Ribbon Analytics - Planner Application

Use Machine Learning to Forecast Network Capacity and Performance Requirements

Predicting Traffic Characteristics and Usage Demands

Ribbon Analytics Planner application lets service providers create forecasts and run simulations to plan network capacity and manage network performance. The predictive analytics application uses machine learning (ML) to analyze historical data, and anticipate future trends and requirements. Network planners, traffic engineering teams, and network operations organizations use Planner to intelligently identify traffic patterns, size networks, plan system capacity, diagnose problems, and strengthen security. Customizable dashboards let administrators easily visualize traffic and run on-demand or scheduled "what-if" scenarios.

Planner helps service providers avoid guesswork, minimize total cost of ownership, and optimize service quality and subscriber satisfaction. The solution is part of Ribbon Analytics suite of Operations applications and runs on a variety of hypervisors like VMware ESXi and KVM, and on public clouds like AWS and hybrid cloud platforms like OpenStack.

Visualizing Network Capacity and Performance Requirements

Planner includes out-of-the-box and customizable dashboards for proactively examining network capacity and performance requirements. Administrators can run simulations to predict traffic patterns, troubleshoot issues, and identify potential performance bottlenecks.

Leverage machine learning to project traffic and resource requirements based on historic data:

- *Use predictive views of network usage and behaviors to accurately forecast future traffic demands*
- *Enable "what-if" analysis*

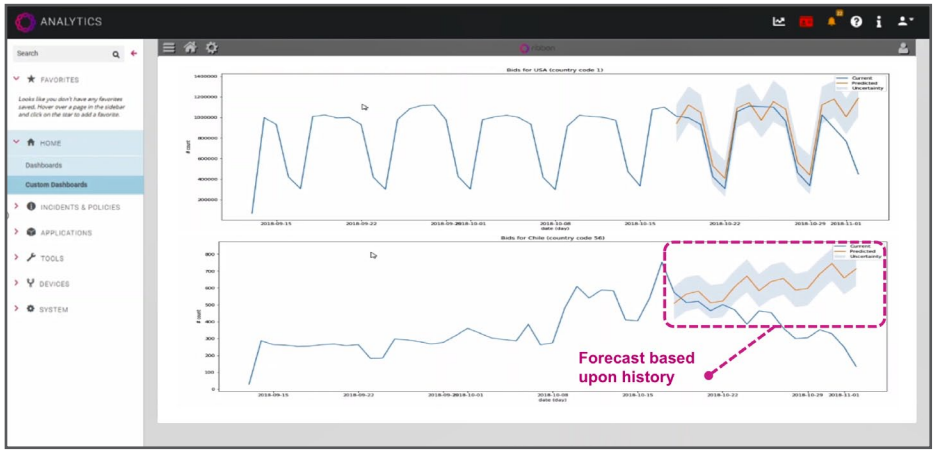

Figure 1: Traffic Forecasting and Capacity Planning

Detecting Network Anomalies and Securing Operations

Network administrators can use Planner for post-mortem analysis and forensics, comparing actual results to predicted results to identify anomalous behavior that could be symptomatic of fraud or abuse. If there is a problem or outage in the network, a data peak or valley can be used as a trigger point for root-cause analysis (RCA) and problem identification (see Figure 2). By proactively comparing projections with actual results, administrators can identify unusual activity, mitigate risk, and keep networks operating at peak efficiency. Planner data can also be exported to external visualization tools for further analysis.

Trigger root-cause analysis to identify unusual activity and mitigate risk.

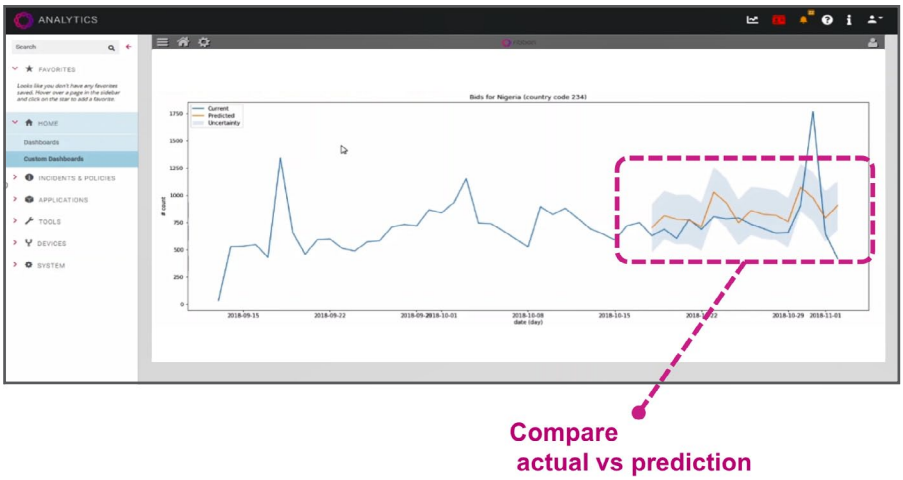

Figure 2: Troubleshooting and Forensics

Transforming Raw Data into Actional Planning Insights

Planner gathers and examines historical data from a variety of sources, analyzing network and device KPIs and utilization metrics to help operations teams project capacity requirements and identify potential performance bottlenecks. The application uses machine learning models to forecast future network resource usage, performance, and maintenance requirements based on historical trends and incidents, accounting for recurring variations like day-of-week, time-of-day, or day-of-year (holiday) tendencies.

Service providers can use Planner for a wide variety of applications. For example, a communications service provider can use Planner for SIP trunk capacity planning, network element resource forecasting and predictive maintenance, VoIP service quality traffic engineering, and to detect fraud or abuse.

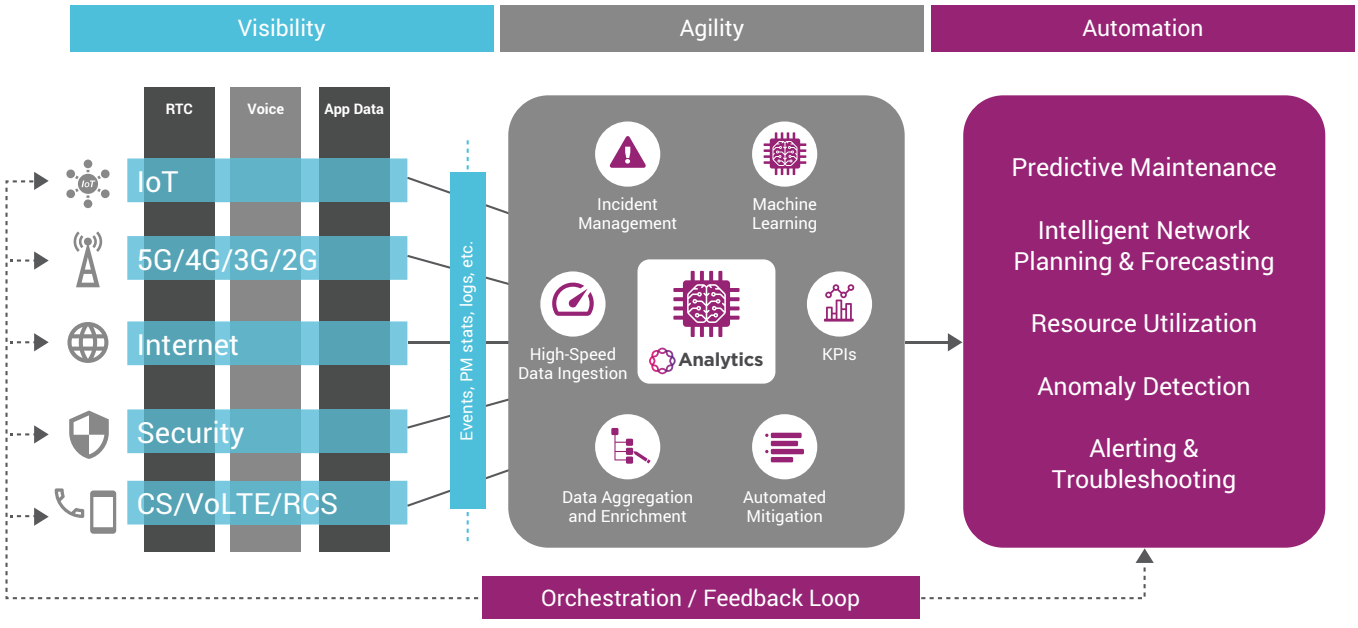

Figure 3: Planner Helps Operations Teams Forecast Capacity Requirements

Planner helps service providers:

- **Optimize costs** by tightly aligning network infrastructure investments with capacity requirements and business demands. It helps service providers avoid overprovisioning resources or system capacity.
- **Improve user experiences and subscriber loyalty** by optimizing service quality and ensuring adequate bandwidth for peak-demand periods.
- **Streamline operations, and improve network planning and budgeting** by intelligently forecasting future capacity requirements and maintenance needs based on empirical historical data.

Next Steps

To learn how Planner can help your company improve capacity planning, minimize TCO, and improve subscriber satisfaction and loyalty contact Ribbon today.

About Ribbon

Ribbon Communications (Nasdaq: RBBN) delivers communications software, IP and optical networking solutions to service providers, enterprises and critical infrastructure sectors globally. We engage deeply with our customers, helping them modernize their networks for improved competitive positioning and business outcomes in today's smart, always-on and data-hungry world. Our innovative, end-to-end solutions portfolio delivers unparalleled scale, performance, and agility, including core to edge software-centric solutions, cloud-native offers, leading-edge security and analytics tools, along with IP and optical networking solutions for 5G. We maintain a keen focus on our commitments to Environmental, Social and Governance (ESG) matters, offering an annual Sustainability Report to our stakeholders. To learn more about Ribbon visit rbbn.com.

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