AmLight: Supporting Major Facilities and Shared-CI Resource Providers in the U.S., Latin America and Africa

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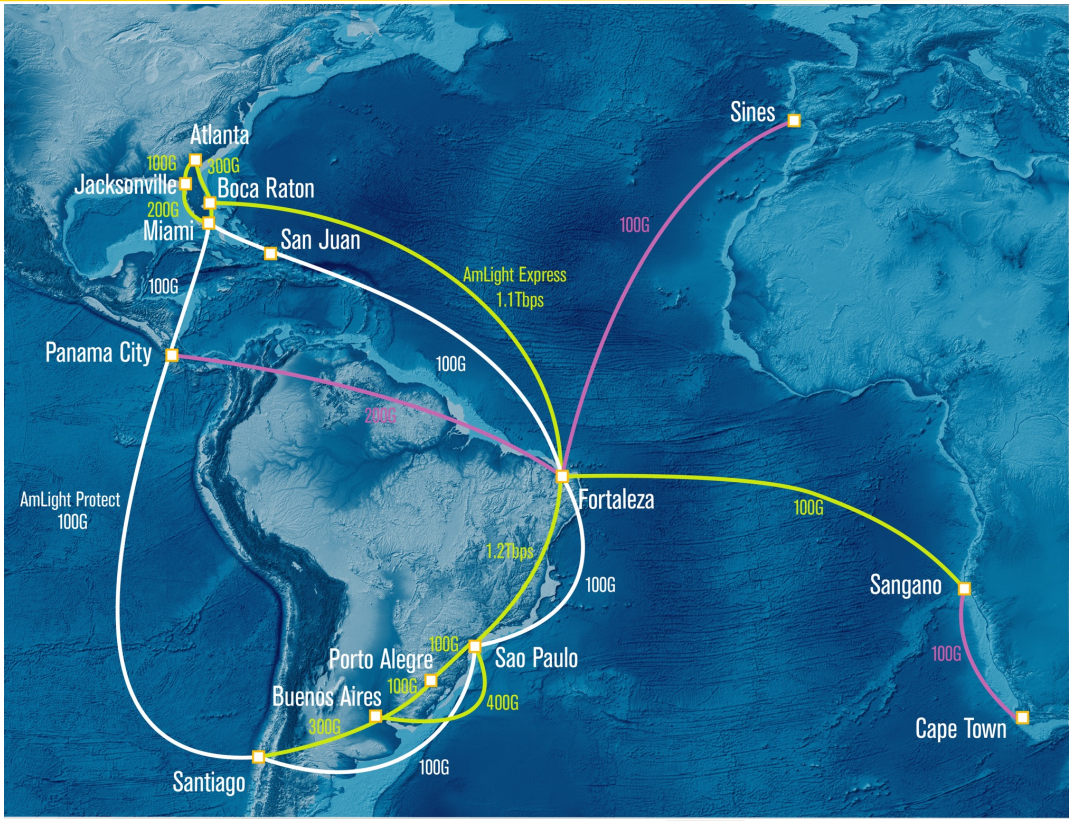
- **AmLight is a purpose-built international R&E network infrastructure**
  - Supports the Vera Rubin Observatory and U.S. astronomy projects, major facilities, scientific workflows, network testbeds, and the R&E communities in the U.S., Latin America, and Africa
- **AmLight: The Next Frontier Towards Discovery in the Americas and Africa** is a new 5-year project awarded in 2025
  - **Operate and evolve a production-grade international network,** connecting major facilities and research communities across the Americas and Africa
  - **Deliver workflow-aware networking** that meets the performance and reliability needs of large-scale science
- **Characteristics of the AmLight international R&E network**
  - Multi-terabit international connectivity across four continents
  - Software-defined networking, enabling autonomic network operations
  - Highly instrumented for deep visibility into the network
    - High-precision telemetry
    - Automated link testing and diagnostics instrumentation



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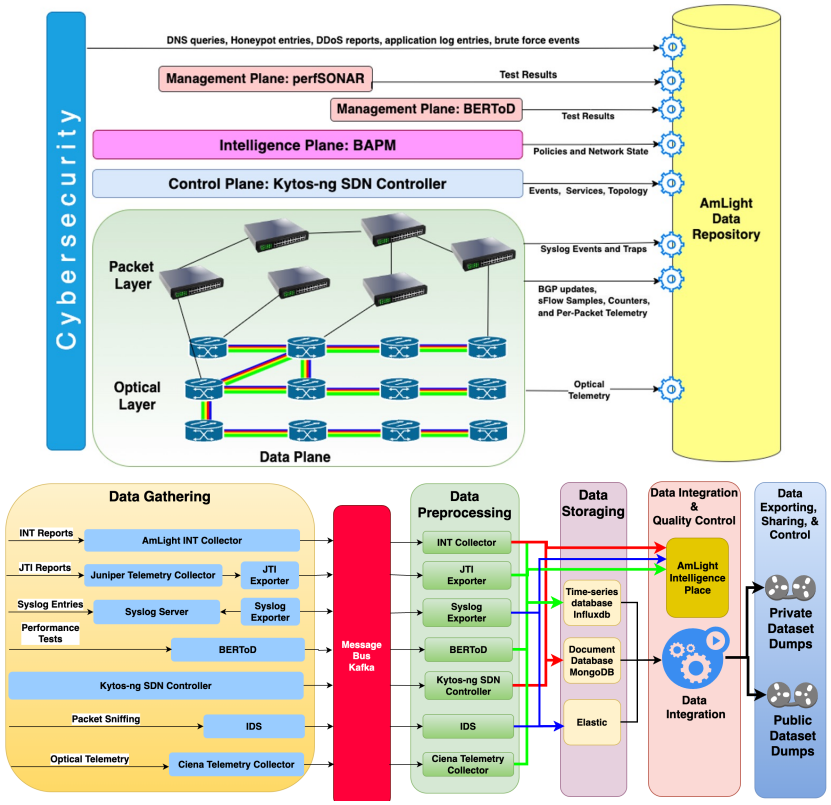
AmLight as a Data Provider to support ML and AI communities

- AmLight is providing datasets to support ML and AI communities
  - The LLM-Driven Data Labeling for Training ML Models (LLMDaL) project, NSF OAC award# 2530965,
    - Fine tunes LLMs to convert AmLight network data into high-quality labeled cybersecurity ready-for-science datasets
  - If interested in labeled cybersecurity data, please response to the LLMDaL questionnaire

- A **Data Production Pipeline** is being built to transform raw AmLight network data into FAIR, ready-for-science datasets for ML and AI research communities

- Datasets will be shared by leveraging collaborative projects
  - Open Science Data Federation (OSDF) for broad distribution
  - COMUNDA portal for access to datasets
  - FIU's Research Dataverse Repository and Smart Data Pipeline of the EnviStor project (NSF award# 2322308) for FAIR compliance



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