

Enabling Integrated Broadband for Reach-Challenged Industrial Complex

Shell Petroleum Development Company of Nigeria Achieves Broadband Integration

Enterprises looking for economical ways to extend the reach of private broadband networks in big campus complexes will be heartened by what a division of Royal Dutch/Shell has accomplished throughout its facilities in Nigeria. Shell Petroleum Development Company of Nigeria (SPDC) has avoided what could have been an extremely costly multi-site networking headache. By using a combination of legacy telephone wiring, fixed wireless links, and office LANs to create a highly integrated broadband platform SPDC provides its staff with access to corporate resources whether they're at home or on the job, event at temporary living quarters and field offices throughout the country.



Site Assessment

SPDC is Nigeria's largest oil supplier, with executive and administrative offices and major operations sites located in both urban and remote settings throughout the country, covering an area more than twice the size of California.

It's hard to imagine a more difficult network integration challenge than the one faced by SPDC. Priorities included integration with dedicated voice and data microwave links; connectivity of different types of residences into corporate data networks; linkage to corporate intranet and Internet gateways at Royal Dutch/Shell headquarters in Amsterdam; and private access via satellite link to an Internet access point in London. Together, these capabilities would ensure Shell Nigeria with secure global connectivity while not relying on often-unreliable links provided by the public infrastructure.

Solutions from Viadux Avoid Cost, Deployment Headaches

Assisted by its regional telecom supplier, SPDC determined that, rather than deploying fiber to all properties it could provide high-speed connectivity over existing telephone lines using broadband gateway technology from Viadux to sites that were otherwise beyond the reach of existing company LAN links.

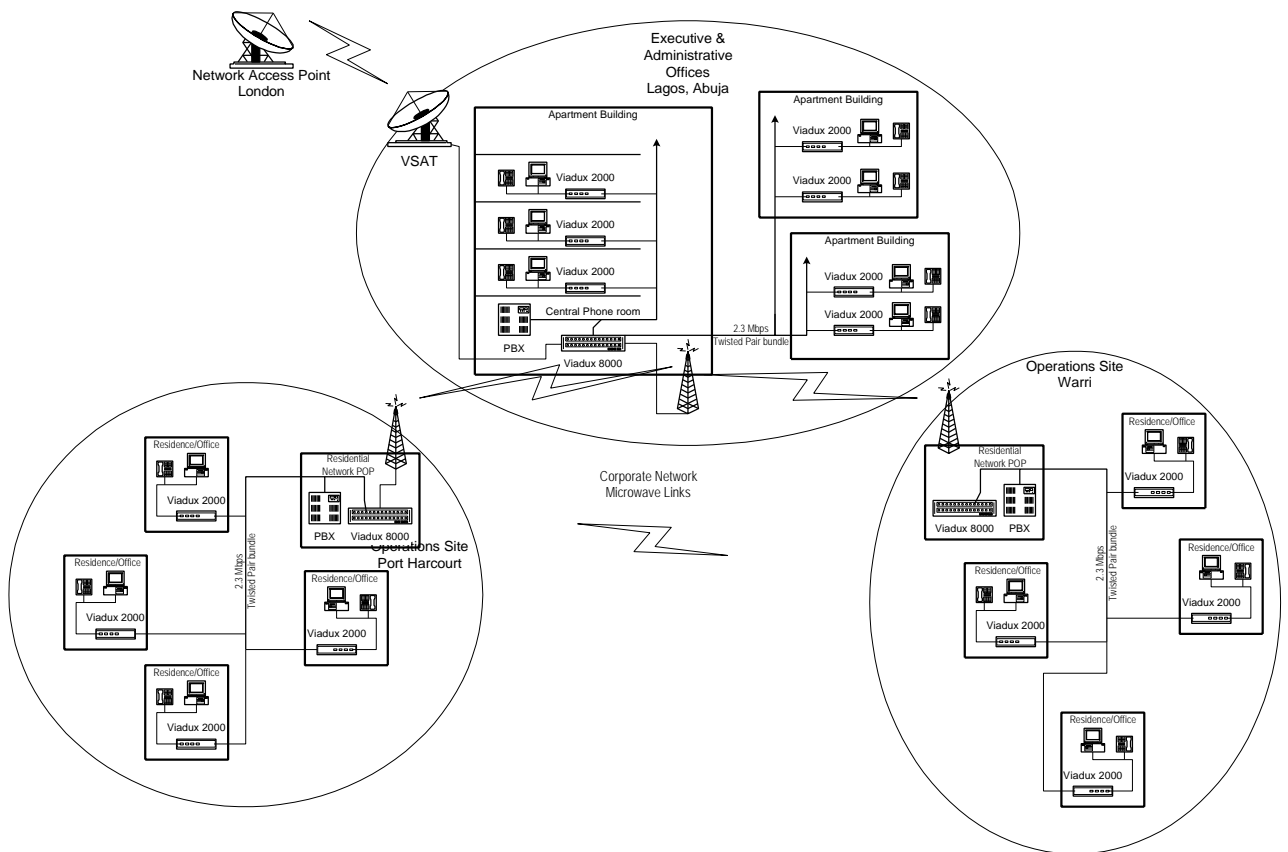
Implementation Phases

SPDC's regional telecommunications supplier began phased-in implementations in the capital city of Lagos, at staff residences needing personal Internet access, and access to the Shell corporate LAN, via the VSAT connection to London. Viadux equipment was installed to provide broadband connectivity from the VSAT terminal, to each of these

residences, via the existing telephone wiring already present in the multi-tenant staff residence buildings. As more staff residences were connected, Viadux equipment was used to provide connectivity between buildings, as well as through the buildings, themselves.

Operational facilities in Port Harcourt and Warri also needed connectivity to the VSAT connection in Lagos. Currently, these facilities were connected to Lagos via corporate 45Mbps point-to-point microwave links. But there were a number of facilities at both Port Harcourt and Warri that did not have connectivity to the local microwave links. Once again, Viadux equipment was installed at Port Harcourt and Warri to provide broadband connectivity, over existing telephone wiring, from the local end of the microwave radio, to a large number of residences and offices present at these two facilities.

All told, over 1,000 Viadux 8000 ports are now deployed at SPDC sites, with broadband service supplied to over half of the facilities and apartment buildings via Viadux solutions.



CASE STUDY

Broadband Extended to Facilities beyond Reach of Corporate LANs

The success of the initial deployment of Viadux in residential settings prompted SPDC to extend corporate LAN access to work facilities in reach-challenged settings, ranging from on-campus security gates to remote field offices in the drilling and exploration regions throughout the Niger Delta. SPDC's Field Logistics Bases, oil wells scattered throughout the region, had been connected by dial-up to the company network through PBXs to the data network. The company used Viadux solutions to deliver broadband services over twisted-pair infrastructure, avoiding costly installation of a second cable to these remote outposts.



Enterprise Benefits

One of the benefits of using the Viadux platform is the versatility it brings to working in whatever scenarios might develop as SPDC's network architectures and applications evolve. This is already well demonstrated in the variety of deployment scenarios in play at SPDC's facilities, but there's more to come.

In situations where the Ethernet link between microwave radios and 8000 gateways is longer than normally can be accommodated over a Category 5 cable connection, the Viadux 300 LongReach™ extends the connection up to 2,500 feet without requiring installation of in-line repeaters. This flexibility optimizes positioning of antennas, switches and concentrators at any given location.

VPNs over SPDC's private network are also planned, simplifying authentication of user access to local and global corporate network assets. The company will have no trouble extending this capability to all locations because the Viadux system ensures secure data encrypted transmissions. This arrangement provides the flexibility to reconfigure private address assignments without impacting the fixed public address assignment for a given interface.

For many enterprises, the ability to remotely manage bandwidth on a per-user basis can be vital to successful, low-cost operations in a multi-tenant environment. And, in all cases, it's essential that companies be able to establish service level priorities and to control quality of service at whatever layers of service management their situations require. At the same time, the concentrator and bridge support PPPoE (Point-to-Point Protocol over Ethernet) and IP.

Affordable, Expandable Deployment

By all accounts, the Viadux system has had a big impact on how SPDC employees make use of corporate network assets. Broadband connectivity has been a self-perpetuating phenomenon among SPDC's resident employees ever since the first links to executives' quarters were installed. A company spokesman sums it up nicely: "Employees who had the broadband connection became the envy of those who didn't."

Once it was understood heaven was at hand, nobody wanted to be left out. Everybody is totally satisfied with the Viadux solution,” he adds. “The system doesn’t break down at all.”

About SPDC

Learn more about Shell Petroleum Development Company of Nigeria (SPDC) at www.shell.com

About Viadux, Inc.

Viadux is a leading provider of in-building broadband access solutions for the telecommunications and service provider industries. The company’s carrier-class gateways and CPE enable service providers to bridge the gap in delivering high speed data, video and voice services to small-to-medium enterprises (SMEs) and residential customers located in Multi-Tenant Unit (MTU/MDU) properties worldwide. As a result, Viadux connects service providers to new revenue sources with fast service deployments and low equipment costs for rapid ROI.

With Viadux, difficult rewiring efforts and costly infrastructure upgrades are eliminated. Broadband is provided over existing wiring, over very long distances, at a fraction of the cost and time that was previously necessary for providing broadband through building and campus rewiring. Viadux equipment connects up to a wide range of backhaul links, including wire-line, fixed wireless, fiber, satellite, and cable, thereby simplifying the installation, regardless of the existing infrastructure.

Contact Us

Viadux, Inc.
9890 Towne Centre DR, Ste. 200
San Diego, CA 92121
Toll Free: 866 4VIADUX (866 484 2389)
International: +1 858 450 3370
sales@viadux.com
www.viadux.com