CYIENT

CYIENT'S DATA MANAGEMENT SERVICES HELP LUMEN ESTABLISH DATA QUALITY GOVERNANCE

SNAPSHOT

Customer: Lumen (formerly CenturyLink)

Location: North America

Industry: Telecommunications

Customer Since: 2008

Challenge: To form a strategic partnership for resolving data inconsistencies and integrity issues, resulting in an improved and established data quality governance for Lumen's business excellence.

Cyient Solution: Cyient data management services, with an offshore center of excellence (CoE).

Outcome: Efficient data governance, thereby, reducing the internal resource cost to Lumen.

Overview

Lumen, formerly CenturyLink, is an American multinational telecommunications company that offers communications, network services, security, cloud solutions, voice, and managed services. Lumen's products and services are centered on three segments: enterprise business, small business, and residential. The company provides broadband, voice, and mobile services to consumers and businesses across the country. Lumen Fiber is an FTTp service, providing broadband Internet to small and slow-growing locations across the United States.

Apart from other engineering services, we at Cyient also offered our data management services to Lumen to enrich, identify, and cleanse data inconsistencies in the network design system (NDS). This enabled Lumen to have better visibility over their "best in world fiber network" to help them plan and expand their network services effectively.

Business Challenge

For a long time, Lumen held their legacy data in an outside plant facility management (OSP-FM) system. The land base configured in the system was quite old, and while expanding their network, there was a need to resolve topological inconsistencies in the existing land base to reflect real-world network changes. The positional accuracy was improved using Cyient's conflation services. Lumen then consolidated various network data sources from the OSP FM and other systems to NDS (physical network inventory).

Since the data was migrated from multiple sources, it resulted in data inconsistencies relating to connectivity, associations, missing/incorrect attribution, etc. In particular, address objects have to be loaded into NDS with reference to loop facility assignment and control system (LFACS) for their subsidiaries (i.e., Qwest, CenturyTel, Embarq, and CLEC).

With all these inconsistencies, Lumen faced challenges in their day-to-day operation, which had a significant impact on the planning and design (P&D) activities. Further, the migrated data was not developed completely to maximize the features of the PNI software effectively.

Lumen reached out to Cyient to implement efficient and effective data governance and quality within their organization.

Cyient Solution

The journey with Lumen started in 2008 with data conflation services in a CoE environment. Cyient's in-house tool, TruShift®, was utilized to improve the customer's legacy data's positional accuracy. After the merger with Lumen, the legacy data and various data from other acquisitions were consolidated into NDS, a Smallworld PNI environment from GE. This created the necessity of cleansing and enhancing the data to maximize the benefits of the NDS environment for accelerating the business.

Cyient offers data management services under various scopes, which are identified below:

Scopes related to building the data in NDS	
Scope	**Description**
ISP data creation + cabinet creation	Create ISP data, such as floor layouts, cable racks, racks, shelves, and cabinets based on the NDS information and specifications.
MDF creation	Create MDFs with verticals, slots, cards, and multiport, based on the information and specification in NDS.
Juno data migration sites	Import ISP data such as racks, shelves, cards, and ports of the "juno" sites into NDS.
OSP-insight metasolve data ISP sites	Import ISP data such as racks, shelves, cards, and ports of the "OSP" sites into NDS.
COE FM_ Migrate CE data into NDS	Migrate the ISP connection data from COE-FM into NDS.
CAF II – Engineering P&D service order provisioning	Plan and design engineering in NDS for the CAF II rollouts.

Scopes related to cleansing the data in NDS	
Scope	**Description**
Tickets	Resolution of "Rapid"/ "Non-Rapid" tickets, as per the guidelines.
CMC-NDS job closing phase 2 and 3. Verify actuals.	Verify the jobs in NDS, before closing, against the actuals, such as quantities, service dates, fixing any migration errors, etc.
OSP FM drawings	Capture the missing features in NDS against the OSP FM drawings, such as aerial, building, terminals, remote terminals, manholes/handholes, etc.
CAF-II	Validate the connectivity and terminal information and reconcile in NDS against LFACS.
EWO info flag cleanup and X-box connectivity	Cleansing the error flags in NDS by fixing the inconsistency based on the description in the error flag.
Inventory automation – ADTRAN/Calix	Cleansing the HDTs and OLTs, based on the audit report from ADTRAN and Calix on the remote HUTs.
BIW fiber cleanup	Review and cleanse the fiber terminals for the connectivity and association, based on the error reports against LFACS and address objects respectively.

The Results

The journey with Lumen included multiple scopes between 2015–2017, and the current team is 220+ associates with scopes, including CMC-NDS job closing, CAF-II, BIWF, and SpringNet (Pilot).

The customer benefits are as follows:

- Established that contracts govern the services provided by Cyient

- Saved **50,000** hours by developing reporting scripts (internally)

- Achieved considerable reduction in time-to-market

- Ensured that the customer has the confidence that Cyient is fully aware of their environment
  - IT to engineering
  - NDS platform
  - Business process

- Delivered flexibility, scalability, and savings in OpEx

- Offered **10-15%** discount on the proactive proposals

- The volumes delivered so far:

Scope	Volumes
ISP data creation + cabinet creation	7,154 ISP data and 9,358 cabinets
MDF creation	3,193
Juno data migration sites	849
OSP-insight metasolve data ISP sites	990 sites and 14 exchanges
Tickets	2,549
CMC-NDS job closing phase 2 and 3. Verify actuals.	86,000 + 14,000
OSP FM drawings	150,000
CAF-II	1,334 reports/362,873 terminals
EWO info flag cleanup and X-box connectivity	108,236 EWO, 23,023 X-box
COE FM_ Migrate CE data into NDS	16,747
CAF II – Engineering P&D service order provisioning	Four cities, P&D, 321 jobs - SOP
Inventory automation – ADTRAN/Calix	16,747 shelfs
BIW fiber cleanup	All addresses and fiber terminals for 1,039 wire centers

Another critical aspect of this engagement is the high level of IP security built into the engagement. Dedicated teams operated in a secured workspace on the Cyient campus, with secure access to the customer's network. Due to the sensitive nature of the work handled, IP security is a top priority. This, combined with our well-established protocols, systems, and processes, makes it a salient feature of our engagement.

The partnership ensured both Lumen and Cyient had a win-win relationship, which would continue further with technological progression.

DESIGNING TOMORROW TOGETHER

Cyient is an acknowledged leader in engineering design services, design-led manufacturing, networks and operations, data transformation, and analytics. We collaborate with our customers to help them achieve more, and together, we shape a better future. We call it Designing Tomorrow Together.

With our industry focus on communications, we align closely with our customers' business needs, goals, culture, and core values. Cyient has successfully delivered various data services and continues to offer data, engineering, and technological assistance to Lumen. This reflects the deep and long-standing relationship that we have developed and sustained for more than a decade.

cyient.com

Cyient (Estd: 1991, NSE: CYIENT) is a global engineering and technology solutions company. As a design, build, operate & maintain partner for leading organizations worldwide, we take solution ownership across the value chain and leverage the power of digital technologies and advanced analytics, along with domain knowledge and technical expertise, to solve complex business problems. Our industry focus includes aerospace and defense, healthcare, telecommunications, rail transportation, semiconductor, industrial, and energy.

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