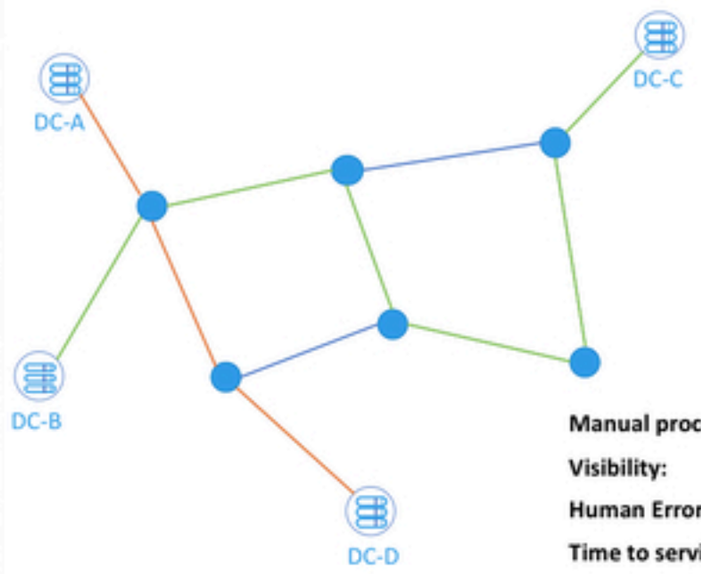
Fiber Smart NETWORKS

Dark Fiber Use Case 1

Dark Fiber Becomes Smart Fiber

Today a Dark Fiber service is turned up manually. Common issues experienced include:

- Out of date documentation results in fibers already allocated. wasting a site visit and forcing a route re-plan.
- Time to Revenue often measured in weeks if not months.
- Baseline tests once the link is completed can reveal the need for further site visits to re-splice.
- Not all splices are cut upon teardown resulting in stranded capacity.
- Roll out can be delayed by access issues.



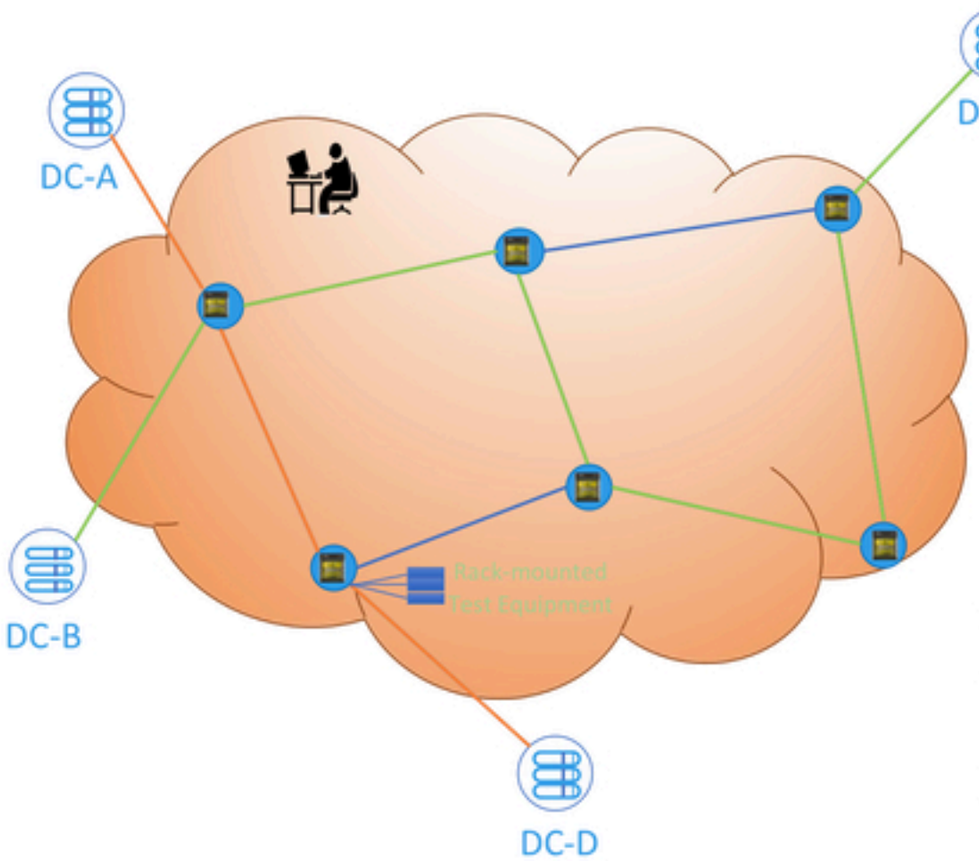
New link request – DC-A to DC-D

• Network Planning & Change Request Approval	2 Days
• Engineer dispatched to splice first node	1 Day
• Engineer dispatched to splice second node, allocated fibers already in use	1 day
• Network Planning allocate new fibers	2 days
• Engineer dispatched to splice second node	1 day
	7 days

New link request – DC-B to DC-C

• Network Planning & Change Request Approval	2 Days
• Engineer dispatched to splice first node	1 Day
• Engineer dispatched to splice second node Planned Route – no fibres available	1 day
• Network Planning allocate new fibers	5 days
• Engineer dispatched to splice second node again	1 day
• Engineer dispatched to splice remaining nodes	3 day
	13 days

Manual process:	Technician has to access fiber manholes
Visibility:	<100% accuracy of data records
Human Errors:	Manual process leads to outages
Time to service:	Days – Weeks
Manageability:	<100% optimal



New link request – DC-A to DC-D

• Network Planning Checks current Network Config & Approves Change Request	0.5 Days
• Cross-connects are configured at each node	1 Minute
	~0.5 days

New link request – DC-B to DC-C

• Network Planning Checks current Network Config & Approves Change Request	0.5 Days
• Cross-connects are configured at each node	1 Minute
	~0.5 days

Automated process:	No need for physical access to fibre Manholes
Visibility:	100% accuracy of data records
Human Intelligence:	Software defined physical network
Time to service:	~30 Seconds
Manageability:	Fully streamlined

A fully automated service reduces costs as well as accelerating and enhancing the services.

- Each system maintains a live record of the current network configuration allowing real time route planning.
- End to End configuration changes can be made in minutes.
- Complete baseline testing can be completed remotely with the records associated with the link to maintain a historical audit of the links performance.
- Truck rolls eliminated from the majority of system turn-ups.
- No physical access required.
- Link cleared end to end on teardown, no stranded capacity.
- Traffic can be remotely re-routed for routine or emergency maintenance in a matter of minutes.
- Phased rollout allows key intersection points to be automated first with less utilized locations added if and when the business case justifies it.