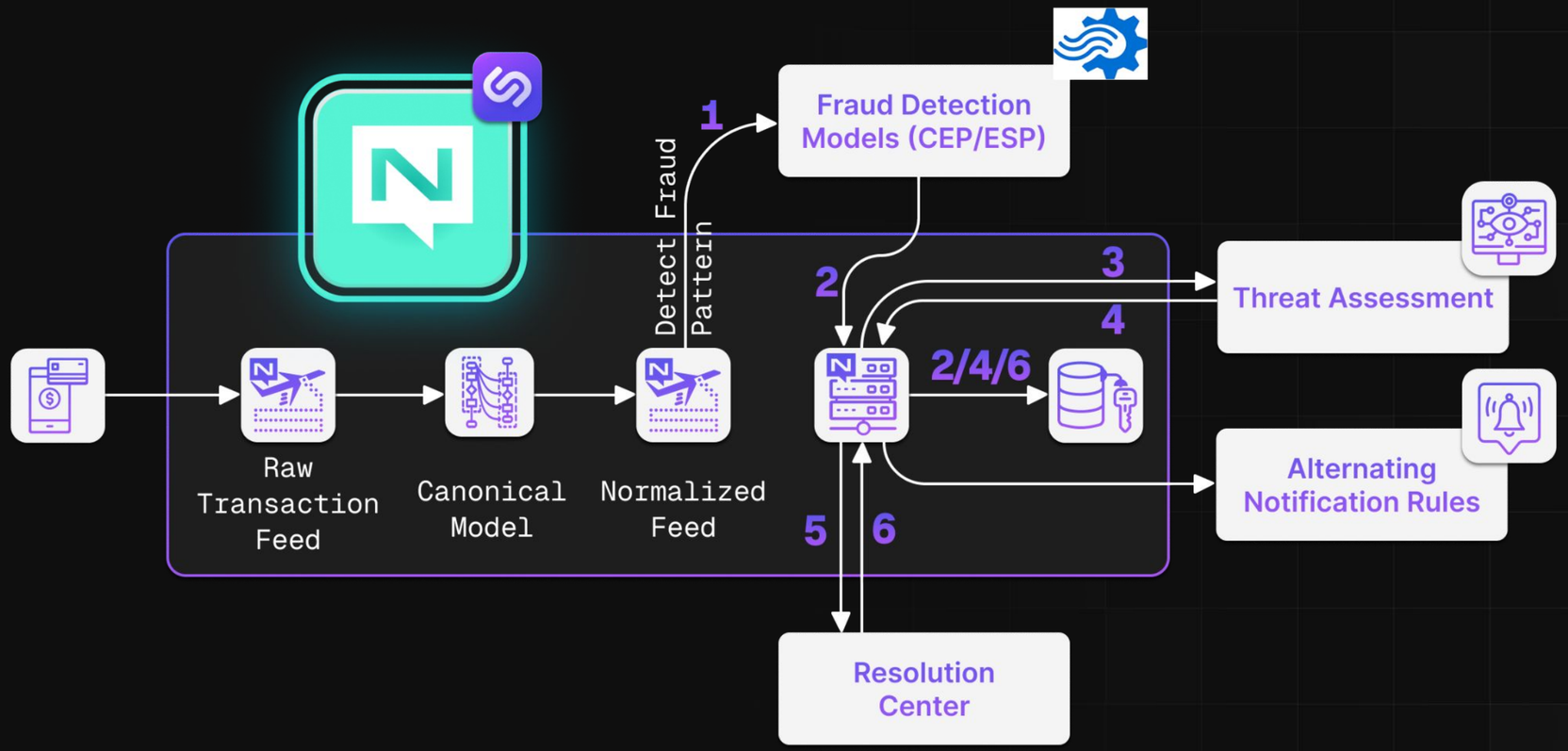
- Core NATS
- KV/OBJ Store
- JetStream
- Connectors
- Security

Fraud Detection



Challenges

- Stream pattern detection
- Complex coordination
- Fraud state management
- Integration

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- Core NATS
- JetStream
- KV Store
- Connectors

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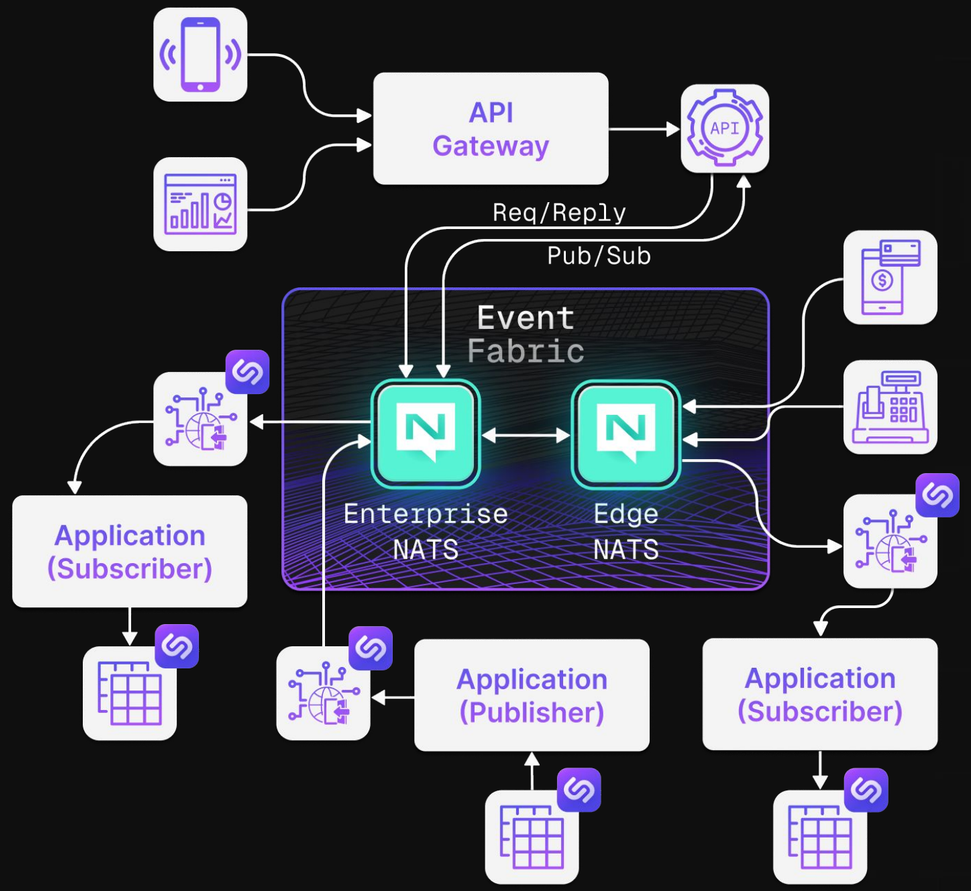
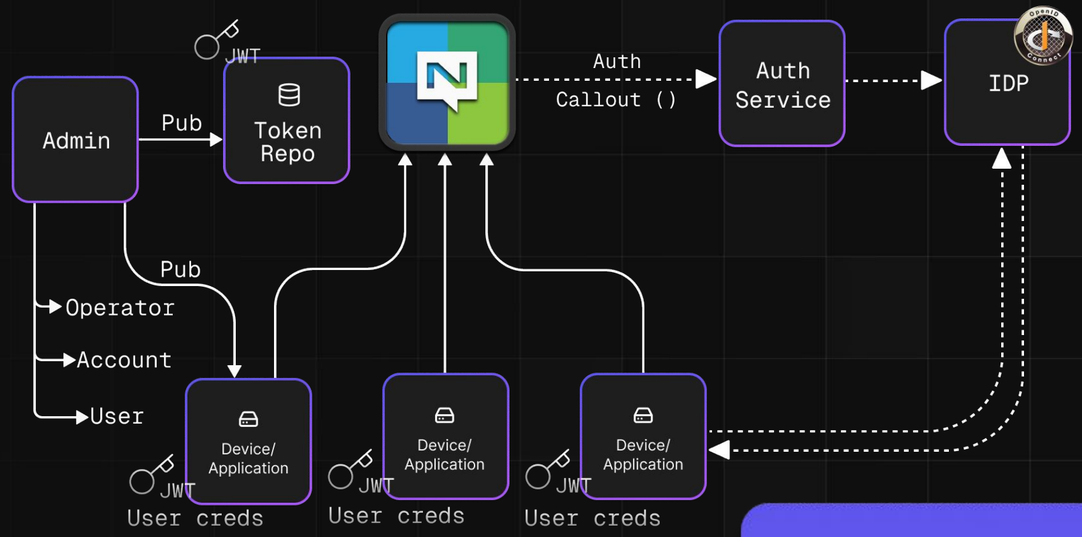
Security & Runtime Governance





Challenges

- IoT & Core security
- Event Content validation
- Event structure management

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- Decentralized Security
- Event Gateway
- Schema Registry

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Standards/Compliance

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FORM3 Customer Example

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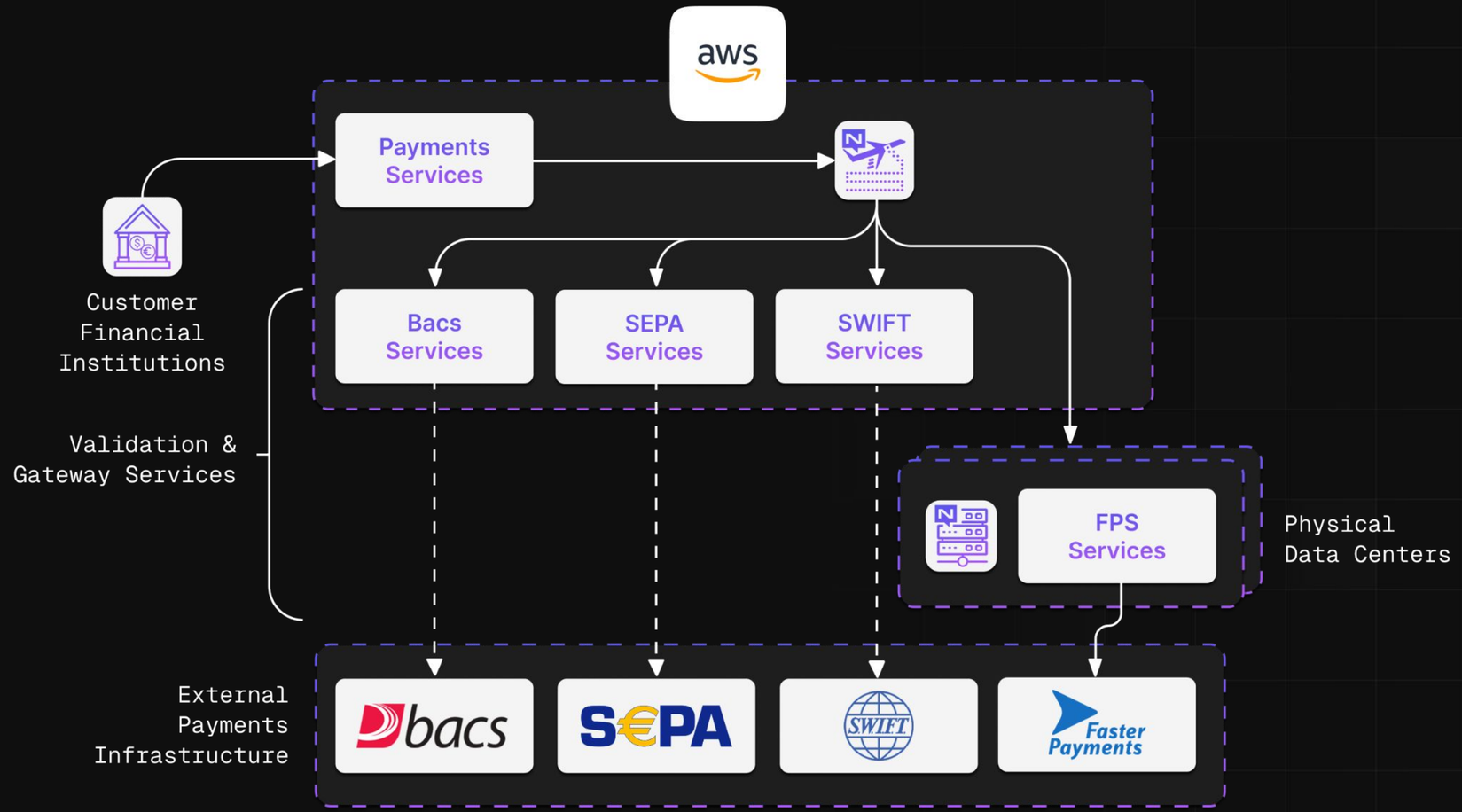

From 500 ms to 50ms !!

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- Eventing+Streaming
- Multi-cloud
- Low latency
- Light weight (Low resource requirements)
- Simplicity

FINECO

Customer Example

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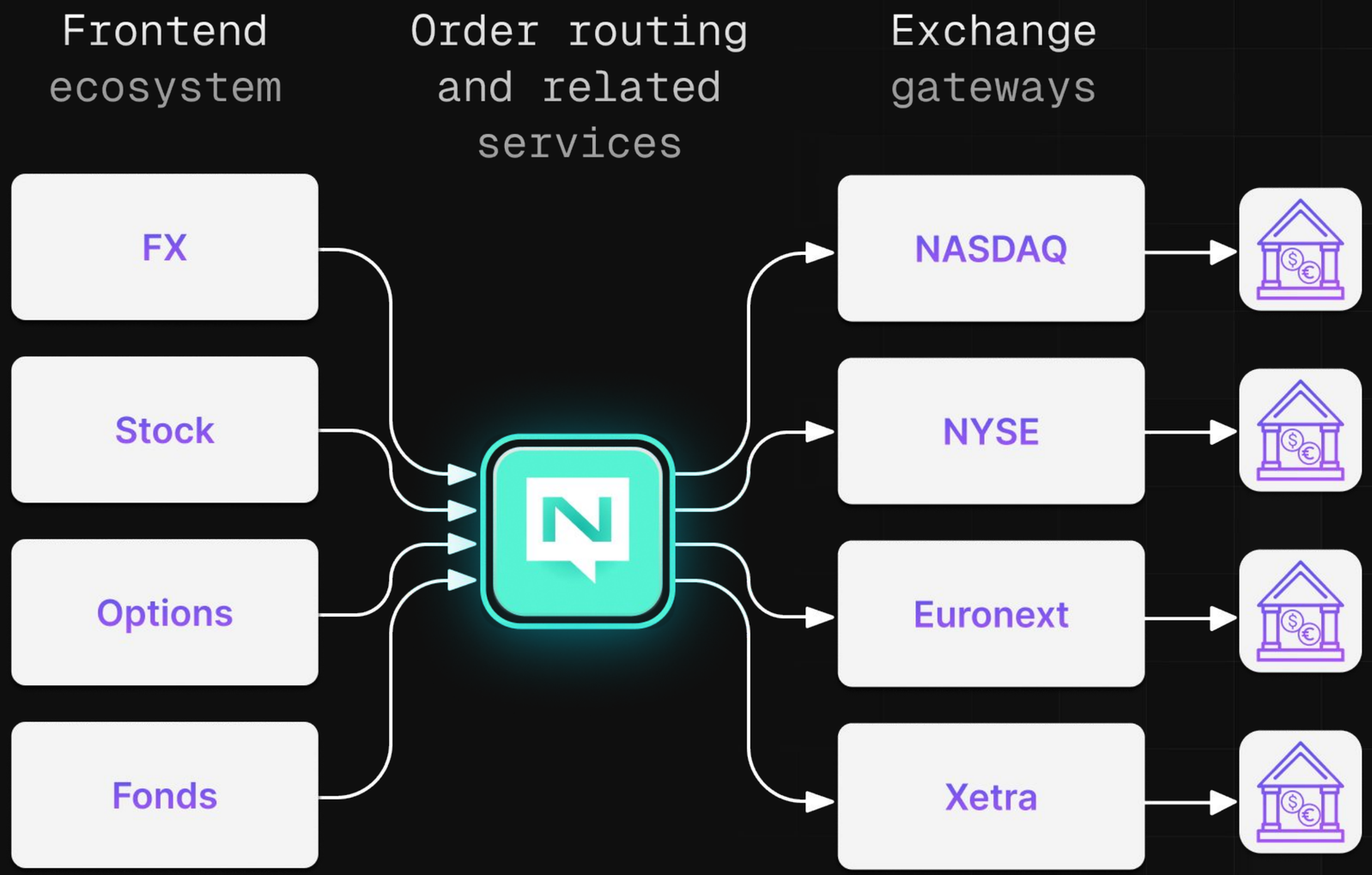

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- Legacy modernization
- Multi-cloud
- Low latency
- Market data distribution
- Drive Innovation
- Simplicity

Why Synadia for FINS?

Cost Avoidance

- Low capacity requirements
- Legacy modernization
- Unified security fabric
- All-in-one platform
- Performance/scalability
- Compliance

Drive Revenue

- Wide variety of use cases
- Agility & Innovation
- Improved customer experience
- Multi-cloud/risk mitigation
- Improved governance

Thank you

INFO@SYNADIA.COM | SYNADIA.COM | NATS.IO

Get Started

synadia.com/solutions/financial-services

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What is NATS?

Optimized for simplicity, portability, and adaptability.

- 14MB to 16MB static Go binary
  - No external dependencies
  - Client-server architecture
  - Powerful clustering features (scale, replication, HA/FT, multi-cloud+edge...)
  - 4 OSes and 7 arches
  - 11 official client libraries
  - 40+ community clients
- Major functionalities:
  - Streams, KV, ObjectStore
  - Pub/Sub
  - Req/Repl (n:m + geo-affinity)
  - Microservices
  - Nex (nats execution engine)