AFCS Application

Data Center and Lab Physical Layer Automation

Larry Cantwell

609-518-4096

larry.cantwell@onpathtech.com

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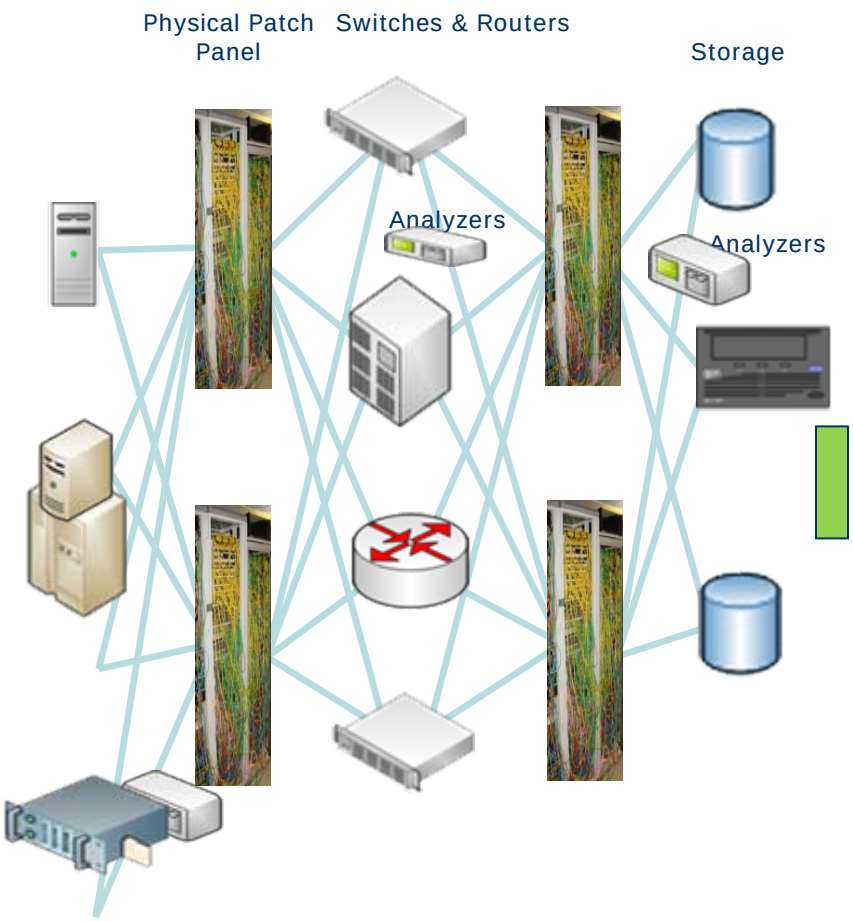
Present Mode of Operation

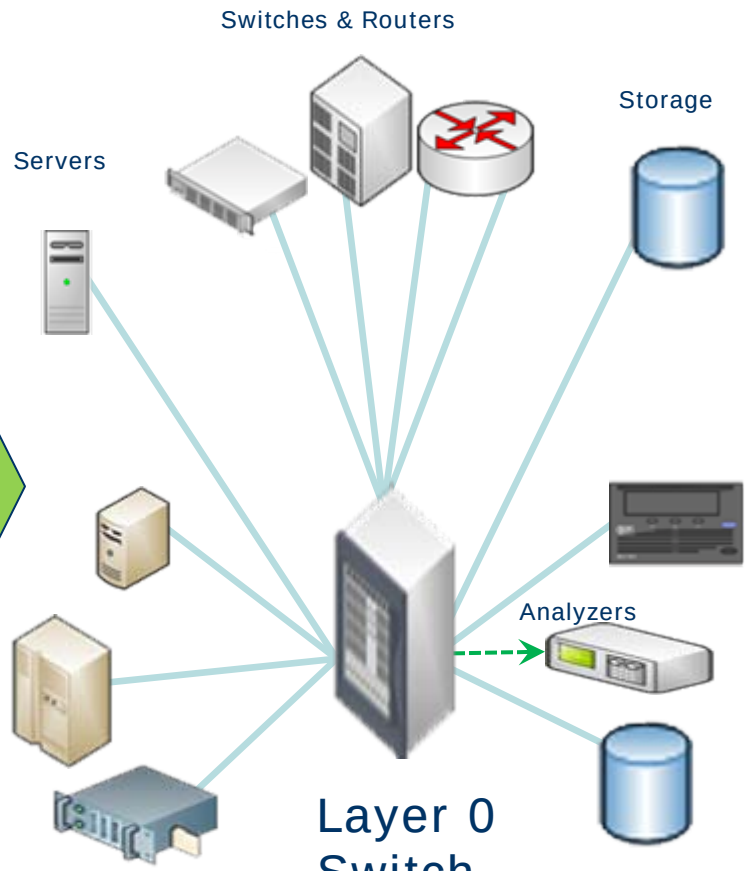
- Historically data centers and test labs use mechanical patch panels to provide physical connectivity.
- This approach has a number of issues that can be associated with it:
  - Operational expenses associated with moving patch cords when needed.
  - User must be present in the subject environment to make physical layer moves thus minimizing ability to share equipment remotely.
  - The probability of cable mistakes and breaks is high.
  - The physical ‘rats nest’ of cabling that can accumulate over time.

Physical Layer Automation Example

Traditional Application



Automated Physical Layer



Benefits of the Application

- Benefits
  - Cable once and manage physical connectivity in a hands off fashion.
  - Facilitate a secure locked down facility where changes are made based on access privileges and an audit trail is present.
  - Enable a centralized passive monitoring approach.
  - Enable a more resilient network by constantly monitoring and re-driving circuits and providing automated circuit failover
  - Reduce operational expenses.

Benefits of the Application

- Who Can Benefit from the Application
  - Data center owners
  - Lab Networks
  - Disaster recovery providers and applications
  - Carrier hotel owners
- Challenges
  - Capital expense justification for large scale deployment is still under investigation