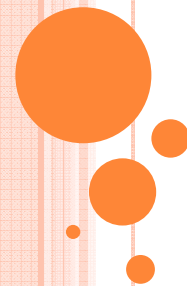


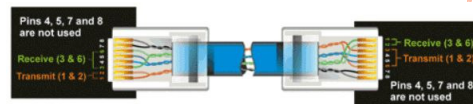
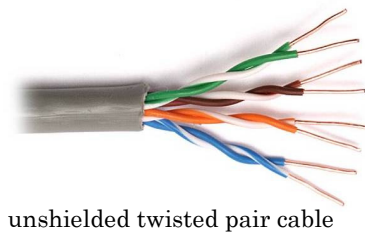
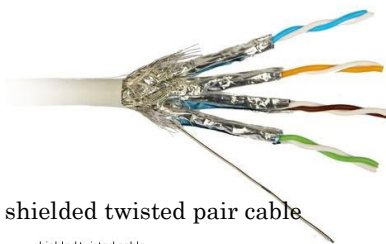
INDUCTION COURSE FOR MII CERTIFICATE EXAMINATION 2014

LAWRENCE CHOW

Information Technology - Supplementary



NETWORK EQUIPMENT



| Pin number | Wire Color | Crossed-Over | | Pin number | Wire Color |
|------------|--------------|--------------|---------|------------|--------------|
| | | Wire | Becomes | | |
| Pin 1 => | Orange/White | 1 | → 3 | Pin 1 => | Green/White |
| Pin 2 => | Orange | 2 | → 6 | Pin 2 => | Green |
| Pin 3 => | Green/White | 3 | → 1 | Pin 3 => | Orange/White |
| Pin 4 => | Blue | 6 | → 2 | Pin 4 => | Blue |
| Pin 5 => | Blue/White | | | Pin 5 => | Blue/White |
| Pin 6 => | Green | | | Pin 6 => | Orange |
| Pin 7 => | Brown/White | | | Pin 7 => | Brown/White |
| Pin 8 => | Brown | | | Pin 8 => | Brown |

Cross over connection

NETWORK EQUIPMENT



fiber optic cable



NETWORK EQUIPMENT



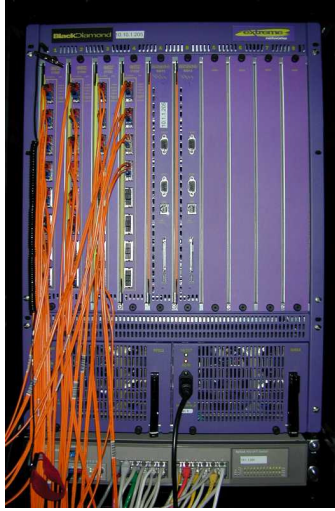
L2 Switch



L3 Switch and router



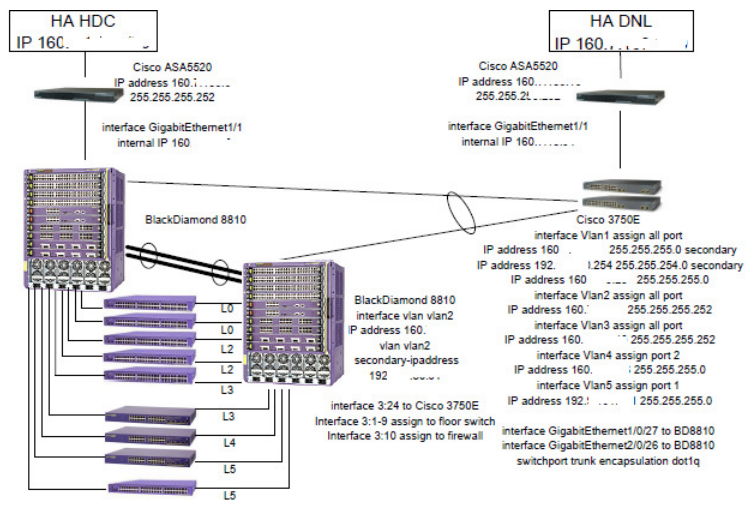
NETWORK EQUIPMENT



Stackable network switch



PWH EXAMPLE



Internet protocol suite

Application layer

BGP · DHCP (DHCPv6) · DNS · FTP · HTTP ·
IMAP · IRC · LDAP · MGCP · NNTP · NTP ·
POP · ONC/RPC · RTP · RTSP · RIP · SIP ·
SMTP · SNMP · SOCKS · SSH · Telnet ·
TLS/SSL · XMPP · *more...*

Transport layer

TCP · UDP · DCCP · SCTP · RSVP · *more...*

Internet layer

IP (IPv4 · IPv6) · ICMP · ICMPv6 · ECN · IGMP ·
IPsec · *more...*

Link layer

ARP/InARP · NDP · OSPF · Tunnels (L2TP) ·
PPP · MAC (Ethernet · DSL · ISDN · FDDI ·
DOCSIS) · *more...*

V · T · E

ERROR DETECTING IN DIGITAL NETWORK

1. Parity check
 - a) One dimension
 - b) Two dimension

| Original Data | Even Parity | Odd Parity |
|---------------|-------------|------------|
| 00000000 | 0 | 1 |
| 01011011 | 1 | 0 |
| 01010101 | 0 | 1 |
| 11111111 | 0 | 1 |
| 10000000 | 1 | 0 |
| 01001001 | 1 | 0 |

2. Repetition codes
3. Cyclic Redundancy check
4. Checksums

IP ADDRESSING

- Attached note

