IPv6 Network Deployment Monitoring and Analysis

draft-pang-v6ops-ipv6-monitoring-deployment-05

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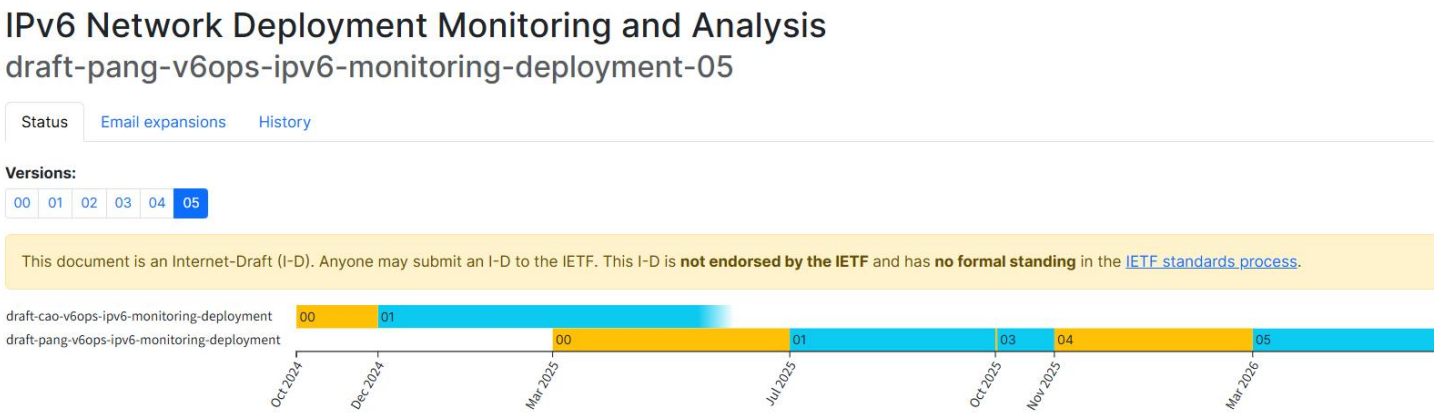
v6ops, IETF 125

Updates after IETF 124



version: 00-01-00-01-02-03-04-05

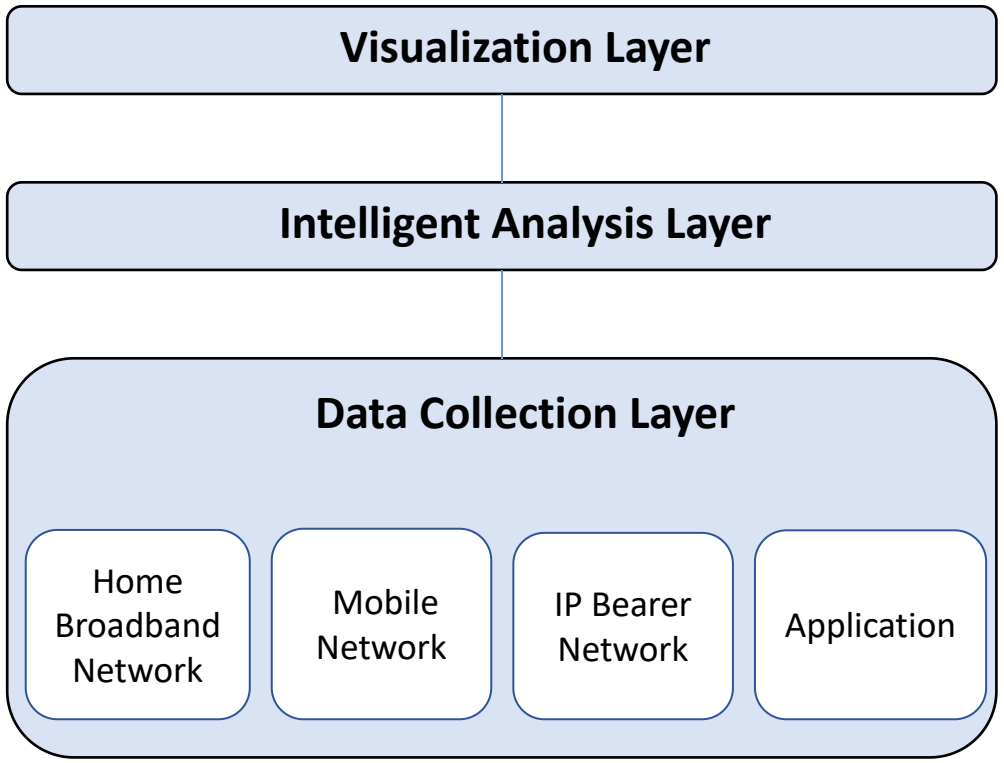
Comments:

1. What data collection methods are used?
2. How to consider existing algorithms such as Happy Eyeballs?

Section 3: Added some details of the IPv6 End-to-End Monitoring and Analysis architecture.

Section 5: Security Considerations

IPv6 End-to-End Monitoring and Analysis Architecture



Data Collection Layer

- Integration with existing network management systems can provide daily-level monitoring data through standardized interfaces.
- The architecture leverages mature, standardized collection mechanisms (such as Telemetry, NETCONF/YANG etc.) to ensure uniform data formats and meet high-frequency traffic monitoring requirements.

Intelligent Analysis Layer

- Dynamic Traffic Attribution: Identify regions with low IPv6 or high IPv4 deployment rates. Develop a correlation analysis plan to identify which specific subsystem (or two) the problem comes from.
- User-level Topology Reconstruction: Maps service chains, rebuilds end-to-end topologies, and supports segmented latency/packet loss diagnosis.

Visualization Layer

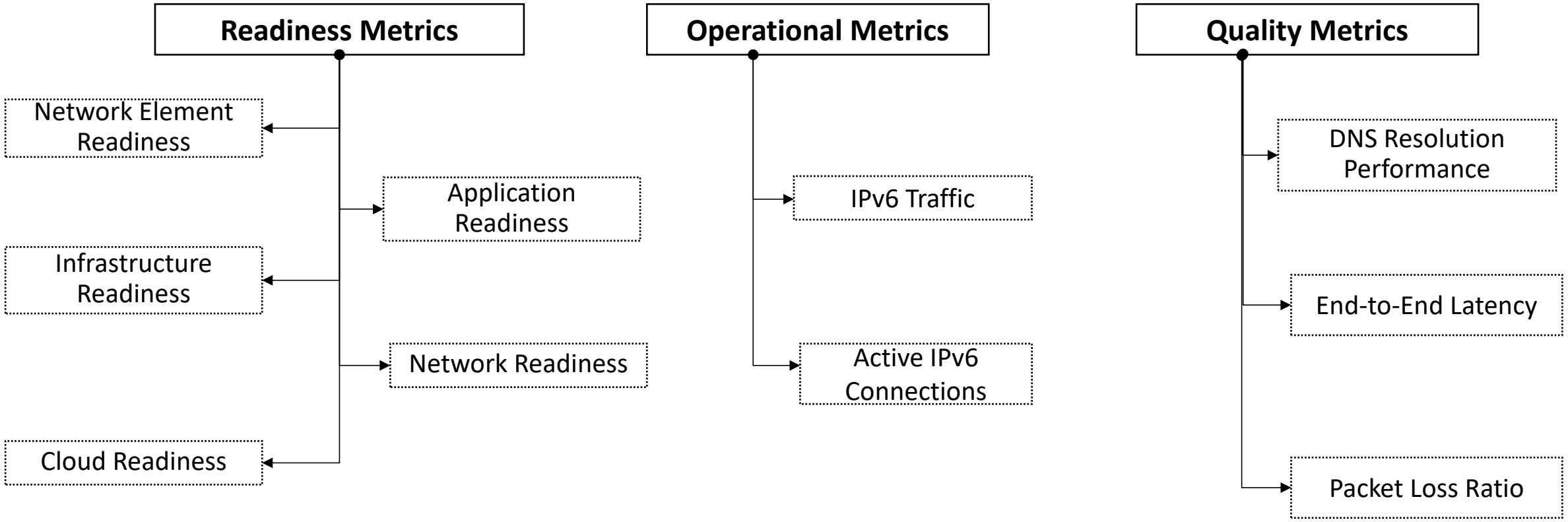
- It provides metrics-based visual presentations.
- The **interactive** query speed achieves **second-level response**.

Our system also provides **data support** for the adoption and advancement of existing IPv6 deployment schemes.

Key Performance Metrics Framework

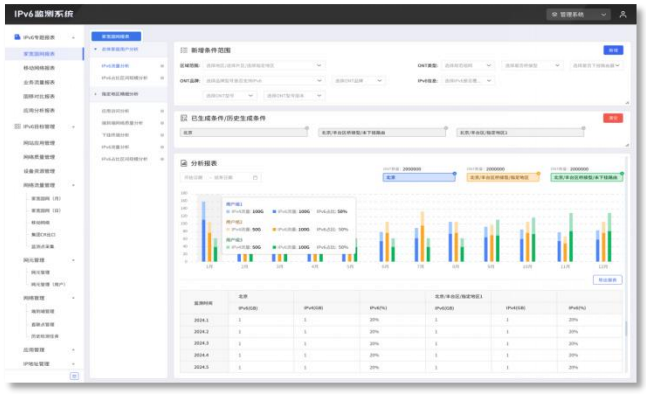
Most current systems rely on localized index analyses.

For a more comprehensive presentation of the **IPv4/IPv6 deployment status** and root-cause analysis of **IPv6 deployment bottlenecks**, we have newly defined a complete set of key performance metrics.

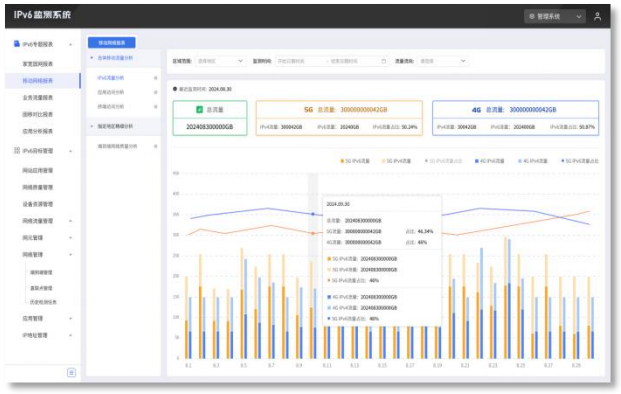


IETF 125 Hackathon

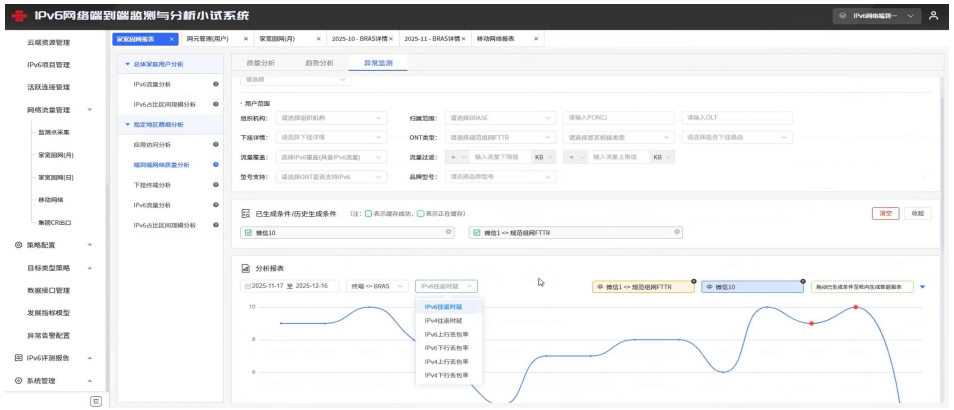
Demonstrate the platform UI and key use cases to validate the draft.



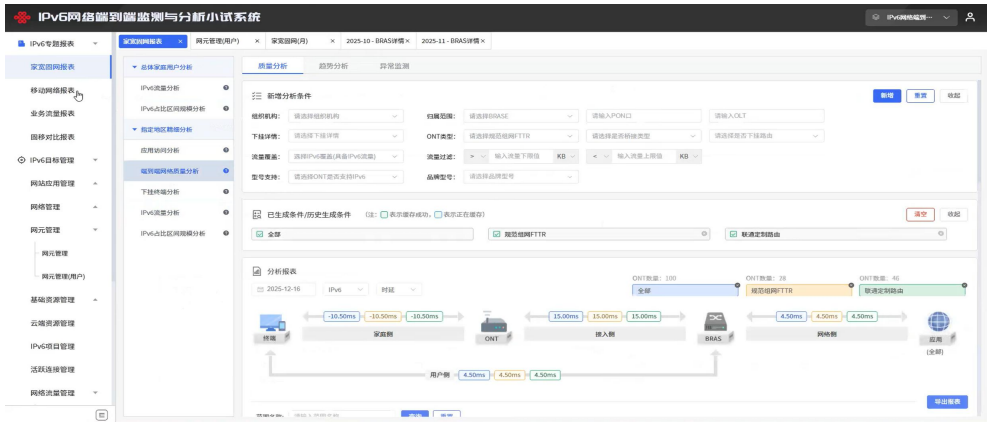
Home Broadband Network Traffic Trend



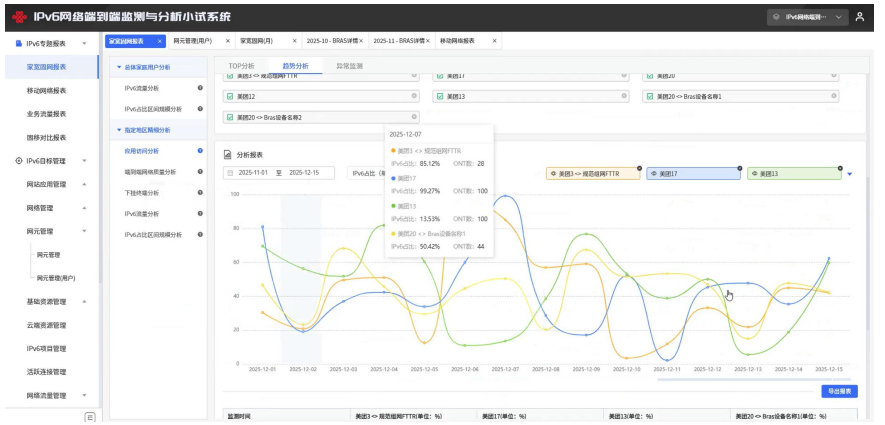
Moblie Network Traffic Trend



Anomaly Monitoring



End-to-end Network Quality Monitoring and Analysis



IPv6 Access Trend of Application

Next Step and Discussion

Call for comments: What did we miss?

Is this valuable and is the WG interested in the topic?

---Call for adoption

If you are interested in draft or have suggestions on how we can enhance our draft. Please reach out to us!

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Thanks for Listening!