AppLogic NETWORKS

Network Observability and Optimization for IoT Networks

SOLUTION BENEFITS:

- Reliable IoT networks to ensure a timely flow of device and sensor data to keep operations running smoothly

- Reduced network costs via optimized IoT networks that manage the flow of device and sensor data

- Continuous optimization of networks via always-on analytics and situational optimization policies

- Proactive and more productive network operations to identify, troubleshoot and resolve network issues and impacted applications, locations and users

- Faster, confident adoption and rollout of new sites and network services to expand operations

Manufacturing, supply chain, utility, and energy firms are increasingly relying on smarter, interconnected networks of IoT sensors and devices to gather critical information about their operations and keeping things running smoothly. Under the covers are highly distributed and complex networks that facilitate the flow of data. The dependence of the IoT network and data for real-time, day-to-day operations requires both network resiliency and traffic optimization to deliver the bandwidth that supports the massive amounts of data generated from the these devices. Seeing optimized networks as business critical, these organizations are turning to AppLogic Networks' Enterprise Solution to give them the visibility and optimization they need to better operate their networks and keep their operations running smoothly.

CHALLENGES

Many organizations utilizing IoT devices and data are facing new network operational challenges as they deploy and are increasingly relying upon smart networks that maintain a flow of critical operational data. The heavy amount of data coming from the SmartGrid, IoT or sensor devices consume tremendous amounts of bandwidth while requiring increased resiliency and lower latency.

The networks supporting this data flow are highly distributed and complex, covering large territories and using multiple network technologies (4G/5G, satellite, microwave, broadband). These networks can be costly, at a time when heads of Network Operations are all being asked to control costs, and ensuring they are reliable, resilient, and optimized to deliver this heavy flow of data is a major challenge for network operations teams. These demands have a trickle effect down to the network and network operations, including:

- The inability to gain complete visibility into use and performance in these highly complex networks and identify where, when and how to optimize it

- Ensuring smarter, interconnected networks can support new, rich content types from sensors and devices including video, streaming data, and collaboration,

- Maintaining network resilience so that bandwidth is properly allocated to critical operational applications even when resources are diminished,

- Properly allocating and dedicating bandwidth to the heavy volumes of data from IoT or sensor network and de-prioritizing non-essential apps

- Getting better use of the existing network to control costs and defer capital or operational expenditures

APPLOGIC NETWORKS' ENTERPRISE SOLUTION

AppLogic Networks' Enterprise Solution is the only network optimization solution on the market that provides both critical components of network management – network observability and network optimization – integrated into a single solution and with a continuous optimization process to ensure your network operates smoothly and efficiently.

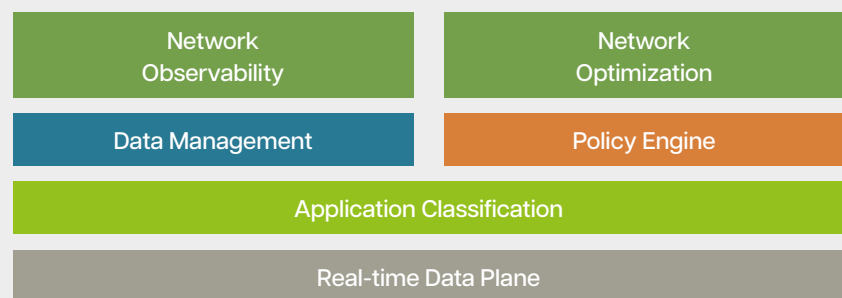APPLOGICNETWORKS.COM

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Both components are supported by AppLogic Networks' industry-leading application classification, network data plane and real-time policy management technologies that have helped optimize some of the largest networks in the world.

- **Network Observability** – AppLogic Networks' advanced analytics provides a detailed understanding of what's going on with your network to identify and troubleshoot problems and pinpoint where and how to optimize.
- **Network Optimization** – AppLogic Networks' comprehensive traffic management capabilities give you the pinpoint controls to optimize your network where, when and how you need it in real-time.

Figure 1

AppLogic Networks' Enterprise Solution Components

Network Observability	Network Optimization
Data Management	Policy Engine
Application Classification	
Real-time Data Plane	

APPLOGIC NETWORKS' PILLARS OF NETWORK OPTIMIZATION
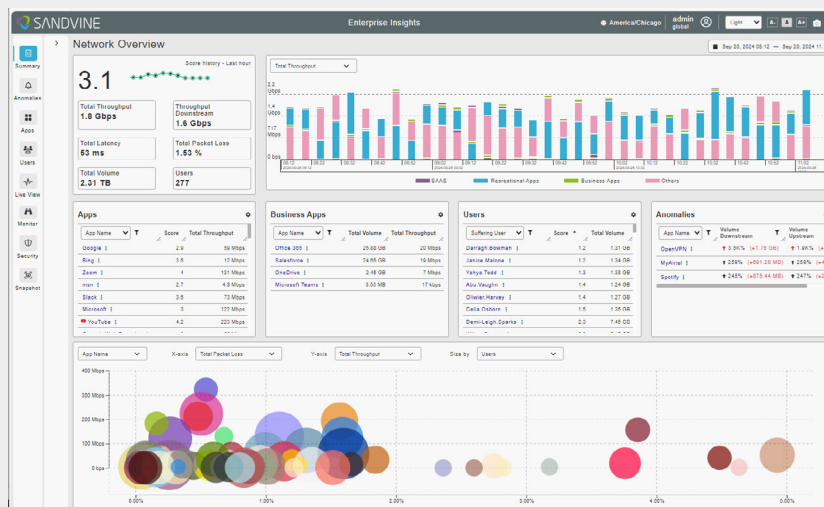
Network Observability

Many network heads in any organization struggle with gaining the visibility they need on their networks. The complexity of energy and utility networks creates even more difficulty in gaining top-level visibility and the details of what specifically is happening. If the goal is to optimize the network, you can't figure out where and how to optimize without detailed analytics.

AppLogic Networks' comprehensive network observability provides the breadth and depth of analytics to provide visibility for operating the network from day to day and to identify ways to optimize network traffic. With AppLogic Networks' network observability, you get:

- Comprehensive dashboards for network, user and application performance with actionable insights,
- Machine-learning driven Quality of Experience scoring and 18 network performance metrics,
- Multi-dimensional data model with 7 network dimensions with correlated scoring and metrics across all dimensions,
- Application-, user-, and location-aware metrics,
- Anomaly detection and alarms engine,
- Drill down into dimensions and values for troubleshooting and optimization identification,
- Real-time (LiveView) metrics and performance data correlated across different dimensions.

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Figure 2

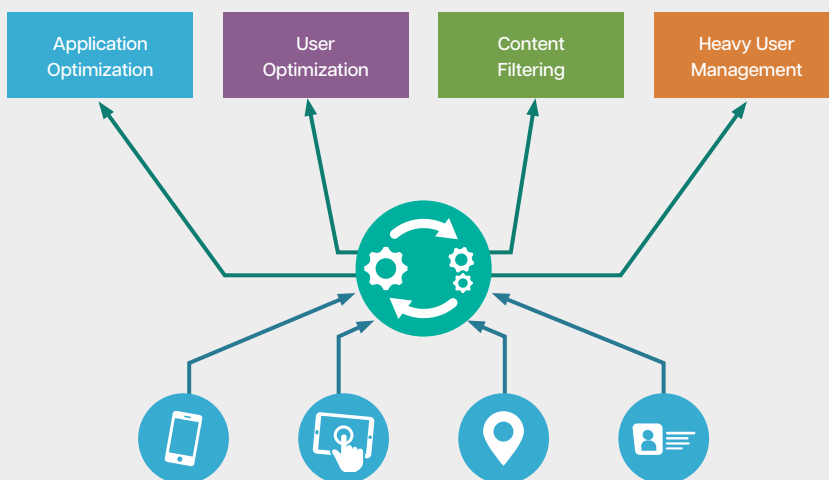Enterprise Insights Network Observability

Network Optimization

Organizations using IoT and sensor devices are especially challenged due to the dependency on their networks and data for day-to-day operations AND the high bandwidth consumed by the high volume data coming from the devices. This can lead to tremendous and sometimes conflicting demands on the network across data, applications and locations.

AppLogic Networks has industry-leading traffic management capabilities that give you the pinpoint attributes over who, what, when, where and how of optimization and the real-time controls to execute policies. With AppLogic Networks' network optimization, you get:

- Real-time, low-latency policy execution
- Dynamic policies with situational execution during times of network degradation or other resiliency situations
- Contextual policy attributes for pinpoint control of bandwidth and network resources
- Situational, time, analytics, network condition and custom policy triggers
- Policy execution metrics and statistics

Figure 2

Enterprise Traffic Management for Network Optimization

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WHY APPLOGIC NETWORKS?

Organizations with IoT and sensor networks worldwide rely on AppLogic Networks to help them gain visibility and optimize their networks. With AppLogic Networks' Enterprise Solution, you uniquely get:

- The industry's leading application classification technology with over 95+% classification of traffic, the highest in the industry (others have no more than 60%),
- Dynamic, real-time optimization policies that can be applied with many different attributes and understand network conditions for the best possible optimization,
- Depth and breadth of the network observability data and insights to provide unmatched contextual insights for troubleshooting and optimization,
- Advanced machine learning-based QoE scoring models that use real-world data to understand the impact of a deep set of metrics (15) on applications and content, and
- Extremely high-scale and low-latency network data and optimization proven at some of the largest networks in the world

THE RESULTS

Using AppLogic Networks' Enterprise Solution, IoT companies can see immediate results including:

- Lower, deferred, or eliminated CAPEX costs for network equipment to increase bandwidth capacity,
- Reduced OPEX costs due to lower subscription and network service costs and higher NetOps team productivity,
- Maintaining SLAs and required bandwidth for business-critical operational applications and SmartGrid and sensor data pipelines
- The ability to offer network resiliency to maintain business continuity and data flow
- A reduction trouble-tickets and have faster mean-time to resolution of network problems
- Return on investment payback in 6 to 8 months based on cost savings and better network productivity

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