**Advanced Diploma of Information Technology**

**ICTNWK541 Assessment**

**Assessment Task 2: Project Portfolio**

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**ABC Enterprises WAN Expansion**

ABC Enterprises is a growing company with headquarters in Melbourne and two branch offices in Sydney and Brisbane. The company currently operates with an outdated network infrastructure that lacks secure, reliable WAN connectivity between sites. The IT department has been tasked with designing, implementing, and securing a new WAN infrastructure that ensures:

* Secure VPN connectivity between all sites.
* Optimised bandwidth usage with reliable routing protocols.
* Proper IPv6 deployment for future scalability.
* Enhanced security mechanisms including firewall rules and access control lists (ACLs).
* Troubleshooting and monitoring tools to detect and rectify network issues efficiently.

As part of the project, you will act as a network engineer responsible for implementing the required WAN connectivity for ABC Enterprises.

**Simulation Software & Tools:**

Software installed to develop this protect.

* Cisco Packet Tracer 8.2.2
* Ubuntu 24.04 LTS
* Wireshark 4.2.2

# **Network Design Review & Planning**

Network Topology

Legal And Security Protocol

Installation Plan

# **Wan Configuration**

Preview WAN Network Topology

WAN Protocols: PPP, VPN Site-To-Site, ADSL

Additional Protocols: DHCP Router, IPV6, NAT

Implemented Network Topology

# **Network Security Implementation**

Apply Access Control Lists (ACLS)

Secure Access By SSH

# **Troubleshooting & Testing:**

Testing WAN Connectivity.