

EMPOWERING DIGITAL TRADING BY XTRADE OMS



CYGNUS INNOVATION LTD
Business Software Experts



About Cygnus Innovation Ltd.

- Founded in 2006, we are one of the leading Information Technology Solution Companies in Bangladesh with a strong talented team that provide extensive range of products and services
- Based out of Niketon, Gulshan-1, Dhaka
- Software experts and developers of market-leading solutions such:
 - XTRADE
 - XBROKER
 - XASSET
 - XMBANK
 - XENTERPRISE



Why Us

- 18 Years' Experience in Software Development
- 17 Years' Experience in Financial Market
- 150+ Clients in Capital Market
- 130+ Clients in Broker House
- 20+ Clients in Merchant Bank
- 7+ Clients in Asset Management
- 2 Client in XTRADE OMS (Order Management System)
- 1 Client in XEnterprise Software
- 4+ Clients in Business Sectors
- 5+ Clients in International Market
- 28+ Software Professionals

- Dedicated Support team
- Dedication to meet deadline
- Deep Technology Expertise
- Committed to client benefits
- Approach to build long-term relationships
- Fastest Growing Company providing Capital Market solutions to Merchant Banks, Asset Management Companies and Brokerage House.
- Every issue/email is addressed within 12 hour of receipt
- Online demo of the project in the development phase
- Update the client of regular progress through a daily status report
- Unconditional warranty for any bug reported in the code we develop



Solution & Services

Web Application Development

Customized Desktop Application

Mobile Application Development

Legacy Systems Transformation & Modernization

ERP Development Services

Database Design, Administration

Mobile Content Management

Website Development

Application Testing Services

Data Migration Services

System Integration

BPO (Business Process Outsourcing) Services Focus

Our Leading Products



Premium Client List

XBROKER Software Client List

1. UCB STOCK BROKERAGE LTD
2. PRIME BANK SECURITIES LTD
3. SIBL SECURITIES LTD
4. SBAC BANK INVESTMENT LTD
5. CITY BROKERAGE LTD
6. AB SECURITIES LTD
7. NBL SECURITIES LTD
8. DHAKA BANK SECURITIES LTD
9. SHAJALAL ISLAMI BANK SECURITIES LTD
10. PADMA BANK SECURITIES
11. COMMERCE BANK SECURITIES & INVESTMENT LTD
12. NRB BANK SECURITIES LTD
13. BD FINANCE SECURITIES LTD
14. CAL SECURITIES LTD
15. MONA FINANCIAL CONSULTANCY & SECURITIES
16. DHAKA SECURITIES LTD
17. HR SECURITIES & INVESTMENTS LTD
18. PRIME ISLAMI SECURITIES LTD
19. PFI SECURITIES LTD
20.  CYGNUS INNOVATION LTD
Business Software Experts
21. A. K. KHAN SECURITIES LTD
22. REMONS INVESTMENT & SECURITIES LTD
23. PHP STOCKS & SECURITIES LTD
24. T.K. SHARES & SECURITIES
25. FAR EAST SHARES & SECURITIES LTD
26. SOHEL SECURITIES LTD
27. MERCHANT SECURITIES LTD
28. MONARCH HOLDINGS LTD
29. ICB SECURITIES TRADING COMPANY LTD
30. AKIJ CAPITAL MANAGEMENT LTD
31. SHARP SECURITIES LTD
32. HAJI AHMAD BROTHERS SECURITIES LTD
33. QUAYUM SECURITIES LTD
34. TIMES SECURITIES LTD
35. ANCHOR SECURITIES LTD
36. PRILINK SECURITIES LTD
37. TREASURE SECURITIES LTD
38. A. M. SECURITIES AND FINANCIAL SERVICES LTD
39. UNIQUE SHARE MANAGEMENT LTD
40. MKM SECURITIES LTD
41. JOYTUN SECURITIES INTL. LTD
42. SFIL SECURITIES LTD
43. ANC SECURITIES
44. SMART SHARE & SECURITIES LTD
45. SOUTH ASIA SECURITIES
46. KABIR SECURITIES
47. AVIVA EQUITY MANAGEMENT
48. EASTERN CAPITAL LTD
49. GMF SECURITIES LTD
50. STOCK MATE SECURITIES LTD (EMES SECURITIES LTD)
51. KAZI FIROZ RASHID SECURITIES LTD
52. NEW ERA SECURITIES LTD
53. COUNTRY STOCK (BANGLADESH) LTD
54. ELEGANT STOCK & SECURITIES LTD
55. DRAGON SECURITIES LTD
56. AL HARAMAIN SECURITIES LTD
57. AMAYA SECURITIES LTD
58. HASAN SECURITIES LTD
59. RELIEF EXCHANGE SECURITIES LTD
60. WINGSFIN SECURITIES LTD
61. GIBSON SECURITIES LTD
62. BEXIMCO SECURITIES LTD



Premium Client List

XBROKER Software Client List

- 63. TRUST REGIONAL EQUITY
- 64. A N F MANAGEMENT CO. LTD
- 65. SBI SECURITIES LTD
- 66. AI-HAJ SECURITIES & STOCKS LTD
- 67. B.J. SECURITIES LTD
- 68. M-SECURITIES LTD
- 69. EMPEROR SECURITIES AND WEALTH MANAGEMENT
- 70. MIRROR FINANCIAL MANAGEMENT LTD
- 71. BD SUNLIFE SECURITIES LTD
- 72. AMAR SECURITIES LTD
- 73. NOUVELLE SECURITIES LTD
- 74. MODERN EQUITY LTD
- 75. MODERN SECURITIES LTD
- 76. RAZZAK SECURITIES
- 77. AL-MUNTaha TRADING CO. LTD
- 78. MAM SECURITIES LTD
- 79. ROSE SECURITIES LTD
- 80. DOHA SECURITIES LTD
- 81. SALAM & CO. LTD
- 82. KOBSHARES & SECURITIES LTD
CYGNUS INNOVATION LTD
Business Software Experts

- 83. NEXUS SECURITIES LIMITED
- 84. FINTRA SECURITIES LIMITED
- 85. KHB SECURITIES LIMITED
- 86. ERSHAD SECURITIES LIMITED
- 87. JAMAL AHMED SECURITIES LTD
- 88. UTTARA EXCHANGE AND SECURITIES
- 89. STOCK & SECURITY LINKWAY
- 90. HOWLADER SECURITIES LTD
- 91. VANGUARD SHARES & SECURITIES LTD
- 92. BROTHERS SECURITIES LTD
- 93. UNITY SHARE MANAGEMENT LTD
- 94. CHITTAGONG CAPITAL LTD
- 95. BUSINESS CAPITAL SHARES & SECURITIES LTD
- 96. OASIS TURNER LTD
- 97. ADAMS SECURITIES LIMITED
- 98. KISHWAR SECURITY INVESTMENT LTD
- 99. EXPRESS SECURITIES LTD
- 100. PLATINUM SECURITIES LTD
- 101. JESCO CAPITAL MANAGEMENT LTD
- 102. SECURE CAPITAL LTD
- 103. JIC SECURITIES LTD
- 104. RAJA SECURITIES LTD
- 105. SOLEX SECURITIES LTD
- 106. LATIF SECURITIES LTD
- 107. BULBUL SECURITIES LTD
- 108. ANWAR KHAN MODERN SECURITIES LTD
- 109. PRUDENTIAL SECURITIES LTD
- 110. FAKHRUL ISLAM SECURITIES LTD
- 111. 3i SECURITIES LTD
- 112. COLUMBIA SHARE LTD
- 113. TASIA SECURITIES LTD
- 114. BENEMOY SECURITIES LTD
- 115. ASSURENT SECURITIES LTD
- 116. SONALI SECURITIES LTD
- 117. BNB SECURITIES LTD
- 118. DYNESTY SECURITIES
- 119. ARENA SECURITIES
- 120. NY TRADING LTD
- 121. TAKAFUL ISLAM SECURITIES LTD
- 122. MIR SECURITIES LTD
- 123. B & BSS TRADING
- 124. FARIHA SECURITIES LTD
- 125. DYNAMIC SECURITIES & CONSULTANTS LTD
- 126. ARIES SECURITIES LTD
- 127. GLOBAL SECURITIES LTD
- 128. D.N. SECURITIES LTD
- 129. HALLMARK SECURITIES LTD
- 130. 3A & COMPANY LTD



Premium Client List

XMBANK Software Client List



1. ICB CAPITAL MANAGEMENT LTD.
2. JANATA CAPITAL & INVESTMENT LTD
3. PRIME BANK INVESTMENT LTD
4. JAMUNA BANK CAPITAL MANAGEMENT LTD.
5. SOUTHEAST BANK CAPITAL SERVICES LTD.
6. CITY BANK CAPITAL RESOURCES LTD.
7. UNICAP INVESTMENTS LTD.
8. GRAMEEN CAPITAL LTD
9. SHANDHANI LIFE FINANCE LTD
10. ABACI INVESTMENTS LTD
11. AAA CONSULTANTS LTD
12. CITIZEN SECURITIES LTD
13. SIM CAPITAL LTD
14. MEGHNA CAPITAL MANAGEMENT LTD.
15. BENGAL INVESTMENT LTD
16. STRATEGIC FINANCE & INVESTMENT LTD (SFIL)
17. CAL (BETA ONE) INVESTMENT LTD
18. NORTHSTAR INVESTMENTS LTD
19. ALPHA CAPITAL MANAGEMENT LTD
20. COMMERCIAL BANK OF CEYLON PLC

Premium Client List

XASSET Software Client List

1. LANKA BANGLA ASSET MANAGEMENT
2. ASIAN TIGER CAPITAL PARTNERS ASSET MANAGEMENT LTD.
3. PRIME ASSET MANAGEMENT
4. HF ASSET MANAGEMENT LIMITED
5. 3I ASSET MANAGEMENT
6. GREEN DELTA DRAGON ASSET MANAGEMENT COMPANY
7. PLI ASSET MANAGEMENT CO. LTD

XTRADE OMS Software Client List

1. BENEMOY SECURITIES LTD
2. MD. FAKHRUL ISLAM SECURITIES LTD.

XENTERPRISE Software Client List

1. BONIK BARTA



About XTrade OMS

What is XTrade OMS?

- XTrade OMS is a cutting-edge Order Management System designed to streamline capital market trading
- It offers fast, secure, and reliable order processing, empowering brokers and investors to make informed decisions with confidence

Key Features

- Real-time trading updates with zero latency
- Multi-level risk management and compliance
- Intuitive dashboard for easy decision-making
- Seamless integration with brokerage APIs

Designed for

- Stock brokers
- Investment firms
- Individual traders

Seeking

- Efficiency
- Transparency
- Reliability



Key Challenges in Capital Markets



High volatility
causing
unpredictable
risks

Complex
regulatory and
compliance
requirements

Slow order
processing
and
settlement
delays

Lack of
transparency
in trade
execution

Trends in Capital Markets



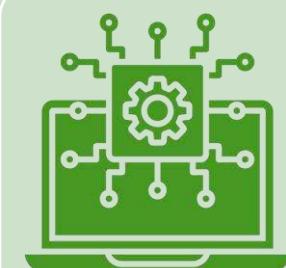
Real-time trading and algorithmic trading adoption

Integration of technology with financial platforms (FinTech)

Rise of automated OMS (Order Management Systems) for speed and accuracy

Increased focus on regulatory compliance and risk management

Role of OMS in Capital Markets



Automate
trade
processing



Reduce
latency



Ensure
regulatory
compliance



Provide
brokers and
traders with
actionable
insights to
make
smarter
decisions



CORE MODULES



CYGNUS INNOVATION LTD.

Business Software Experts

Software Solutions Experts

CYGNUS INNOVATION LTD.

Order Management Module

Enables fast, accurate, and real-time order placement, modification, and execution across multiple markets and instruments

- Multi-asset order handling (stocks, bonds, derivatives, commodities)
- Real-time order tracking and updates
- Multi-level approval workflow for large orders
- Smart Order Routing (SOR) to find best execution venues
- Bulk and basket order execution support



Risk Management Module

Comprehensive risk management ensures regulatory compliance and safeguards against excessive exposure

- Real-time exposure monitoring
- Margin and leverage calculations
- Alerts for breaches of pre-defined limits
- Pre-trade and post-trade risk checks
- Stress testing & scenario analysis



Portfolio Management Module

A comprehensive view of investor portfolios for informed decision-making

- Real-time portfolio valuation and P&L tracking
- Asset allocation and diversification insights
- Performance comparison across time periods
- Tax optimization and reporting
- Automated rebalancing tools



Analytics Module

AI-powered analytics provide insights from market data, trades, and portfolios

- Advanced trade analytics and reporting
- Historical data trends and visualizations
- Predictive analytics and alerts
- Sentiment analysis (news, social media impact)
- Heatmaps & sectoral performance



Security Module

Robust security framework protects user data and financial transactions

- Role-based access control
- Multi-factor authentication (MFA)
- End-to-end encryption
- Audit trails and activity logs
- Biometric login support (Face/Fingerprint ID)





ADVANCED & INNOVATIVE FEATURES



CYGNUS INNOVATION LTD.

Business Software Experts

U.S. GOVERNMENT PRINTING OFFICE 1914 10-1250

XTrade OMS - Advanced & Innovative Features

Real-Time Dashboards

Unified dashboards for a complete market, portfolio, and order view

- Customizable dashboard widgets
- Live updates of orders, trades, and market movements
- Quick access to critical KPIs
- Drag-and-drop visualization panels
- Cross-device synchronization (web + mobile)

Alerts & Notifications

Instant alerts for critical events via multiple channels

- Price movement alerts
- Risk exposure notifications
- Trade execution confirmations
- News & event-driven alerts
- Voice assistant integration (Alexa/Google)

XTrade OMS - Advanced & Innovative Features

AI/ML Analytics

Machine Learning enhances trading strategies and risk control

- Predictive analytics for price movements
- Algorithmic trade recommendations
- Pattern recognition for risk management
- AI-powered fraud detection
- Smart trade execution optimization

Mobile Trading App

Freedom of portability in your hands

- Full OMS functionality on mobile (iOS & Android)
- Biometric login
- Push notifications

XTrade OMS - Advanced & Innovative Features

Advanced Reporting

Customizable reporting system for better decision-making and compliance

- Automated report generation
- Export in PDF, Excel, or CSV formats
- Scheduled and on-demand reports
- Compliance-ready audit reports
- Visual report builder

Interactive Charts

Dynamic visualization tools for better insights

- Candlestick, line, bar, and depth charts
- Zoom-in, filter, and comparison tools
- Integration with AI/ML insights
- Chart-based trading (trade directly from charts)
- Technical indicators (RSI, MACD, Bollinger Bands)

XTrade OMS - Advanced & Innovative Features

API & Integration Layer

- Open APIs for third-party integrations
- FIX/ITCH protocol support
- Integration with market data feeds (Bloomberg, Refinitiv, DSE)

RegTech & Compliance

- Built-in compliance monitoring
- Automated regulatory reporting (local & global)
- AML/KYC integration

Cloud & Scalability

- Cloud-native deployment (AWS/Azure/GCP)
- High availability & auto-scaling
- Disaster recovery & backup solutions

XTrade OMS - Advanced & Innovative Features

Social & Community Trading

- Copy trading features
- Community insights and leaderboards
- Gamification for investor engagement

Blockchain & Digital Assets Support

- Secure custody of digital assets
- Tokenized securities trading
- Blockchain-based settlement

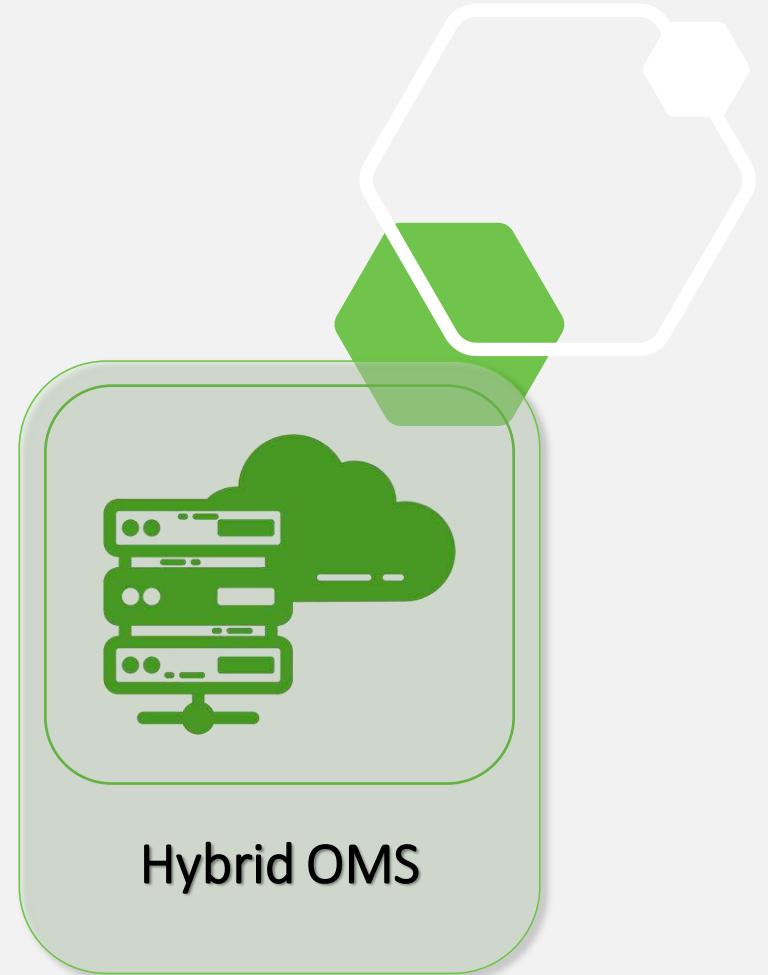
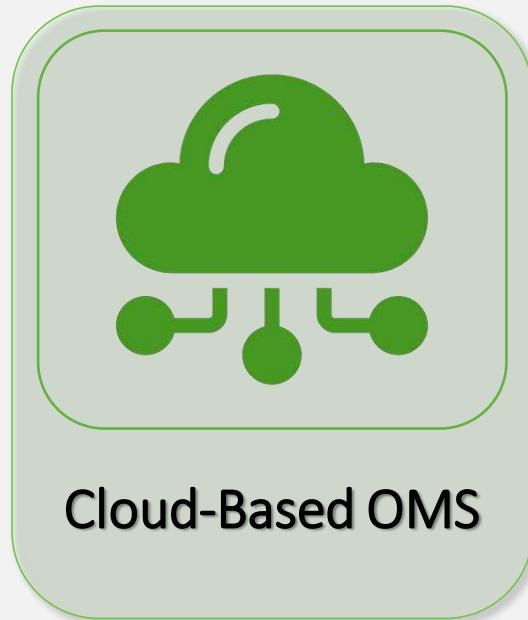




TYPES OF OMS & XTRADE ADVANTAGES

 **CYGNUS INNOVATION LTD.**
Business Software Experts
Software Solutions
Cygnus Innovation Ltd.

Types of OMS



Comparison Table – OMS Types

Feature / OMS Type	Traditional OMS	Cloud OMS	Hybrid OMS
Deployment	On-premises	Cloud	On-prem + Cloud
Cost	High upfront	Subscription	Medium
Scalability	Limited	High	Medium-High
Maintenance	In-house	Provider-based	Shared
Accessibility	Local network	Anywhere	Mixed
Security & Compliance	High	Provider-level	Mixed
Customization	Full control	Limited	Moderate

XTrade Advantages

XTrade OMS combines the best of all worlds, offering speed, scalability, and security

- Multi-type deployment options: cloud, on-premises, hybrid
- Fast and reliable order execution
- Real-time dashboards and analytics
- Strong risk management & compliance
- AI/ML-powered insights for smarter trading

How XTrade Saves Time & Reduces Risk

Traditional OMS / Manual Trading

- Receive order manually
- Record order in spreadsheet
- Approve via phone/email
- Submit order to exchange
- Manually track settlement and risk

XTrade OMS Automated Workflow

- Order entered in XTrade OMS dashboard
- Automated approval workflow
- Real-time submission to exchange
- Automated risk monitoring & alerts
- Real-time settlement tracking & reporting

Key Performance Indicators (KPIs)

Users experienced measurable improvements with XTrade

- Order processing time ↓ 70%
- Error rate ↓ 80%
- Trade execution speed ↑ 3x
- Risk exposure monitored in real-time
- Compliance breaches ↓ 90%



Market Need & Trend

Efficient OMS like XTrade are no longer optional but essential for brokers, investors, and trading firms

Market Statistics

- Global trading volume ↑ 20% YoY
- Algorithmic trading accounts for 70% of total trades in developed markets
- Cloud adoption in trading platforms ↑ 40% in last 3 years

Regulatory Pressures

- Mandatory trade reporting & compliance
- Real-time risk management standards
- Investor protection & audit trail obligations

Market Opportunities

- Faster, automated trading solutions
- Integration with AI/ML analytics for smarter decisions
- Scalability for growing trading volumes
- Cost-efficient cloud deployment



OMS Integration & Support

- XTrade OMS is designed to integrate seamlessly with existing trading and brokerage systems.
- Coupled with 24/7 support and structured training, it ensures smooth adoption and operational efficiency.

API Integration

- RESTful and WebSocket APIs for real-time order execution
- Integration with trading exchanges, CRM, risk, and portfolio systems
- Supports automated workflows and data synchronization

Third-Party System Integration

- Accounting & reporting systems
- Market data providers and news feeds
- Compliance and regulatory platforms

24/7 Support

- Round-the-clock technical support
- Live chat, email, and phone assistance
- Quick resolution for critical issues

Training & Onboarding

- Guided onboarding sessions
- User manuals, video tutorials, and webinars
- Continuous education for new features and modules



Frequently Asked Questions (FAQ)

- **Is XTrade OMS difficult to implement?**
 - Not at all. It comes with quick deployment, APIs for integration, and guided onboarding support. Most clients go live within days, not months.
- **Can XTrade OMS handle large trading volumes?**
 - Yes. It's cloud-native and scales automatically with market demand, handling peak loads seamlessly.
- **What about compliance with regulations?**
 - XTrade OMS is fully compliant with ISO 27001, GDPR, and SEC/DSE guidelines, ensuring audit readiness.
- **Does XTrade provide ongoing support?**
 - Yes. Our 24/7 support team ensures continuous assistance through live chat, phone, and email.

Common Myths

- **Myth 1: OMS is only for large firms.**

Reality: XTrade OMS is scalable and affordable, suitable for both small brokerages and large institutions.

- **Myth 2: Manual systems are more reliable.**

Reality: Manual systems increase human error risk. XTrade OMS ensures accuracy, automation, and audit-ready records.

- **Myth 3: OMS adoption is too expensive.**

Reality: Cloud deployment lowers cost significantly, with pay-as-you-grow flexibility.

- **Myth 4: OMS is too complex for staff to use.**

Reality: XTrade OMS features intuitive UI, training, and user-friendly dashboards.



TECHNOLOGY STACK



CYGNUS INNOVATION LTD.

Business Software Experts

Exercises 19.1 Writing Sentences

CHI NON AVVISO CONVIENE

Technology Stack

- XTrade OMS is built on a robust, scalable, and modern technology stack designed for performance, security, and flexibility in capital markets
- Each layer of our stack is optimized for real-time order processing, high availability, and future-proof innovation

Core Technologies

- Programming Languages
 - Python (core engine – speed, reliability, scalability)
 - Python (data analytics, AI/ML integration)
 - JavaScript / TypeScript (frontend, dashboards, interactivity)



Technology Stack

Frameworks

- Django
- FastAPI (Python APIs & ML models)
- React.js (real-time trading dashboards, visualizations)
- Node.js (event-driven processing, API gateway)
- State Management (Redux)
- RTK Quarry
- Next.js (Admin Panel)

Database & Storage

- PostgreSQL (primary transactional database, ACID compliance)
- MongoDB (flexible storage for unstructured trade data, logs)
- Redis (ultra-fast caching, session management)

Message Broker

- Kafka
- Redis (Pub-Sub)
- Redis (Stream)

Technology Stack

Cloud & Infrastructure

- Cloud Providers: multi-cloud ready
- Containerization: Docker (isolation, easy deployment)
- Orchestration: Kubernetes (scalability, self-healing clusters)
- Load Balancing: Nginx / HAProxy

Security & Compliance

- Data Encryption: AES-256, TLS/SSL
- Authentication & Authorization: OAuth2, JWT, Role-Based Access Control (RBAC)
- Compliance Standards: ISO 27001, GDPR, DSE/SEC guidelines

Streaming & Messaging

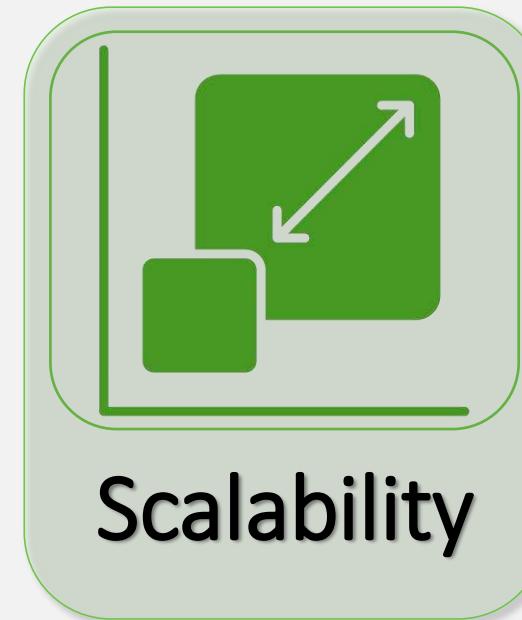
- Apache Kafka (real-time trade events)
- Redis (Pub-Sub)
- Redis(Stream)

DevOps & CI/CD

- Version Control: Git + GitHub/GitLab
- CI/CD Pipelines: Jenkins / GitHub Actions
- Monitoring: Prometheus + Grafana (system health, alerts), Node_Explorer
- Logging: ELK Stack (Elasticsearch, Logstash, Kibana)
- Automation: Ansible / Terraform (Infrastructure as Code)

Technology Stack

The XTrade OMS technology stack gives brokerage houses and investors confidence that they're working with the most advanced order management solution in the market by ensuring:



OMS System Architecture

XTrade OMS is built on a multi-layered, modular architecture that ensures:

- Real-time performance
- Scalability
- Secure integrations with trading systems, exchanges, and investor platforms

Client Layer (User Access Layer)

- Web platform (React.js dashboards, trading terminals)
- Mobile apps (Android/iOS)
- Broker terminals (desktop apps)
- Secure login with MFA

API Gateway & Integration Layer

- API Gateway (Node.js / Kong / NGINX)
- REST & WebSocket APIs for real-time trading
- FIX Protocol adapters
- ITCH Protocol
- Third-party API integrations (banks, KYC/AML services)

OMS System Architecture

Application Services Layer

- Order Management Module – order entry, modification, cancellation
- Risk Management Engine – exposure checks, margin limits, compliance
- Portfolio Management – holdings, P&L tracking
- Analytics & AI Engine – predictive models, trade patterns, anomaly detection
- Notification & Alerts – SMS, email, push notifications

Data Layer

- Transactional Database – PostgreSQL (ACID compliance)
- Market Data Storage – MongoDB / Time-series DB
- Cache – Redis (low-latency execution)
- Search & Logs – Elasticsearch

Infrastructure Layer

- Containers – Docker for microservices
- Orchestration – Kubernetes for auto-scaling
- Load Balancers – HAProxy / NGINX
- Monitoring & Logging – Prometheus, Grafana,
- Cloud Platforms – Local Cloud

Security & Compliance Layer

- End-to-end encryption (TLS 1.3, AES-256)
- Role-based access control (RBAC)
- Regulatory compliance (ISO 27001, GDPR, SEC/DSE guidelines)
- Intrusion detection & monitoring

OMS System Architecture

Infrastructure Layer

- Containers – Docker for microservices
- Orchestration – Kubernetes for auto-scaling
- Load Balancers – HAProxy / NGINX
- Monitoring & Logging – Prometheus, Grafana,
- Cloud Platforms – Local Cloud

Security & Compliance Layer

- End-to-end encryption (TLS 1.3, AES-256)
- Role-based access control (RBAC)
- Regulatory compliance (ISO 27001, GDPR, SEC/DSE guidelines)
- Intrusion detection & monitoring

Server & Hardware Requirements

- XTrade OMS is optimized for both cloud-native deployments and on-premise installations.
- To ensure **high availability, fault tolerance, and low-latency execution**, we recommend the following **specifications**:
 - Minimum Requirements (Pilot/Small Brokerage)
 - Recommended Requirements (Mid-to-Large Brokerage)

Minimum Requirements (Pilot/Small Brokerage)

Component	Minimum Specification
CPU	4 Cores (Intel Xeon / AMD EPYC / equivalent)
RAM	16 GB
Storage	500 GB SSD (NVMe preferred)
Network	1 Gbps Ethernet
OS	Linux (Ubuntu 22.04 LTS / RHEL 9)
Database Server	PostgreSQL 14+ with replication enabled
Backup	Daily incremental + weekly full backup

Recommended Requirements (Mid-to-Large Brokerage)

Component	Recommended Specification
CPU	8–16 Cores (Intel Xeon Gold / AMD EPYC series)
RAM	32–64 GB
Storage	1–2 TB NVMe SSD + separate 1 TB backup storage
Network	Dual 10 Gbps Ethernet (with redundancy)
OS	Linux (Ubuntu LTS / RHEL / CentOS Stream)
Database Server	PostgreSQL cluster + Redis + MongoDB
High Availability	Load Balancer (HAProxy/NGINX) + Kubernetes nodes
Backup	Automated cloud backup + on-premises archive

Cloud Deployment Options

Cloud Provider	Recommended Setup	Notes
Local Data Center	Best in Industry	Best for scalable

On-Premise Deployment Options

- Single Server Deployment (Small Brokerage): All services on one high-performance server.
- Cluster Deployment (Large Brokerage): Separate nodes for Application, Database, and Analytics.
- Disaster Recovery (DR): Secondary server at remote site with automated replication.

Additional Recommendations

- UPS & Power Backup – Minimum 30 mins uptime during outages.
- Firewall & IDS/IPS – Hardware firewall + intrusion detection.
- Redundancy – Dual power supply, RAID storage, failover clustering.
- Monitoring – Github Action, Prometheus + Grafana for real-time hardware utilization.

Roadmap & Future Plan

XTrade OMS is not just a trading engine for today — it is a future-ready capital market platform that continuously evolves with AI, cloud-native innovations, and regulatory advancements.



Planned Features & Enhancements

- AI-Powered Decision Support – predictive order execution, anomaly detection, robo-advisory modules.
- Advanced Analytics Dashboards – customizable KPIs, risk heatmaps, profit/loss trends.
- Multi-Asset Support – equities, bonds, commodities, derivatives, crypto.
- Cross-Border Trading – OMS adaptation for multiple exchanges & jurisdictions.
- Mobile-First Expansion – full trading features via iOS/Android apps.
- Regulatory Automation – automatic compliance reporting (DSE, SEC, MiFID II).
- Blockchain for Settlements – faster clearing & settlement using distributed ledger.

AI Integration Roadmap

- Phase 1: Real-time anomaly detection for fraudulent/irregular trades.
- Phase 2: Predictive risk modeling & portfolio optimization.
- Phase 3: AI-based sentiment analysis from market news & social feeds.
- Phase 4: Autonomous trading assistants (robo-traders with compliance controls).



Expansion Goals

Short-Term (1–2 Years):

- Expand across regional brokerages.
- Strengthen integrations with banks & fintech APIs.
- Introduce AI-based risk monitoring.

Mid-Term (3–4 Years):

- Enter international markets with multi-exchange compatibility.
- Launch cloud-native SaaS OMS offering.
- Support commodities & derivatives trading.

Long-Term (5+ Years):

- Full AI-driven trading ecosystem (portfolio management + execution).
- Blockchain-based settlement & clearing.
- Global expansion into developed markets (NYSE, LSE, SGX).



Security & Compliance Details

- Security and compliance are non-negotiable in a capital market OMS
- XTrade OMS ensures data integrity, confidentiality, and regulatory compliance through multi-layered security architecture and adherence to global standards

Core Security Features

Data Encryption

- At Rest: AES-256 encryption for databases, logs, and backups.
- In Transit: TLS 1.3 + HTTPS for all communication.
- API Security: OAuth 2.0 / JWT tokens for secure API calls.

Authentication & Access Control

- Multi-Factor Authentication (MFA): Password + OTP/biometric.
- Role-Based Access Control (RBAC): Separate privileges for traders, admins, compliance officers.
- Session Monitoring: Auto time-outs, suspicious login alerts.

Core Security Features

Application Security

- OWASP Top 10 Mitigation: Protection against SQL injection, XSS, CSRF
- API Rate Limiting & Throttling to prevent abuse
- Regular Penetration Testing & Vulnerability Scanning

Compliance Standards

- ISO 27001 – Information Security Management
- GDPR – Data privacy compliance (user consent, right to erasure)
- SOC 2 Type II – System & Organization Controls
- Local Capital Market Regulations:
 - Bangladesh BSEC & DSE guidelines
 - MiFID II for EU integration
 - SEC/FINRA rules for US expansion

Get in Touch with Us



+880 1911-736731
+880 1730-357154
+880 19172-69727



info@cygnusinnovation.com



<https://cygnusinnovation.com>



Cygnus Innovation Ltd
House: C-39, 1st Floor, Block: C, Niketon, Gulshan-1
Dhaka-1212, Bangladesh



CYGNUS INNOVATION LTD
Business Software Experts

