NetWare Post-Install Tasks

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OUCS
4 February 2005

1. INETCFG

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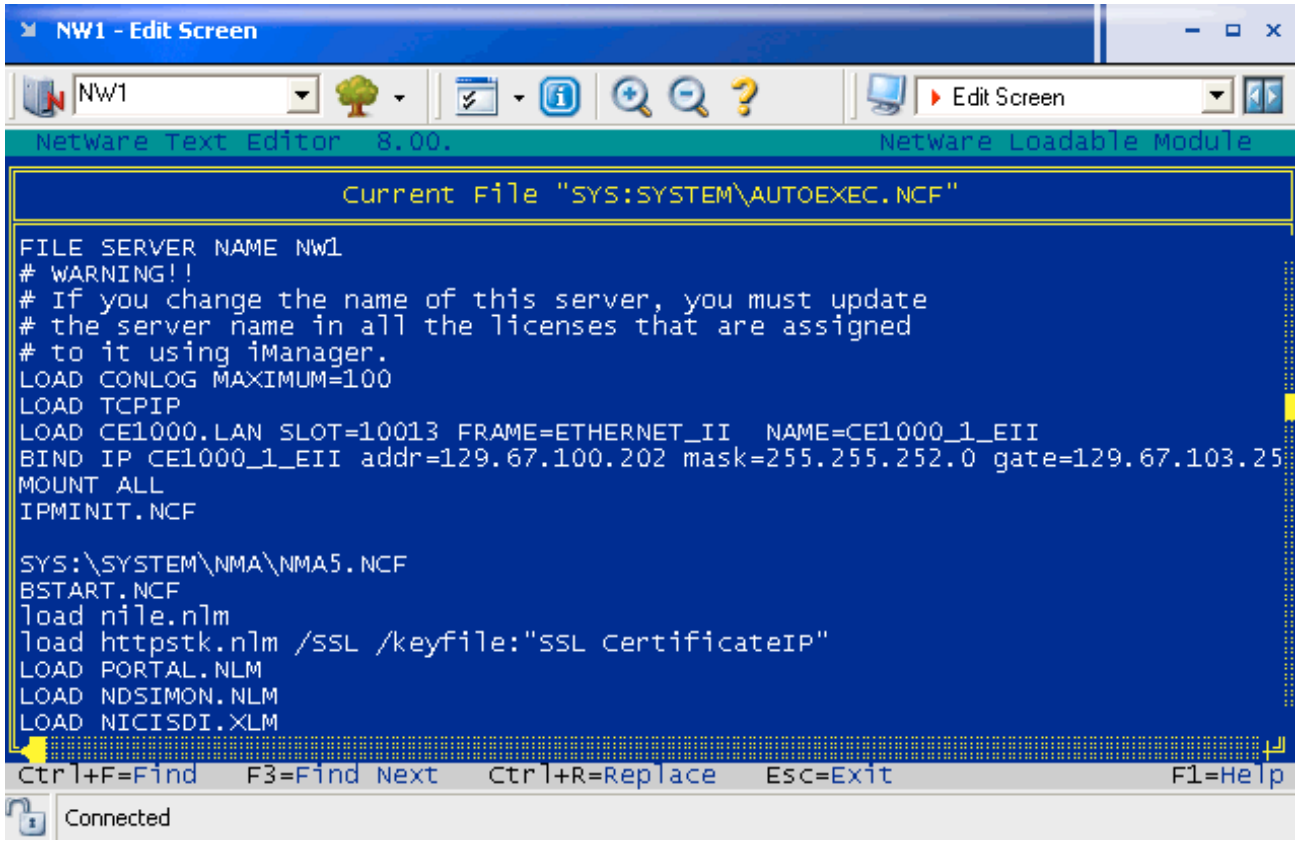
Let `inetcfg` manage your networking commands rather than leaving them in `autoexec.ncf`



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- This can be undone

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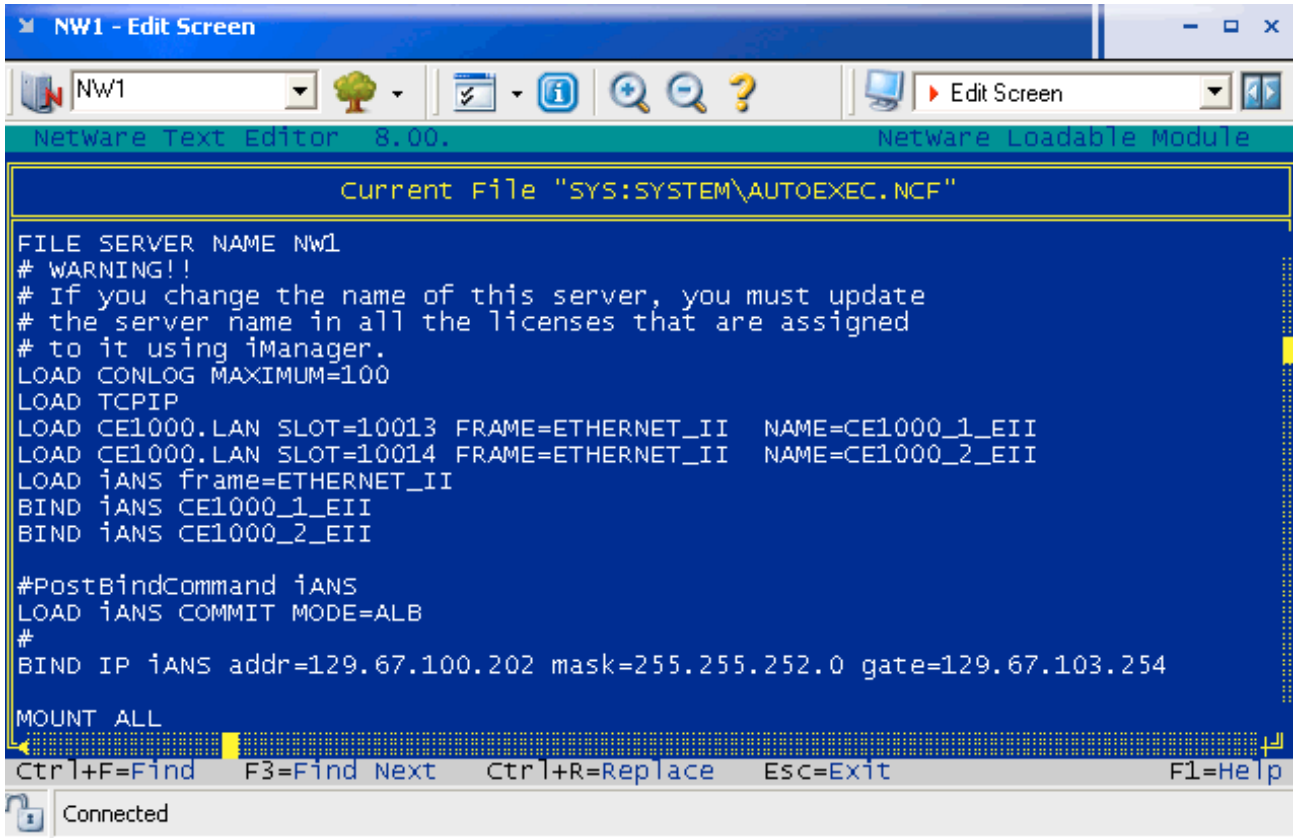

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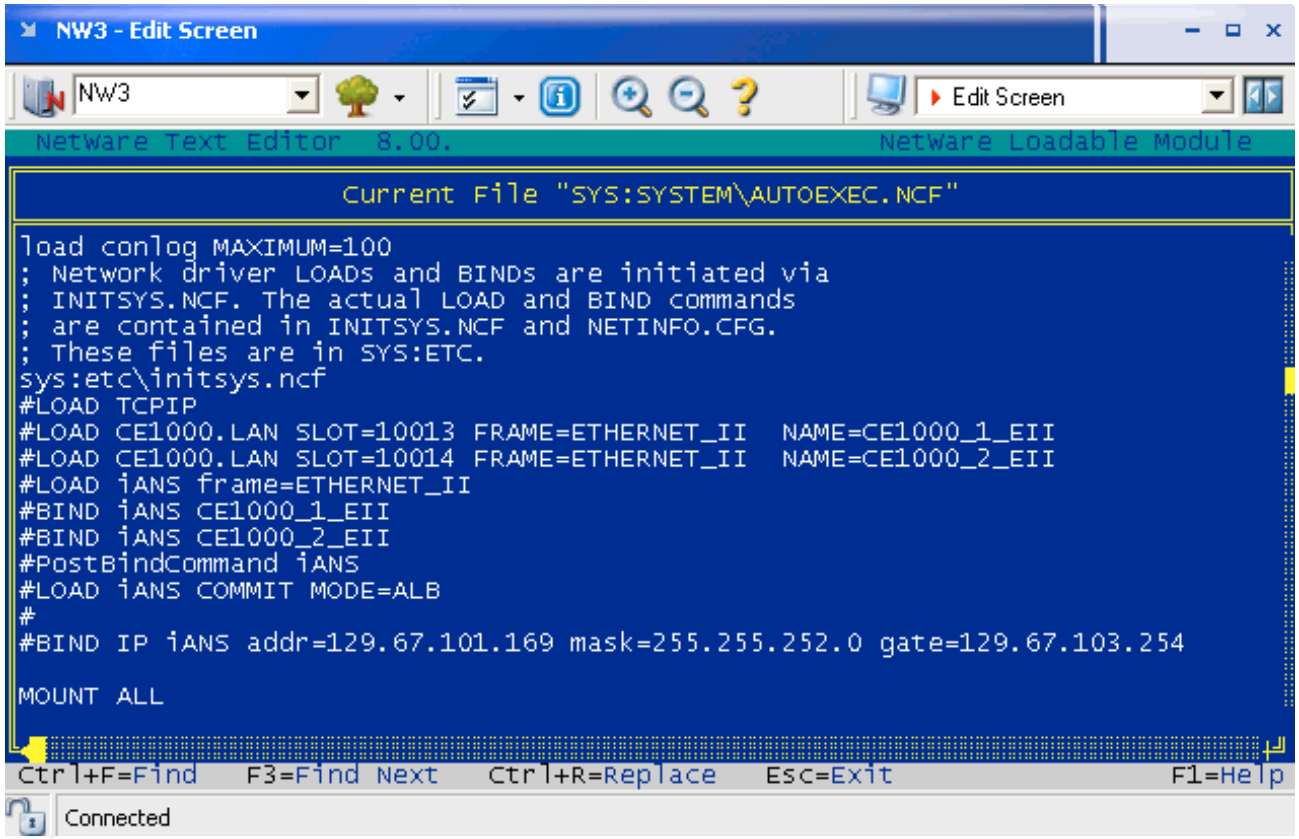

Further configuration

- Bindings
  - Select TCP/IP
  - Select TCP/IP Bind Options
  - Select RIP Bind Options and ensure that status is DISABLED
  - Select OSPF Bind Options and ensure that status is DISABLED

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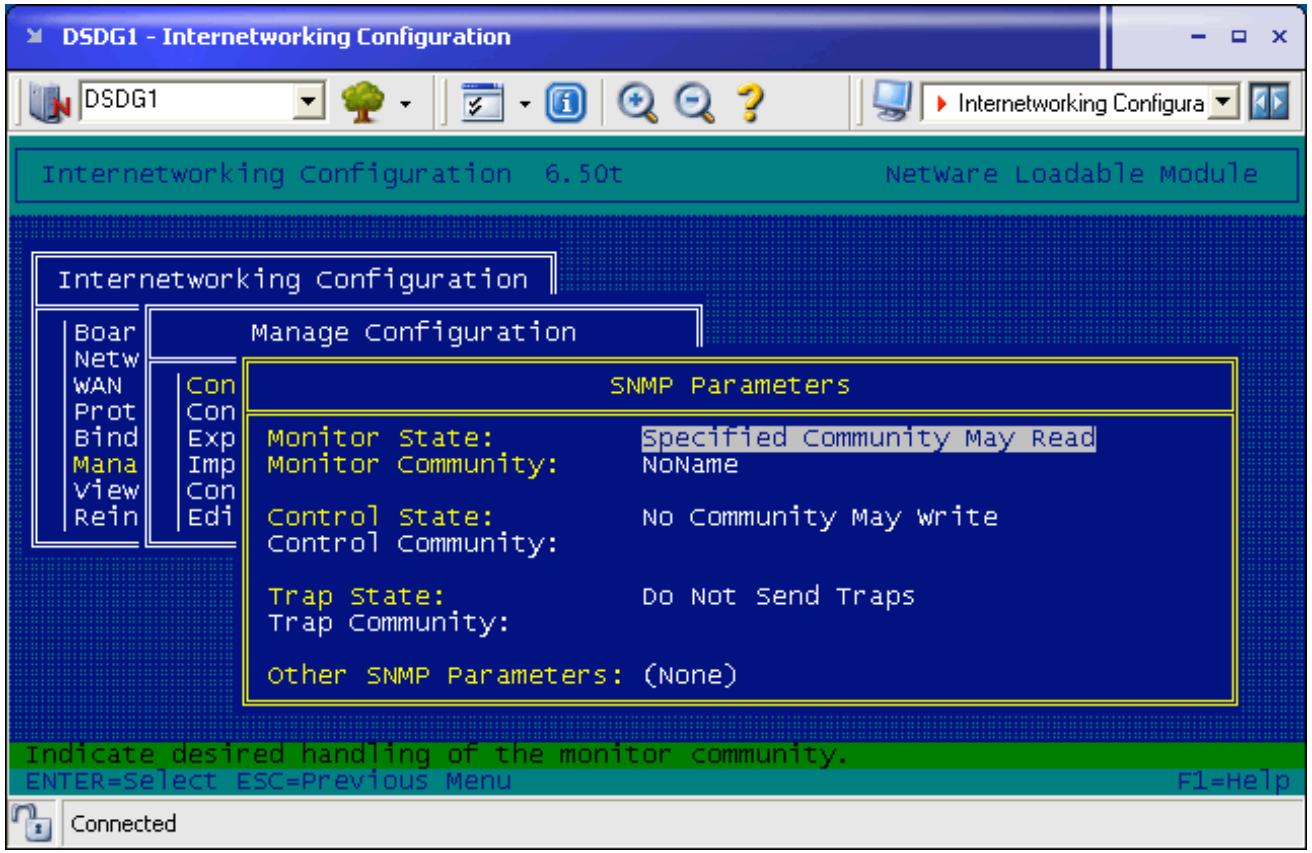
- Manage Configuration
  - Select Configure SNMP Parameters and configure the following:
    - Monitor State: Specified Community may read
    - Monitor Community: [Suitable name]
    - Control State: No Community May Write
    - Trap State: Do Not Send Traps

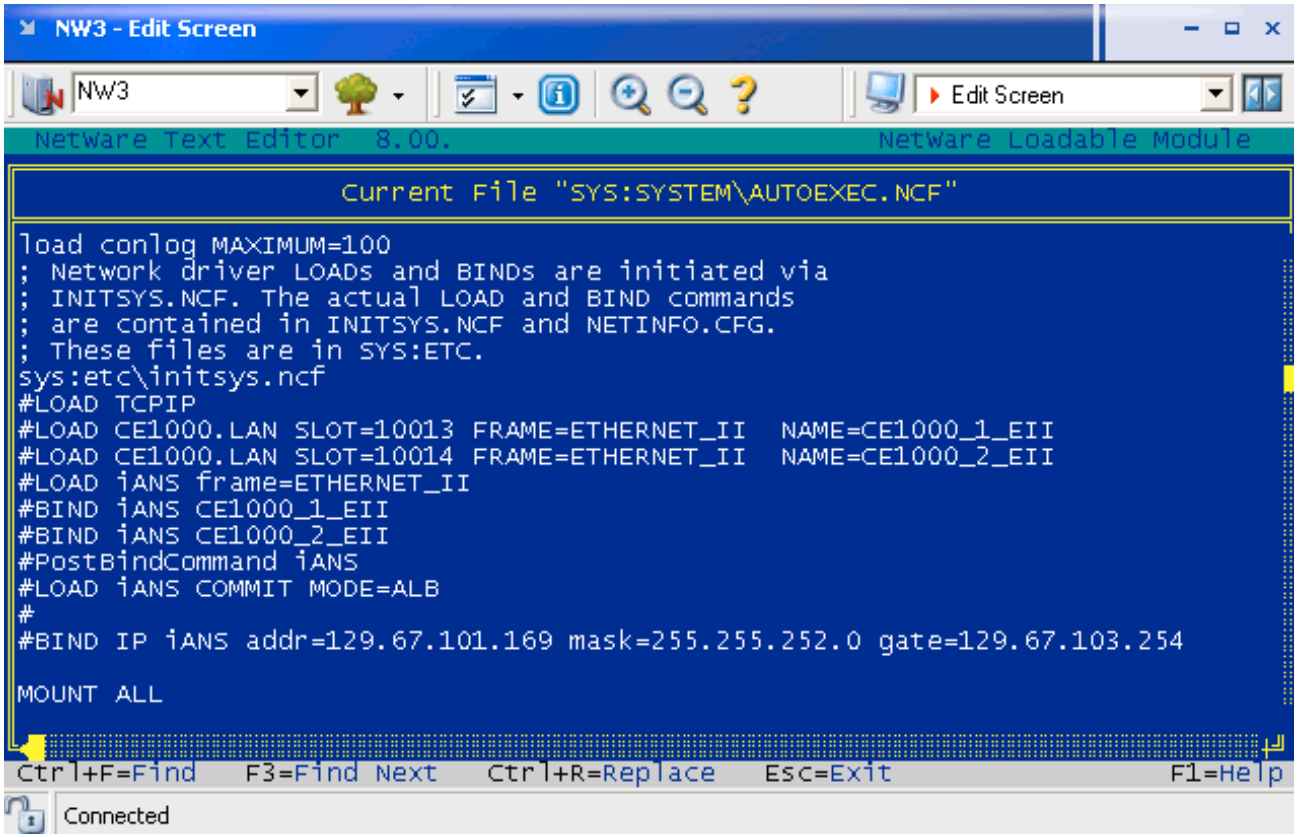
Further configuration



Teaming

iANS Configuration

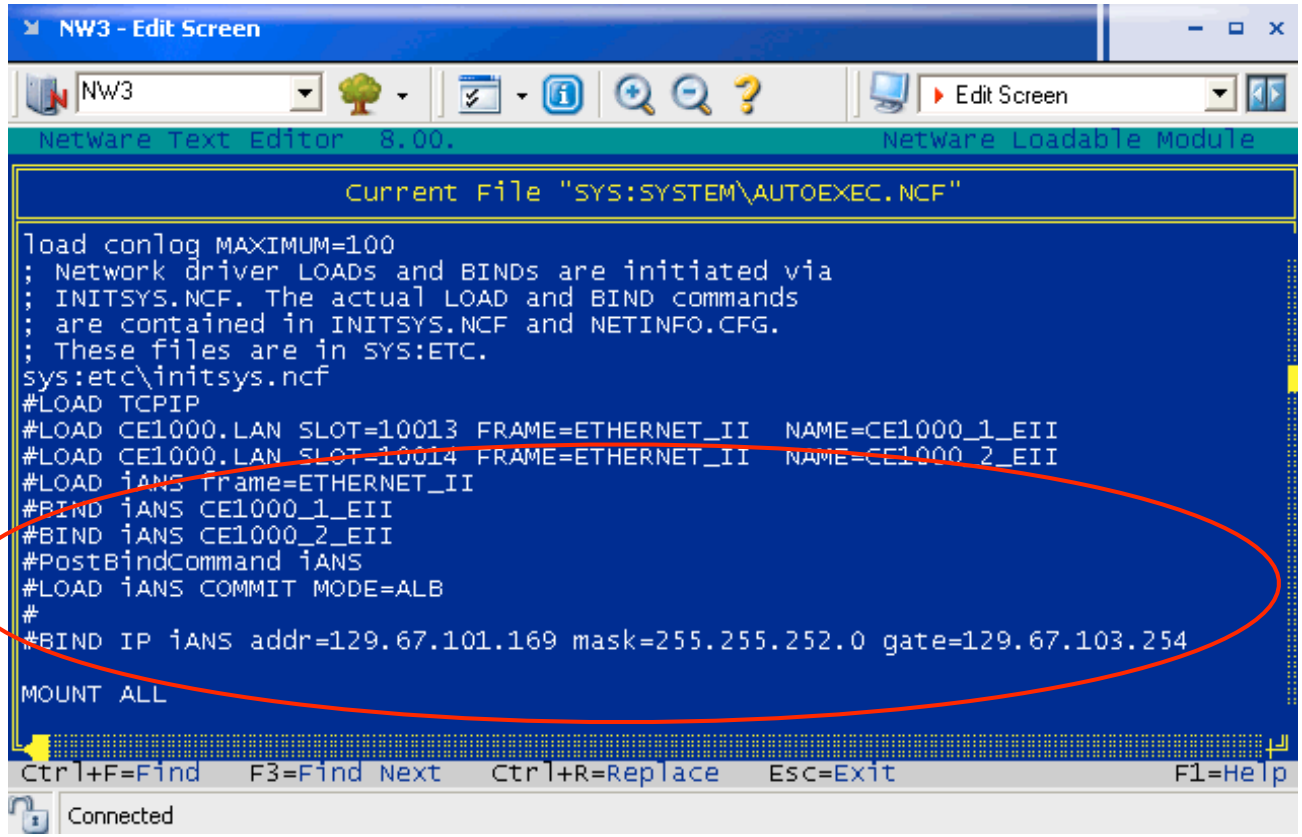
PostBind commands

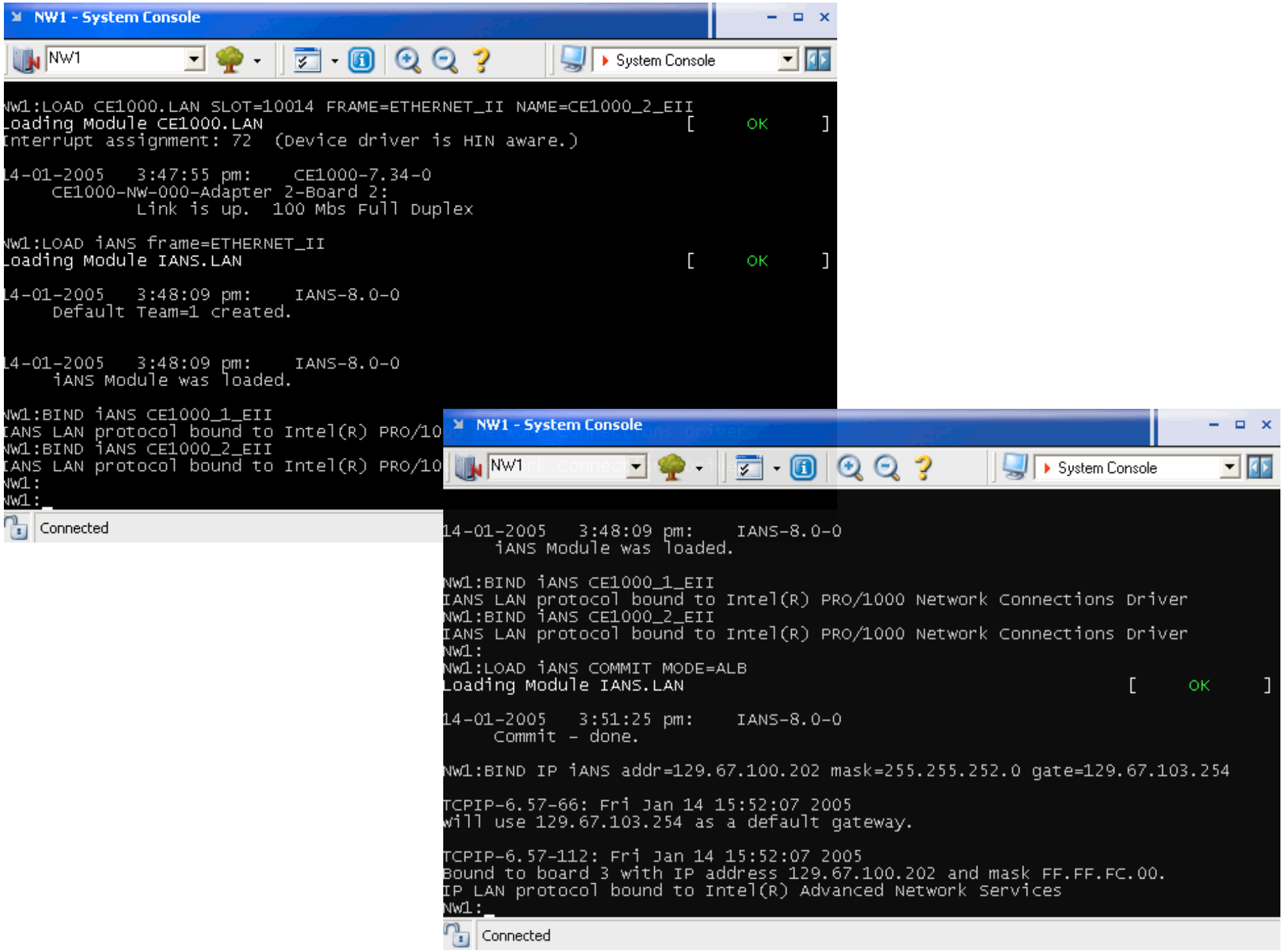


Two LAN drivers

iANS Configuration

PostBind commands




NW1 - System Console
NW1
System Console
NW1:LOAD CE1000.LAN SLOT=10014 FRAME=ETHERNET_II NAME=CE1000_2_EII
Loading Module CE1000.LAN [OK]
Interrupt assignment: 72 (Device driver is HIN aware.)
14-01-2005 3:47:55 pm: CE1000-7.34-0
CE1000-NW-000-Adapter 2-Board 2:
Link is up. 100 Mbs Full Duplex
NW1:LOAD iANS frame=ETHERNET_II
Loading Module IANS.LAN [OK]
14-01-2005 3:48:09 pm: IANS-8.0-0
Default Team=1 created.
14-01-2005 3:48:09 pm: IANS-8.0-0
iANS Module was loaded.
NW1:BIND iANS CE1000_1_EII
IANS LAN protocol bound to Intel(R) PRO/10
NW1:BIND iANS CE1000_2_EII
IANS LAN protocol bound to Intel(R) PRO/10
NW1:
NW1:
Connected
NW1 - System Console
NW1
System Console
14-01-2005 3:48:09 pm: IANS-8.0-0
iANS Module was loaded.
NW1:BIND iANS CE1000_1_EII
IANS LAN protocol bound to Intel(R) PRO/1000 Network Connections Driver
NW1:BIND iANS CE1000_2_EII
IANS LAN protocol bound to Intel(R) PRO/1000 Network Connections Driver
NW1:
NW1:LOAD iANS COMMIT MODE=ALB
Loading Module IANS.LAN [OK]
14-01-2005 3:51:25 pm: IANS-8.0-0
Commit - done.
NW1:BIND IP iANS addr=129.67.100.202 mask=255.255.252.0 gate=129.67.103.254
TCPIP-6.57-66: Fri Jan 14 15:52:07 2005
will use 129.67.103.254 as a default gateway.
TCPIP-6.57-112: Fri Jan 14 15:52:07 2005
Bound to board 3 with IP address 129.67.100.202 and mask FF.FF.FC.00.
IP LAN protocol bound to Intel(R) Advanced Network Services
NW1:
Connected

Time

- **`Timesync.nlm`** is now deprecated in favour of **`xntpd`**
- Edit **`SYS:ETC\NTP.CONF`** and add the following lines below **`fudge 127.127.1.0 stratum 3`**:

```
server ntp0.oucs.ox.ac.uk minpoll 4
server ntp1.oucs.ox.ac.uk minpoll 4
server ntp2.oucs.ox.ac.uk minpoll 4
```

- Further down the file, Un-rem **`stepclock`**
- Edit **`SYS:SYSTEM\TIMESERV.NCF`** as follows:
  - REM out **`LOAD TIMESYNC`**
  - Un-rem **`LOAD xntpd`**
- Then from the console **`UNLOAD TIMESYNC`** then **`XNTPD`**

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Unscoped is a general default scope. A 'Scoped' Scope is a Scope Unit that has been defined with a specific Scope name. The Unscoped Scope is a grouping of all service URL information that is not tied to a particular scope. In SLP version 1 the default scope is called the 'Unscoped scope'. In SLP version 2 it will be called the 'Default Scope'. If a DA has been configured to support a scope other than the default, it can no longer support the Unscoped scope. In SLP version 1, scope is an attribute and it only supports one scope (the 'unscoped' scope). This is a limitation of the SA. If you require more than one scope in your network and want to set up a default scope container, create a scope called the 'default scope'. Do not use the Unscoped scope in this configuration. This will make the transition to SLP version 2 later easier for the customer. SLP version 2 defines some enhancements to SLP. The basic operation of SLP does not change.

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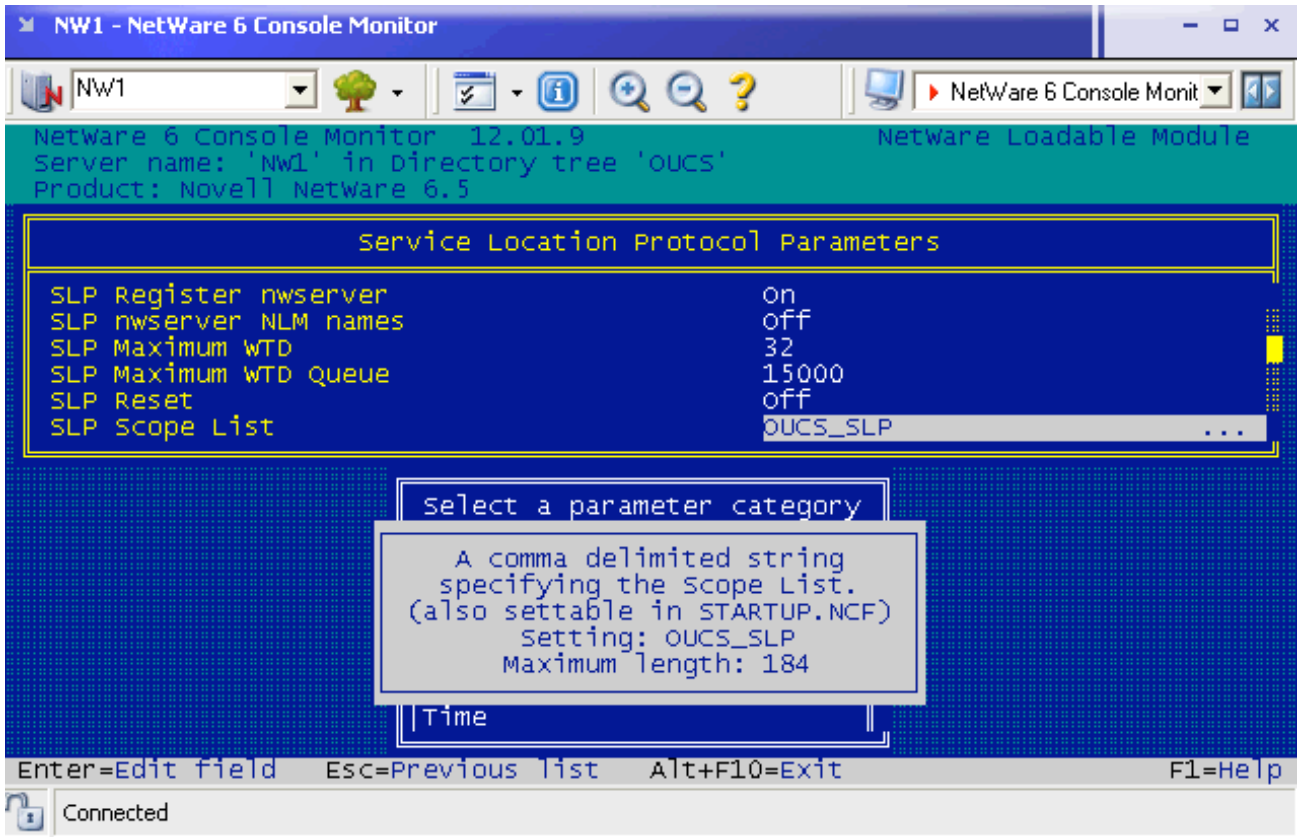
SLP is quite easy to configure

- Create a SCOPE unit for your tree in ConsoleOne. Call it something simple: **`OUCS_SLP`**
- Create an SLP DA (Directory Agent) object. One server will be the DA
  - A single Directory Agent (DA) is sufficient on our networks; at most, two for redundancy
- Edit **`SYS:ETC\SLP.CFG`** on each server so that it includes the IP address of your DA

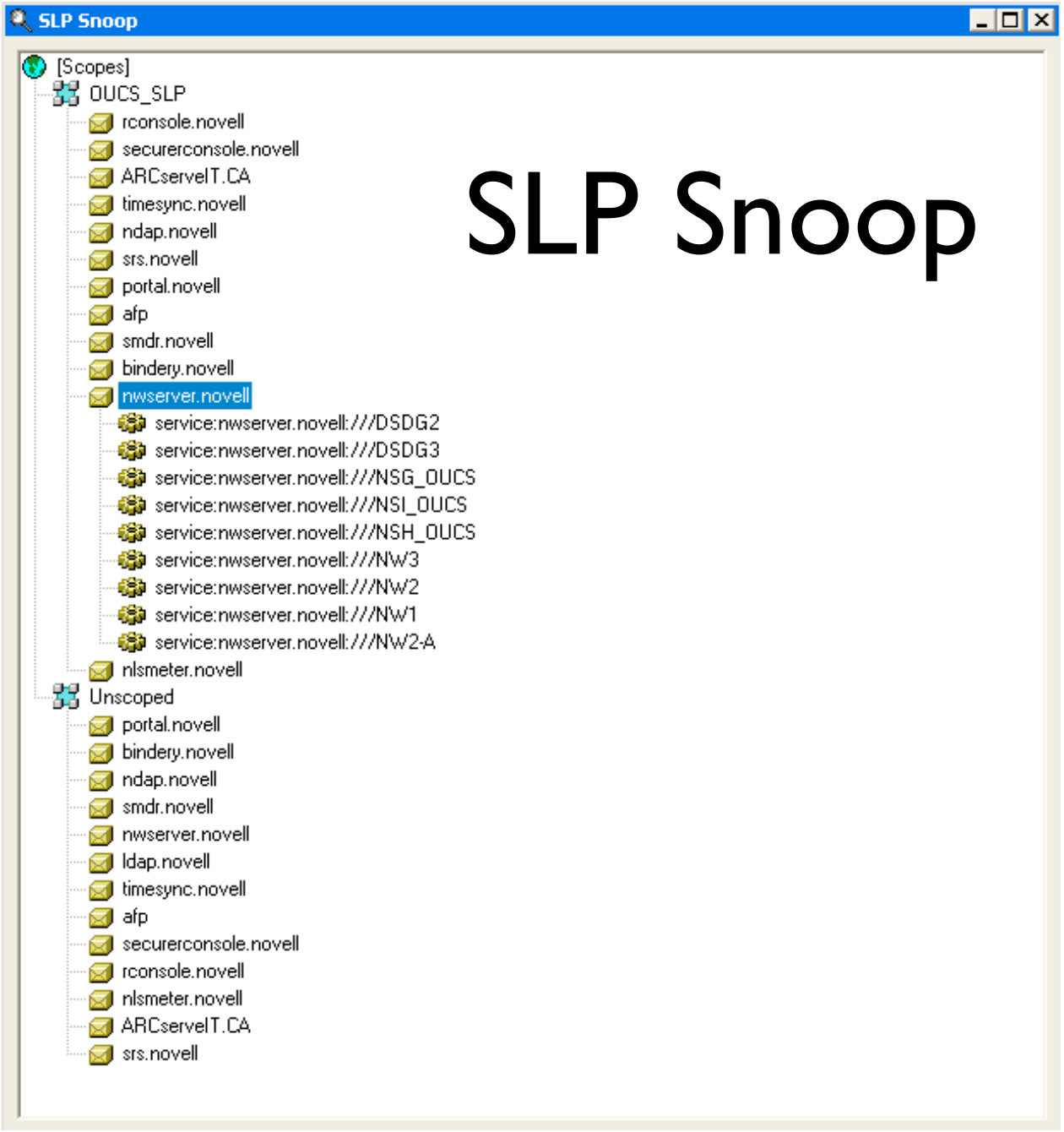

NW1 - NetWare 6 Console Monitor
NW1
NetWare 6 Console Monit
NetWare 6 Console Monitor 12.01.9
NetWare Loadable Module
Server name: 'NW1' in Directory tree 'OUCS'
Product: Novell NetWare 6.5
Service Location Protocol Parameters
SLP Register nwserver
On
SLP nwserver NLM names
off
SLP Maximum WTD
32
SLP Maximum WTD Queue
15000
SLP Reset
off
SLP Scope List
OUCS_SLP ...
Select a parameter category
A comma delimited string specifying the Scope List. (also settable in STARTUP.NCF)
Setting: OUCS_SLP
Maximum length: 184
Time
Enter=Edit field
Esc=Previous list
Alt+F10=Exit
F1=Help
Connected

More SLP

- Enter the name of your scope in Monitor (Server Parameters / Service Location Protocol / Scope Name)
  - Reload SLP by typing **`SET SLP RESET=ON`** at the console (a server restart is recommended by some)
- From NetWare 6.5, SLPv2 is now the *de facto* standard; it's good practice to configure your servers to be compliant
  - Not doing this can cause problems such as server hangs when doing **`DISPLAY SLP SERVICES`**

SLP

- Configure your clients so that they point to the DA / DAs
  - On Windows you can run **`slpinfo`** to check that the clients are communicating correctly with the DAs
- ON OSX, enable SLP registrations in Directory Access.app
  - Config file: **`/etc/slpsa.conf`**
  - **`man slpd`**
  - **`man slp_reg`**


SLP Snoop
[Scopes]
OUCS_SLP
rconsole.novell
securerconsole.novell
ARCserveIT.CA
timesync.novell
ndap.novell
srs.novell
portal.novell
afp
smdr.novell
bindery.novell
nwserver.novell
service:nwserver.novell:///DSDG2
service:nwserver.novell:///DSDG3
service:nwserver.novell:///NSG_OUCS
service:nwserver.novell:///NSI_OUCS
service:nwserver.novell:///NSH_OUCS
service:nwserver.novell:///NW3
service:nwserver.novell:///NW2
service:nwserver.novell:///NW1
service:nwserver.novell:///NW2-A
nlsmeter.novell
Unscoped
portal.novell
bindery.novell
ndap.novell
smdr.novell
nwserver.novell
ldap.novell
timesync.novell
afp
securerconsole.novell
rconsole.novell
nlsmeter.novell
ARCserveIT.CA
srs.novell

SLP Snoop

Key TIDs

- TID-10062474 SLP Design and Implementation Guidelines (01 JUL 2004)
- TID-10014466 Configuring SLP for a NetWare Client (06 MAY 2004)
- TID-10027163 Configuring SLP for a NetWare Server (11SEP 2003)
- TID-10059981 Configuring SLP with a SCOPED directory agent (DA) (30 JUN 2004)
- TID-10061396 How to change from UNSCOPED to a named SCOPE (18 FEB 2003)
- TID-10025313 Frequently Asked Questions (FAQ) about SLP (04 DEC 2002)
- NOVELL: Frequently Asked SLP Questions (eDirectory Cool Solutions)
  - http://www.novell.com/coolsolutions/nds/features/a_slp_faq_edir.html

Other Tuning Tips

- Don't just accept Novell default values for all server parameters
- Carefully read TIDs such as TID10012765 - Performance, Tuning and Optimization
- Always TEST parameter changes on a test server before applying them to production servers

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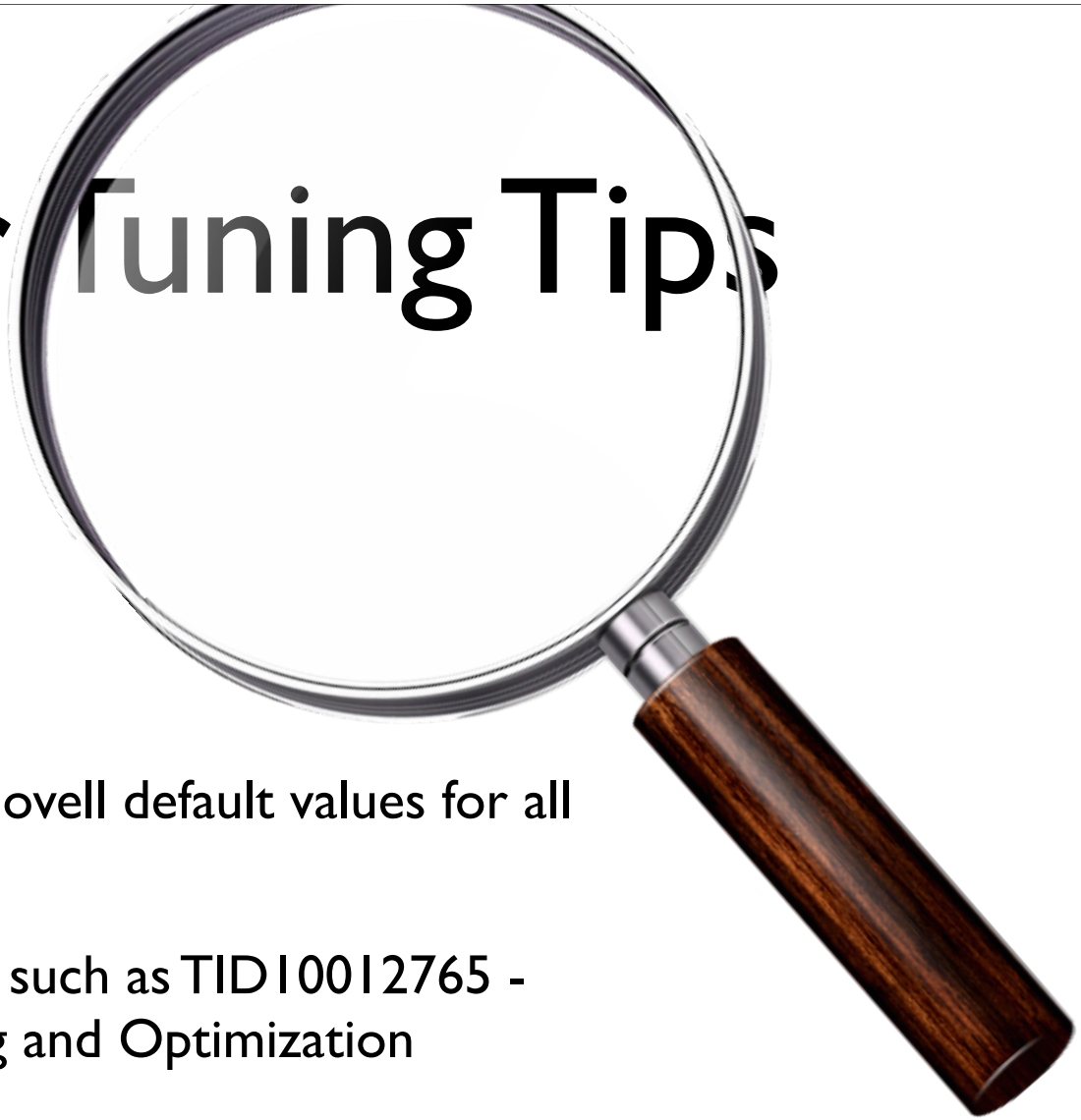

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Packet Receive Buffers

- In MONITOR
  - Select Server Parameters
  - Select Communications
  - Set Minimum Packet Receive Buffers to, e.g. 100
  - Set Maximum Packet Receive Buffers to, e.g. 200
- These settings may well vary depending on the load on the server, network configuration

TXTHRESHOLD

- Represents the threshold for transmits from the LAN controller
  - **`TXTHRESHOLD n`** [where n = number of 8 bytes]
- Maximum number is 200 - this ensures there will be no underruns
- For Intel NICs:
  - Edit **`C:\NWSERVER\DRIVERS\CE100B.LDI`** (or appropriate **`.LDI`** file for your card)
  - Scroll down to the **`TXTHRESHOLD`** BLOC
  - Un-Rem: **`PR TXTHRESHOLD OPT`**
  - Rem: **`PR TXTHRESHOLD HID`**
  - Change default value (**`DEF`**) to '200'

Other things to look for

- Memory configuration for TSAFS.NLM
  - **`LOAD TSAFS /CacheMemoryThreshold=1`**
  - Edit **`SYS:\ETC\SMS\TSA.CFG`**
  - http://support.novell.com/cgi-bin/search/searchtid.cgi?/10091980.htm
- IPTables (see http://www.mindworksuk.com)