

# IETF 119 – TEAS Meeting

Use cases, Network Scenarios and gap analysis for Packet Optical Integration (POI) with coherent pluggables under ACTN Framework.

draft-poidt-ccamp-actn-poi-pluggable-usecases-gaps-00

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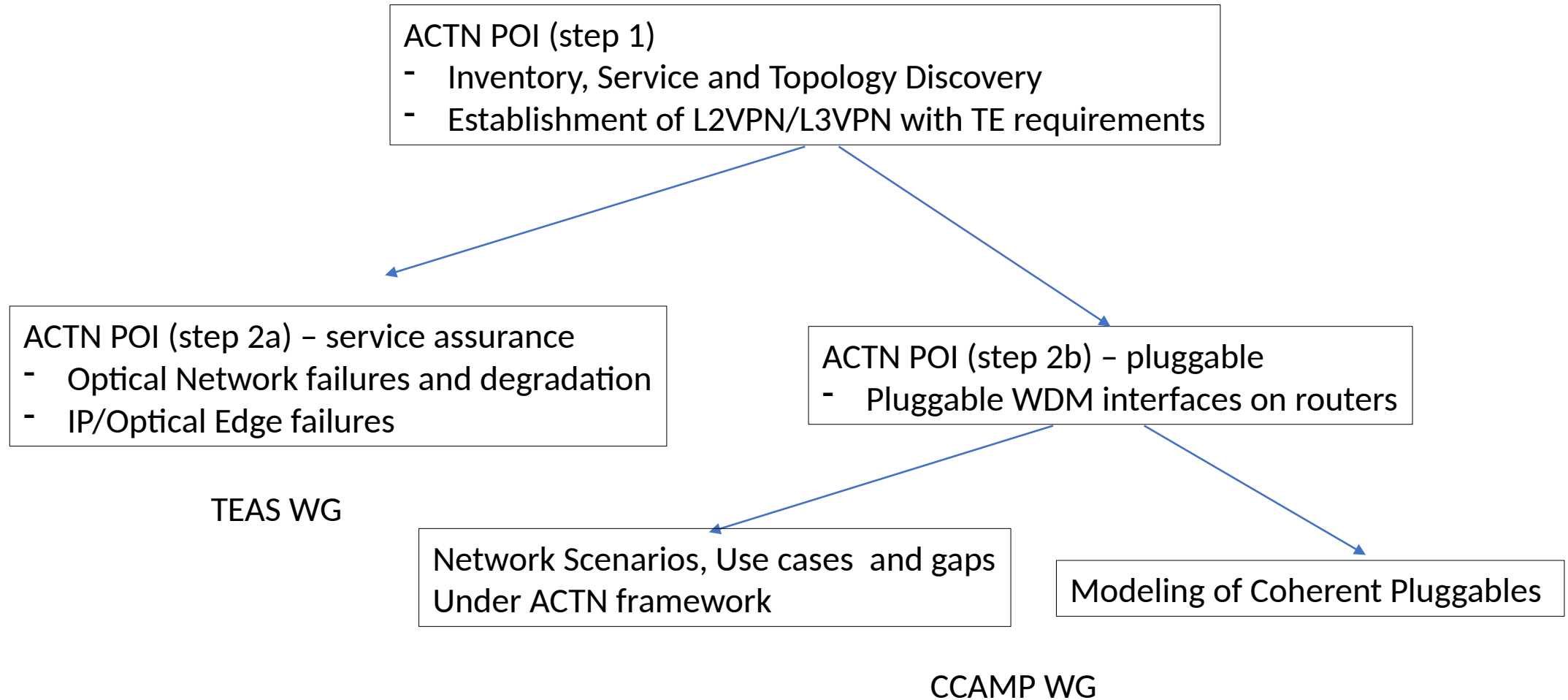
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# Motivation and relation to TEAS

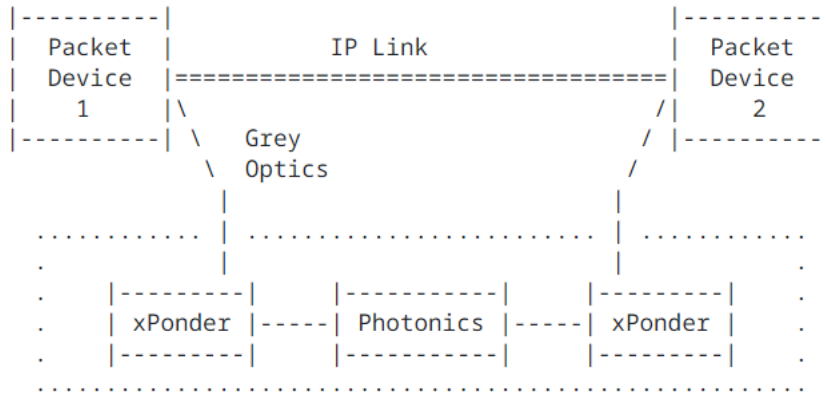


- The new coherent pluggable technology is **mature** (in particular 400G), deployed in field and ready to come into operator's network
- The operators are targeting to have end-to-end SDN control management of the full network including those new DWDM pluggables in the Routers.
- The work is a continuation of draft-ietf-teas-actn-poi-applicability and draft-poidt-teas-poi-assurance for the new scenarios.
- During the last IETF meetings the discussions were stucked in controversy about who controls the pluggable (optical vs packet controller)
- Agreement to move forward together with focus on **scenarios, use cases and modelling work** under general ACTN framework.
- **Network scenarios and use cases** are defined in the common draft led by operators.
- Modelling work has started in parallel (focus on the pluggable).
- Coordination with TEAS were ACTN and PoI are defined is required.

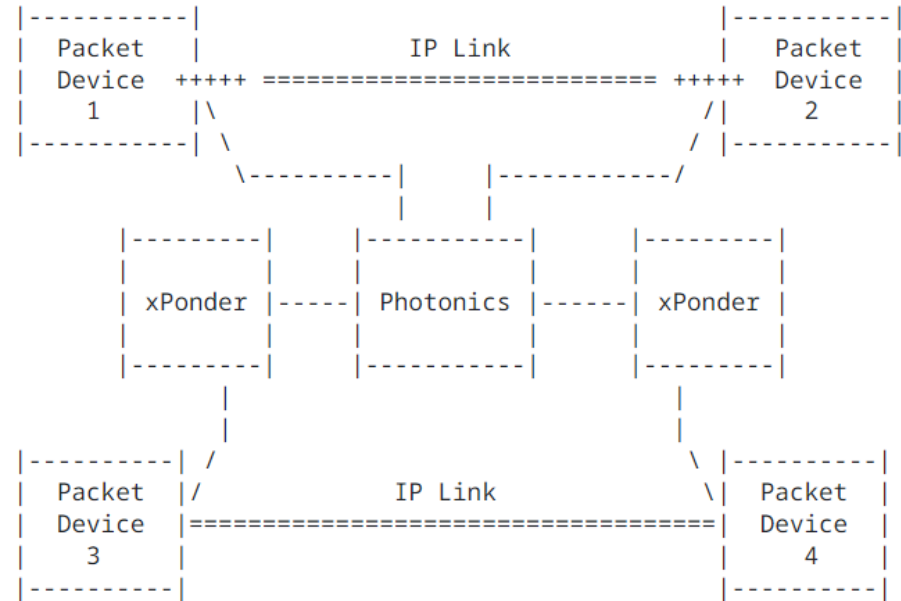
# ACTN POI work and relations



# Traditional vs new deployment



Optical Network = Photonics + xPonder



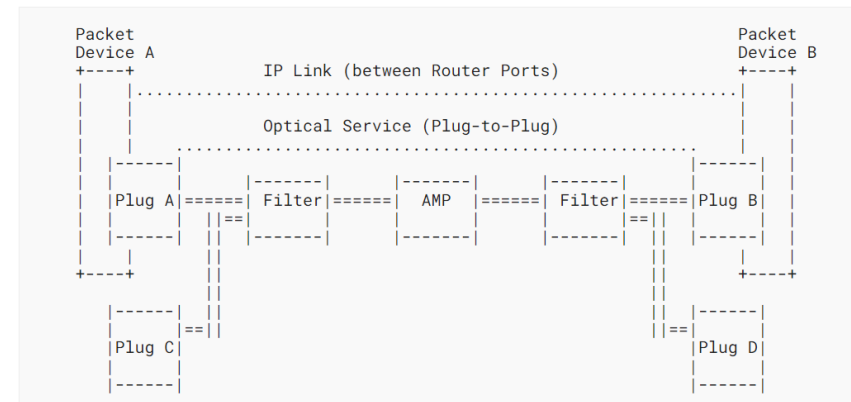
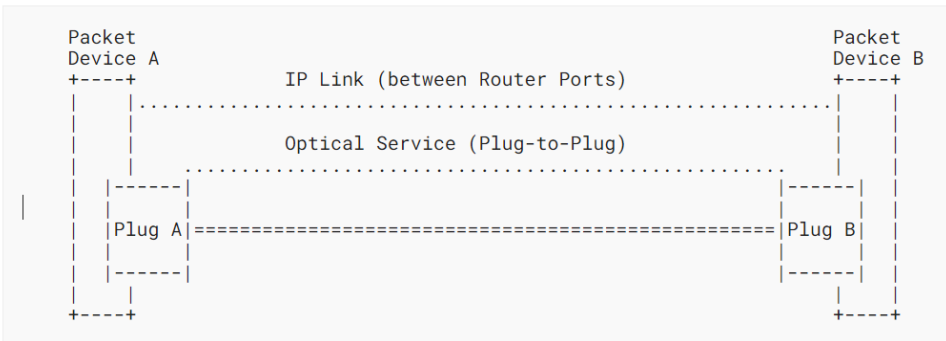
Optical Network: Photonics + pluggables + xPonder

# Network scenarios

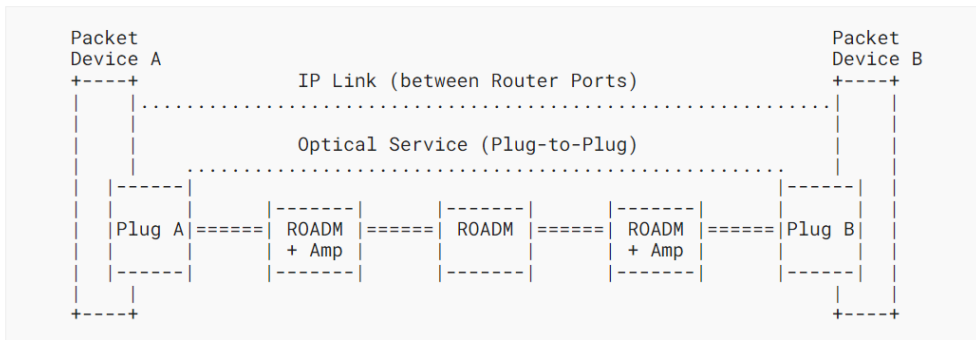


- What are the network scenarios we're targeting?

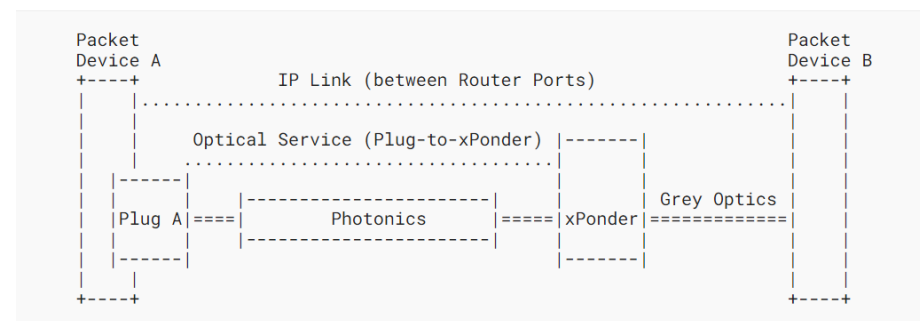
A) High capacity point to point connection over dedicated direct fiber    B) High capacity point to point over shared fiber



C) High capacity point to point over metro-regional shared meshed network



D) High capacity point to point optical connection between standard pluggable and xPonder



# Use Cases



- A set of use cases has been compiled and prioritized.
- For each use case, it is identified if it applies for the general PoI, or just for scenarios with pluggables.
- **Top priority: End-to-end multi-layer visibility**
  - Discovery and inventory of the End-to-end multi-layer network
  - End-to-end multi-layer event/fault management
  - End-to-end multi-layer performance management
- **Inter-domain link validation**
  - Verify the connection between pluggable in the router and the ROADM
- **Service provisioning/fulfillment:**
  - Pluggable to pluggable service Provisioning
  - End-to-end service multi-layer fulfilment with SLA constraints (TE constraints)
  - End-to-end service multi-layer fulfilment with SLA constraints (TE constraints) and optical restoration support

# Next steps



- Feedback from IETF community beyond optical experts
- Provide additional use cases: Open to contributions!
- Get reviews of the draft
- Harmonize terminology
- Keep alignment on draft-ietf-teas-actn-poi-applicability and draft-poidt-teas-poi-assurance
- Suggestions from TEAS?