



Enterprise AI Network Troubleshooting

LEVERAGING THE POWER OF AI TO
MANAGE YOUR NETWORK



Enterprise AI Network Troubleshooting Delivers:

Easy Network Data Exploration

Via an easy to use, AI-powered natural language question and answer UI and user experience, users can explore all of their network data across any metric and contextual dimension.

Detailed Analysis Results

Generative AI "why" explanations based on data results in table and graphical form, automatically choosing the best graphs and dimensions based on the results.

Suggestive Exploration

AI App Analyst maintains full context of the analysis within a Q&A session and uses this to generate prompt suggestions for further user exploration based on the context and results.

Reasoning Explanations

AI AppAnalyst provides background audit trails of the model's reasoning process so users understand the reasoning process and paths taken.

EXECUTIVE SUMMARY

Modern enterprise networks are highly complex with thousands of applications, a wide variety of content, 10s of thousands of users, and multitudes of physical locations all creating tremendous management challenges for NetOps teams. By leveraging the power of artificial intelligence (AI), NetOps teams can gain faster, more detailed insights into their network performance and issues to keep things running smoothly and more quickly troubleshoot and resolve problems.

BUSINESS CHALLENGES

Enterprise network complexity is at an all-time high and bandwidth consumption is projected to continue growing at 30-40 percent per year, further increasing this complexity. 10s of thousands of users and devices, spread across many different locations, working with an every growing number of cloud and SaaS applications is creating a management nightmare for network teams who need to balance the network traffic and eliminate problems even more quickly.

Dashboards are highly useful in providing the most immediate actionable insights around the most critical questions NetOps teams need to answer. However, they do not always answer every question your network operations team needs, sometimes involve multiple layers of drill-down or –across for troubleshooting, or require personnel to have deep expertise into the meaning and impact of specific network metrics.

This is where AI provides value. AI in network observability can help ease network management demands by providing greater visibility and deeper "why" explanations to help NetOps teams better understand their network.

APPLIC NETWORKS' SOLUTION

AppLogic Networks AI AppAnalyst provides a unique and powerful Q&A interface where users can ask any question of the AppQoE data in natural language and get clear, insightful analysis and explanations. AI AppAnalyst not only provides the data in answer to the question but also uses generative AI and automated analysis to explore the data, look for outliers in the metrics, and provide a detailed explanation to the users as to what is going on and why.

CORE CAPABILITIES

Natural Language Q&A

AI AppAnalyst provides an easy to use natural language Q&A interface to explore overall network performance and identification of potential issues. Users can ask practically any question of their data, at any angle, and are no longer limited to dashboard views.

AI-powered Analysis

AI App Analyst provides detailed, AI-powered analysis across network performance metrics and dimensions to identify network and QoE issues. This helps surface potentially hidden issues and speeds the problem identification process.



KEY BENEFITS AND OUTCOMES:

- Increased NetOps team efficiency and productivity in monitoring, managing and troubleshooting their networks,
- Easy exploration of all performance metrics across a wide variety of contextual dimensions to gain immediate insights into network performance,
- Faster identification of critical network problems and generative AI guidance with regard to the issues at hand,
- Faster problem troubleshooting and resolution to better maintain SLAs and reduce the trouble-ticket backlog,
- Identification of hidden network optimization areas to better manage bandwidth utilization, raise user and application QoE and reduce network costs.

Generative AI Explanations

AI AppAnalyst provides detailed generative AI explanations of its analysis of the network metrics, for “why” explanations. This reduces the burden on the users to interpret a multitude of metrics by identifying and explaining the critical ones.

Suggestive Explorations

In the generative AI answers, AI App Analyst provides prompt suggestions based on the context of the questions and returned metrics. This provides the users with hints as to what areas to explore and drill-down questions to ask to help guide data exploration.

Broad, Contextual Coverage

With AI AppAnalyst, users can explore data across the many contextual dimensions supported by AppLogic Networks network observability solution and AppQoE data all within a single question. This exposes ALL network data to gain deeper and broader viability.

Figure 1

AI Troubleshooting of Apps with AI AppAnalyst

compare and analyze the qoe scores for the conferencing apps

Answer Visualization Reasoning CoT

The analysis of conferencing applications' QoE scores reveals significant performance disparities, with Microsoft Teams showing concerning quality issues that require immediate attention. Over the last 24 hours, **Webex leads with an excellent QoE score of 4.34**, followed by **Zoom at 4.04**, **Slack at 3.62**, and **Microsoft Teams trailing significantly at 2.79**. This 1.55-point spread indicates substantial user experience differences across platforms.

The root cause analysis reveals that **Microsoft Teams' poor performance stems from critical network quality issues**: the application experiences the **highest average latency at 63ms** (70% higher than Webex's 37ms) and **significant packet loss at 2.08%** (over 6 times higher than Webex's 0.34%). These network connectivity problems directly correlate with the poor user experience, as high latency and packet loss severely impact real-time communication quality essential for conferencing applications.

Notably, **Zoom demonstrates impressive scalability**, maintaining a strong 4.04 QoE score while serving the largest user base (170 subscribers) and handling the highest data volume (170.65 GB). This suggests robust infrastructure capable of maintaining quality under load. However, the analysis is limited by the inability to examine weekly trends due to data retention constraints, preventing determination of whether Teams' issues represent a recent degradation or persistent problem.



Suggested Questions:

What specific locations or network sites are experiencing the worst Microsoft Teams performance?



How does Microsoft Teams' performance vary by time of day over the past week using hourly data?



What is the breakdown of Microsoft Teams' performance by application content type (video calls vs. voice calls vs. messaging)?



How do the QoE scores for all conferencing apps compare across different service plans?



What is the correlation between device types and QoE performance for Microsoft Teams users?





Figure 2

AI Troubleshooting of Network Locations with AI AppAnalyst

What is the application usage pattern comparison between these suffering locations and high-performing locations?

Answer Visualization Reasoning CoT

The application usage pattern comparison reveals **dramatic disparities** between suffering and high-performing locations, exposing both critical infrastructure failures and distinct user behavior adaptations. The suffering locations (SV2-Quality and SV2-Finance) demonstrate a **business-focused usage pattern severely hampered by infrastructure limitations**, while high-performing locations support diverse entertainment and productivity applications with excellent quality.

Key Performance Contrasts:

- **Volume disparity:** High-performing locations handle up to 163GB for single applications (BitTorrent) versus maximum 20GB in suffering locations
- **Latency crisis:** Suffering locations experience 3-10x higher latency (66-127ms vs. 7-37ms in high-performing areas)
- **Quality degradation:** Consistent poor QoE scores (0.42-2.0) in suffering locations versus excellent performance (4.0-4.76) elsewhere

Application Category Patterns: Suffering locations show heavy reliance on:

- **Business applications:** Microsoft suite dominates with 19.97GB usage despite poor performance
- **Conferencing tools:** Microsoft Teams suffers severely (120.9ms latency, 6.07% packet loss)
- **Cloud services:** Amazon AWS shows critical connectivity issues (111ms latency, 3.4% packet loss)
- **Basic web browsing:** Users forced to rely on simpler services due to infrastructure limitations

High-performing locations successfully support:

- **Gaming:** PlayStation delivers exceptional performance (118-122GB, 4.0+ QoE)
- **Entertainment:** Video streaming and social media operate smoothly
- **File sharing:** BitTorrent achieves 163GB volume with 4.2 QoE score

The temporal analysis confirms these are **persistent infrastructure problems, not capacity issues**, as performance doesn't correlate with usage intensity or peak hours.



Suggested Questions:

How do service plans and subscriber types correlate with the poor performance in these suffering locations? 

What specific network infrastructure components (gateways, access nodes, interfaces) serve the SV2-Quality and SV2-Finance locations? 

How does device type and connectivity method impact application performance in these suffering locations? 

What is the historical trend of application performance degradation at these locations over the past month? 

ABOUT APPLIC NETWORKS

AppLogic Networks' cloud-based App QoE portfolio helps customers deliver high quality, optimized experiences to consumers and enterprises. Customers use our solutions to analyze, optimize, and monetize application experiences using contextual machine learning-based insights and real-time actions. Market-leading classification of more than 95% of traffic across mobile and fixed networks by user, application, device, and location creates uniquely rich, real-time data that significantly enhances interactions between users and applications and drives revenues. For more information visit <https://www.applogicnetworks.com> or follow AppLogic Networks on X @AppLogic Networks.



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