

SOLUTION BRIEF

NETWORK GAMING EXPERIENCE

The world of online gaming is a fierce battleground. Multiplayer matches and live streams thrive or fail based on seamless network performance. Lag, interruptions, and unresponsive gameplay can turn potential wins into frustrating losses and send viewers searching for other entertainment.

That's why Cirries DART enters the arena – a powerful network visibility solution ensuring the quality of experience every gamer deserves.



DART

DATA ANALYSIS in REAL TIME


cirries®

ELEVATING YOUR GAMING EXPERIENCE WITH DART

In today's contemporary gaming landscape, characterized by the prevalence of online multiplayer experiences and live streaming, the role of network performance cannot be overstated in defining the quality of the gaming encounter. Gamers across the globe demand uninterrupted gameplay, minimal latency, and responsive interactions, underscoring the critical importance of network monitoring in any thriving gaming application.

Cirries DART offers a comprehensive network visibility solution designed to guarantee that each player's Quality of Experience (QoS) aligns with the prerequisites of equitable play. The primary goal is to efficiently resolve network performance and security issues swiftly, thus maximizing the overall gaming experience.

THE CRUCIAL ROLE OF NETWORK MONITORING

Network monitoring is the linchpin of multiplayer online gaming, facilitating real-time communication and collaboration between players. It ensures the efficient and low-latency transmission of data between players and game servers. Here are several key reasons why network monitoring is indispensable:

Reduced Latency: Latency signifies the delay between a player's input and the game's response. Elevated latency can lead to noticeable delays in actions, detrimentally affecting the overall gaming experience. Network monitoring is instrumental in maintaining minimal latency, ensuring responsiveness and precision during gameplay.

Minimal Lag and Packet Loss: Lag, packet loss, and jitter can disrupt the gaming experience, resulting in stuttering or freezing. Real-time network monitoring tools identify and mitigate these issues promptly, delivering a smoother and more enjoyable gaming experience.

Competitive Advantage: In the competitive landscape of esports and gaming, even milliseconds can determine victory or defeat. A well-monitored network provides players with a competitive edge, enabling quicker reactions and precise execution of strategies.

Reliable Online Interactions: Online multiplayer games rely heavily on real-time communication among players. A robust network guarantees effective player communication, seamless coordination of strategies, and uninterrupted social interactions.

Quality Streaming: For gamers who stream their gameplay on platforms such as Twitch or YouTube, network performance is paramount. A stable and high-speed network facilitates higher-quality video streaming, preventing buffering or interruptions that can deter viewers.

Security and DDoS Protection: Gaming platforms are prime targets for Distributed Denial of Service (DDoS) attacks and other threats. Network monitoring tools enhance security by detecting and mitigating malicious traffic, safeguarding gaming servers and player data.

3.2 BILLION

There are over 3.2 billion gamers worldwide, demonstrating the massive and continuously expanding user base of network-dependent gaming.

80 BILLION

An estimated 80 billion devices will be connected to the Internet by 2025, underscoring the ever-increasing congestion and competition for network resources within the gaming ecosystem.

\$200 BILLION

The online gaming industry is worth over \$200 billion. This highlights the significant financial implications of providing a seamless network gaming experience.

*The provided statistics highlight the importance of network performance in gaming. While these figures are based on reliable sources, they should be considered representative rather than absolute guarantees of individual player experience.

INTEGRATION WITH GAMING SERVERS & PLATFORMS

Effective integration with gaming servers and platforms is crucial to ensure seamless gameplay, detect issues in real-time, and optimize network performance. This integration involves several key steps and considerations:

Selection of Network Monitoring Tools: Choosing network monitoring tools that are compatible with the gaming servers and platforms you use. These tools should offer the features and capabilities needed for effective monitoring.

Deployment of Network Monitoring Agents: Deploy network monitoring agents or sensors strategically within your gaming infrastructure. These agents should be placed at key points, such as near-game servers, data centers, and network gateways.

API Integration: Many network monitoring solutions offer Application Programming Interfaces (APIs) that allow for seamless integration with gaming servers and platforms. Utilize these APIs to extract relevant data and metrics.

Data Collection and Analysis: Collect a wide range of data related to network performance, including latency, packet loss, bandwidth utilization, and server health. Analyze the collected data in real-time to identify anomalies, trends, and issues that could affect gameplay.

Real-time Alerts and Notifications: Configure the network monitoring system to issue real-time alerts and notifications when predefined thresholds or anomalies are detected. These alerts can be sent to network administrators or relevant stakeholders through various communication channels.

Performance Metrics and Reporting: Develop customized dashboards and reports that display performance metrics and trends. These reports can provide insights into the health of your gaming network and help in making informed decisions.

Quality of Service (QoS) Implementation: Implement Quality of Service (QoS) policies within your network to prioritize gaming traffic over other types of data. This ensures that gaming data receives the necessary bandwidth and priority to maintain low latency and minimize packet loss.

Security Integration: Integrate security measures within the network monitoring system to detect and mitigate security threats, such as DDoS attacks or unauthorized access attempts, in real-time.



REAL-WORLD APPLICATIONS

Network monitoring isn't limited to just one type of game or gaming platform. It has diverse applications across the gaming industry:



Multiplayer Online Games

Games like "Fortnite," "Call of Duty," and "League of Legends" rely on robust network monitoring to provide millions of players with low-latency, high-quality gameplay experiences.



Mobile Gaming

Mobile gaming apps, from casual to competitive titles, benefit from network monitoring to offer a seamless gaming experience on smartphones and tablets.



Cloud Gaming Services

Advanced network monitoring to deliver high-end gaming experiences via the cloud, reducing the need for powerful local hardware.



Esports Tournaments

Esports events, which often feature large-scale competitive matches, depend on network monitoring to ensure fair and consistent gameplay for professional players.

BENEFITS OF DART

Performance Metrics for Every Aspect

You have access to a comprehensive array of Key Performance Indicators (KPIs) to evaluate network, infrastructure, and application performance via a single troubleshooting interface. These KPIs cover areas such as TCP performance, RTP metrics, network usage, user experience, application performance, and voice and video Quality of Experience (QoE). In today's dynamic gaming landscape spanning legacy, virtual, and cloud infrastructures, understanding network trends, application usage, response times, and areas of unacceptable performance can be challenging. DART comprehends the geography of users and application flows, identifies areas of high usage, assesses response times, and addresses session quality concerns swiftly.

Network, User Experience & Application Performance Monitoring

DART analyzes all network traffic and application transactions in real-time, producing numerous detailed metrics on voice, video, and application performance. It detects network bottlenecks, application latency, and web application issues by collecting performance metrics from network packet sensors and metadata sensors, then storing them in a centralized time-series database. This architecture allows for an immediate baseline of overall network and application performance, empowering you to promptly identify network and application/server trends and anomalies.

Automated Actions and Drill Down

DART drastically reduces the time required to identify and resolve network issues by proactively alerting of any user or device experiencing subpar performance. It monitors and displays performance metrics, issuing notifications when predefined thresholds for poor Quality of Experience (QoE) are breached. Furthermore, DART offers drill-down capabilities, enabling swift fault isolation to pinpoint the root cause of performance degradation. With just a few clicks, you can identify the issue, whether it be network congestion, retransmissions, packet loss, high CPU usage, or application response problems. DART allows you to create alerts and workflows to automatically investigate and provide a solution for the issue.

Intellidata

Monitoring network flows is pivotal in understanding network behavior and performance. DART generates Intellidata, a packet level understanding of the communications for each session in the network. Unlike traditional Netflow Generators that sample data at ratios of 1024:1 or higher, DART evaluates every packet in a flow. This provides detailed metrics for each flow, including latency and encountered error conditions along the flow path, which is crucial for rapidly identifying and resolving performance and security issues.

SUMMARY

Network monitoring for gaming applications is not a luxury but a necessity in the fiercely competitive gaming arena. By ensuring optimal network performance through DART, both developers and players can relish smoother, more responsive gameplay. In an era dominated by multiplayer experiences where the line between virtual and real-world competition blurs, DART ensures that the gaming universe remains interconnected, exhilarating, and accessible to all. Elevate your gaming experience with DART and secure your place in the thriving world of online gaming.



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