Solution Brief

RADinsight Smart Diagnostics

AI driven service assurance from the customer edge to the cloud

RADinsight SD (Smart Diagnostics) empowers communications service providers (CSP)'s service desk representatives, network operations and enterprise IT with intuitive, insightful and on-the-spot diagnostic tools to troubleshoot end-to-end Ethernet connectivity issues.

More and more businesses are moving their enterprise applications to the cloud for cost and efficiency purposes. This topology shift also means that CSPs are losing end-to-end visibility of their service quality. Carrier Ethernet has its own built-in mechanisms to ensure the highest connectivity standards, and traditional OSS monitoring and troubleshooting tools used by CSP operations and engineering are designed to support these standards. However, CSPs have much less visibility when it comes to the cloud connectivity segments and enterprise networks, especially if they don't manage them, as is often the case.

To create end-to-end Ethernet visibility, service assurance systems could potentially collect, correlate and analyze additional data from routers, software agents that are deployed on customer LAN computers (in managed CPE services), probes, or other relevant systems that might be deployed in CSP networks. However, this would be a very complex and costly task, and there are no such solutions in the market.

RAD

Your Network's Edge®

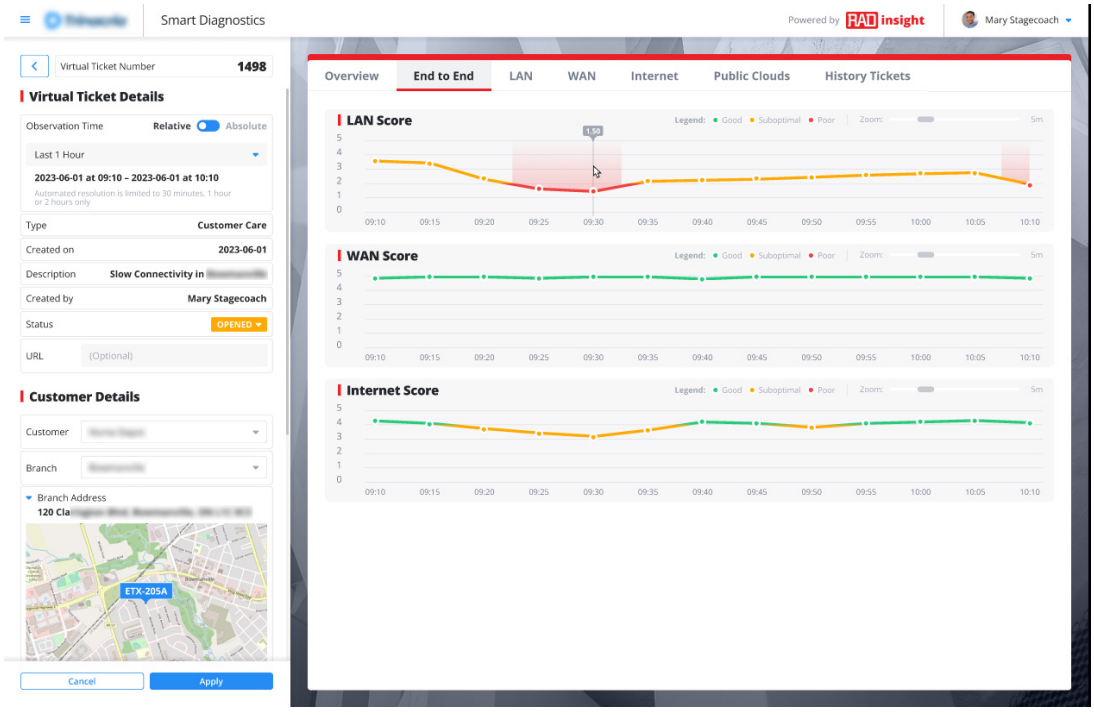
Solution Brief

RADinsight Smart Diagnostics is able to do what traditional service assurance systems- can't:

- Leverage installed base of carrier edge devices, such as Ethernet access devices or NIDs, to expand the scope of service performance monitoring beyond the service provider's network – from the customer branch all the way to the cloud-based application.
- Apply advanced analytics based on AI to generate on-the-spot, automated diagnostics and next-best-action for persistent and historic service issues.
- Facilitate collaboration between different stakeholders through virtual ticketing.
- Allow intuitive operation without the need for engineering skills.

Service Connectivity Troubleshooting

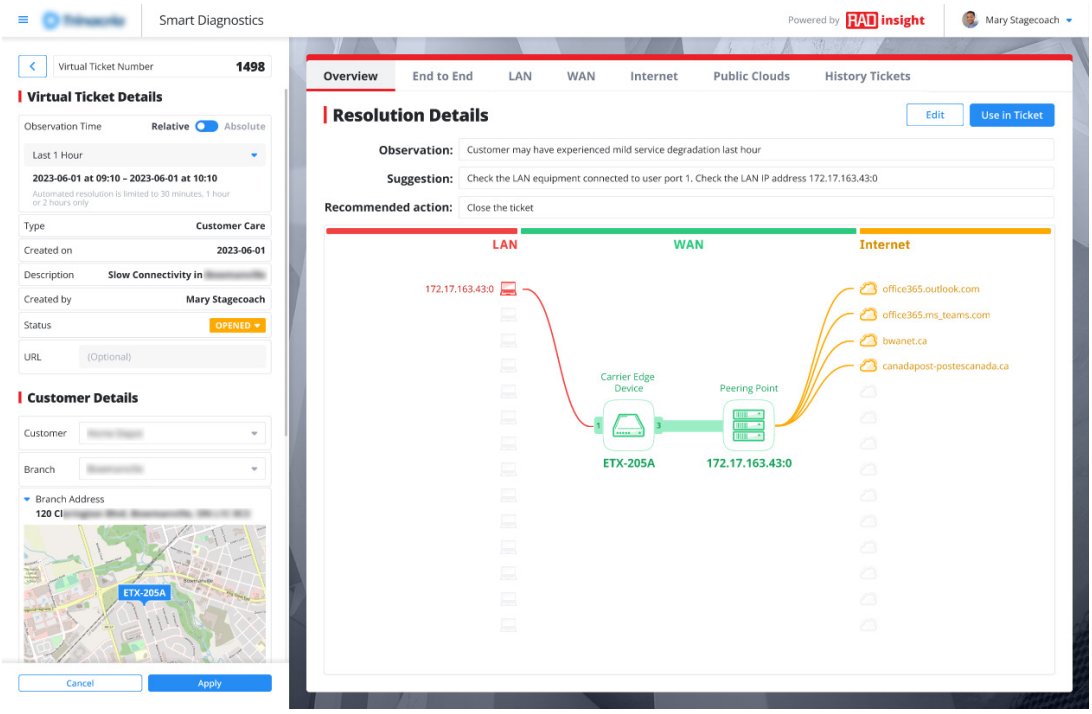
RADinsight SD is used for troubleshooting customer-reported connectivity issues by isolating the problem between the customer's site, CSP network, and internet/cloud connectivity segments.



RADinsight SD continuously monitors the connectivity KPIs at a 1-minute intervals. The KPIs are monitored at high granularity, including the specific source IP address at the customer site/branch, the CSP service, and the destination URL. Quality of Service (QoS) scores for each connectivity segment are calculated based on unsupervised and supervised machine learning ensemble methods, which take into consideration the deviation of KPIs from historical data and the anomalies density, and also reflect the severity of the Impact on the connectivity service.

Automated Resolution

RADinsight SD analyzes problematic symptoms in each connectivity segment, as well as their severity and density over time. It automatically generates plain-language problem observations and recommendations to help focus business customers on specific areas for remedy or improvement. This information can be shared – via APIs – with the CSP's customer case management system, so that the customer complaint handling process is completely automated.



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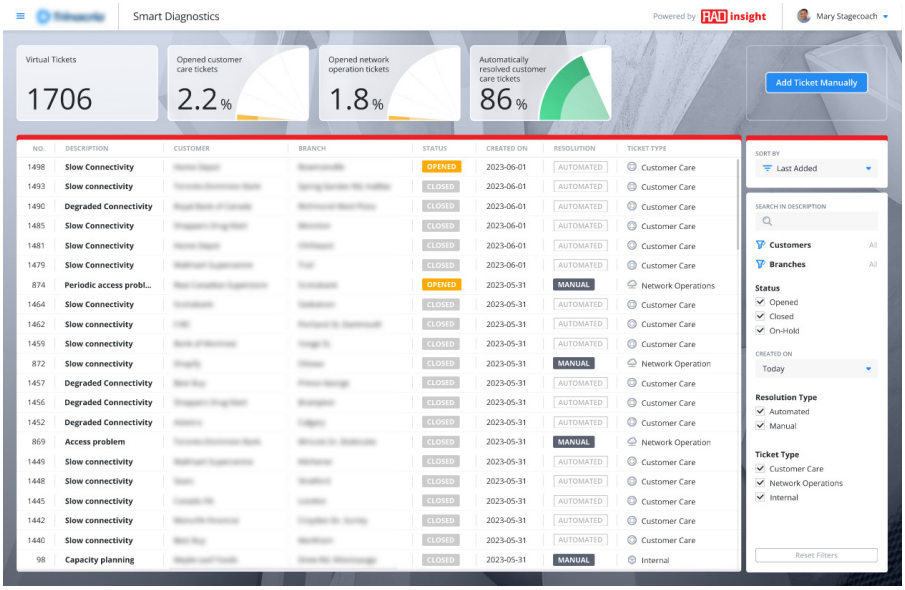
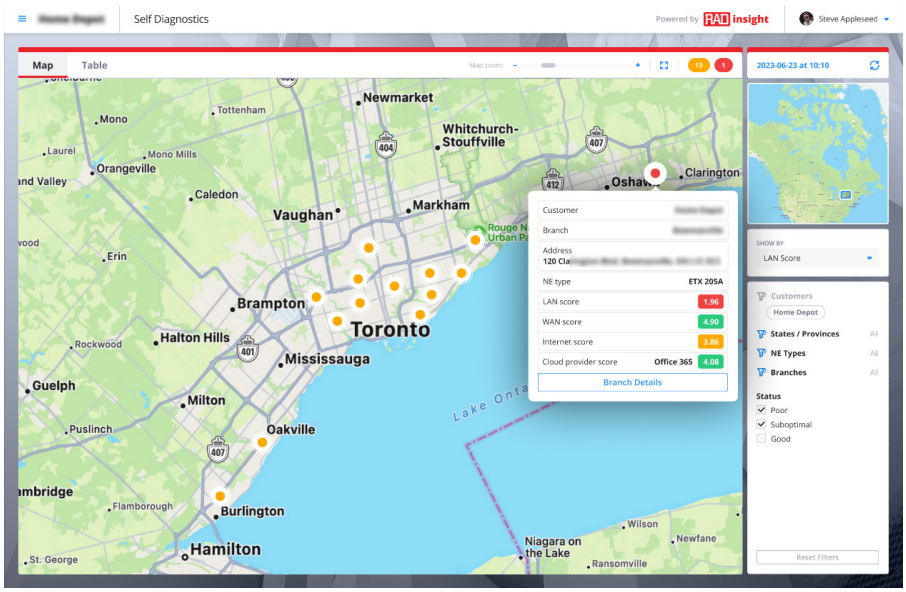
Operational Collaboration

Every problem investigation is documented via a virtual ticket for future reference, historical analysis, linkage to the original ticket, and linkage between tickets created by different stakeholders at the CSP (e.g., linkage between the customer case and network trouble ticket).



Self Service & Transparency

RADinsight SD can also be made available to end users, such as enterprise IT, via an easy integration with the customer self-service portal for self-diagnostics.



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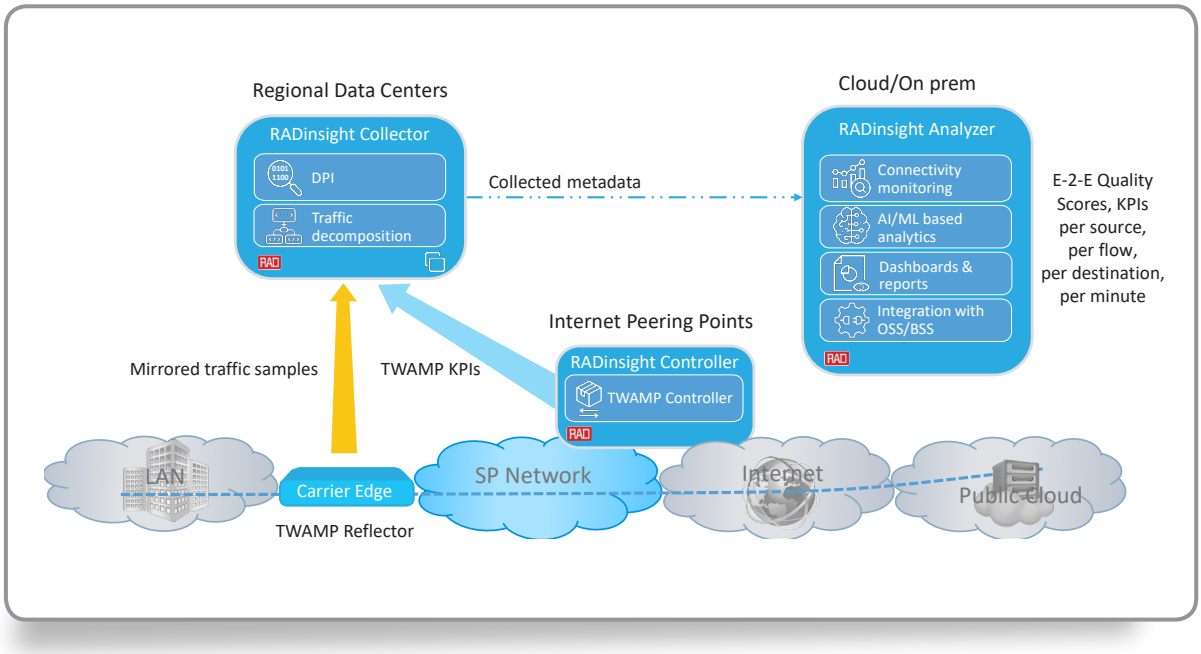
Technology and Architecture



RADinsight SD includes the RADinsight Collector, which is placed in regional data centers. It collects passive and active measurements, filters out payloads, and transfers packet headers as metadata to the RADinsight Analyzer, where analytics and visualization are performed. Fully containerized, RADinsight SD can be deployed on public clouds or at customer premises. User privacy is preserved since only metadata is transferred to the RADinsight Analyzer.

This solution can be easily integrated with the CSP OSS/BSS handling inventory, provisioning, case management, and more) via open APIs.

User Value

SMB/Enterprise	Customer Care Service Desk	Network Operations
Self-diagnosis & problem areas view	Fast diagnosis at Service desk	E2E monitoring & troubleshooting
Self-service & transparency Reduce calls to Customer Care	Improve First Call Resolution Reduce Customer Call duration Reduce churn	Streamline process Reduce troubleshooting time

To learn more about RADinsight Smart Diagnostics, contact us at market@rad.com.