SLOG SOLUTIONS PRIVATE LIMITED
TECHNOLOGY: CCNA
DURATION: MODULE 1 (4 WEEKS)

MODULE 1:

CCNA Essentials

Network Fundamentals
- OSI model
- TCP/IP model
- TCP and UDP protocols
- Firewalls
- Access points
- Internal and external cloud services
- Virtual services
- Virtual network infrastructure
- Network topology
- Troubleshooting
- IPv4 addressing and subnetting
- Unicast , Broadcast and Multicast
- IPv6 address schema
- IPv6 address types

LAN Switching Technologies
- Switching concept
- MAC learning and aging
- Frame switching
- Frame flooding
- MAC address table
- Interpret Ethernet frame format
- VLAN
- Interswitch connectivity
- STP protocols
- STP mode
- STP root bridge selection
- CISCO discovery protocol
- LLDP
- Ether channel

Routing Technologies

- Routing concept
- Packet handling
- Frame rewrite
- Routing table
- VLAN routing
- SVI
- Static routing
- Dynamic routing
- Distance vector routing protocol
- Link state routing protocol
- IPv4 and IPv6 static routing
- Network route
- Host route
- Floating route
- Single area and multi area OSPFv2 for IPv4
- Single area and multi-area OSPFv3 for IPv6
- EIGRP for IPv4
- EIGRP for IPv6
- RIPv2 for IPv4
- End to end connectivity issues

WAN Technologies

- PPP and MLPPP on WAN
- PPPoE client side interface
- GRE tunnel connectivity
- WAN topology
- WAN access connectivity options
- Internet VPN
- MPLS
- QoS concept
- Shaping
- Policing
- Congestion management

Infrastructure Services
- DNS lookup operation
- Client connectivity issues involving
- DHCP on a router
- TFTP ,DNS and gateway options
- HSRP
- NAT
- Static NAT
- Pool NAT
- PAT
- NTP operating in a client server mode

Infrastructure Security
- Port security
- Max MAC addresses
- Violation actions
- Err-disable recovery
- Access layer threat mitigation techniques
- 802.1x
- DHCP snooping
- Nondefault native VLAN
- Traffic filtering
- Basic device hardening
- Local authentication
- Secure password
- Source address
- telnet /SSH
- login banner

Infrastructure Management
- device monitoring protocols
- SNMPv2
- SNMPv3
- Syslog
- ICMP echo-based IP SLA
- Backup and restore device configuration
- Device maintenance
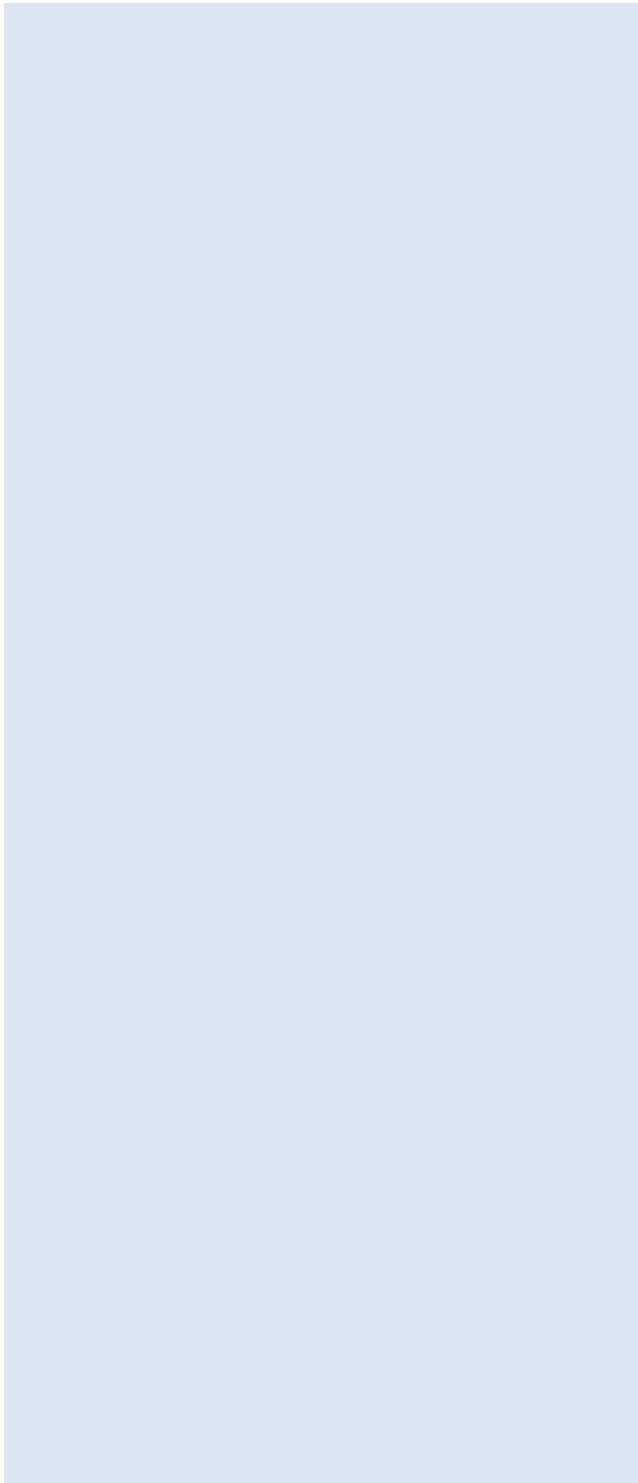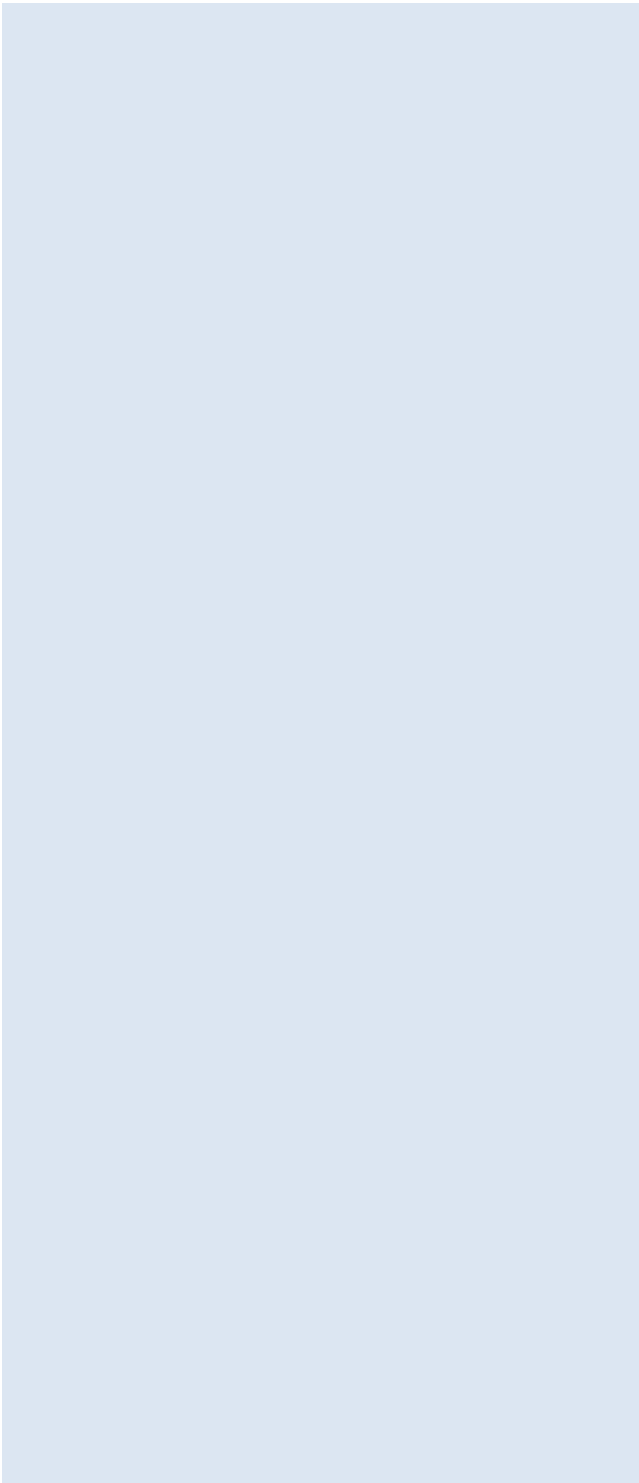
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