

## Career Episode 1

### Revolutionizing Corporate Circuits: The Globe Telecom, Inc. Galactus Migration Project

#### INTRODUCTION

1.1 This career episode looks into my engagement with the Globe Galactus Migration Project. I've driven the migration of corporate leased-line circuits for Globe Telecom across Panay Island. As an enterprise and corporate field operation, I've expertly installed and configured a range of customer premises equipment, collaborating with diverse clients. My focus on meticulous testing, methodical documentation, and client-centred handovers ensures peak network functionality. With a dedication to transparency and excellence, I've transformed telecommunication landscapes for optimal performance.

#### BACKGROUND

1.2 In the realm of telecommunications transformation, my journey with the Globe Galactus Migration Project has been marked by an unwavering dedication to revolutionizing network landscapes. As an integral member of Globe Telecom, Inc., I assumed the role of Enterprise and Corporate Operations (ECOPs), driving the migration endeavour that spans Panay Island's four provinces: Iloilo, Capiz, Antique, and Aklan. The timeline from 2020 to the present bears witness to my active involvement in orchestrating the migration of corporate leased-line circuits from legacy nodes to a state-of-the-art network infrastructure. Collaborating with a diverse array of clients, including banks, government agencies, educational institutions, BPOs, local ISPs, and private corporations, my responsibilities encompassed the meticulous installation and configuration of customer premises equipment (CPE). The roster of modems, ranging from Ciena 3916 and 3926 to Huawei ETN Series and Cisco's extensive lineup, was met with adept configuration finesse. This encompassed the intricacies of remote management, IP addressing, VLANs, router DHCP settings, static routes, and DNS configurations.

1.3 In the pursuit of network optimisation, my acumen extended to holistic integration and testing. Armed with cutting-edge tools such as optical time domain reflectometers (OTDR), VeEX TX300s, and JDSU HST-3000, I left no facet unexamined. My quest for seamless functionality led me to employ specialised tests, including RFC 2544 and Bit Error Rate (BER) evaluations, to ensure that the network not only met but exceeded client expectations. The nexus of methodical documentation and holistic reporting fortified my commitment to transparency and reliability. The meticulous record-keeping of installations, configurations, and testing results laid the foundation for troubleshooting, referencing, and training, while my comprehensive reports fortified open communication and project awareness. As a tenacious verifier, I aligned every device with the grand tapestry of the project, meticulously inspecting integration and functionality to ensure an impeccable handover. This dedication culminated in a client-centric transition, where detailed orientation sessions empowered clients and operational teams alike with a comprehensive understanding of the infrastructure's nuances. Figures and visual representations punctuated this narrative, underpinning my commitment to clarity, reliability, and transformative excellence.

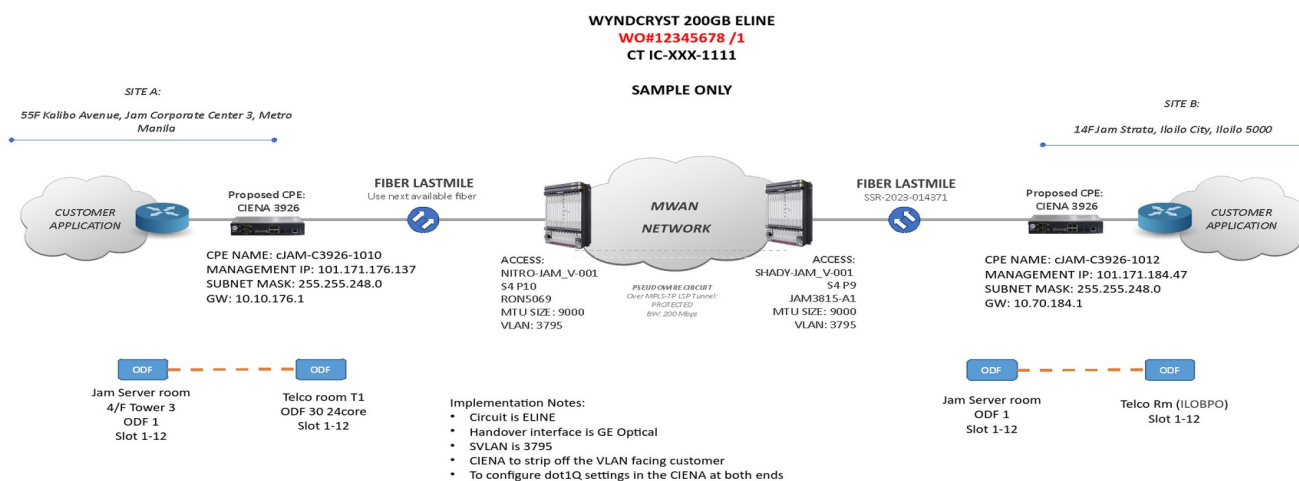
#### PERSONAL TECHNOLOGIST ACTIVITY

##### 1.4 Preparation and Planning

- *Project Analysis:* I conducted a thorough assessment of the project guidelines to gain a comprehensive understanding of the scope and transformative objectives of the Globe Galactus Migration Project. This analysis allowed me to align my efforts with the overarching goals of the initiative.
- *Medium Identification:* Tailoring the installation to project requirements, I meticulously selected appropriate mediums. This ranged from conventional copper dropwires to cutting-edge fibre optic cables, ensuring that each choice aligned with the project's specific needs and technological advancements.
- *Resource Accumulation:* Recognising the importance of seamless execution, I procured essential tools and customer-premises equipment. My preparation extended to obtaining

critical materials like LAN cables, RJ-45 connectors, and various fibre patch cords (such as LC-LC and LC-SC). This ensured that I was well-equipped for the installation process and could maintain operational efficiency.

- **Detailed Design Review:** I delved into the intricate details of the project by thoroughly studying the low-level design (LLD), a sample of which is shown in Figure 1, provided by project managers. This meticulous review allowed me to grasp the specifics of the blueprint and guarantee precise execution in alignment with the project's requirements.



**Figure 1.** A sample of a low-level design diagram

## 1.5 Mediums Installation

- **Design Assessment:** I embarked on comprehensive site surveys to identify the optimal installation locations. Based on these assessments, I meticulously referred to the low-level design provided by the project manager. This ensured that the execution was not only aligned with the plan but also adaptable to real-world conditions.
- **3rd Party Contractor Management:** I oversaw the installation work carried out by third-party contractors. Their tasks primarily involved the installation of intricate mediums like fibre optic cables, which were pivotal to the project's success.
- **Precision-Driven Installation:** Paying utmost attention to detail, I executed installations with precision. This encompassed not only ensuring accurate alignment but also establishing secure connections and employing appropriate fastening techniques. This meticulous approach guaranteed the longevity and operational efficiency of the installed components.
- **Medium Integrity Check:** To validate the success of our installations, I conducted rigorous post-installation examinations. This involved evaluating the parameters of the installed media against predefined standards. The meticulous checks verified the integrity of the installations and confirmed their alignment with the project plans.

## 1.6 Modems and Routers: Installation and Configuration

- **Specialised Installation:** Leveraging my expertise, I managed the installation of diverse modems and routers. These included renowned brands like Actelis, Ciena, Huawei, and Cisco. My approach catered to the varied demands of different network environments, ensuring seamless integration.
- **Configuration Excellence:** My responsibilities extended beyond installation, as I meticulously configured these devices. This involved fine-tuning settings such as remote management, LAN and WAN IP addresses, VLANs, router DHCP settings, static routes, and DNS settings. I adhered closely to the low-level design provided, guaranteeing precise alignment with project specifications. In Figure 2, a Ciena 3916 configuration is shown using the Minicom terminal emulator.

```

#
interface GigabitEthernet0/2/4
 portswitch
 undo shutdown
 port link-type trunk
 port trunk allow-pass vlan 1194
 dcn
#
interface GigabitEthernet0/2/5
 portswitch
 undo shutdown
 port link-type dot1q-tunnel
 port default vlan 1194
 dcn
#
interface GigabitEthernet0/2/6
 undo shutdown
 dcn
#
interface GigabitEthernet0/2/7
 portswitch
 undo shutdown
 port link-type trunk
 port trunk allow-pass vlan 1194
 dcn
#
interface GigabitEthernet0/2/7.4063
 vlan-type dot1q 4063
 description *****MANAGEMENT*****
 ip address 10.153.244.42 255.255.255.252
#
interface NULL0
#
interface LoopBack1023
 description DCN loopback interface
 ip binding vpn-instance __dcn_vpn__
 ip address 128.107.239.226 255.255.0.0
#
ospf 65534 vpn-instance __dcn_vpn__
 description DCN ospf create by default
 opaque-capability enable
 hostname
 vpn-instance-capability simple
 area 0.0.0.0
 network 0.0.0.0 255.255.255.255
#
ip route-static 0.0.0.0 0.0.0.0 10.153.244.43
#

```

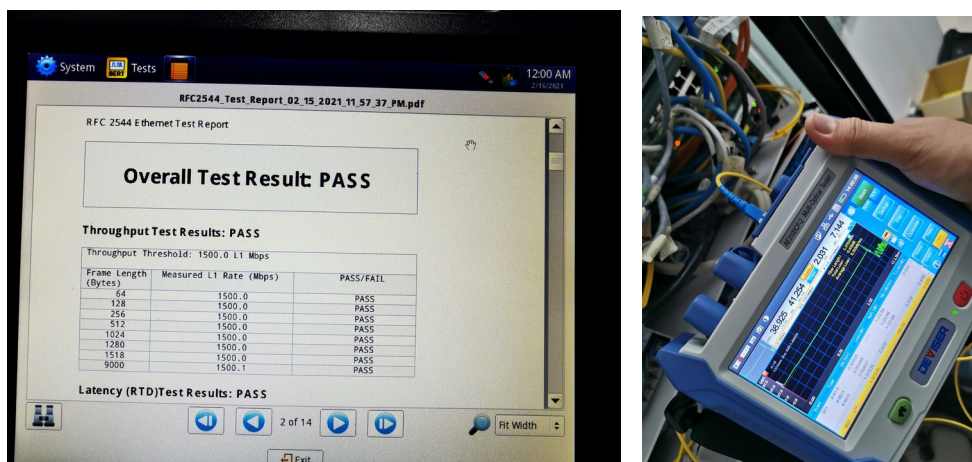
**Figure 2.** Ciena 3916 configuration using the Minicom terminal emulator

### 1.7 Integration of Modem and/or Microwave Radio

- *Holistic Integration:* I seamlessly integrated the installed modems and routers into Globe's access node network. This integration was designed to enhance overall compatibility and functionality, ensuring a cohesive and efficient network architecture.
- *Optimal Performance Assurance:* Beyond integration, I undertook measures to guarantee optimal performance. This included establishing robust connectivity and dynamic interaction between devices, resulting in seamless data transmission and bolstering network reliability.

### 1.8 Quality Assurance and Testing

- *In-Depth Evaluation:* I undertook a meticulous approach to testing, going beyond routine checks. This encompassed comprehensive testing phases to ensure impeccable device quality and peak performance. These in-depth evaluations were vital to ensuring the robustness of the infrastructure.
- *Fibre Optic Analysis:* Leveraging the precision of an Optical Time-Domain Reflectometer (OTDR), I conducted thorough assessments of the fibre optic integrity. This proactive analysis allowed me to preemptively address vulnerabilities and maintain uninterrupted and efficient data transmission.
- *Advanced Functionality Tests:* To ensure peak functionality and unwavering reliability, I employed specialised tests such as RFC 2544 and Bit Error Rate (BER) evaluations. Utilising cutting-edge devices like VeEX TX300s and JDSU HST-3000, I left no stone unturned in validating the network's capabilities. RFC 2544 and optical time-domain reflectometer testing and results are shown in Figure 3.



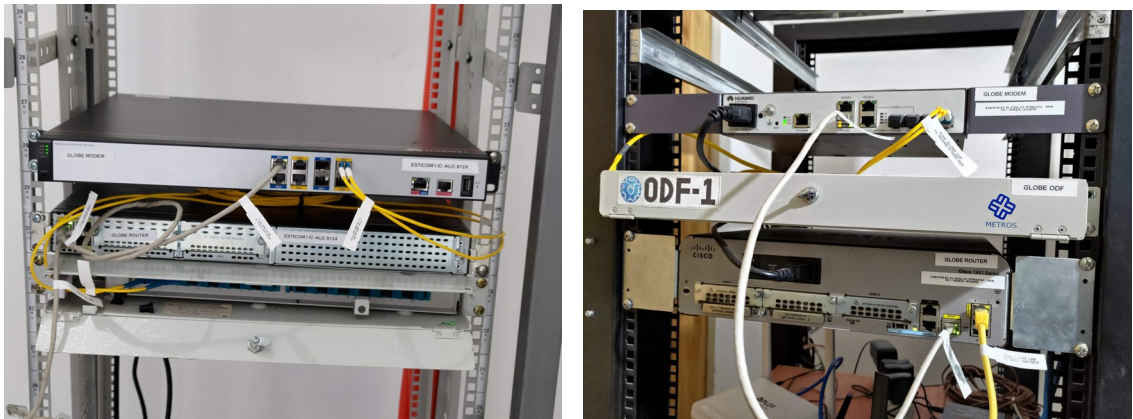
**Figure 3.** RFC 2544 sample results are on the left, and OTDR sample testing is on the right

### 1.9 Documentation and Reporting

- *Methodical Documentation:* I captured each phase of the installation journey with meticulous detail. This comprehensive documentation went beyond the steps taken and encompassed vital data such as IP addresses, port assignments, VLAN configurations, and more. These records facilitated future troubleshooting and streamlined referencing and training processes.
- *Holistic Reporting:* My commitment to transparent communication was evident in the thorough reports I prepared. These reports not only detailed procedures and outcomes but also incorporated test results, configurations, alterations, and critical images. By promptly sharing these comprehensive reports with project stakeholders, I ensured open communication and maintained project awareness.

### 1.10 Finalisation and Handover

- *Meticulous Verification:* I conducted thorough inspections of installed devices to ensure both individual functionality and seamless integration within associated systems. These meticulous verifications aligned every element with the project's stipulated requirements, guaranteeing a high level of quality.
- *Client-Centric Handover:* Recognising the importance of a smooth transition, I facilitated comprehensive orientation sessions. These sessions equipped clients with a deep understanding of the infrastructure, empowering them with knowledge and instilling confidence in the robustness of the installed systems. This client-centric approach enhanced the handover process and fostered a strong partnership. Figure 4 provides a visual representation of the devices presented to the client after rigorous testing, refining, and labelling.



**Figure 4.** Examples of circuits ready for service to different clients

## SUMMARY

1.11 In the dynamic realm of telecommunications, I led the transformation of Globe Telecom's network landscape through the Galactus Migration Project. As Enterprise and Corporate Operations, I orchestrated the migration of corporate leased-line circuits across Panay Island. Collaborating with diverse clients, including banks, educational institutions, and private corporations, I expertly installed and configured customer premises equipment. Meticulous testing, transparent documentation, and client-centred handovers ensured optimal network performance. Armed with cutting-edge tools, my dedication to holistic integration and specialised testing upheld network excellence. This commitment to transformative clarity and reliability has reshaped telecommunications horizons.