



The bridge to possible

ACCEDIAN

Skylight performance visibility driving intent-based assurance

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What customers care about

The
SERVICE
Experience

And what they don't care about

Technology
Siloed
Performance





Agenda

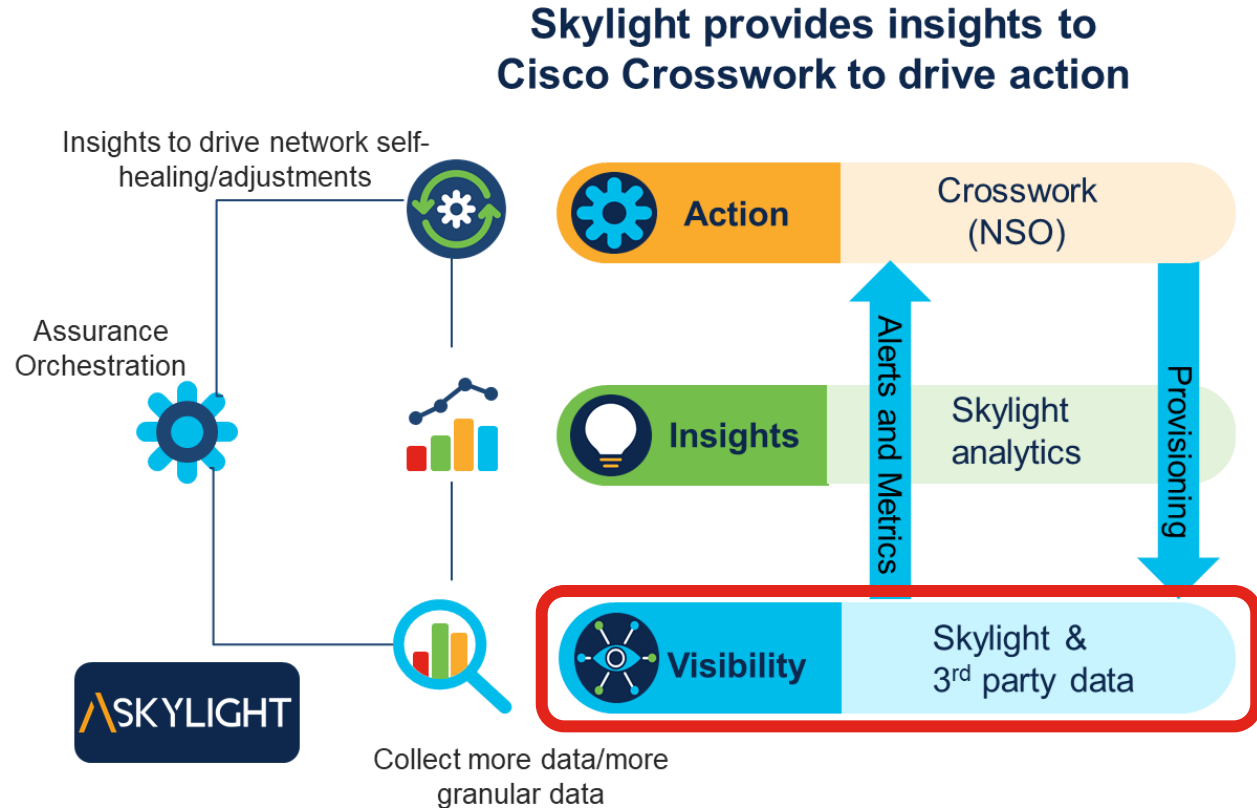
- It all starts with visibility
- Packets don't lie...
- What is intent-based assurance anyway?
- How are we doing it?



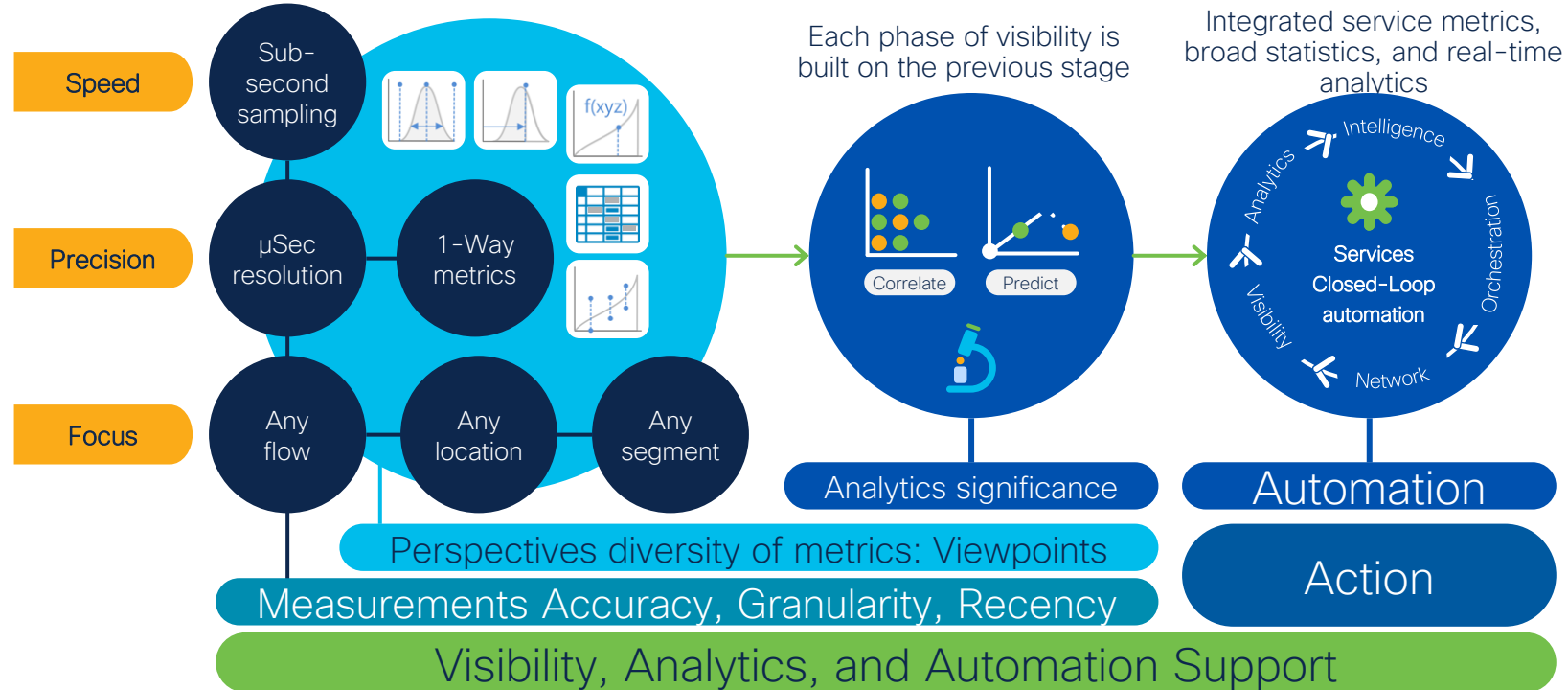
It all starts with
visibility

Accedian Skylight performance visibility

- It all starts with visibility
- Visibility provides control and insight
- With control and insight you can drive action



Accedian Skylight and Cisco Crosswork addressing performance assurance challenges





Packets don't
lie...

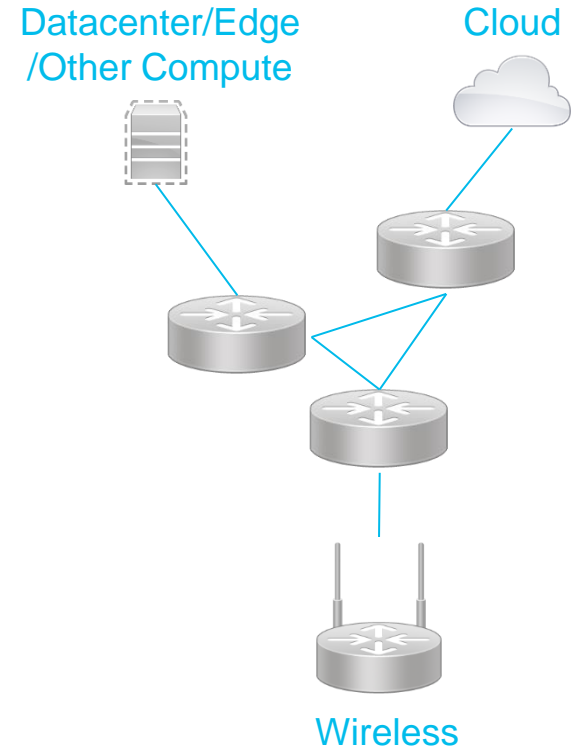
Focus on end-to-end visibility

- The thesis of Accedian Skylight is fairly simple: packets don't lie
- You can look at how a packet traverses a network and learn a lot about how the network and applications on that network perform
- Use data from streams of those packets to build a statistical model of the behavior of the network
- Bring all of this statistical data into one place, combine it with other sources of performance data, and you can learn a lot about what has happened in your network and to your users and what might be happening in the future



So what is end to end?

- End-to-end doesn't just mean from one router to another
- In many situations the user experience extends beyond into cloud, datacenter, wireless, etc.
- Understanding end-user experience means putting packets everywhere and measuring them



Breaking out of the network management mindset...

- User experience is more than just the status of the equipment in the network
- The network can be up, and all the lights are green and yet users are complaining of a poor experience
- Understanding user experience **starts** with understanding end to end visibility using packets, **then** correlating other sources of performance data to help drill down to root cause
- **In summary:** User experience is more than the sum of the devices in the network. Start with the user.





What is intent-based assurance anyway?

Why do we automate visibility?

We want continuous visibility

- Remember that this is not just about troubleshooting or one-time tests, it is about building a continuous statistical model of network and service performance

Networks are not static

- If we want to have continuous visibility we need to be able to put that visibility in place automatically as the network changes and evolves

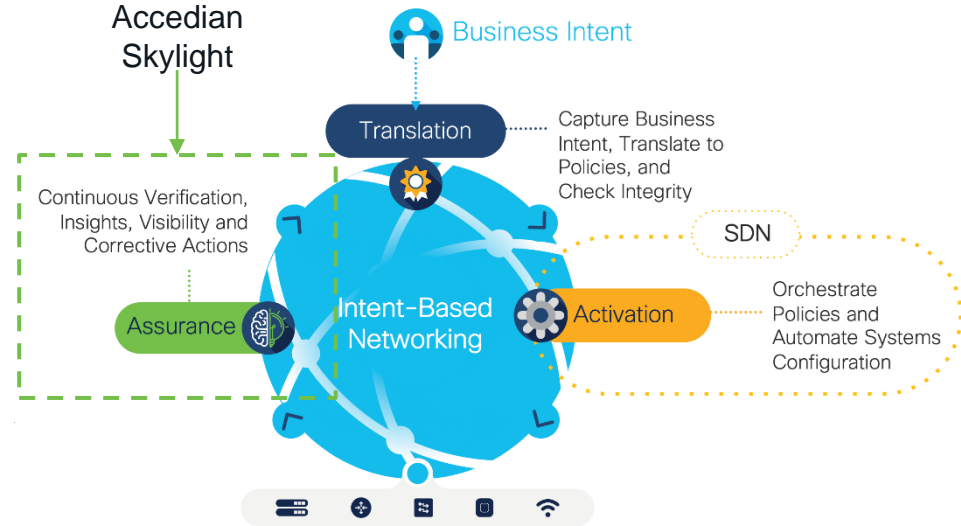
Intent-based networks require intent-based assurance

- In order to be able to ensure the network matches the intent you need to be able to automate the feedback loop



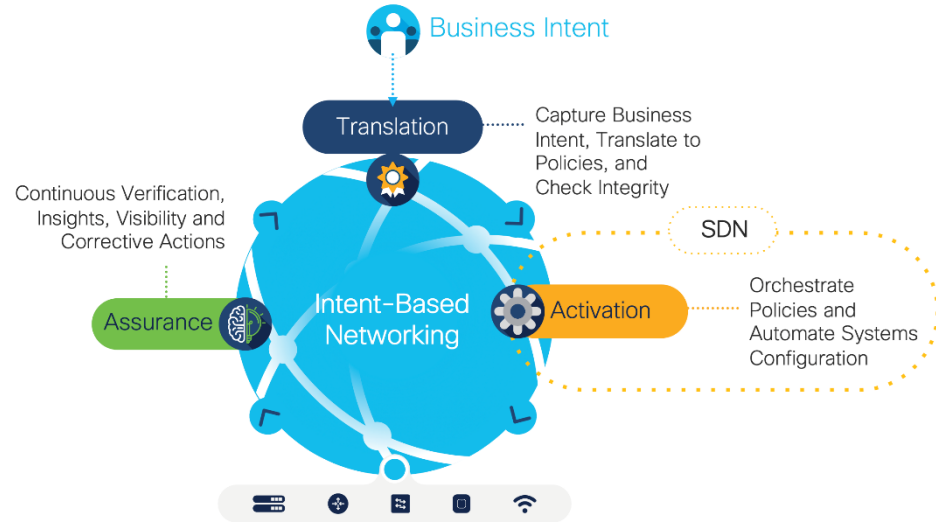
Why intent-based assurance?

- Intent-based networking requires a feedback loop on how well the network is delivering the intent
- The feedback loop needs to be able to be automatically set up when the service is set up
- The idea behind intent-based assurance is to make it easy to automate assurance when you deploy services on a network
- **Intent-based assurance:** tell Skylight the service you want to monitor, and we'll let you know when something goes wrong



What is the end result?

- Use Cisco NSO with Skylight to automate the provisioning of service assurance, and to collect alerts when there are issues with the service and automate remediation actions
- Integration of Skylight data into CNC Network/Service health to view service assurance data in the Cisco CNC platform
- Leverage Skylight as a service assurance platform, correlating Skylight probe data alongside other PM data sources for a single pane of glass for internal performance troubleshooting and also end customer portal views



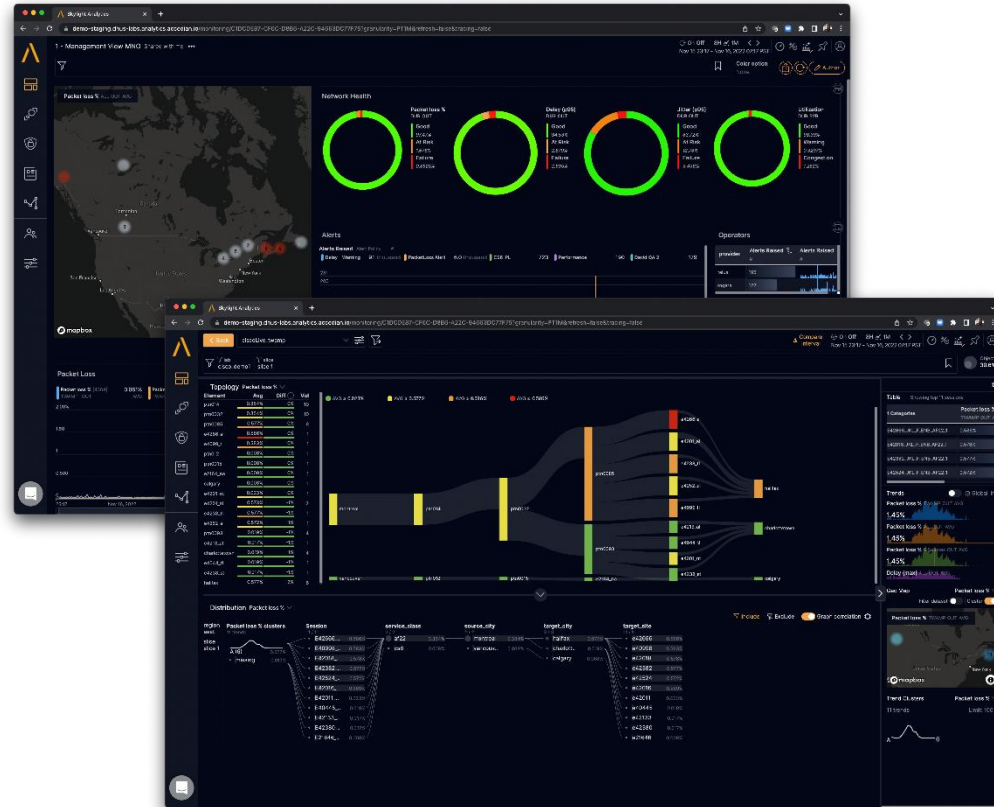


How are we doing it?

The Skylight platform

Skylight platform

- APIs to automate provisioning of intent-based assurance
- APIs to receive data and events from the platform
- A streaming analytics / ML platform to analyze, correlate and find anomalies in the data
- A user interface for both internal customer use (troubleshooting) and external use (user portals)

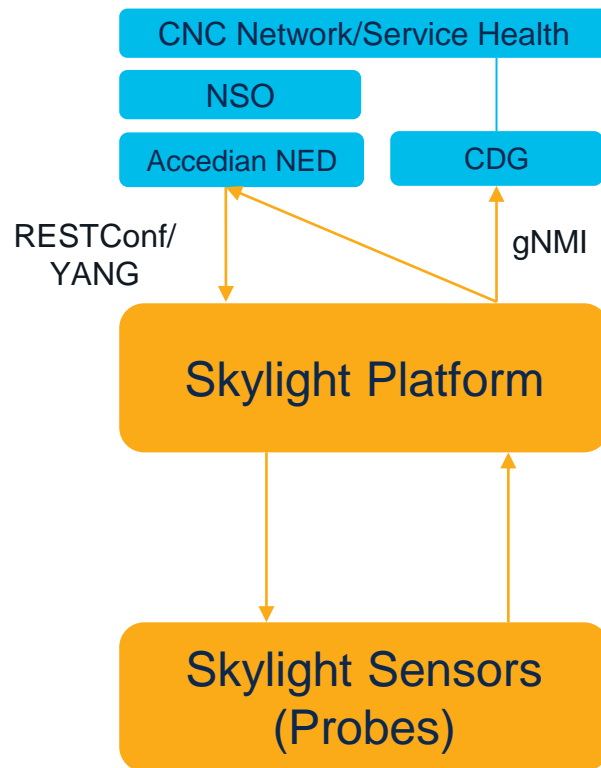


Automating performance monitoring with CNC/NSO



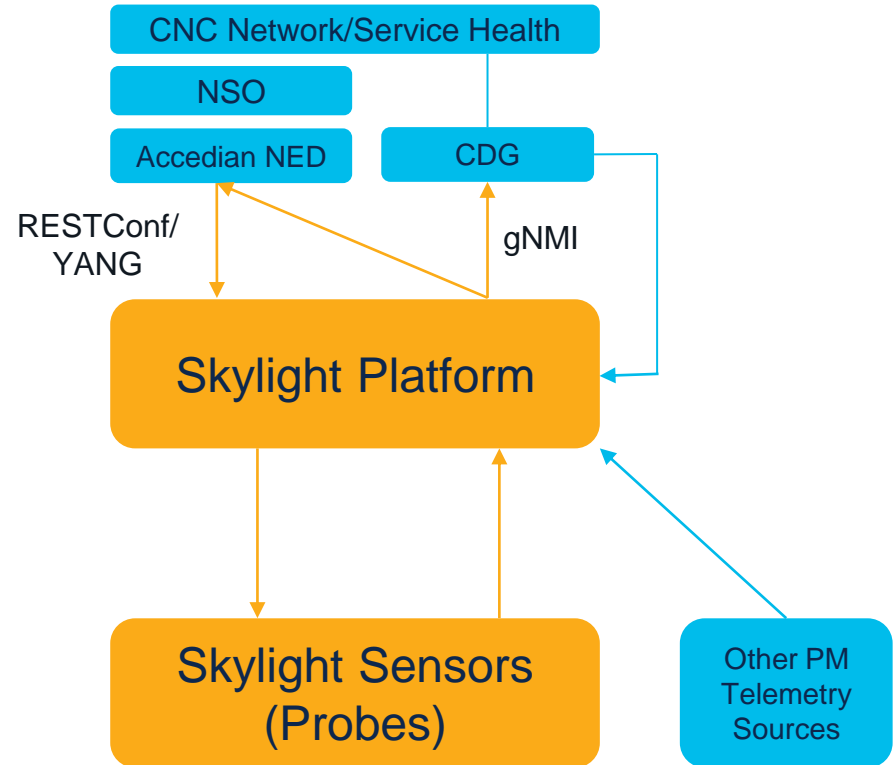
Skylight Sensors (probes)

- Docker container, VM with HW assist (Smart SFP etc.)
- Variety of tests and monitoring: L2-L4 and L7 standards-based
- Skylight has RESTConf/YANG interfaces towards CNC/NSO for interworking
- Accedian NED to automate provisioning from NSO
- Integrating gNMI interface with Cisco CDG to feed data into Network & Service Health



Final Thought

- Skylight supports OpenMetrics (i.e. Prometheus) <https://openmetrics.io/> a CNCF standard for data ingestion
- We mediate several other protocols into that, including Cisco Model-Driven Telemetry (MDT) via gNMI, and many other protocols
- These 3rd party data sources enrich the Skylight assurance visibility and the combined data set drives the action taken by Crosswork



Cisco Webex App

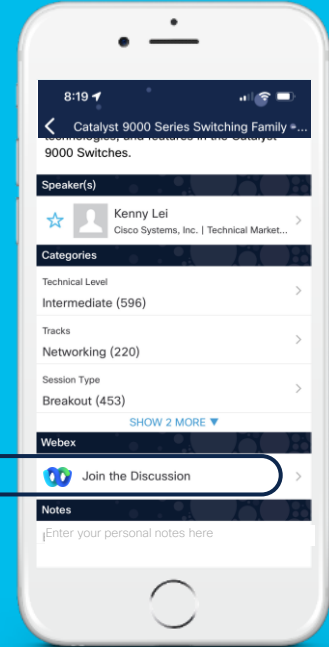
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Thank you

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CISCO *Live!*

