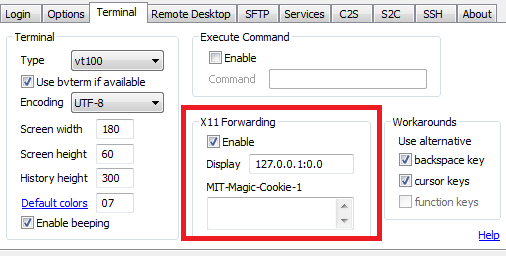
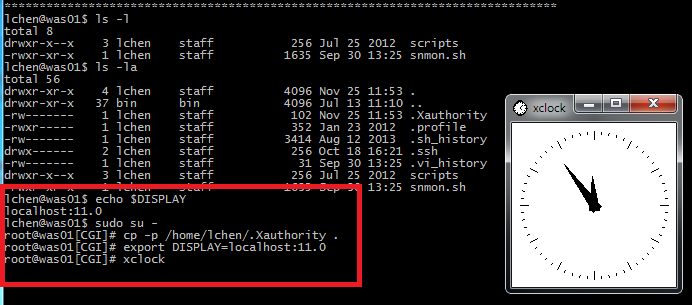
# run xwin on laptop as root via ssh protocol,

* 1. start xming server on laptop
  2. connect to AIX via ssh with xauthority enabled



* 1. follow the steps:



# Start Nagios

nagios@ifx01:/usr/local/nagios># cat start\_nrpe.ksh

#!/usr/bin/ksh

nohup /usr/local/nagios/bin/nrpe -c /usr/local/nagios/etc/nrpe.cfg -n -d >/dev/null 2>&1

nagios@ifx01:/usr/local/nagios># ./start\_nrpe.ksh

nagios@ifx01:/usr/local/nagios># ps -ef|grep nagios

nagios 14287080 1 0 09:58:48 - 0:00 /usr/local/nagios/bin/nrpe -c /usr/local/nagios/etc/nrpe.cfg -n -d

# Configure network tuning parameters

Use the no command to configure network tuning parameters. The no command sets or displays current or next boot values for network tuning parameters. This command can also make permanent changes or defer changes until the next reboot. Whether the command sets or displays a parameter is determined by the accompanying flag. The -o flag performs both actions. It can either display the value of a parameter or set a new value for a parameter. When the no command is used to modify a network option it logs a message to the syslog using the LOG\_KERN facility. For a more information on how the network parameters interact with each other, refer to the Networks and communication management

[lchen@ifx01 /home/lchen] $ no -a

arpqsize = 1024

arpt\_killc = 20

arptab\_bsiz = 7

arptab\_nb = 149

bcastping = 0

bsd\_loglevel = 3

clean\_partial\_conns = 0

delayack = 0

delayackports = {}

dgd\_flush\_cached\_route = 0

dgd\_packets\_lost = 3

dgd\_ping\_time = 5

dgd\_retry\_time = 5

directed\_broadcast = 0

fasttimo = 200

hstcp = 0

icmp6\_errmsg\_rate = 10

icmpaddressmask = 0

ie5\_old\_multicast\_mapping = 0

ifsize = 256

igmpv2\_deliver = 0

init\_high\_wat = 0

ip6\_defttl = 64

ip6\_prune = 1

ip6forwarding = 0

ip6srcrouteforward = 1

ip\_ifdelete\_notify = 0

ip\_nfrag = 200

ipforwarding = 0

ipfragttl = 2

ipignoreredirects = 0

ipqmaxlen = 100

ipsendredirects = 1

ipsrcrouteforward = 1

ipsrcrouterecv = 0

ipsrcroutesend = 1

limited\_ss = 0

llsleep\_timeout = 3

lo\_perf = 1

lowthresh = 90

main\_if6 = 0

main\_site6 = 0

maxnip6q = 20

maxttl = 255

medthresh = 95

mpr\_policy = 1

multi\_homed = 1

nbc\_limit = 524288

nbc\_max\_cache = 131072

nbc\_min\_cache = 1

nbc\_ofile\_hashsz = 12841

nbc\_pseg = 0

nbc\_pseg\_limit = 1048576

ndd\_event\_name = {all}

ndd\_event\_tracing = 0

ndogthreads = 0

ndp\_mmaxtries = 3

ndp\_umaxtries = 3

ndpqsize = 50

ndpt\_down = 3

ndpt\_keep = 120

ndpt\_probe = 5

ndpt\_reachable = 30

ndpt\_retrans = 1

net\_buf\_size = {all}

net\_buf\_type = {all}

net\_malloc\_frag\_mask = {0}

netm\_page\_promote = 1

nonlocsrcroute = 0

nstrpush = 8

passive\_dgd = 0

pmtu\_default\_age = 10

pmtu\_expire = 10

pmtu\_rediscover\_interval = 30

psebufcalls = 20

psecache = 1

psetimers = 20

rfc1122addrchk = 0

rfc1323 = 0

rfc2414 = 1

route\_expire = 1

routerevalidate = 0

rtentry\_lock\_complex = 0

rto\_high = 64

rto\_length = 13

rto\_limit = 7

rto\_low = 1

sack = 0

sb\_max = 1048576

send\_file\_duration = 300

site6\_index = 0

sockthresh = 85

sodebug = 0

sodebug\_env = 0

somaxconn = 1024

strctlsz = 1024

strmsgsz = 0

strthresh = 85

strturncnt = 15

subnetsarelocal = 1

tcp\_bad\_port\_limit = 0

tcp\_cwnd\_modified = 0

tcp\_ecn = 0

tcp\_ephemeral\_high = 65535

tcp\_ephemeral\_low = 32768

tcp\_fastlo = 0

tcp\_fastlo\_crosswpar = 0

tcp\_finwait2 = 1200

tcp\_icmpsecure = 0

tcp\_init\_window = 0

tcp\_inpcb\_hashtab\_siz = 24499

tcp\_keepcnt = 8

**tcp\_keepidle = 3600 #(ipdev)tcp\_keepidle = 14400**

tcp\_keepinit = 150

tcp\_keepintvl = 150

tcp\_limited\_transmit = 1

tcp\_low\_rto = 0

tcp\_maxburst = 0

tcp\_mssdflt = 1460

tcp\_nagle\_limit = 65535

tcp\_nagleoverride = 0

tcp\_ndebug = 100

tcp\_newreno = 1

tcp\_nodelayack = 1

tcp\_pmtu\_discover = 1

tcp\_recvspace = 16384

tcp\_sendspace = 16384

tcp\_tcpsecure = 0

tcp\_timewait = 1

tcp\_ttl = 60

tcprexmtthresh = 3

tcptr\_enable = 0

thewall = 2097152

timer\_wheel\_tick = 0

tn\_filter = 1

udp\_bad\_port\_limit = 0

udp\_ephemeral\_high = 65535

udp\_ephemeral\_low = 32768

udp\_inpcb\_hashtab\_siz = 24499

udp\_pmtu\_discover = 1

udp\_recvspace = 42080

udp\_sendspace = 9216

udp\_ttl = 30

udpcksum = 1

use\_sndbufpool = 1

root@ipdev:/># no -L

General Network Parameters

--------------------------------------------------------------------------------

NAME CUR DEF BOOT MIN MAX UNIT TYPE

DEPENDENCIES

--------------------------------------------------------------------------------

bsd\_loglevel 3 3 3 0 7 numeric D

--------------------------------------------------------------------------------

fasttimo 200 200 200 50 200 millisecond D

--------------------------------------------------------------------------------

init\_high\_wat 0 0 0 0 10 %\_of\_thewall D

--------------------------------------------------------------------------------

nbc\_limit 512K 512K 512K 0 8E-1 kbyte D

thewall

--------------------------------------------------------------------------------

nbc\_max\_cache 128K 128K 128K 1 512M byte D

nbc\_min\_cache

nbc\_limit

--------------------------------------------------------------------------------

nbc\_min\_cache 1 1 1 1 128K byte D

nbc\_max\_cache

--------------------------------------------------------------------------------

nbc\_ofile\_hashsz 12841 12841 12841 1 999999 segment D

--------------------------------------------------------------------------------

nbc\_pseg 0 0 0 0 2G-1 segment D

--------------------------------------------------------------------------------

nbc\_pseg\_limit 1M 1M 1M 0 2M kbyte D

--------------------------------------------------------------------------------

ndd\_event\_name {all} {all} {all} 0 128 string D

--------------------------------------------------------------------------------

ndd\_event\_tracing 0 0 0 0 64K-1 numeric D

--------------------------------------------------------------------------------

net\_buf\_size {all} {all} {all} 0 128 string D

--------------------------------------------------------------------------------

net\_buf\_type {all} {all} {all} 0 128 string D

--------------------------------------------------------------------------------

net\_malloc\_frag\_mask {0} {0} {0} 0 128 string D

--------------------------------------------------------------------------------

netm\_page\_promote 1 1 1 0 1 numeric D

--------------------------------------------------------------------------------

sb\_max 1M 1M 1M 4K 8E-1 byte D

--------------------------------------------------------------------------------

send\_file\_duration 300 300 300 0 4G-1 second D

--------------------------------------------------------------------------------

sockthresh 85 85 85 0 100 %\_of\_thewall D

--------------------------------------------------------------------------------

sodebug 0 0 0 0 1 boolean C

--------------------------------------------------------------------------------

sodebug\_env 0 0 0 0 1 boolean C

--------------------------------------------------------------------------------

somaxconn 1K 1K 1K 0 32K-1 numeric C

--------------------------------------------------------------------------------

tcp\_inpcb\_hashtab\_siz 24499 24499 24499 1 999999 numeric R

--------------------------------------------------------------------------------

tcptr\_enable 0 0 0 0 1 boolean C

--------------------------------------------------------------------------------

thewall 2M 2M 2M 0 64M kbyte S

--------------------------------------------------------------------------------

udp\_inpcb\_hashtab\_siz 24499 24499 24499 1 83000 numeric R

--------------------------------------------------------------------------------

use\_sndbufpool 1 1 1 0 1 boolean R

--------------------------------------------------------------------------------

TCP Network Tunable Parameters

--------------------------------------------------------------------------------

NAME CUR DEF BOOT MIN MAX UNIT TYPE

DEPENDENCIES

--------------------------------------------------------------------------------

clean\_partial\_conns 0 0 0 0 1 boolean D

--------------------------------------------------------------------------------

delayack 0 0 0 0 3 boolean D

--------------------------------------------------------------------------------

delayackports {} {} {} 0 10 ports\_list D

--------------------------------------------------------------------------------

hstcp 0 0 0 0 1 boolean D

--------------------------------------------------------------------------------

limited\_ss 0 0 0 0 100 numeric D

--------------------------------------------------------------------------------

rfc1323 0 0 0 0 1 boolean C

--------------------------------------------------------------------------------

rfc2414 1 1 1 0 1 boolean C

--------------------------------------------------------------------------------

rto\_high 64 64 64 2 8E-1 roundtriptime R

rto\_low

--------------------------------------------------------------------------------

rto\_length 13 13 13 1 64 roundtriptime R

--------------------------------------------------------------------------------

rto\_limit 7 7 7 1 64 roundtriptime R

rto\_high

rto\_low

--------------------------------------------------------------------------------

rto\_low 1 1 1 1 63 roundtriptime R

rto\_high

--------------------------------------------------------------------------------

sack 0 0 0 0 1 boolean C

--------------------------------------------------------------------------------

tcp\_bad\_port\_limit 0 0 0 0 8E-1 numeric D

--------------------------------------------------------------------------------

tcp\_cwnd\_modified 0 0 0 0 1 boolean C

--------------------------------------------------------------------------------

tcp\_ecn 0 0 0 0 1 boolean C

--------------------------------------------------------------------------------

tcp\_ephemeral\_high 64K-1 64K-1 64K-1 32K+1 64K-1 numeric D

tcp\_ephemeral\_low

--------------------------------------------------------------------------------

tcp\_ephemeral\_low 32K 32K 32K 1K 65534 numeric D

tcp\_ephemeral\_high

--------------------------------------------------------------------------------

tcp\_fastlo 0 0 0 0 1 boolean C

--------------------------------------------------------------------------------

tcp\_fastlo\_crosswpar 0 0 0 0 1 boolean C

--------------------------------------------------------------------------------

tcp\_finwait2 1200 1200 1200 0 32K-1 halfsecond D

--------------------------------------------------------------------------------

tcp\_icmpsecure 0 0 0 0 1 boolean D

--------------------------------------------------------------------------------

tcp\_init\_window 0 0 0 0 32K-1 byte C

--------------------------------------------------------------------------------

tcp\_keepcnt 8 8 8 0 32K-1 numeric D

--------------------------------------------------------------------------------

**tcp\_keepidle 14400 14400 14400 1 32K-1 halfsecond C**

--------------------------------------------------------------------------------

tcp\_keepinit 150 150 150 1 32K-1 halfsecond D

--------------------------------------------------------------------------------

tcp\_keepintvl 150 150 150 1 32K-1 halfsecond C

--------------------------------------------------------------------------------

tcp\_limited\_transmit 1 1 1 0 1 boolean D

--------------------------------------------------------------------------------

tcp\_low\_rto 0 0 0 0 3000 numeric D

timer\_wheel\_tick

--------------------------------------------------------------------------------

tcp\_maxburst 0 0 0 0 32K-1 numeric D

--------------------------------------------------------------------------------

tcp\_mssdflt 1460 1460 1460 1 64K-1 byte C

--------------------------------------------------------------------------------

tcp\_nagle\_limit 64K-1 64K-1 64K-1 0 64K-1 byte D

--------------------------------------------------------------------------------

tcp\_nagleoverride 0 0 0 0 1 boolean D

--------------------------------------------------------------------------------

tcp\_ndebug 100 100 100 0 32K-1 numeric D

--------------------------------------------------------------------------------

tcp\_newreno 1 1 1 0 1 boolean D

--------------------------------------------------------------------------------

tcp\_nodelayack 1 0 0 0 1 boolean D

--------------------------------------------------------------------------------

tcp\_recvspace 16K 16K 16K 4K 8E-1 byte C

sb\_max

--------------------------------------------------------------------------------

tcp\_sendspace 16K 16K 16K 4K 8E-1 byte C

sb\_max

--------------------------------------------------------------------------------

tcp\_tcpsecure 0 0 0 0 7 numeric D

--------------------------------------------------------------------------------

tcp\_timewait 1 1 1 1 5 15\_second D

--------------------------------------------------------------------------------

tcp\_ttl 60 60 60 1 255 0.6\_second C

--------------------------------------------------------------------------------

tcprexmtthresh 3 3 3 1 32K-1 numeric D

--------------------------------------------------------------------------------

timer\_wheel\_tick 0 0 0 0 100 numeric R

--------------------------------------------------------------------------------

UDP Network Tunable Parameters

--------------------------------------------------------------------------------

NAME CUR DEF BOOT MIN MAX UNIT TYPE

DEPENDENCIES

--------------------------------------------------------------------------------

udp\_bad\_port\_limit 0 0 0 0 8E-1 numeric D

--------------------------------------------------------------------------------

udp\_ephemeral\_high 64K-1 64K-1 64K-1 32K+1 64K-1 numeric D

udp\_ephemeral\_low

--------------------------------------------------------------------------------

udp\_ephemeral\_low 32K 32K 32K 1K 65534 numeric D

udp\_ephemeral\_high

--------------------------------------------------------------------------------

udp\_recvspace 42080 42080 42080 4K 8E-1 byte C

sb\_max

--------------------------------------------------------------------------------

udp\_sendspace 9K 9K 9K 4K 8E-1 byte C

sb\_max

--------------------------------------------------------------------------------

udp\_ttl 30 30 30 1 255 second C

--------------------------------------------------------------------------------

udpcksum 1 1 1 0 1 boolean D

--------------------------------------------------------------------------------

IP Network Tunable Parameters

--------------------------------------------------------------------------------

NAME CUR DEF BOOT MIN MAX UNIT TYPE

DEPENDENCIES

--------------------------------------------------------------------------------

directed\_broadcast 0 0 0 0 1 boolean D

--------------------------------------------------------------------------------

ie5\_old\_multicast\_mapping 0 0 0 0 1 boolean D

--------------------------------------------------------------------------------

ip6\_defttl 64 64 64 1 255 numeric D

--------------------------------------------------------------------------------

ip6\_prune 1 1 1 1 8E-1 second D

--------------------------------------------------------------------------------

ip6forwarding 0 0 0 0 1 boolean D

--------------------------------------------------------------------------------

ip6srcrouteforward 1 1 1 0 1 boolean D

--------------------------------------------------------------------------------

ip\_ifdelete\_notify 0 0 0 0 1 boolean D

--------------------------------------------------------------------------------

ip\_nfrag 200 200 200 1 32K-1 byte D

--------------------------------------------------------------------------------

ipforwarding 0 0 0 0 1 boolean D

--------------------------------------------------------------------------------

ipfragttl 2 2 2 1 255 halfsecond D

--------------------------------------------------------------------------------

ipignoreredirects 0 0 0 0 1 boolean D

--------------------------------------------------------------------------------

ipqmaxlen 100 100 100 100 2G-1 numeric R

--------------------------------------------------------------------------------

ipsendredirects 1 1 1 0 1 boolean D

--------------------------------------------------------------------------------

ipsrcrouteforward 1 1 1 0 1 boolean D

--------------------------------------------------------------------------------

ipsrcrouterecv 0 0 0 0 1 boolean D

--------------------------------------------------------------------------------

ipsrcroutesend 1 1 1 0 1 boolean D

--------------------------------------------------------------------------------

lo\_perf 1 1 1 0 1 boolean R

--------------------------------------------------------------------------------

maxnip6q 20 20 20 1 32K-1 numeric D

--------------------------------------------------------------------------------

multi\_homed 1 1 1 0 3 boolean D

--------------------------------------------------------------------------------

ndogthreads 0 0 0 0 1K numeric D

--------------------------------------------------------------------------------

nonlocsrcroute 0 0 0 0 1 boolean D

--------------------------------------------------------------------------------

subnetsarelocal 1 1 1 0 1 boolean D

--------------------------------------------------------------------------------

tn\_filter 1 1 1 0 1 boolean D

--------------------------------------------------------------------------------

ARP/NDP Network Tunable Parameters

--------------------------------------------------------------------------------

NAME CUR DEF BOOT MIN MAX UNIT TYPE

DEPENDENCIES

--------------------------------------------------------------------------------

arpqsize 1K 1K 1K 1 32K-1 numeric D

tcp\_pmtu\_discover

udp\_pmtu\_discover

--------------------------------------------------------------------------------

arpt\_killc 20 20 20 0 255 minute D

--------------------------------------------------------------------------------

arptab\_bsiz 7 7 7 1 32K-1 bucket\_size R

--------------------------------------------------------------------------------

arptab\_nb 149 149 149 1 32K-1 buckets R

--------------------------------------------------------------------------------

dgd\_packets\_lost 3 3 3 1 32K-1 numeric D

--------------------------------------------------------------------------------

dgd\_ping\_time 5 5 5 1 8E-1 second D

--------------------------------------------------------------------------------

dgd\_retry\_time 5 5 5 1 32K-1 numeric D

--------------------------------------------------------------------------------

ndp\_mmaxtries 3 3 3 0 8E-1 numeric D

--------------------------------------------------------------------------------

ndp\_umaxtries 3 3 3 0 8E-1 numeric D

--------------------------------------------------------------------------------

ndpqsize 50 50 50 1 32K-1 numeric D

--------------------------------------------------------------------------------

ndpt\_down 3 3 3 1 8E-1 halfsecond D

--------------------------------------------------------------------------------

ndpt\_keep 120 120 120 1 8E-1 halfsecond D

--------------------------------------------------------------------------------

ndpt\_probe 5 5 5 1 4G-1 halfsecond D

--------------------------------------------------------------------------------

ndpt\_reachable 30 30 30 1 4G-1 halfsecond D

--------------------------------------------------------------------------------

ndpt\_retrans 1 1 1 1 4G-1 halfsecond D

--------------------------------------------------------------------------------

passive\_dgd 0 0 0 0 1 boolean D

--------------------------------------------------------------------------------

rfc1122addrchk 0 0 0 0 1 boolean D

--------------------------------------------------------------------------------

Stream Header Tunable Parameters

--------------------------------------------------------------------------------

NAME CUR DEF BOOT MIN MAX UNIT TYPE

DEPENDENCIES

--------------------------------------------------------------------------------

lowthresh 90 90 90 0 100 %\_of\_thewall D

--------------------------------------------------------------------------------

medthresh 95 95 95 0 100 %\_of\_thewall D

--------------------------------------------------------------------------------

nstrpush 8 8 8 8 32K-1 numeric S

--------------------------------------------------------------------------------

psebufcalls 20 20 20 20 8E-1 numeric I

--------------------------------------------------------------------------------

psecache 1 1 1 0 1 boolean D

--------------------------------------------------------------------------------

psetimers 20 20 20 20 8E-1 numeric I

--------------------------------------------------------------------------------

strctlsz 1K 1K 1K 0 32K-1 byte D

--------------------------------------------------------------------------------

strmsgsz 0 0 0 0 32K-1 byte D

--------------------------------------------------------------------------------

strthresh 85 85 85 0 100 %\_of\_thewall D

--------------------------------------------------------------------------------

strturncnt 15 15 15 1 8E-1 numeric D

--------------------------------------------------------------------------------

Other Network Tunable Parameters

--------------------------------------------------------------------------------

NAME CUR DEF BOOT MIN MAX UNIT TYPE

DEPENDENCIES

--------------------------------------------------------------------------------

bcastping 0 0 0 0 1 boolean D

--------------------------------------------------------------------------------

dgd\_flush\_cached\_route 0 0 0 0 1 boolean D

--------------------------------------------------------------------------------

icmp6\_errmsg\_rate 10 10 10 1 255 msg/second D

--------------------------------------------------------------------------------

icmpaddressmask 0 0 0 0 1 boolean D

--------------------------------------------------------------------------------

ifsize 256 256 256 8 1K numeric R

--------------------------------------------------------------------------------

igmpv2\_deliver 0 0 0 0 1 boolean D

--------------------------------------------------------------------------------

llsleep\_timeout 3 3 3 1 2G-1 second D

--------------------------------------------------------------------------------

main\_if6 0 0 0 0 32K-1 numeric D

--------------------------------------------------------------------------------

main\_site6 0 0 0 0 1 boolean D

--------------------------------------------------------------------------------

maxttl 255 255 255 1 255 second D

--------------------------------------------------------------------------------

mpr\_policy 1 1 1 1 6 numeric D

--------------------------------------------------------------------------------

pmtu\_default\_age 10 10 10 0 32K-1 minute D

--------------------------------------------------------------------------------

pmtu\_expire 10 10 10 0 32K-1 minute D

--------------------------------------------------------------------------------

pmtu\_rediscover\_interval 30 30 30 0 32K-1 minute D

--------------------------------------------------------------------------------

route\_expire 1 1 1 0 1 boolean D

--------------------------------------------------------------------------------

routerevalidate 0 0 0 0 1 boolean D

--------------------------------------------------------------------------------

rtentry\_lock\_complex 0 0 0 0 1 boolean R

--------------------------------------------------------------------------------

site6\_index 0 0 0 0 32K-1 numeric D

--------------------------------------------------------------------------------

tcp\_pmtu\_discover 1 1 1 0 1 boolean D

--------------------------------------------------------------------------------

udp\_pmtu\_discover 1 1 1 0 1 boolean D

--------------------------------------------------------------------------------

n/a means parameter not supported by the current platform or kernel

Parameter types:

S = Static: cannot be changed

D = Dynamic: can be freely changed

B = Bosboot: can only be changed using bosboot and reboot

R = Reboot: can only be changed during reboot

**C = Connect: changes are only effective for future socket connections**

M = Mount: changes are only effective for future mountings

I = Incremental: can only be incremented

Value conventions:

K = Kilo: 2^10 G = Giga: 2^30 P = Peta: 2^50

M = Mega: 2^20 T = Tera: 2^40 E = Exa: 2^60

# no -o tcp\_keepidle=3600