School Network Design – Budget & Configurations

# 💰 Device Budget Breakdown

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Device | Model / Type | Quantity | Unit Price (EGP) | Total Price (EGP) |
| Router | Cisco 2811 | 1 | 20000 | 20000 |
| Core Switch | Cisco 2960 (Layer 2) | 1 | 25000 | 25000 |
| Access Switches | Cisco 2960 | 4 | 5000 | 20000 |
| DHCP/DNS Server | Generic Server | 1 | 25000 | 25000 |
| Wireless Access Points | Cisco WAP / TP-Link EAP | 8 | 3000 | 24000 |
| Client PCs | Generic (Students + Staff) | 30 | 7000 | 210000 |
| Cabling, Connectors, Rack | CAT6 + Accessories | - | - | 20000 |
| Firewall (Optional) | pfSense Box / Fortigate 40F | 1 | 15000 | 15000 |
| UPS | Backup Power | 2 | 10000 | 20000 |
| Installation & Labor | Technicians | - | - | 15000 |

## Total Estimated Cost: 400,000 EGP

# ⚙️ Basic Configuration Commands

# VLAN Configuration (on all switches)  
vlan 10  
 name Students  
vlan 20  
 name Teachers  
vlan 30  
 name Admins  
  
# Assigning VLANs to ports (example)  
interface fastEthernet 0/1  
 switchport mode access  
 switchport access vlan 10  
  
# Router-on-a-Stick Setup  
interface FastEthernet0/0.10  
 encapsulation dot1Q 10  
 ip address 192.168.10.1 255.255.255.0  
  
interface FastEthernet0/0.20  
 encapsulation dot1Q 20  
 ip address 192.168.20.1 255.255.255.0  
  
interface FastEthernet0/0.30  
 encapsulation dot1Q 30  
 ip address 192.168.30.1 255.255.255.0  
  
# DHCP Server Settings (example)  
Pool Name: VLAN10\_Students  
Network: 192.168.10.0  
Subnet Mask: 255.255.255.0  
Default Gateway: 192.168.10.1  
DNS: 8.8.8.8  
  
# Ping Test  
Use 'ping' command between PCs to test connectivity within and across VLANs