

# Accedian Skylight Intent-Based Assurance

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## Introduction

Accedian is a performance analytics and end-user experience solution company, building products to help its customers assure digital infrastructure. Accedian was established in 2004 and is headquartered in Montreal, Canada. Customers include leading global communications service providers and enterprises worldwide.

Accedian's solutions are built on their Skylight performance assurance platform providing end-to-end network, application, and service performance visibility, spanning user and device edge to core networks and the cloud. As a comprehensive assurance solution, Skylight combines Accedian's software and hardware sensors with its orchestration and analytics layers to provide performance monitoring, visualization and insights via customizable dashboards and end-user portal views.

## Intent-Based Assurance with Accedian Skylight

Accedian recently launched intent-based capabilities on the Skylight platform. As part of Accedian's go-to-market plan, it has **integrated Skylight's intent-based assurance with Cisco's Crosswork Network Automation platform**.

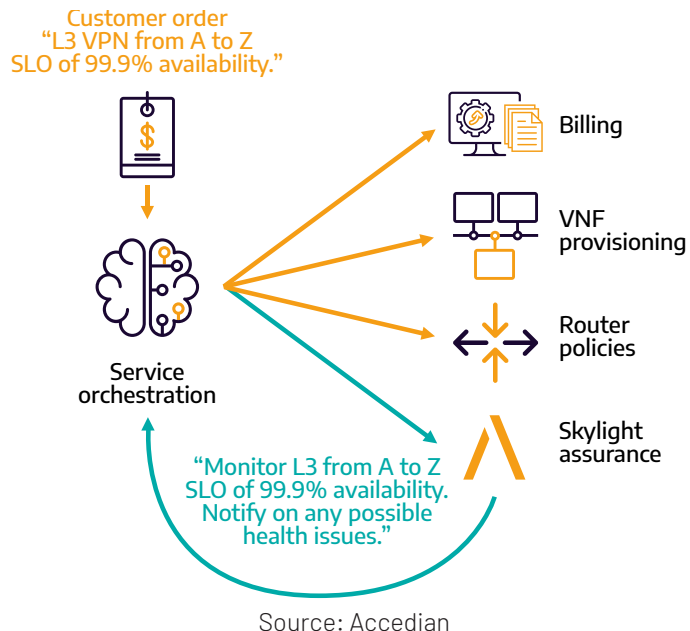
Accedian continues to leverage its performance sensors in its intent-based assurance suite. These sensors are available in VM and container form factors for software and in hardware as low-cost small-form-factor pluggable (SFP) sensors or modules with embedded FPGAs for strategic placement in networks where no native assurance capability is available or where additional functionality, accuracy, and precision is needed.

Likewise, Accedian's full suite of multi-layer, standards-based, on-demand or continuous tests are utilized in their intent-based offering to provide end-to-end and per-segment performance metrics.

## Skylight's New Intent-Based Capabilities

To support intent-based assurance, Accedian has added three main sets of capabilities to Skylight:

- Given an input model that describes a service, Skylight can figure out how to instrument the network to provide assurance for the service and automate the placement, deployment, and configuration of instrumentation with sensors.



As part of our research brief on Intent-Based Networking, the sponsors, Accedian and Cisco, requested AvidThink provide an independent review of Accedian's solution. AvidThink conducted this review using the information provided by the sponsors and AvidThink's market research on intent-based networking and assurance. AvidThink has not verified the solution's features and capabilities. Readers interested in the sponsors' solution should ascertain the veracity of vendor claims themselves. AvidThink cannot be held liable for any unexpected or incorrect operation and damages due to any inaccuracies listed here.

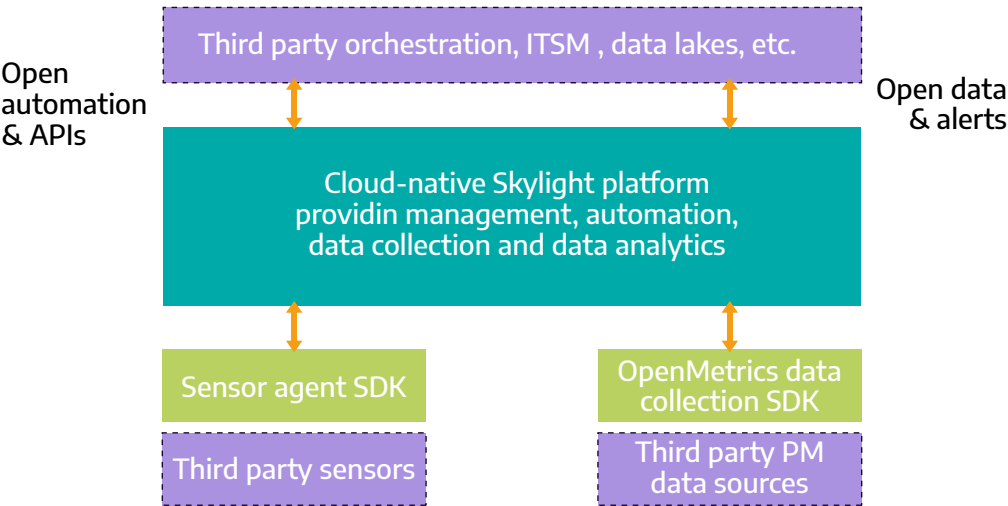
- Skylight can understand how a service should behave, create the KPI metrics relevant to maintaining appropriate QoS, track those metrics, detect when the service has an issue, and inform a companion orchestration system to trigger remedial action and optimization.
- Accedian has added APIs for provisioning intent-based assurance and has also built integration back into network automation controllers for streaming data and alerts.

With these additions, Skylight can provide the assurance input as part of an autonomous closed-loop system that adapts to potential service degradation or any potentially user-impacting trends or behavior and drives auto-remediation.

Skylight Platform Enhancements Details

Accedian’s Skylight platform includes the following new and enhanced features:

- **Provisioning:** REST, RESTConf/YANG API interfaces for provisioning intent-based assurance.
- **Service Modeling:** Skylight can take incoming models and build templates for service activation to support intent-based assurance. Using incoming input on the type of service, connection points, and target service level objective (SLO), Skylight can determine which sensors and reflectors to use, which sessions to provision in its orchestrator, and then pre-provision metadata in its analytics user interface that reflects the appropriate KPIs and alert triggers.
- **Events and Visibility:** MQTT/Kafka/RESTConf/gNMI APIs to send data and events from the platform to an external system.
- **Open-standards Monitoring:** Support for OpenMetrics, an open standard for data ingestion from Linux Foundation’s Cloud Native Computing Foundation used by the popular Prometheus open-source monitoring system.
- **Analysis Engine Upgrade:** A streaming analytics and machine learning system to analyze, correlate, and find anomalies in the data.
- **User Interface Enhancements:** An updated user interface for internal customer troubleshooting and external end-user portals.
- **End-to-end Intelligence:** Skylight can use its intelligence to combine measurements from multiple sources to create end-to-end KPIs and service views when an end-to-end metric is unavailable via any other native method.



Source: Accedian

For integration with Cisco Cisco Crosswork Network Services Orchestrator (NSO), Accedian Skylight now supports:

- Accedian NSO Network Element Driver (NED) with support for RESTConf to interface with Skylight to automate provisioning from NSO, and also alerts back to NSO to drive closed loop automation use-cases.
- Cisco Crosswork Data Gateway(CDG) integration via gNMI interface to feed data into Cisco Crosswork Network Controller for additional visibility into CNC network and service health.



Source: Accedian and Cisco

## Assessment of Skylight for Intent-Based Assurance

To understand how Accedian Skylight measures up as an intent-based assurance system, we'll examine it through the lens of high-level capabilities in AvidThink's research brief on intent-based assurance ([download from Accedian's website](#)):

- **Service model decomposition:** Skylight can take a service model definition (in RESTConf/YANG) of supported services, figure out how to instrument the network elements with its sensors, create a list of sensors required, along with metadata configuration for analytics KPI and alerts.
- **Network instrumentation:** Skylight supports automation of network instrumentation and zero-touch provisioning to easily deploy Skylight into the network.
- **Mapping to application-aware KPIs:** In the service model decomposition step, Skylight generates the session configuration and metadata needed to appropriately monitor the sessions in its dashboard.
- **Detection and alerting:** Skylight can alert consumers using its assurance data stream (e.g., via Cisco NSO) based on fixed SLAs or on anomalies and predictive intelligence.

And when we look at the components-level view of Skylight as laid out in the brief, we observe:

- **Growing catalog of service models:** It's all about the models and their sophistication and richness. Skylight supports end-to-end topologies today with mesh, hub and spoke, and other more complex capabilities in the future.
- **Intelligent translation engine:** Skylight has the foundational capabilities to translate the service model into sensor configuration and placement, session context, and metadata for KPIs and alerting.
- **Rich telemetry facilities supporting multi-vendor elements:** Accedian's use of standards-based telemetry and support for different types of incoming data allows it to support multiple networking vendors. As an established player in the assurance space, most Accedian customers today successfully use their products in multi-vendor networks.
- **Software agents and sensors:** While Accedian can integrate third-party sensors and agents into its platform, it also provides its software and hardware sensors, reducing integration hassle and time to deployment.
- **Scalable data management and real-time data analytics:** Skylight is a proven system deployed at tier one service providers collecting and analyzing data from millions of objects.
- **Powerful analytics engine:** Accedian has a capable analytics engine today as part of Skylight that is deployed at customers for service failure, degradation detection, and anomaly detection in performance and security. We expect this will be an area of continued investment for Accedian to improve the richness of services it can support and predictive events that it can spot.

### Review Wrap-Up

Accedian Skylight’s enhanced platform shows what intent-based assurance systems can bring to customers — reduction in time to deployment for assurance, reduced manual intervention, and autonomous creation of service-aware KPIs and alerts.

Skylight’s integration with the Cisco Crosswork Network Automation suite gives them a credible and expansive go-to-market motion. It brings value to Cisco customers using Crosswork by enhancing the intent-based capabilities of that platform.

In our networking industry, intent-based systems are in their early days. AvidThink expects rapid innovation in this space as models become more sophisticated and the catalog of supported services grows. Still, even at launch, Accedian Skylight already provides value for customers with a strong promise of what’s to come.



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