Senior Technical lead - Network Programming - Rainbow Six Siege

Montreal - Full-time - 744000142870100

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As a Technical Lead – Network Programming, you will serve as the technical authority for multiplayer systems, network architecture, game replication, dedicated server technology, and online services. You will define the long-term technical strategy for networking systems while leading a team of programmers responsible for delivering performant, scalable, and secure multiplayer experiences.

You will drive architectural decisions affecting millions of players, balancing gameplay requirements, server performance, scalability, reliability, security, and operational costs. You will collaborate closely with Gameplay, Engine, Online Services, Security, Data, Production, and Live Operations teams to ensure the online experience meets the highest standards of quality and competitiveness; aligning closely with Ubisoft's expectations that Technical Leads define technical vision, provide technical oversight, mentor teams, and act as trusted experts across the organization.

What you'll do

Technical Vision & Architecture

- Define and own the networking architecture roadmap for current and future projects.
- Establish long-term strategies for:
    - Game state replication
    - Server authority models
    - Client prediction and reconciliation
    - Lag compensation
    - Matchmaking integrations
    - Online infrastructure
    - Distributed game services
- Make critical technical decisions regarding server architectures, networking frameworks, and backend integrations.
- Evaluate technical trade-offs among latency, bandwidth, scalability, security, and development velocity.
- Ensure networking systems remain scalable throughout the entire lifecycle of our live game.

Multiplayer Systems Ownership

- Own the architecture and evolution of:

    - Dedicated game servers
    - Replication systems
    - Session management
    - Matchmaking integrations
    - Backend service integrations
    - Cross-platform multiplayer functionality
- Establish performance budgets and networking best practices.
- Drive improvements to server stability, uptime, and operational efficiency.
- Lead investigations into systemic online gameplay issues affecting player experience.
- Ensure networking systems support future gameplay ambitions without major redesigns.

Performance & Scalability

- Define performance targets for:
    - Server tick rates
    - Bandwidth consumption
    - CPU utilization
    - Memory usage
    - Replication costs
    - Service response times
- Analyze large-scale telemetry and production metrics.
- Lead optimization initiatives for high-scale multiplayer environments.
- Develop strategies to support player population growth and evolving infrastructure requirements.
- Collaborate with Live Operations and Online Services groups to maintain service health.

Reliability & Security

- Establish standards for service resiliency and fault tolerance.
- Drive initiatives to minimize service disruption and downtime.
- Partner with security teams to address:
    - Exploits
    - Packet manipulation
    - Authority bypass attempts
    - Cheating vectors
    - Service abuse
- Define secure networking practices across the project.
- Participate in incident response and root cause analysis for large-scale production issues.

Leadership & Mentorship

- Lead and mentor network and online systems programmers.
- Help engineers grow into senior and specialist roles.
- Review architecture, designs, and code for technical excellence.
- Foster a culture of ownership, accountability, and continuous learning.
- Establish best practices and technical standards for multiplayer development.
- Act as the primary escalation point for complex networking issues.

Cross-Disciplinary Collaboration

- Work closely with:
    - Gameplay Programming
    - Engine Programming

    - Quality Engineering
    - SRE / Operations
    - Backend Services
    - Data Engineering
    - Security
    - Production
- Translate technical constraints into actionable recommendations for non-technical stakeholders.
- Align multiplayer architecture with business, production, and player experience goals.
- Coordinate networking initiatives across multiple teams and studios when required.

What you bring to the team

Required

- 10+ years of professional software engineering experience.
- 7+ years of experience developing multiplayer systems.
- Proven experience leading technical initiatives for large-scale online games.
- Deep expertise in:
    - Client/server architecture
    - Real-time networking
    - Replication models
    - Distributed systems
    - Concurrency and multithreading
    - Performance optimization
- Very strong C++ expertise.
- Experience with dedicated server development and operation.
- Experience supporting live-service products in production.
- Demonstrated ability to influence technical direction across multiple teams.

Preferred

- Experience shipping competitive multiplayer titles.
- Experience with large-scale live-service architectures.
- Experience building backend services and cloud-native systems.
- Knowledge of AWS/Azure/Gamelift/Playfab, and service orchestration.
- Experience with telemetry, observability, and production monitoring.
- Experience working across multiple studios and global development organizations.