**1. Chart 1: Ping Sweep Frequency and Destination IP**

icmp = subset(dos, Protocol == "ICMP")

dt = as.data.frame(table(icmp$Destination))

top = dt[dt$Freq>0,]

xyplot(Var1 ~ Freq, data =top, ylab="Destination IP",xlab="Frequency", type = "b", main = "Ping Sweep Occurances on Destination IP")

**2. Chart 2: Locate sadmind daemon**

sadmin = subset(dos, Protocol == 'SADMIND')

xyplot(Source ~ Time, data = sadmin, ylab = "IP Address", xlab = "Time", main = "Locate hosts running SADMIND protocol")

**3. Chart 3: Intrusion through sadmind vulnerability**

tel = subset(dos,Protocol == "TELNET")

tbip = as.data.frame(table(tel$Source,tel$Destination))

toptb = tbip[tbip$Freq>0,]

levelplot(Freq ~ Var1\*Var2, data = toptb, shrink = c(0.5, 1), main = "Number of attack from Source IP", xlab="Source IP", ylab="Occurances",col.regions = colorRampPalette(c("#F5F5F5", "#01665E"))(20))

**4. Chart 4: Trojan DDoS host Installation**

ds2 = subset(dos, Destination %in% c('172.16.115.20','202.77.162.213','172.16.112.10','172.16.112.50'))

ds3 = subset(ds2, Source %in% c('172.16.115.20','202.77.162.213','172.16.112.10','172.16.112.50'))

ds4 = subset(ds3, Protocol %in% c('TELNET','RSH','TCP'))

ds4$No. <- NULL, ds4$Length<-NULL, ds4$Info <- NULL

p <- ggparcoord(data = ds4, columns = 1:3, title = "DDos Attack Graph with Specific Protocols (TCP/TELNET/RSH) Focusing on Compromised Hosts", showPoints = TRUE)

print(p)

**5. Chart 5 DDoS Attack Graph with Multiple Protocols High Activity Compromised Hosts**

ds2 = subset(dos, Destination %in% c('172.16.115.20','202.77.162.213','172.16.112.10','172.16.112.50'))

ds3 = subset(ds2, Source %in% c('172.16.115.20','202.77.162.213','172.16.112.10','172.16.112.50'))

p <- ggparcoord(data = ds3, title = "DDos Attack Graph with Multiple Protocols Focusing on High Activity Compromised Hosts")

print(p)