



SKYLIGHT™ DATA HUB IQ

SOLUTION BRIEF

Contextual insights and proactive problem resolution

SkyLIGHT DataHUB IQ unleashes the power of performance data through actionable analytics

Over 30% of customer churn is due to network issues that were not identified or could not be solved. And it's 50 times more expensive for service providers to win a new customer than to keep an existing one happy. With networks becoming more dynamic and complex, it is getting harder to get insight quickly to solve problems.

Today's network performance and monitoring tools can graph and report on network data but fall short on providing meaningful insight. It's a highly manual process for operations teams to find the underlying root causes in the network infrastructure, the application, or the data center.

With the move to 5G and software-defined cloud networks, there is growing pressure to automate service quality management using analytics and machine learning to gain accurate and real-time insight on what's happening and how to fix issues. Or, even better, to stop application and network problems in their tracks, before customers even notice.

SkyLIGHT DataHUB IQ

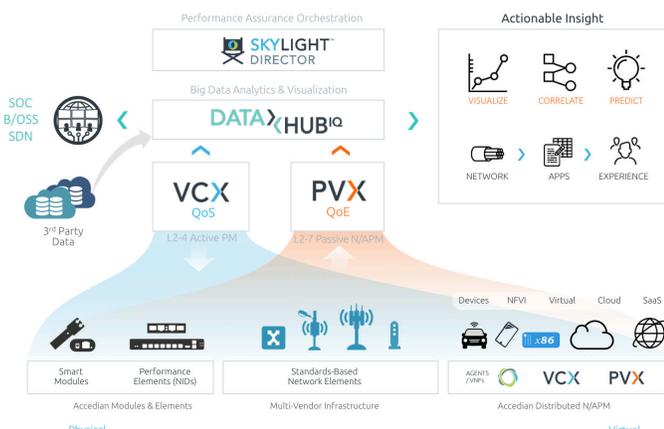
DataHUB IQ is a new addition to the SkyLIGHT™ family, built from the ground up with one mission: to provide actionable insight to understand how the network is behaving, how customers are experiencing services, and where and how to address performance issues.

SkyLIGHT is a fully virtualized network monitoring solution capable of performance management at full network scale, while achieving unsurpassed accuracy and real-time reporting capabilities. It provides over 50 different primary measurements and statistical KPIs to detect and isolate performance issues.

SkyLIGHT DataHUB IQ combines the power in these KPIs with other network data to provide, deep insight into network behavior and the service experience of customers.

This gives network and IT operations teams a single, unified view of network and service performance, enabling the prioritization of the most severe, customer-impacting issues for immediate resolution.

DataHUB IQ is powered by big data analytics and enriched with machine learning to filter billions of data points per day down into valuable insights that you can take action on. Machine learning and artificial intelligence (AI) algorithms dynamically baseline and determine anomalies, as well as correlate performance measurements and metadata to rapidly generate insight and recommended actions.



DataHUB IQ is a cloud-native platform with big data scale

SkyLIGHT DataHUB IQ is based on micro services software architecture. It can be deployed using Docker and hosted as software as-a-service (SaaS) in a public or private cloud.

The platform is multi-tenanted, enabling logical instances to share the same physical software installation—to support self-care customer portals or diverse business units, for example.

SkyLIGHT DataHUB IQ leverages the power of Apache Druid and Apache Spark to allow scaling to petabytes of data.



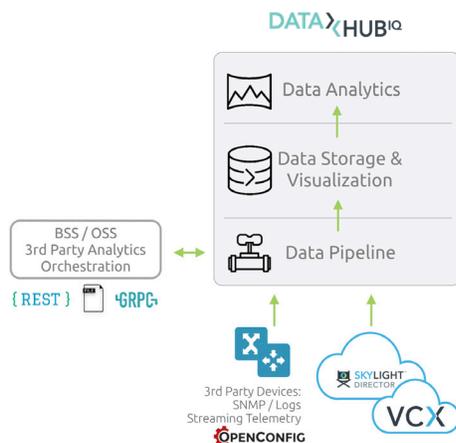
DataHUB IQ benefits

- **Deep multilayer visibility into end-to-end service performance:** DataHUB IQ uncovers the underlying problem to see the ‘invisible’ cause of issues using advanced machine learning and by correlating performance management KPIs together with other data sources (e.g. network equipment).
- **Contextual real-time insight to enable closed loop automation:** DataHUB IQ automatically cleans and removes ‘bad data’ to ensure highly accurate reporting and valuable insight that enables automation of network management and service assurance.
- **Consolidate multiple reporting tools into a single unified analytics platform :** DataHUB IQ makes it easy to digest third-party data sources and acts as a one-stop-resource for network and service performance intelligence feeds to customer self-care digital portals, Service Operations Centers (SOCs) and business teams.



Open data ingress, egress and APIs for powerful integration

For data ingress, SkyLIGHT DataHUB IQ offers an open data pipeline for integration of any time-series data captured from the network. DataHUB IQ



supports Accedian SkyLIGHT performance management KPIs out of the box, as well as SNMP and CSV/XML/JSON files, streaming telemetry data using gRPC, and other similar data formats and protocols. Accedian SkyLIGHT performance metrics can be enriched with other sources of data to speed up root cause detection and analysis.

Once stored in DataHUB IQ, data can be easily enriched. Through either the user interface (UI) or RESTful APIs, each stored object can be tagged with contextual metadata (from routers, mobile backhaul infrastructure, or eNodeB vendor equipment, for example). This enriched data can then be leveraged in queries, dashboards and reports in DataHUB IQ to provide additional network and service views, and to power correlation and prediction algorithms.

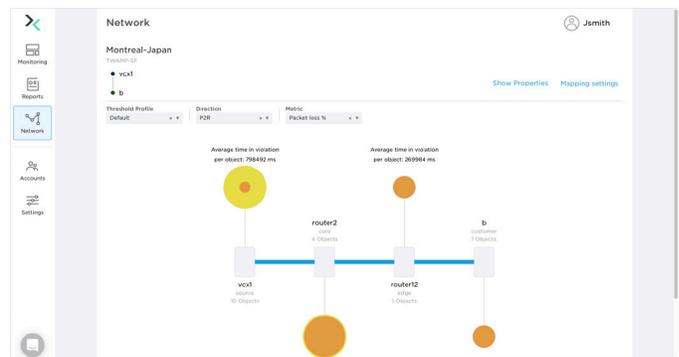
For data egress to other systems, DataHUB IQ also supports an open data pipeline with JSON over WebSockets and gRPC to allow access to both raw data and synthetic or generated data (alarms, events, etc.) from DataHUB IQ into other systems.

Finally, DataHUB IQ supports RESTful APIs for integrating other application functions. Any actions performed in the UI (e.g. configuration, adding domains or metadata, etc.) are also available from an open and documented RESTful / JSON API. This allows full integration with the business support system (BSS) or operations support system (OSS) layer and opens any function in DataHUB IQ to scripting.

Performance troubleshooting

SkyLIGHT DataHUB IQ processes billions of data points per day and distills this into actionable insight on not only where, but also how to address performance issues, in three simple steps:

1. Build dynamic dashboards that provide a 'single pane of glass' view of network performance, using the power of machine learning to alert you to active and potential issues in the network.
2. Drill down to determine the impact of an event alert (such as packet loss and latency) on your network and customer experience, and quickly identify the root cause.
3. Leverage the power of performance data, using machine learning, to determine what other events are impacting the network and where the root cause of the problem is located. Easily visualize and correlate metadata to understand the root cause of the problem and how to resolve the issue.

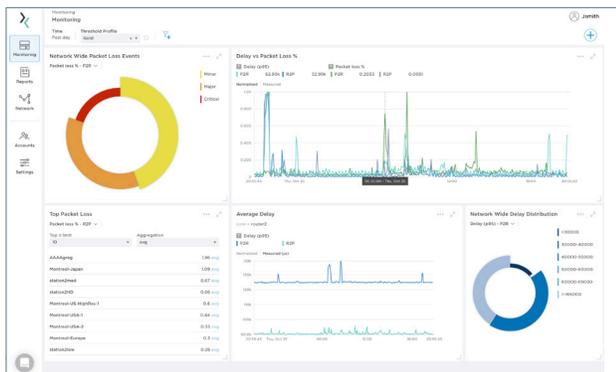


Use correlation to pinpoint the root cause of issues



Service insight reporting

SkyLIGHT DataHUB IQ provides intuitive dashboards and reports that visualize application, service and network performance in real time with the ability to drill down and correlate data for maximum insight. Operations teams can quickly determine the origin of network and service issues, and how best to address them.



Single view of network and service performance in real time

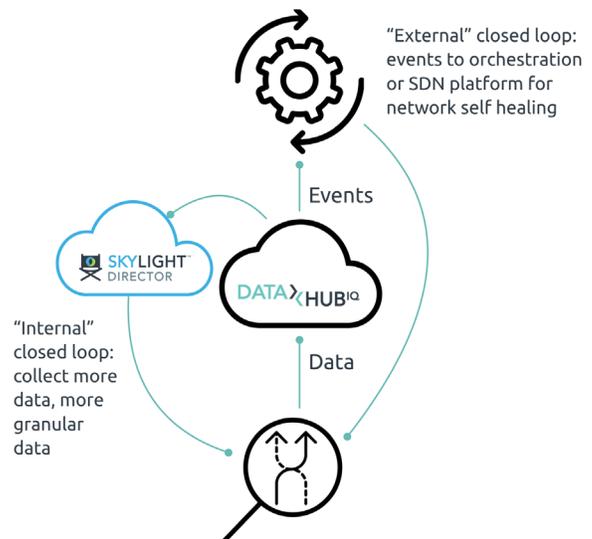
- **DataHUB IQ provides:**

- › Fully customizable reports, alerts, dashboards, KPIs and role-based views for each network and service type.
- › Direct performance and QoE insights feeds to customer care portals, business stakeholders and service operations centers (SOCs).
- › Easy-to-use and intuitive user interface with drag-and-drop report dashboards, custom formats and ad hoc data exploration and analysis.

Closed loop automation

With the move to software-defined networks and increasingly cloud-native network functions, there is a pressing need for new analytics-based monitoring software that can provide multilayer insight on service availability and performance—in real time and in context.

SkyLIGHT DataHUB IQ streams data in real time to monitor how well services are performing, and whether it is time to make changes or adjust policies.



- **DataHUB IQ:**

- › Easily integrates with any SDN or orchestration workflow that can react in real time to events as they happen in the network.
- › Enables closed loop automation with granular network and service visibility. Events can be processed in real time to increase the collection granularity and frequency of KPIs, or initiate the collection of other KPIs to improve the ability to correlate and do root cause analysis.
- › Uses machine learning to identify patterns and anomalies, and recommend fault fixes which, with human training, can become automated fixes.

