National Toxicology Program

LDAS II Technical Reference Manual

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National Toxicology Program

LDAS II Technical Reference Manual

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1. Introduction

Chapter 1

1.1 Overview

The National Toxicology Program (NTP) sponsors research studies to determine the health effects of potential toxic and carcinogenic agents found in the environment. The two-year chronic bioassay for carcinogenicity in rodents is the primary method used to identify which chemicals or physical agents have the potential to be hazardous to humans.

The NTP uses the Toxicology Data Management System (TDMS) to store, query, and report data from these studies. The NTP is headquartered at the National Institute of Environmental Health Sciences (NIEHS) in the Research Triangle Park and uses the computer facilities at NIEHS to operate TDMS.

The Laboratory Data Acquisition System II (LDAS II) is the data collection system for the Toxicology Data Management System. LDAS II collects, stores, and reports data from rodent toxicology studies performed at contract laboratories located throughout the United States.

Data may be collected for the In-Life phase of a study on a workstation that is carried into the room in the Laboratory that houses the animals. Data may be collected for the Pathology phase of a study on a workstation in the pathology laboratory room. The data is entered directly into the system from a keyboard. Data may also be collected on paper forms in the animal room or the pathology laboratory room and later entered into the system on a workstation located outside the animal room or laboratory.

Reports may be run from some of the LDAS II workstations in the facilities conducting the studies. LDAS II transfers the study data to the TDMS database on the NIEHS computer facility. This database, TDMS, resides on an AlphaServer 2100 4/200 named Hazel. Data can be retrieved from TDMS and used by NIEHS scientists to analyze and review the study results and to publish the findings.

The first version of LDAS, referred to now as LDAS I, began operating in laboratories in the summer of 1991. There have been major advances in both hardware and software since the initial deployment of LDAS I. The advantages of the technology advances plus a mandate to replace obsolete equipment has led to the design and development of the second version of the Laboratory Data Acquisition System – LDAS II.

The purpose of this document is to provide a reference of technical information for developers and other individuals involved in the maintenance of LDAS II.

1.2 Intended Audience

This document is intended for the Hardware Configuration Management Group of the National Toxicology Program support contractor, as well as on-site personnel in the labs. It assumes a basic understanding of operations and file manipulations using the Microsoft Windows 2000 operating system, as well as normal application operation and familiarity with the LDAS II Workstation software. As well, it assumes a basic ability and familiarity with the computer and lab hardware involved in an LDAS II lab environment.

1.3 Icons and Useful Information

In this guide, the following icons will be used:

	The "**Warning**" (stop sign) icon indicates a critical user message such as the loss of data could result if certain procedures are not followed.

	The "**Notes**" icon indicates a user message that is helpful for the utilization of LDAS II system processes.

	The "**Tips**" icon indicates a helpful short cut that you may apply when using LDAS II.

2. LDAS II System Hardware

Chapter 2

Figure 2-1 Animal Room Workstation Enclosure

2.1 LDAS II C3 Configuration Hardware

Following is an inventory list of the hardware parts required to build an LDAS II C3 Configuration Workstation:

• ASUS TUSL 2c Motherboard. • Antec Case (19.0” x 8.5” x 19.8”). • Two Kingston ATA66 Removable drive bays and chassis. • Intel Pentium III processor. • Two Maxtor 20 GB hard drives. • 250 MB internal Zip drive (there are two Zip drives for the Pathology Workstation). • ‘Y’ power splitter cable (for Pathology Workstation only).	• 52x CD-ROM drive. • Floppy disk drive. • 256 MB memory (2 DIMMS). • 3Com 3C905c-txm NIC Card. • Keyboard and mouse. • Monitor. • Promise RAID card FastTrak 66 (Hardware Kit from case. This kit contains the card, screws and standoff.)

Table 2-1: Inventory List of Hardware Parts C3 Configuration Workstation

2.2 LDAS II Workstation Assembly Procedures

The LDAS II Administrative (AWS) and Pathology (PWS) Workstations consist of a CPU, monitor, keyboard, and mouse. The Administrative Workstation may be equipped with certain peripheral devices such as a printer, but these are not a part of the workstation itself. The Pathology (PWS) workstation also includes a second Zip drive instead of a floppy drive to accomodate its backup scheme.

The Animal Room Workstation (ARWS), in addition to the CPU, monitor, and keyboard (a mouse is not attached to the ARWS), consists of the enclosure (cart) that is used in the laboratories.

This section contains the instructions for building the CPUs, for modifying the Animal Room Workstation enclosures, and for assembling the Animal Room Workstation.

2.2.1 Workstation Assembly Procedure

Before assembling the CPU, the front cover and the top cover of the case must be removed. There are two slots on the bottom of the front cover located at each end. The front cover can be removed by placing a finger in each of these slots and then lifting up and out. The cover will “snap” off the case.
After the front cover is removed, three screws will be exposed on the front of the case. These screws need to be removed to remove the top cover. After the screws are removed, the top cover is removed by sliding it forward while lifting up. When both the top front and top covers are removed from the case, the case is ready for the CPU assembly.

2.2.2 Case

1) Attach the rubber feet on each corner on the bottom of the case.

2) Remove the top brace (the forward part of the brace is attached with a screw; the back part of the brace slips into slots in the back of the case).

3) Remove the USB slot cover from the back of the case.

	There are 2 serial port slots on the back of the case. One will already be removed).

4) Remove the attached serial port slot cover from the back of the case.
5) Remove the attached sound card I/O cover from the back of the case.
6) Remove the 3.5” drive holder on the front of the case.
7) Remove the first 3 PCI slot covers (the first three from the left when viewing the back of the case from the outside).

2.2.3 Fan Installation

1) Install the fan in the fan location on the left side (looking at the back of the case from the front) of the backside of the front of the case. Check the airflow arrow, the Antec label on the fan will face toward the back of the computer when properly installed.
2) Attach power cable.

2.2.4 Motherboard Installation

1) Mark the standoff holes on the floor of the computer.
2) Install the standoff screws.
3) Secure the motherboard to the floor of the case with screws (provided with motherboard).
4) Attach the power LED, power switch, Hard Drive LED, reset switch and speaker wires to the motherboard as depicted in the Motherboard’s User Manual.
5) Install the processor, ensuring that pin one corresponds to the proper spot on the motherboard.
6) Assemble and install the heat sink. Make sure to use the instruction manual for the CPU.
7) Install memory DIMMs in slots 1 and 2.

8) Connect Serial Connector to appropriate space on Motherboard, and secure in third slot from the right at rear of computer.

9) Install the 3Com NIC card in third PCI and attach the WOL connector.

10) Set the DIPswitches on the motherboard (refer to the Motherboard User's Manual).

2.2.5 Promise RAID Card Installation

1) Install the Promise RAID Card in the first PCI slot.

2.2.6a Floppy and Zip Drive Installation for AWS and AWRS only.

1) Remove the 3.5" drive cage.

2) Install the floppy drive in the top slot of the drive holder. The floppy drive should be installed with the top facing the top of the case.

3) Install the Zip drive below the floppy drive.

4) Locate the six pins on the rear side of the Zip drive and set the jumpers on the right most pins for master configuration.

5) Replace the drive holder and secure it with 2 screws.

6) Attach the floppy power cord.

7) Attach the floppy IDE cable to the motherboard IDE connection with the floppy cable pin 1 on the left.

8) Attach the floppy cable to the back of the floppy drive with pin 1 closest to the floppy power cable.

9) Attach a blue IDE connection to IDE 1 on the motherboard and then to the Zip drive.

10) Attach the power cable to the Zip drive.

11) Secure the hard drive with the screws provided.

12) Place the steel cover back on the drive enclosure.

13) Slide the drive enclosure back into the receiving frame.

2.2.6b Floppy and Zip Drive Installation for PWS only

1) Remove the 3.5" drive cage.

2) Locate the six pins on the rear side of the top Zip drive and set the jumpers on the rightmost pins for MASTER configuration.

3) Install the top Zip drive in the top slot of the drive holder.

4) Locate the six pins on the rear side of the bottom Zip drive and set the jumpers on the rightmost pins for SLAVE configuration.

5) Install the bottom Zip drive in the bottom slot of the drive holder.
6) Replace the drive holder and secure it with 2 screws.
7) Attach the “Y” power-splitter cable to the power supply cable from the case.
8) Attach the two power connectors on the other end of the splitter to both Zip drives.
9) Attach a blue IDE connection to the IDE 1 on the motherboard.
10) Attach one connector to bottom Zip drive and the remaining connector to the top Zip drive.
11) Secure the hard drive with the screws provided.
12) Place the steel cover back on the 3.5” drive cage.
13) Slide the 3.5” drive cage back into the receiving frame.

2.2.7 Assembling the Removable Hard Drive

1) Remove the drive enclosure from the Kingston reciving frame.
2) Remove the steel cover from the drive enclosure.
3) Attach the gray I/O interface cable to the hard drive.
4) Attach the power cord to the hard drive.
5) Secure the hard drive with the screws provided.
6) Place the steel cover back on the drive enclosure.
7) Slide the drive enclosure back into the receiving frame.

2.2.8 Installing the Removable Hard Drive Enclosures

1) Remove the steel blocker from the 2nd and 3rd slot.
2) Attach the rails to the hard drive enclosure with the screws provided.
3) Mount the rail as far back as possible with the tabs on the rail facing the front of the drive.
4) Slide the first Kingston drive enclosure in the top slot on the right front side of the case.
5) Slide the second Kingston drive enclosure in the next available slot on the right front side of the case.

2.2.9 Completing the Removable Hard Drive Installation

1) Attach the top hard drive cable to the front IDE slot on the RAID card. This is the one furthest from the rear of the case.
2) Attach the lower hard drive cable to the rear IDE slot on the RAID card. This assures that hard drive array “0” will always be the top drive and array “1” will always be the lower drive. The Blue connector side of the IDE cable **MUST** be connected to the RAID card, attaching it to the removable drive chassis will result in an inoperable system.
3) After the drives are inserted, you will turn on the drives by locking the drives in position with the keys provided.
4) Attach the power cord to both the top and bottom of the hard drive bay.

2.2.10 Installing the CD ROM

1) Move the jumper on the CD ROM drive from the slave to the master position.
2) Install the CD ROM in the bottom slot on the right front side of the case (under the removable hard drives).
3) Attach the CD ROM drive with the 4 screws provided using the lower holes (2 on each side).
4) Connect the power plug to the CD ROM drive.
5) Connect the blue IDE connector to IDE 2 on the motherboard.
6) Connect the IDE cable to the back of the CD-ROM.

2.2.11 Complete the CPU Assembly

1) Attach the power cord to the motherboard.
2) Replace the top cover of the case and secure with the three screws.
3) Remove the 3rd drive cover from the right side of the case and the two 3.5 drive convers.
4) Snap the front cover on the case.
5) Replace the AGP slot blocker on the back of the case.

2.3 Modification of the UPS

The following tools and parts are required for modifying the UPS:

- Soldering Iron
- De-Solder Wick
- Wire Strippers

- Awl or sharp pointed screw driver
- Ruler
- Solder
- **A** four foot length of 14-gauge dual lead wire
- Two 1-inch long pieces of heat shrink tubing
- Cable ties

2.3.1 Assembly Instructions:

1) Remove the cover and front panel of the UPS.

2) Disconnect the battery by removing the positive cable (RED) from the battery terminal.

3) De-solder and remove the momentary push button switch located on the front LED circuit board (The switch has (4) posts).

4) After removing the switch, assure that the (4) holes and pads on the board are clear of solder.

5) Measure and cut a 4 foot long piece of dual lead replacement wire and remove a 1/2 inch piece of insulation from both ends of both wires.

6) Solder both wires at one end of the 4 foot wire, and then place a 1" long piece of heat shrinkable tubing on each of the tinned wires. (Do not shrink the tubing at this time) These wires are to be inserted and soldered onto the LED circuit board.

7) From the front of the LED board insert the first wire into the top left hole from where the button was removed and solder into place. Insert the second wire into the bottom right hole on the board and solder into place.

8) Shrink the tubing as close to the circuit board as possible

9) Remove the rubber cover for the push button from the front of the faceplate, cut a small hole in it and thread the unsoldered wires through it. Reconnect the positive cable to the battery. Then replace the faceplate and the cover of the UPS.

10) Attach the two open ends of the wires to the contact block, it doesn't matter which wires gets connected to which post on the contact block.

11) At the front of the station, after the key switch has been removed, install and secure the replacement push button switch.

12) The UPS will be installed behind the internal fan housing at the rear of the station. The wires and the contact block will be routed to the push button switch and snapped into place. Make sure the wires are routed as to not conflict with any other hardware and secure in place with cable ties.

2.4 Removal of the Front Panel Key Switch

The following tools are required for removing the switch:

- Flathead screwdriver
- Phillips screwdriver
- Round file
- Wire strippers
- Wire crimpers
- Ruler
- Two wire butt splice connectors

2.4.1 Removal Instructions:

1) Unplug cable wiring from key switch at rear of internal fan housing.
2) Unscrew and remove the key switch assembly at the front of the workstation.
3) Cut the wires at the end that was disconnected from the fan housing approximately 2” from the Molex connector.
4) Connect the two black wires together and the two white wires together using a butt splice connector and replace the Molex connector to the rear.

2.5 Power Cord Modification

Tools required for power cord modifications:

- Hex Wrench
- Wire Strippers
- Ruler
- Parts required for power cord modifications:
- 3 Prong AC Male Power Plug
- 3 Prong AC Female Power Plug

2.5.1 Power Cord Modification Instructions

1) Remove the 12 hex screws from the rear of the station.
2) Unplug the Molex connector on the yellow power cable that is entering the bottom of the unit from the fan housing.
3) Remove the round strain relief bolt that is holding the cable in place (This will allow the cable to be removed from the station).
4) After the cable has been removed, slide the wire mesh and grommet down the cable approximately 2 ½ feet.

5) Cut the cable 2 feet from the Molex connector.

6) Take the cut off end of the Molex end of the cable and strip the insulation back enough to allow a 3-prong AC male power plug to be installed.

7) Attach the 3 prong male power plug.

8) Strip the insulation on the remaining cable the same as above, to allow for a 3-prong female power plug to be installed (this plug will be installed later).

9) Reinstall the cable into the bottom of the station.

10) Reconnect the round strain relief that holds the cable in place.

11) Install the 3-prong female power plug.

12) Plug the UPS into the 3prong female power plug of the power cord.

13) Plug the 3 prong male power plug into the UPS and reconnect the Molex connector to the fan assembly. This will provide power to the fan assembly and allow the fan assembly to be powered on and off from the front push button switch on the station.

2.6 Setting LDAS II Workstation System Parameters

2.6.1 Assigning the ASUS Motherboard BIOS Settings

The BIOS version is determined by the LDAS Administrator. The workstation will be equipped with an ASUS TUSL motherboard. The following tables indicate the appropriate BIOS settings for the motherboard. Refer to Appendix C for information pertaining to how and when the BIOS settings should be entered. To set the BIOS, you will need to boot up the workstation.

BIOS Field	
MAIN Fields	**Setting**
System Time	Set to current time
System Date	Set to current data
Legacy Diskette A	1.44M, 3.5 in. / Set to NONE for Path machine
Legacy Diskette B	None
Floppy 3 Mode support	Disabled
Primary Master	None
Primary Slave	None

Table 2-2: Bios Settings for an ASUS TUSL motherboard

Secondary Master	None (Auto for initial windows install)
Secondary Slave	None
Language	English
Supervisor Password	Disabled
User Password	Disabled
Halt on	All but Disk/Keyboard
Installed Memory	Default
BIOS Field	
Advanced	**Settings**
CPU Internal Frequency	Set to 1000
CPU Frequency Multiple	Default
FSB/SDRAM/PCI Freq Ratio	Default
FSB/SDRAM/PCI Freq (MHz)	Default
CPU Vcore	Default
CPU Level 1 Cache	Enabled
CPU Level 2 Cache	Enabled
CPU Level 2 Cache ECC Check	Disabled
Processor Serial Number	Disabled
BIOS Field	**Setting**
BIOS Update	Disabled
PS/2 Mouse	Auto
USB Legacy	Disabled
OS/2 Onboard Memory > 64M	Disabled
Chip Configuration	
SDRAM Capability	Default
SDRAM Operations mode	Default
BIOS Field	**Setting**
SDRAM Timing	By SPD
SDRAM CAS Latency	Default
SDRAM RAS to CAS Delay	Default
SDRAM RAS Precharge	Default
SDRAM Cycle Time	7T, 9T
SDRAM Page Closing	One Bank
CPU Latency Timer	Enabled
Command Per Cycle	Enabled
Onboard VGA	Enabled
NTSC/PAL	NTSC

Table 2-2: Bios Settings for an ASUS TUSL motherboard

Synchronous display	Enabled
Display Device Priority	CRT, Flat, TV
Graphics Window Size	64 MB
AGP Capability	4x Mode
Memory Hole at 15m-16m	Disabled
PCI 2.1 Support	Enabled
Onboard PCI IDE Enable	Both
SDRAM Data Driving Mode	Normal
I/O Device Configuration	
Onboard AC97 modem	Disabled
Onboard AC97 Audio	Disabled
Onboard FDC Swap A & B	No Swap
Floppy Disk Access Control	R/W
Onboard Serial Port 1	Default
Onboard Serial Port 2	Default
UART2 Use as	COM Port
Onboard Parallel Port	Default
Parallel Port Mode	ECP and EPP
ECP DMA Select	3
Onboard CIR I/O	Disabled
PCI Configuration	
Slot 1-5 IRQ	Auto
Slot 2 IRQ	Auto
Slot 3 IRQ	Auto
Slot 4 IRQ	Auto
Slot 6 IRQ	Auto
PCI/VGA Palette Snoop	Disabled
PCI Latency Timer	32
BIOS Field	**Setting**
SymBios SCSI BIOS	Auto
USB Function	Disabled
Primary VGA BIOS	OnBoard
Intel CNR LAN boot ROM	Disabled
Onboard Audio	Disabled
PCI IRQ Resource Exclusion	All No
Shadow Configuration	**Settings**
Video ROM BIOS Shadow	Enabled
C8000-DFFFF	Disable
Power	**Settings**

Table 2-2: Bios Settings for an ASUS TUSL motherboard

Power Management	User Defined
Video Off Option	Suspend -> Off
Video Off Method	DPMS Off
HDD Power Down	Disabled
Suspend to RAM Capability	Disabled
APIC Mode	Disabled
Suspend Mode	Disabled
PWR Button < 4 secs.	Soft Off
Power Up Control	
AC Power Loss Restart	Disabled (Admin and Pathology) Enabled (In-
Power Up on External	Disabled
Wake on LAN or PCI Modem	Disabled
PWR Upon PS/2 KB/Mouse/CIR	Disabled
PWR Up on PS/2 Keyboard	Space Bar
Automatic Power Up	Disabled
Hardware Monitor	
Auto Recognize	Do Not Change Defaults
Boot	
1. Other Boot Device	SCSI Boot Device/Onboard ATA Boot Device
2. Removable Device	Legacy Floppy / set to NONE for Path Machine
3. ATAPI CD-ROM	ATAPI CD-ROM
4. IDE Hard Drive	None
SCSI/Promise Boot Sequence	Promise/SCSI
Plug and Play OS	Yes
Boot Virus Detect	Yes
Quick POST	Enabled
Boot Up Floppy Seek	Disabled
Full Screen Logo	Enabled

Table 2-2: Bios Settings for an ASUS TUSL motherboard

2.7 Mirroring the Hard Drives

1) Be sure the machine is shut down and turned off before inserting or removing the removable drives.

2) After both hard drives are inserted (the one containing the system and the blank one) and both are locked (this turns them on), you will get a screen that will have a flashing line at the top with the last word on the line being “critical”

	At the bottom of the screen there are instructions. To mirror the drive, use the **CTRL F** to enter the Array Bios Configuration Utility (**ESC** will boot the machine and run with only one drive).

3) From the resulting Main Menu, press **<5>** – **Rebuild Array**.
4) You will be presented with a list of arrays with **`Array 0`** highlighted. Select this array by pressing <**ENTER**>.
5) Then you will be presented with a screen to assign a spare drive for rebuilding the array. Select the choice that is highlighted by default by pressing <**ENTER**>.
6) You will see a message in the middle of the screen that will tell you the percent complete of the rebuild. This will take about 20 minutes.
7) When the rebuild is completed, there will be a flashing message that you can press any key to reboot.
8) Press any key to reboot so you can verify that you can access LDAS II. When the rebooting is complete, you will have completed the installation. Wait for a few seconds before accessing LDAS II (until the lights stop flashing rapidly).

3. LDAS II System Software

Chapter 3

3.1 LDAS II C3 Software Configuration

Following is an inventory list of the software required to build an LDAS II C3 Configuration Workstation:

- Windows 2000 with Service Pack 2
- FastTrak Raid Card Driver v1.30
- WinZip 8.0
- Oracle 8i
- McAfee VirusScan 4.5
- LDAS II Workstation Software 1.5

3.2 LDAS II System MASTER Image Loading

To begin setting up an LDAS II system requires the construction of a “MASTER” or set of “MASTER” hard drive images from which all future systems will be copied. The following sections will begin with setting up this “MASTER” image.

3.2.1 MASTER Image Loading Required Items

For this task you will need the following items. Make sure you have everything you will need before you begin:

- Assembled LDASII C3 Configuration Workstation
- Windows 2000 Setup floppy disks (4)
- Windows 2000 Installation CD
- Windows 2000 Service Pack 2
- FastTrak Raid Card Driver floppy disk, version 1.30
- WinZip 8.0 Installation CD
- Oracle 8i CD
- McAfee VirusScan 4.5 CD
- LDAS II Installation CD

3.2.2 Windows 2000 Installation and Setup

1) To begin with two mirrored, blank hard drives in the assembled LDAS II C3 Configuration Workstation (see Chapter 2 for details). Use the following directions:

   a) **<Ctrl-f>** to get to the Fast Track Main Menu.

   b) Press **<3 - Define Array>**.

   c) Press **<ENTER>** on Array 1 (already highlighted).

   d) Press the <**Space Bar>** untill the **RAID** mode says **MIRROR**.

   e) Press the **<Up>** and **<Down>** arrow keys to change both harddrive assingments to "**Y**".

   f) Press **<Ctrl-Y>** to **Save**.

   g) Press '**Y**' to **Create** and **Duplicate** disk.

   h) Press **<ENTER>** to select **Source Disk** (Source capacity must be smaller than the Target).

   i) Press <**Y-Continue>**.

2) Press **<Ctrl+Alt+B>** to enter the **Manage PC Boot Agent**.

3) At the **Config** message choose **Disable**.

4) Press **<F10>** to **Save**.

5) Insert the Windows 2000 Setup CD into the CD-Rom drive.

6) Boot the machine.

   a) Enter BIOS.

   b) Set the Secondary Master to Auto

   c) At Boot menu, **arrow down** to CD-Rom and press **<+>** twice to make the CD-Rom the first Boot Device.

   d) To Exit and save changes, press **<Enter>**.

   e) Press **<Y>**.

7) Watch for the message **Setup is inspecting your hardware configuration**. Press the <**F6>** key when prompted at the bottom of the screen.

8) You will see a message **Setup is loading files…** Wait while files are loaded.

9) You will see the message "**Setup could not determine the type of one or more mass storage devices"**.

10) Press the <**S**> key to specify mass storage devices.

11) When prompted. insert the disk with the **FastTrak** driver.

12) Press **<Enter>**.

13) Using the arrow keys, select "**Win2000 Promise Fast Trak66(tm) Controller (PDC20262)"** from the list on the screen.

14) Press **<Enter>**.

15) You will see the "**Setup will load support..."** message again. Now you will see the following listed on the screen:

   a) Win2000 Promise FastTrak66(tm) Controller (PDC20262)

   b) Press **<Enter>** to continue.

16) You will see the message "**Setup is starting Windows 2000"** at the bottom of the screen. Wait for the screen with a "**Welcome to Setup"** message.

17) Press **<Enter>** for **SETUP WINDOWS 2000 NOW**.

18) Insert the **Windows 2000 Installation CD** and press **<Enter>**.

19) Press **<F8>** to agree to the Licensing Agreement.

20) You will see the partition setup screen with the message **The list below shows existing partitions and spaces available for creating new partitions…**

21) Delete every partition from the list at the bottom of the screen with the following steps:

   a) Select a partition and press <**D**>.

   b) If the partition you have selected is a system partition you will see a warning screen. Press **<Enter>** if you see this message.

   c) You will see a screen with the message 'You have asked Setup to remove the partition…' Press **<L>**.

   d) Repeat these steps for every partition listed on the screen.

You should now have one unpartitioned space on the drive listed.

22) Press <**C**> to create new partitions.

23) Enter **<u>1498</u>** and press **<Enter>** to create the first partition.

24) Using the arrow keys, select the unpartitioned space from the list and press <**C**> to create new partitions. Enter **2888** and press <**Enter**> to create the second partition.

25) Select the unpartitioned space from the list and press **C** to create new partitions. Enter **996** and press <**Enter**> to create the third partition.

26) Select the unpartitioned space from the list and press **C** to create new partitions. Accept the default value of the remaining space and press <**Enter**> to create the last partition.

27) Highlight **C:** in the list on the screen.

28) Press <**Enter**> to begin installation of Windows 2000.

29) Select the **NTFS** option from the list on the screen.

30) Press <**Enter**> to format the **C:** partition. Wait while Setup formats the disk.

31) Insert the **FastTrak** disk when prompted to do so and press <<**Enter**>>.

32) Wait while Setup completes the text portion of the installation.

33) Setup will restart the machine.

34) Click <**Next**> on the **Windows 2000 Setup** window. Wait.

35) Click <**Next**> on the **Regional Settings** window.

36) You will see the **Name and Organization** window. Enter ***NTP*** in the **Name** field. Enter ***NIEHS*** in the **Organization** field. Click <**Next**>.

37) You will see the **Registration** window. Enter **Product ID #** and click <**Next**>.

38) You will see the **Computer Name and Administrative Password** window. Enter a unique name in the **Computer** name field.

39) Enter and confirm password ***saddle*** in the **Administrative Password** field. Click <**Next**>.

40) Set the correct date, time and time zone in the **Date and Time Settings** window. Click <**Next**>.

41) Next you will see the **Windows 2000 Networking Components** window. Select **Custom settings** and click <**Next**>.

42) Select **Internet Protocol (TCP\IP)** and click <**Properties**>.

   a) Click <**Advanced**>.

43) Click <**Properties**> under the **DNS** frame.

44) Select the **DNS** tab and click <**Add**>.

45) Enter the following **DNS: 157.98.8.8,** and then click **<Add>**.

46) Click **<Add>** again and add the following **DNS: 157.98.8.7.**

47) In the **DNS suffix for this connection** field enter: ***NIEHS.NIH.GOV***.

48) Select the **IP Settings** tab and click **<Add>** inside the **Default Gateway** frame.

49) Enter **157.98.8.10**, and then click **<Add>**.

50) Click the **WINS** tab.

a) Click **<Add>**.

51) Enter the values for **WINS Server Primary (*157.98.8.162)***

a) Click **<Add>**.

52) Enter the values for the **WINS Server Secondary (*57.98.12.215*)** and click **<Add>**.

53) Click **<OK>** to close the **Advanced TCP/IP Settings** window.

54) Click **<OK>** to close the **Internet Protocol properties** window.

55) Click **<Next>** on the **Setup** window.

56) Select the **No** option and enter ***LDAS*** for the workgroup name on the **Workgroup or Computer Domain** screen. Click **<Next>**.

57) Wait while setup installs components and performs final tasks.

58) When setup is complete click **Finish**. Windows will restart.

59) Once Windows restarts, click **<Next>** on the **Network Identification Wizard** screen.

60) Select the '**Users must enter a username and password'** option from the **Users Of This Computer** screen and click **<Next>**.

61) Click **Finish** on the last **Network Identification Wizard** screen.

62) Logon as the user ***ADMINISTRATOR*** using the password ***saddle***.

63) You will see the **Getting Started with Windows 2000** screen. Uncheck the **Show this screen at startup** box and click the **Exit** button.

3.3 Windows 2000 Service Pack 2 Installation

1) Insert Windows 2000 Service Pack 2 CD. If setup does not begin automatically open, run **W2KSP2.exe** from the CD.

2) Check **Accept the License Agreement** and **uncheck** the box to "**Backup the File necessary to uninstall**" then click **Install** on the **Setup** window.

When finished you will see a **Windows 2000 Service Pack 2 installation is complete…** Remove the CD and click **Restart**

3) Logon by entering password and clicking **<OK>**.

4) Go to **Start Menu / Settings / Control Panel**. Double-click **Administrative Tools**.

5) Double-click the **Computer Management** icon, and then select **Disk Management** from the list on the left side of the window.

6) Right-click the Zip drive and select '**Change Drive Letter and Path'** from the menu.

7) Click <**Edit>** to change the drive letter of the first removable Zip drive to **X** and press **<OK>**.

   a) Repeat steps 6 and 7 to add the second removable Zip drive. Note that the second Zip drive is given the drive letter **Z**.

8) Right-click the CD drive and select '**Change Drive Letter and Path'** from the menu.

9) Click <**Edit>** to change the drive letter of the CD drive to **Y** and press **<OK>**.

10) Format and label remaining partitions with NTFS.

   a) Right click on the **D** drive and click **<Format>**.

   b) Check the **"Perform quick format"** box and click **<OK>**.

   c) Right click on the **D** drive.

   d) Click on **Properties**.

   e) Type "**Apps**" in the **Label** box when asked for a disk lable.

   f) Repeat **a** through **d** for the **E** drive and label the **E** drive "**Data"**.

   g) Repeat **a** through **c** for the **F** drive and label the **F** drive "**Temp Data"**.

11) Right click on the **C** drive.

12) Click on **Properties**

13) Type **OS** in the Label box.

14) Click <**OK**> to save the label.

15) Restart the computer.

16) Logon by entering password and clicking <**OK**>.

3.4 WinZip 8.0 Installation

1) Insert LDASII Setup CD
2) Double-click the **WinZip80.EXE** on the setup disk.
3) Click the **Setup** button in the **Setup** window.

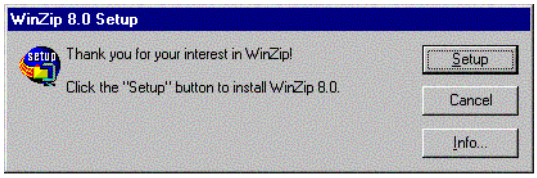

Figure 3-1 WinZip80 Setup Window

4) Click <**OK**> to accept the default location.

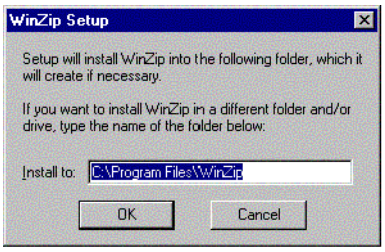

Figure 3-2 WinZip80 Default Location

5) Click <**Next**> on the **WinZip Setup** screen

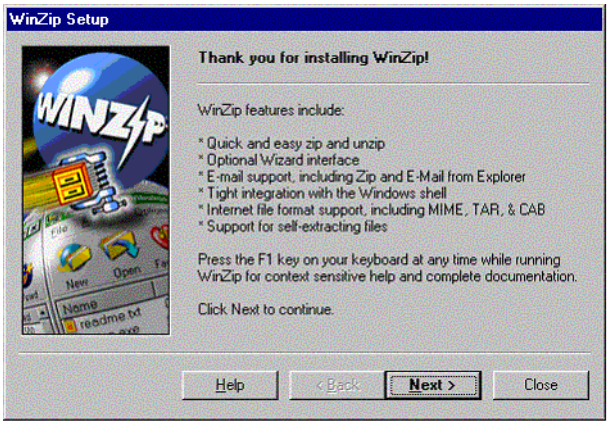

Figure 3-3 WinZip80 Setup Thank You Window

6) Click **Yes** to accept the WinZip license agreement.

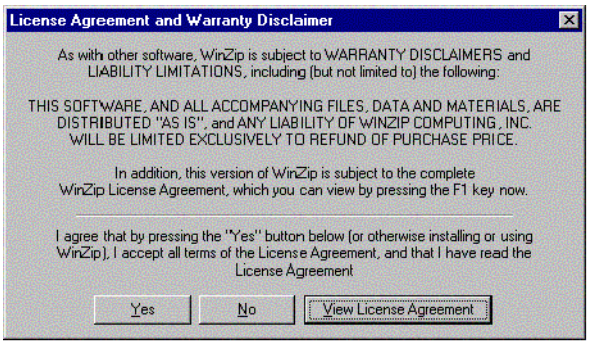

Figure 3-4 WinZip80 License Agreement

7) Click **<Next>** on the **Setup** screen.

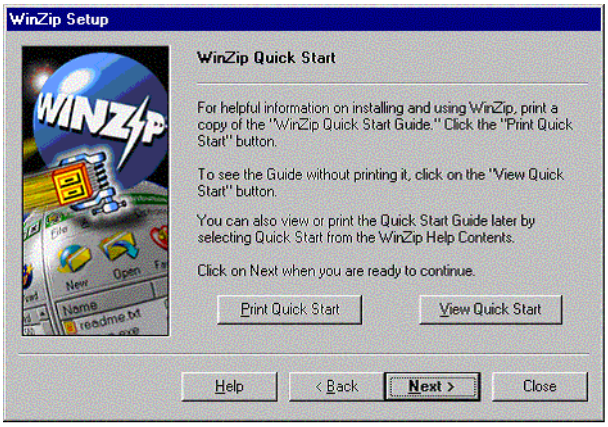

Figure 3-5 WinZip80 Quick Start Window

8) Select **Start With WinZip Classic**.

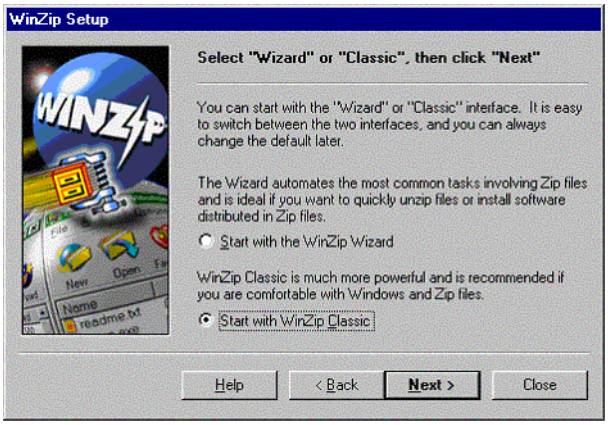

Figure 3-6 WinZip80 Classic/Wizard Startup Window

9) Click **<Next>**.

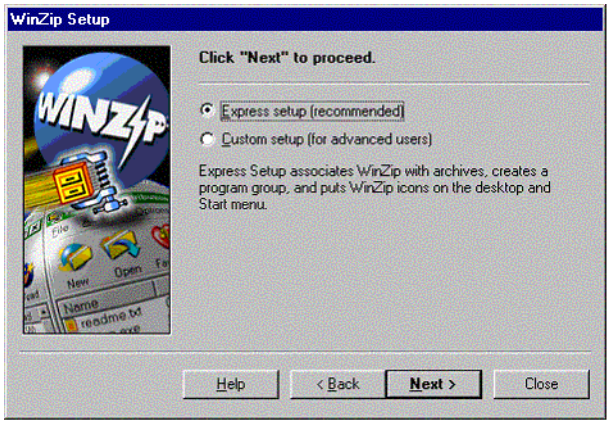

Figure 3-7 WinZip80 Proceed to Express Setup Window

10) Select **Express Setup**.

11) Click **<Next>**.

12) Click **<Next>**.

13) Click **Finish**.

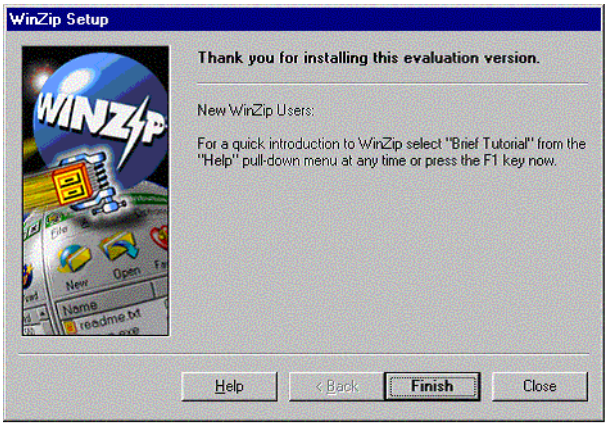

Figure 3-8 WinZip80 Finish Installation Window

14) Close all open windows.

3.5 Oracle 8i Installation

1) Insert the Oracle 8.1.7 Setup CD. If setup does not begin automatically open, run **Setup.EXE** from the CD.

2) Click **Install/Deinstall Products** on the **Oracle** window.

Figure 3-9 Oracle Install/Deinstall Products Window

3) On the **Oracle Universal Installer** window, click **<Next>**.

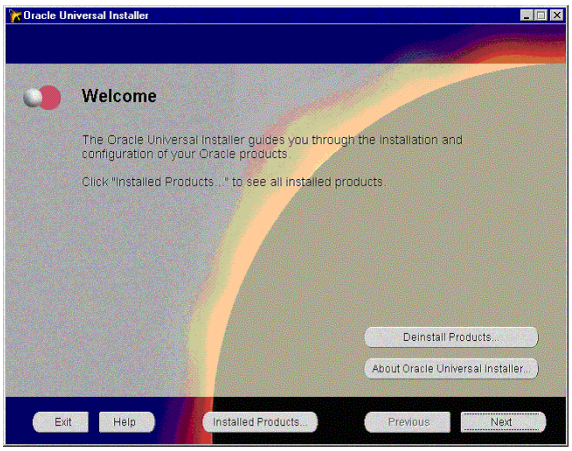

Figure 3-10 Oracle Universal Installer Window.

4) Set the **Name** to **<u>O8i</u>**.

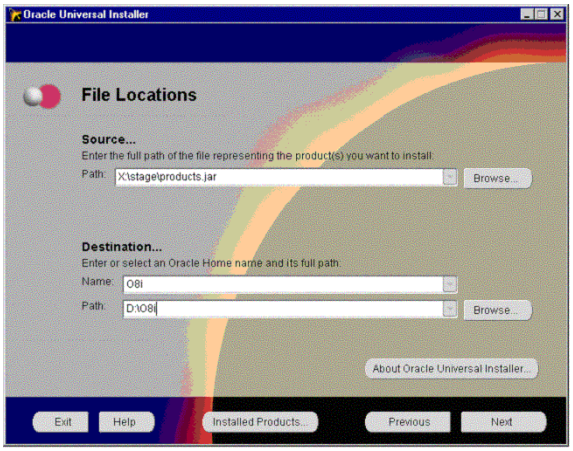

Figure 3-11 Oracle Set Name and Location

5) Set the **Location** to **D:\O8i**. Click **<Next>** and wait.

6) Select **Oracle8i Enterprise Edition 8.1.7.0.0** from **Available Products** dialog box and click **<Next>**.

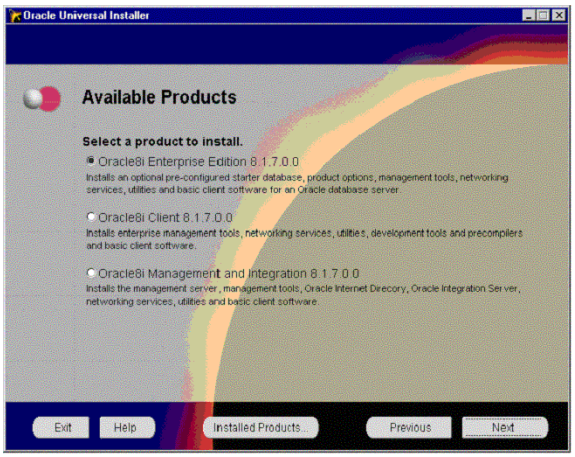

Figure 3-12 Oracle Available Products Dialog Box

7) Select **Typical** from the **Installation Types** dialog box and click **<Next>**. Wait…

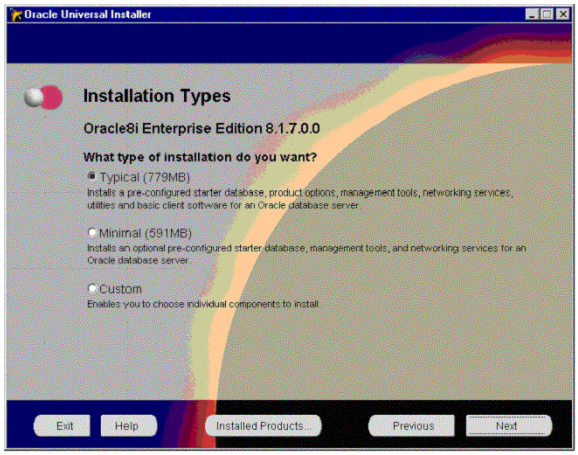

Figure 3-13 Oracle Installation Types Dialog Box

8) Type in **<u>LDAS</u>** in the **Global Database Name** field.

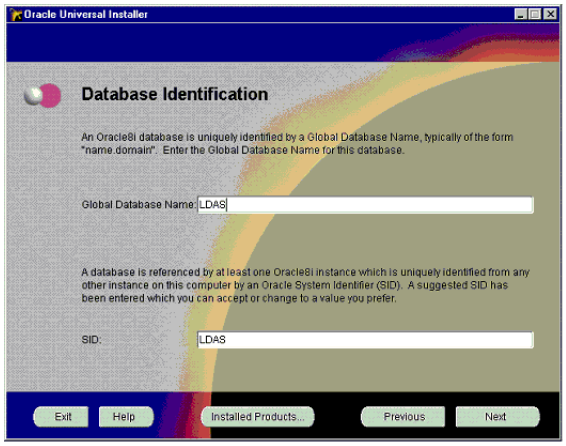

Figure 3-14 Oracle Database Identification Window

9) Type in **<u>LDAS</u>** in the **SID** field. Click **<Next>**. Wait…

10) Click **Install**. Wait...

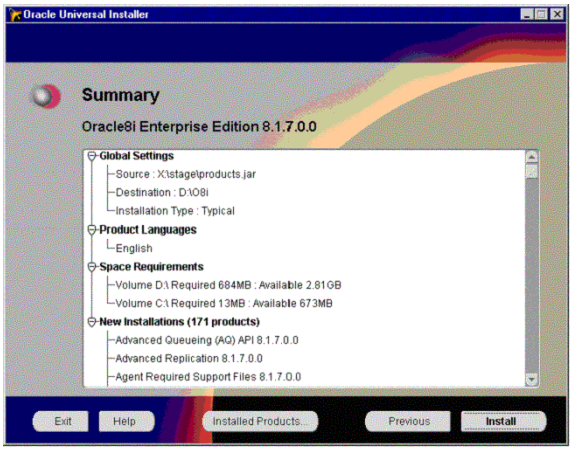

Figure 3-15 Oracle Universal Installation Summary Screen

11) Click **<OK>** on the **Oracle Database Configuration Assistant Alert Screen**.

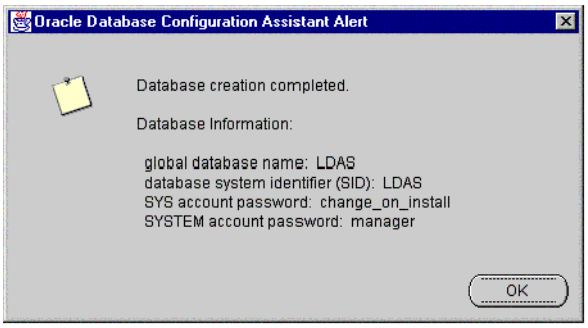

Figure 3-16 Oracle Database Configuration Assistant Alert Screen.

12) Click the **Exit** button when the installation is complete.

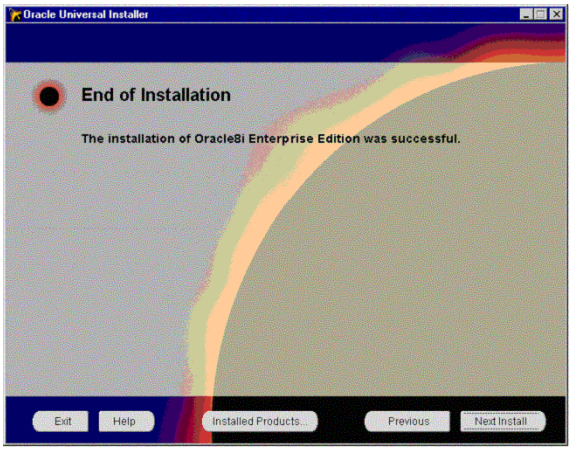

Figure 3-17 Oracle End of Installation Screen

13) Click **Yes** on the **Do you really want to exit?** screen.

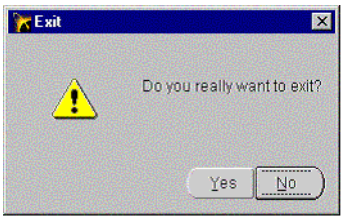

Figure 3-18 Oracle Exit Confirmation Screen.

14) Click the minimized **Oracle HTTP Server** window on the task bar, and then close that window.

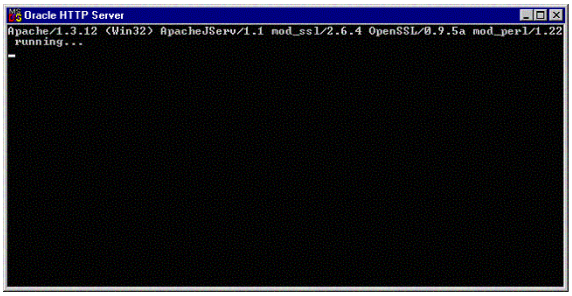

Figure 3-19 Oracle HTTP Server Window

15) Select **Start / Settings / Control Panel**. Double-click **Administrative Tools**.

16) Double-click **Services**.

17) Stop the **OracleO8iAgent** and **O8iDataGatherer**.

18) Set the startup type for **OracleO8iDataGatherer**, **OracleO8Iagent** and **OracleO8IHTTPServer** to **MANUAL** by right clicking on the **Name** then click on **Properties**.

19) In the **Start Up Type** box, set to **Manual** and click **<OK>**.

20) Repeat steps **17** through **19** for each service.

21) Close all windows and reboot.

3.6 McAfee Antivirus Software Installation

1) Insert the CD containing Windows Installer and VirusScan.

2) Open Explorer and double-click on the **Vscan45.MSI** file on the CD.

3) Click **<Next>** on the **Product Information** screen.

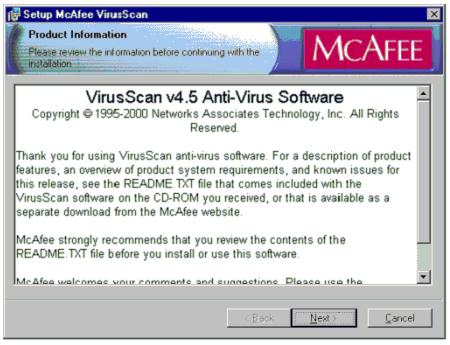

Figure 3-20 McAfee Product Information Screen

4) Select **I agree**... and click **<Next>** on the **License Agreement** screen.

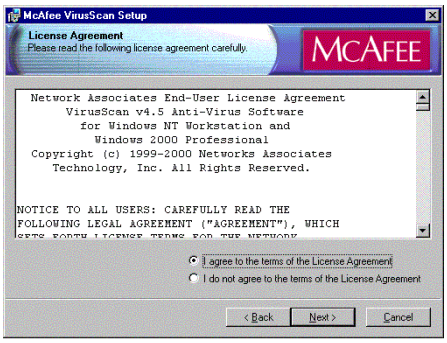

Figure 3-21 McAfee License Agreement Screen

5) Select **Use Maximum Security** and click **<Next>** on the **Security Type** screen.

Figure 3-22 McAfee Select Security Type Screen

6) Select **Typical Installation** and click **<Next>** on the **Setup Type** screen.

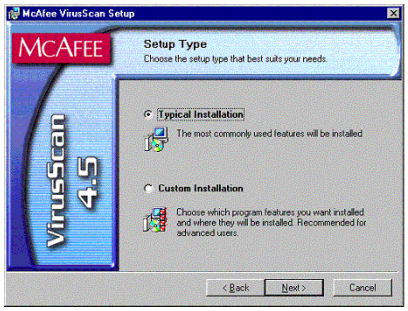

Figure 3-23 McAfee Setup Type Screen

7) Click **Install** and wait.

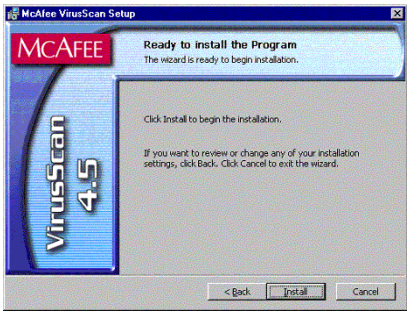

Figure 3-24 McAfee Ready To Install Screen

8) Check **Scan Memory For Viruses before Configuring** and click **Configure** on the **Setup Wizard** screen.

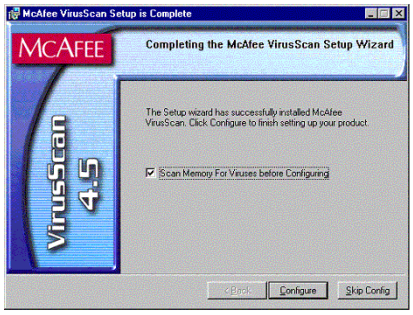

Figure 3-25 McAfee Scan Memory For Viruses Screen

9) Check **Create Emergency Disk** and **Run Default Scan for Viruses after installation** on the **Configuration** screen. Click **<Next>**.

Figure 3-26 McAfee Virus Scan Configuration Screen

10) Insert a blank floppy disk into drive **A**. Click **<Next>** on the **Emergency Disk Wizard** screen.

Figure 3-27 McAfee Emergency Disk Creation Wizard Screen

11) Click **<Next>**.

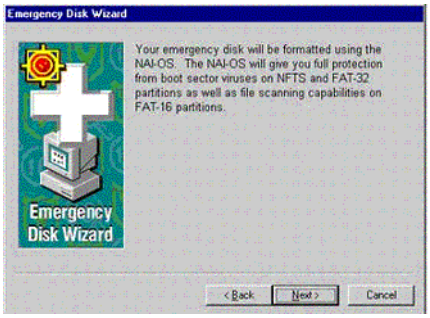

Figure 3-28 McAfee Emergency Disk Formatting Screen

12) Click **<Next>**.

Figure 3-29 McAfee Insert Blank Disk Screen

13) Remove the disk from the floppy drive. Label and write protect the disk. Click **Finish**.

Figure 3-30 McAfee Emergency Disk Confirmation Screen

14) Select **Wait and Run Auto Update Later** and click **<Next>**. Wait…

Figure 3-31 McAfee Update Virus Definition Files Screen

15) Check **Start VirusScan** and click **Finish** on the **McAfee VirusScan** screen.

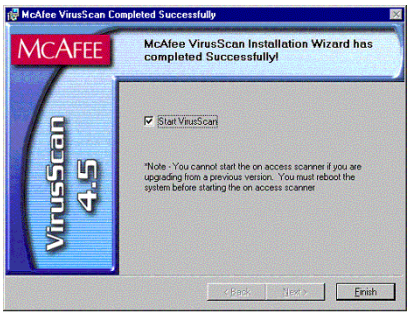

Figure 3-32 McAfee Virus Scan Installation Complete Screen

16) Virus Scan will run. Wait…

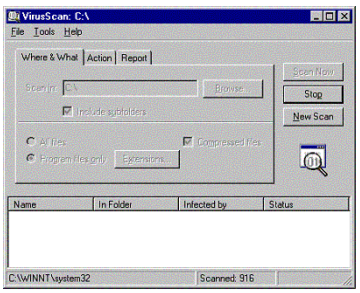

Figure 3-33 McAfee Run Virus Scan Screen

17) After the virus scan is complete the window will close.

18) Now, double click the magnifying glass icon in the task bar tray.

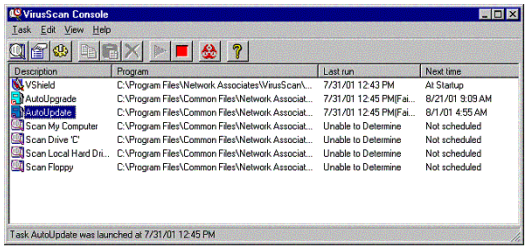

Figure 3-34 McAfee Virus Scan Console

19) Disable **Auto Upgrade** and **Auto Update**, by selecting them and choosing **Task / Properties**.

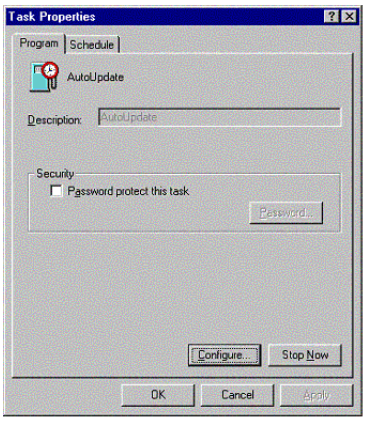

Figure 3-35 McAfee Task Properties Screen

20) Select the **Schedule** tab and uncheck **Enable**. Click **<OK>**.

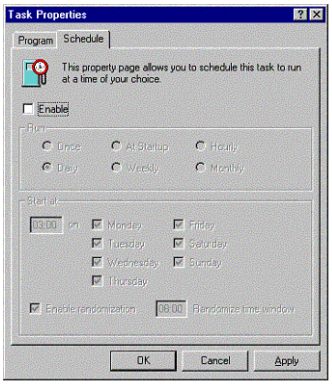

Figure 3-36 McAfee Schedule Task Properties Screen

21) Double-click on **VShield** in the **VirusScan Console** window.

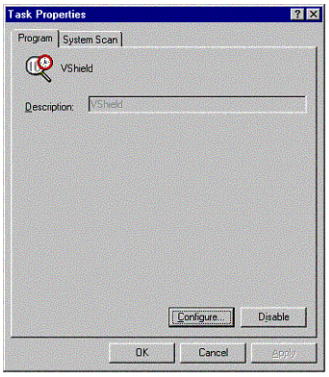

Figure 3-37 McAfee Configure Task Properties Screen

22) Click **Configure**.

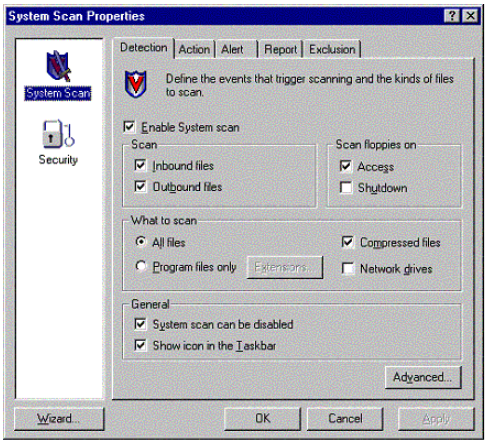

Figure 3-38 McAfee System Scan Properties Screen

23) Select **System Scan**. Select the **Detection** tab. In the **What to scan** frame select **All files**. In the **General** frame uncheck **System scan can be disabled**.

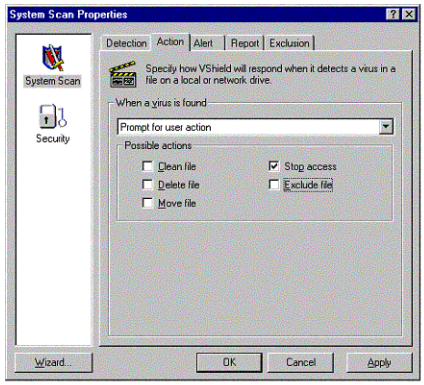

Figure 3-39 McAfee System Scan Action Properties

24) Select the **Action** tab. In the drop down list on the **When a virus is found** frame select **Prompt for User Action**. Uncheck all possible actions except **Stop Access**.

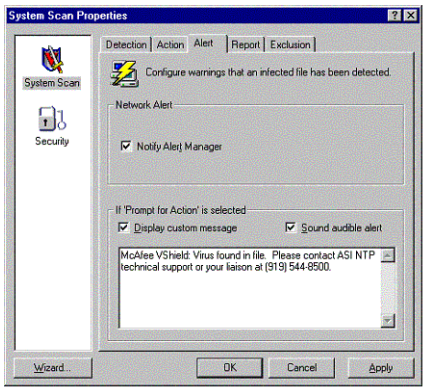

Figure 3-40 McAfee System Scan Alert Properties

25) Select the **Alert** tab. Check **Display Custom Message**. Add, **"Please contact ASI NTP technical support or your liaison at (919) 544-8500"** to the original message.

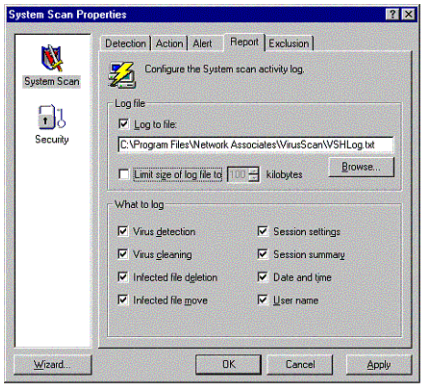

Figure 3-41 McAfee System Scan Report Properties

26) Select the **Report** tab. Uncheck **Limit Size of Log File to**.

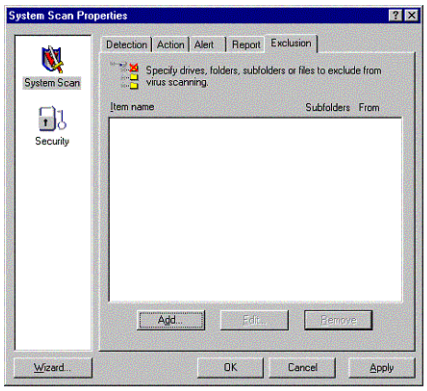

Figure 3-42 McAfee System Scan Exclusion Properties

27) Select the **Exclusion** tab. Delete all excluded files and locations by selecting each and clicking **Remove**.

28) Click **<OK>**.

29) Click **<OK>** on Task Properties and close all windows.

3.7 LDAS II v1.5 Software Setup

1) Place **ASUS** CD-Rom in CD drive.
2) Click **Intel 815 chipset graphics control driver**.
3) Click **<Next>**.
4) Click **<Yes>**.
5) Click **<Finsh>** to Reboot.
6) Insert LDAS II v1.5 Setup CD
7) Right-click the desktop, select **Properties** and on the **Settings** tab set **Screen Area** to **800 x 600** and set **colors** to **256**.
8) Copy the following files from the .DLL folder on the LDAS II setup disk to **C:\WINNT\System32**:

File Name	Date/Version
CRPAIG32.DLL	11/8/98 / 11:00 AM
CRPE32.DLL	2/23/00 / 10:43 AM
DUNZIP32.DLL	9/29/99 / 8:55 AM
IMPLODE.DLL	10/9/01 / 11:35 AM
P2SODBC.DLL	6/21/99 / 12:00 PM
MSCAL.OCX	6/25/98 / 11:00 PM
MFC42.DLL	No Change
MSCOMCT2.OCX	5/21/2000 / 11:00 PM

Table 3-3: LDAS 2 .DLL Files

9) Select **Start / Run** and type the following line in the box provided on the **Run** dialog: **regsvr32 mscal.ocx**

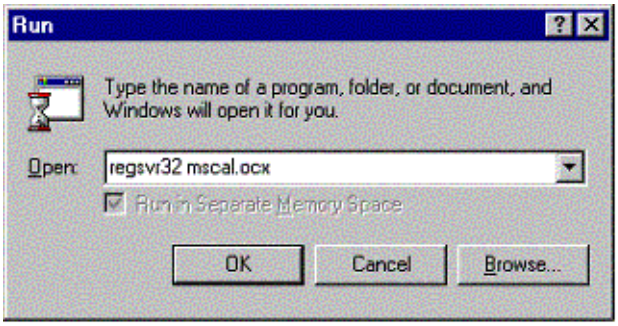

Figure 3-43 Start/Run Dialog Box

10) Click **<OK>** on the **Run** dialog box, and then click **<OK>** on the **Regsvr32** dialog.

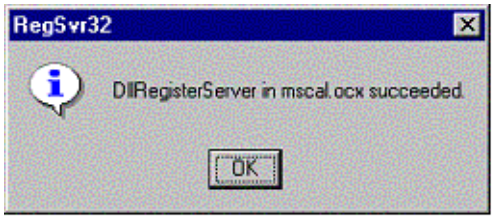

Figure 3-44 RegSvr32 Dialog Box

11) Select **Start / Run** and type the following line in the box provided on the **Run** dialog: **regsvr32 mscomct2.ocx**

12) Click **<OK>** on the **Run** dialog box, then click **<OK>** on the **Regsvr32** dialog.

13) Create **F:\ldasii\system\script**.

14) Copy **env-var.reg** and **LDAS_Table_Space.sql**.

15) On the setup disk in the **Setup** folder find the **LDAS_SETUP.BAT** file. Double-click the file, which will:

   a) Create the directory structure on the D:, E:, and F: drives.

   b) Add the Oracle_SID to the registry.

   c) Create the appropriate tablespaces in Oracle.

16) Copy **DISKWAIT.AVI**, **FILECOPY.AVI**, **FILEDISK.AVI, LDASIIUpdate.exe** from the **AVI** folder on the setup disk into **D:\LDASII\System\Applications**.

17) Double click on **LDASIIUpdate.exe** in **D:\LDASII\System\Applications,** This will extract all the files from the **LDASIIUPDATE.ZIP** file from the latest build.

18) Select **Start / Settings / Control Panel** and double-click **System**.

19) Select the **Advanced** tab then click **Environment Variables**.

20) Select **Path** from the **System Variables** list then click **Edit**. Add ***;D:\LDASII\ SYSTEM\DLL;D:\LDASII\SYSTEM\OCX*** to the existing value (note the leading semicolon "**;**").

21) Click **<OK>** three times.

22) In the Control Panel, double-click **Administrative Tools**, then **Computer Management,** select **Local Users and Groups** and double-click **Users** from the list, then **New User** from the **Action** menu.

23) Set username to ***LDAS***, password to ***saddle*** and confirm password.

24) Uncheck '**User must change password'**.

25) Check '**User cannot change password'** and '**Password never expires'**.

   a) Click **<Create>** then <**Close**>.

   b) Double-click **Groups** for the **Local User and Group**.

   c) Right-click **Administrators** and click <**Add to Group**>.

   d) Click **<Add>** and select **LDAS**.

   e) Click **<Add>**.

   f) Click **<OK>**.

   g) Click **<OK>**.

26) In the Control Panel/Administrative Tools, double-click **Data Sources**, then select the **User DSN** tab.

   a) Click **<Add>** and select **Oracle ODBC Driver** from the list.

27) Click <**Finish**>. Add **LDASIIDatabase** as **Data Source Name** and **system** as User ID.

28) Click **<OK>** twice.

29) Close all windows.

30) Restart the computer and logon using the same steps as before, only this time you will logon as **User:** ***LDAS***, **Password:** ***saddle***.

31) Uncheck **Show this screen at startup** and click <**Exit**> on the **Welcome to Windows 2000** screen.

32) On the setup disk find the **Background** folder. Copy the entire folder to **E:**

33) Right-click the desktop and select **Properties**.

34) Select the **Background** tab.

35) Click the <**Browse…**> button in the **Wallpaper** frame.

36) Select the **LDAS** bitmap in the **E:\Background** folder and click **<Apply>**.

37) Select the **Appearance** tab and set the desktop color to black. Click <**Apply**>. Click **<OK>**.

38) Select **Start / Run** and type in ***RegEdit***. Click **<OK>**.

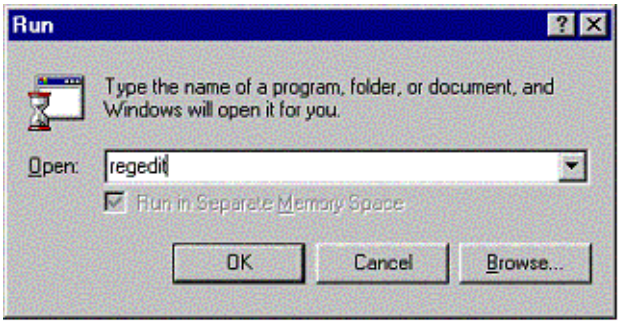

Figure 3-45 Start/Run regedit Dialog Box

39) Navigate to: **HKEY_LOCAL_MACHINE\ SOFTWARE\Microsoft\WindowsNT\CurrentVersion\Winlogon**

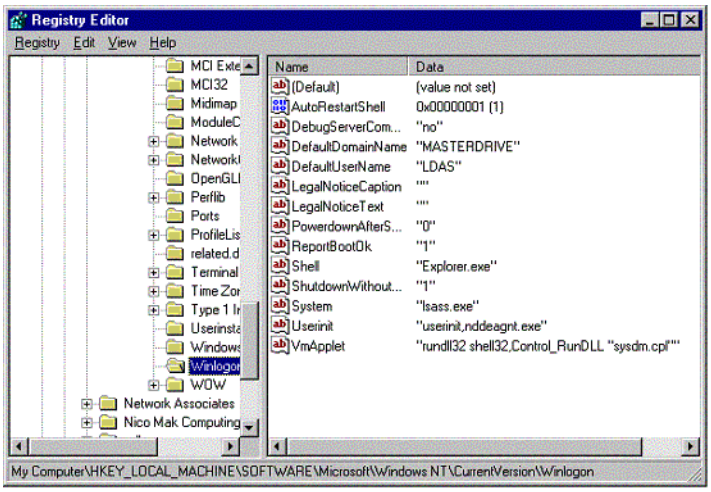

Figure 3-46 Registry Editor Screen

40) Select the **WinLogon** folder on the left pane of the Registry Editor and right-click on right pane.

41) Select **New** then select **String Value**.

42) Type ***DefaultPassword*** as new string value and press **<Enter>**.

43) Right-click **AutoAdminLogon** in the right hand pane then select **Modify**.

44) Set the **Value data** to **"1"**. Click **<OK>**.

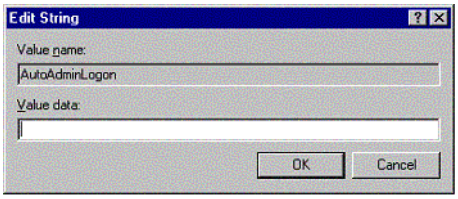

Figure 3-47 Edit String Dialog Box

45) Right-click **DefaultPassword** in the right hand pane and select **Value**, then select **Modify**.

46) Set the **Value data** to the password supplied by the LDAS II System Administrator. Click **<OK>**.

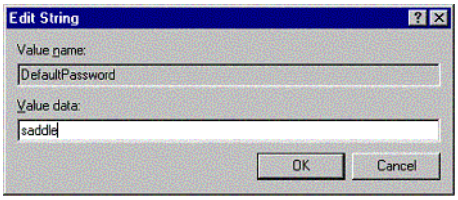

Figure 3-48 Value Name/Value Data Dialog Box

47) Double-click **Shell** in the right hand pane.

48) Set **Value data** to **D:\LDASII\System\Applications\ldas2.exe** then click **<OK>**.

49) Close the **Registry editor** window.

50) Copy latest ldasii update to **D:\ldasii\system\applications\update temp**.

51) Run **LDASII Update** in **D:\ldasii\system\applications**.

52) Once finished, close LDAS by **END Task** through **<Ctrl+Alt+Delete>**.

53) Run **Release REGOCXS.BAT** from the **RegisterOCX** folder on the setup disk. Click all of the **<OK>** buttons as .OCX's are registered.

54) Close all open windows and restart the machine.

55) Set **Workstation Type** to **LDASII Administration**, **Facility Number** to ***51*** then click **Accept**.

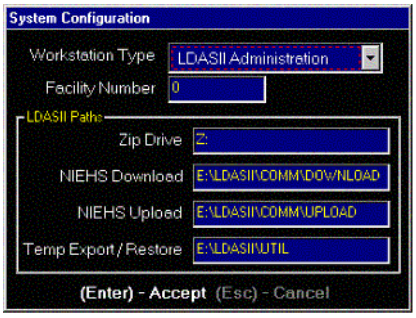

Figure 3-49 System Configuration Screen

56) Set **First Name** to ***QA1***, **Last Name** to ***QA1***, password to the password supplied to you by the LDAS II System Administrator, **Login ID** to ***qa1***, **Operator Type** to **Security Administrator**, and **Operator #** to ***9999***.

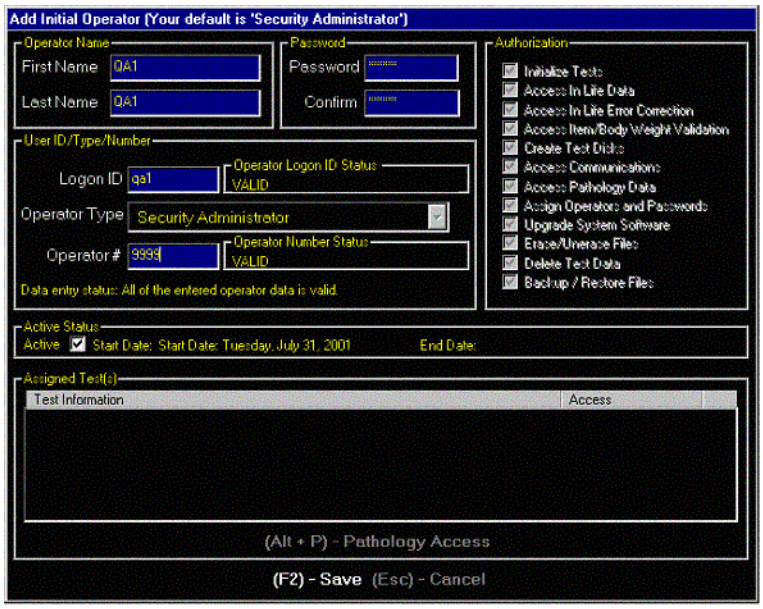

Figure 3-50 Add Initial Operator Screen

57) Click <**Save**>.

58) Logon as ***qa1*** and click <**Accept**>.

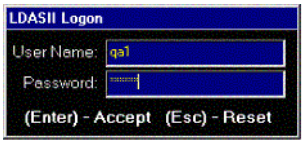

Figure 3-51 LDAS 2 Logon Screen

59) Once logged in, Press **ALT+Q** at the same time.

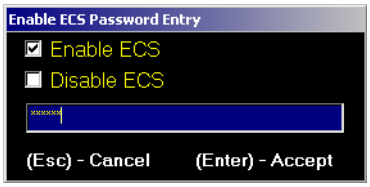

Figure 3-52 Enable ECS Password Entry Screen

60) Check **Enable ECS** with the left mouse button, and type the password supplied by the LDAS II System Administrator.

61) Click **<Enter>** to accept.

62) Select **Shutdown System** from the **Administrative Main Menu**.

63) Select **(Enter)-Accept** on the shutdown warning dialog.

3.8 LDAS II Workstation Configuration

Once the "MASTER" drive is configured and available, specific workstations can be created by copying the MASTER and configuring the copy to be one of the three LDAS II Workstation types.

There are three types of LDAS II Workstations: Administrative, Animal Room, and Pathology. All of the workstations contain identical LDAS II software so that they can be easily converted from one type to another if needed. The following is a list of steps required to change the workstation type.

If the original workstation type is Administrative, go to the **E:\LDASII\COMM\Download** directory with Windows Explorer and delete any

download protocol or data files and then to the **E:\LDASII\COMM\Upload** folder and delete any transaction sets.

1) Go to Task Manager, and select **New Task**
2) Type **D:\O8i\bin\oemapp.bat dbastudio** (This **IS** Case Sensitive)
3) Login. You will need an appropriate User ID and Password.
4) Expand the Users folder.
5) Delete the following users:
   a) LDASREPORTTEMP
   b) LDASWORKSTATION
   c) MASTER
   d) All Study User Accounts (Any user accounts beginning with S and followed by a test number)

      The only accounts that should be remaining are DBSNMP, SYS, and SYSTEM.

6) Restart LDAS.

If you are using a “locked down” workstation, access the Task Manager by pressing **CTRL+ALT+DEL**. Once you have the Task Manager window, click **Logoff**. Logging off of NT will automatically restart LDAS. If you are using a workstation that is not “locked down”, then you can restart LDAS by clicking the LDAS II icon on the desktop.You will get a window where you enter the Workstation type, facility, etc. Follow these procedures as in the steps for the LDAS II Installation above.

4. LDAS II System Peripherals

Chapter 4

4.1 Setting up the LDAS II Printer using DLC

The LDAS II Administrative workstation can be set up to print directly to the **HP4050 TN** printer or through the lab's network using **DLC** (Data Link Control) protocol.

To set up a local printer use the **Add Printer Wizard** function in **Start / Settings / Printers**.

4.1.1 To set up a printer using DLC:

1) Select **Start / Settings / Control Panel / Network and Dial-Up Connections**.
2) Right-click **Local Area Connection** for which you want to install the DLC protocol, and then select **Properties**.
3) On the **General** tab, click **Install**.
4) In the **Select Network Component Type** dialog box, click **Protocol**, and then click **Add**.
5) In the **Select Network Protocol** dialog box, click **DLC Protocol**, and then click **OK**.
6) Reboot the PC if prompted to do so.
7) Go to **Start / Settings / Control Panel / Printers**.
8) Double-click on **Add Printer Wizard**.
9) Select **My Computer** then click **Next**.
10) Click **Add Port**.
11) Select **Hewlett-Packard Network Port**.
12) Click **New Port**.
13) Type in ***HPLJ4050TN*** into the **Name:** field.
14) Type in the ***LAN HW ADDRESS*** into the **Card Address:** field.

	To get the ***LAN HW ADDRESS*** for the printer: 1) Press the **Menu** button on the printer once. 2) Press the right side of the **Item Menu** button twice. 3) You now have PRINT CONFIGURATION on the LCD screen. 4) Press the **Select** button once.

15) Click **OK**.

16) Click **Close**.

17) Click **Next**.

18) Click **Have Disk**.

19) Type in ***E:\Drivers\HP_Printer_4050TN***.

20) Click **OK.**

21) Select **HP LaserJet 4050 Series PS**.

22) Click **Next**.

23) Click **Keep Existing Driver**.

24) Type in ***HPLJ4050TN*** in the **Printer Name:** field

25) Click on **Yes** for **Use Default Printer**.

26) Click **Next**.

27) Click **Next**.

28) Click **Yes** for **Test Print**.

29) Click **Finish**.

30) Click **Yes** for **Did Test Print Properly**, if test page is printed.

4.2 Example Settings for Attaching Balances to LDAS II Animal Room Workstations

4.2.1 Sartorius Standard LP Balance Settings

Please refer to the Sartorius Master^{pro} Series User's Guide for details and instructions for configuring the balance.

Application Setting	Menu Items	Factory Setting
1 1 3	**Adapt filter:** Strong vibration	
1 2 1	**Application filter:** Final readout	X
1 3 4	**Stability range:** 2 digits	X
1 5 2	**Taring:** After stability	X
1 6 1	**Auto Zero:** On	X
1 7 2	**Weigh unit 1:** Grams/g	X
1 8 1	**Display accuracy 1:** All digits	X
1 9 1	**CAL key function:** External calibration/adjustment with pre-set weight valve	
1 10 1	**Calibration/adjustment sequence:** Calibration -> automatic adjustment	X
1 13 1	**Tare with power on:** On	X
1 15 1	**isoCAL function:** Off	
2 1 1	**Application selection:** Weighing	X
3 1 2	**Weight unit 2:** Grams/g	X
3 2 1	**Display accuracy 2:** All digits	X
3 5 2	**Counting/percent parameters:** Display accuracy	X
3 6 3	**Decimals for calculation:** 2 decimal places	X
3 7 2	**Animal activity:** Normal	X
3 8 2	**Start animal weighing:** Automatic	X
3 9 2	**Print animal weights:** Animal weight factor	X
3 10 2	**Autostart application:** Off	X
4 2 2	**Auto print +/-:** Off	X
4 3 1	**+/- control ports on:** Within control range	X
5 1 7	**Baud rate:** 9,600 baud	
5 2 4	**Parity:** Even	
5 3 1	**No. of stop bits:** 1 stop bit	X
5 4 3	**Handshake mode:** Hardware handshake, 1 character after CTS	X
6 1 4	**Print manual/automatic:** Auto print without stability	
6 2 2	**Stop auto print:** Not possible	X

Table 4-4: Sartorius Standard LP Balance Factory Settings

6 3 1	**Time-dependent auto print:** 1 display update	X
6 4 1	**Print -> autotare:** Off	X
7 1 1	**Print application parameters:** Off	X
7 2 2	**Line format:** For other applications/GLP	X
7 3 1	**Print net total:** Auto print net	X
8 1 1	**Menu:** Parameter settings alterable	X
8 2 1	**Acoustic signal:** On	X
8 3 1	**Block keys:** Keys unblocked	X
8 4 1	**External switch function:** Key function	X
8 5 1	**Backlighting:** On	X
8 6 1	**Power-on mode:** On/off/standby	X
8 7 2	**Auto shutoff:** Off	X
8 8 2	**Control port function:** Output	X
8 10 1	**ISO/GLP printout:** Off	X
9 1 2	**Factory setting:** Do not restore	X

Table 4-4: Sartorius Standard LP Balance Factory Settings

Sartorius balance models LP2200 and later **MUST** use a 9 to 25 pin 5' Sartorius cable, model 72602.

4.2.2 To Activate Animal Weighing (Sartorius)

Set the following animal weighing parameters in the Setup menu:

- **Animal activity:** Active, setting 373
- **Start animal weighing:** Automatic, setting 382
- **Print animal weights:** On: animal weight, factory setting 393
- **Application setting:** Animal Weighing, setting 217

4.2.3 To De-activate Animal Weighing (Sartorius)

Set the following animal weighing parameters in the Setup menu:

- **Animal activity:** Normal, setting 372

- **Printout:** Animal weight factory, setting 392
- **Application setting:** Weighing, setting 211

	The **Start Animal Weighing** parameter does not affect a de-activated Animal Weighing setting.

4.3 Mettler PM 4800 and PM 6000 Balance Settings

The configuration is divided into four sectors:

- Reset
- Scale
- Unit
- I-Face

4.3.1 Reset

- Standard setting – Yes

4.3.2 Scale

- Asd, Automatic stability detection, weighing speed – 2
- d., Selection of display sequences (Readablity) – 0.1
- dd., Weighing-in aid (Delta Display) switching on or off – Off
- az, Automatic zero correction (Autozero) switching on or off – On

4.3.3 Unit

- Unit 1, Basic weighing unit – g (gram)
- Unit 2, Switchable weighing unit – g (gram)
- Prt, Switch print/transfer command on or off – on
- (Image of both status indicators), Switch status indicator on or off – on

4.3.4 I-Face

- S, Data transfer mode – Cont
- b, Baud rate – 9600
- P, Parity - -E- (even)
- PAUSE, Pause between transfers and handshake – 0
- Au, Certified balances with auxiliary equipment – Off

Appendix A

A. Data Life Cycle of a National Toxicology Program Animal Study

The following steps are a brief description of the life cycle of the NTP study data:

1) A chemical is nominated and selected for study.
2) A study protocol is defined by NTP scientists.
3) A contract is established with a laboratory to perform In-Life and Pathology data collection based on the protocol requirements.
4) The protocol is sent to the laboratories.
5) The laboratory Data Administrator (or representative) request a study number from the NTP computer support contractor.
6) The NTP computer support contractor assigns the study number and the computer support contractor notifies the laboratory.
7) The laboratory Data Administrator completes the PEX forms which contain the information from the protocol regarding number of study animals, number of cages, treatment groups, required clinical procedures, required pathology procedures, etc.
8) The forms are submitted to the NTP laboratory Liaison.
9) NTP laboratory Liaison enters the data from the PEX forms into the Protocol Analysis System (PAS) on TDMS.
10) The laboratory Liaison generate a Validation Report containing all of the PEX data entered and send the form to the laboratory for verification and sign off.
11) Following verification of the PEX information, the laboratory Liaison creates an In-Life protocol download file. A pathology protocol download file will also be created, but it may not be done immediately, as it will not be needed by the laboratory until at least one animal has been removed from the study due to sacrifice or early death.
12) The Data Administrator downloads the In-Life protocol file to the local workstation and then runs the Initialize Test / Update Protocol function on the Administrative Workstation.
13) The Data Administrator assigns animals to the study by running the Assign Animals to Cages function on the Administrative Workstation.

14) The Data Administrator builds a transaction set on the Administrative Workstation, which contains all of the animal assignment and cage allocation data.

15) The Data Administrator uploads the transaction set to TDMS using the Upload to TDMS function.

16) A Zip disk is created on the Administrative Workstation for the test.

17) The Zip disk is given to a technician in the laboratory and carried to an Animal Room Workstation for data collection.

18) The technician inserts the Zip disk into the Animal Room Workstation, boots up the workstation, turns on the balance, and collects data.

19) The technician carries the disk back to the laboratory Data Administrator when data collection has been completed.

20) The Data Administrator copies the data to the Administrative Workstation.

21) The Data Administrator builds a transaction set containing the newly collected data.

22) The Data Administrator may run local reports at any time. Typically, the Data Administrator will run a Transaction Log as soon as a transaction set is built to verify that the correct data was collected by the technician.

23) The Data Administrator uploads the transaction set to TDMS using the Upload to TDMS function.

24) The transaction set is processed by TDMS Receive and TDMS Update and loaded into the TDMS database.

25) After the data is loaded into the TDMS database, both NTP personnel and local laboratory personnel may run mainframe reports on the data that has been collected.

26) The creation of disks, collection of data on the Animal Room Workstation, transferring the data back to Administrative Workstation, and the uploading of data to TDMS steps are repeated until the In-Life portion of the test has been completed.

27) When an animal has been removed from the study, either due to early removal or scheduled sacrifice, the pathology data collection may begin.

28) The pathology protocol file is created on TDMS and downloaded to the Administrative Workstation (if not done previously).

29) A Pathologist is assigned to the test by the Security Administrator.

30) A new operator transaction set is created and uploaded to TDMS to assign the Pathologist to the test.

31) A pathology Zip disk is created on the Administrative Workstation by the Data Administrator.

32) The pathology Zip disk is inserted into the Pathology Workstation and the test is copied to the workstation.

33) The Pathologist begins collecting pathology data.

34) On a laboratory-defined schedule, the data is copied from the pathology workstation to a Zip disk and transferred to the Administrative Workstation. (Frequent uploads of data to TDMS are recommended)

35) The Data Administrator builds a transaction set containing the pathology data using the Administrative Workstation.

36) The transaction set is uploaded to TDMS.

37) The transaction set is processed by TDMS Receive and Update and loaded into the TDMS database.

38) After the data is loaded into the database, the NTP staff and the local laboratory personnel may run mainframe pathology reports on the data.

39) The pathology data collection continues until data collection is complete based on the requirements defined in the study protocol.

40) When a laboratory has completed a study, the Data Administrator requests that a “lock date” be set for the study. The lock date essentially transfers “ownership” of the data from the local laboratory to the NTP personnel.

41) All of the study slides and data are sent to the NTP or designated contractor for archive.

42) The study slides and data are reviewed by a Pathology Working Group (PWG). The PWG notes any disagreement with the laboratory observing Pathologist’s findings.

43) The data is then reviewed by a Post-PWG group of pathologists. These scientists resolve any differences between the observing pathologists findings and the reviewing pathologists findings.

44) Any required changes are made by the computer support contractor or one of the pathology laboratories contracted for making such changes.

45) All modified data is uploaded to TDMS.

46) All final reports are run and the P14 is stored.

47) The study materials are sent to the reporting contractor who completes the technical report.

Appendix B

B. LDAS II Data Transfer And Networking

All NTP study information is stored on TDMS at the NIEHS computing facility in the Research Triangle Park. The stored data is either the result of data entry into the PAS system (protocol information) that is a part of the complete TDMS or by the transfer of data from the LDAS II system. Refer to **Appendix A: Data Life Cycle of a National Toxicology Program Animal Study** for an example of the complete life cycle of test data during a NTP study.

For detailed information on how to connect an Administrative Workstation to the NIEHS network, contact your site Liaison.

B.1 System Data Transfer

The data flow between TDMS and the LDAS II Administrative Workstation, and the flow between the Administrative Workstation and the Animal Room and Pathology Workstations is shown in Figure B-1.

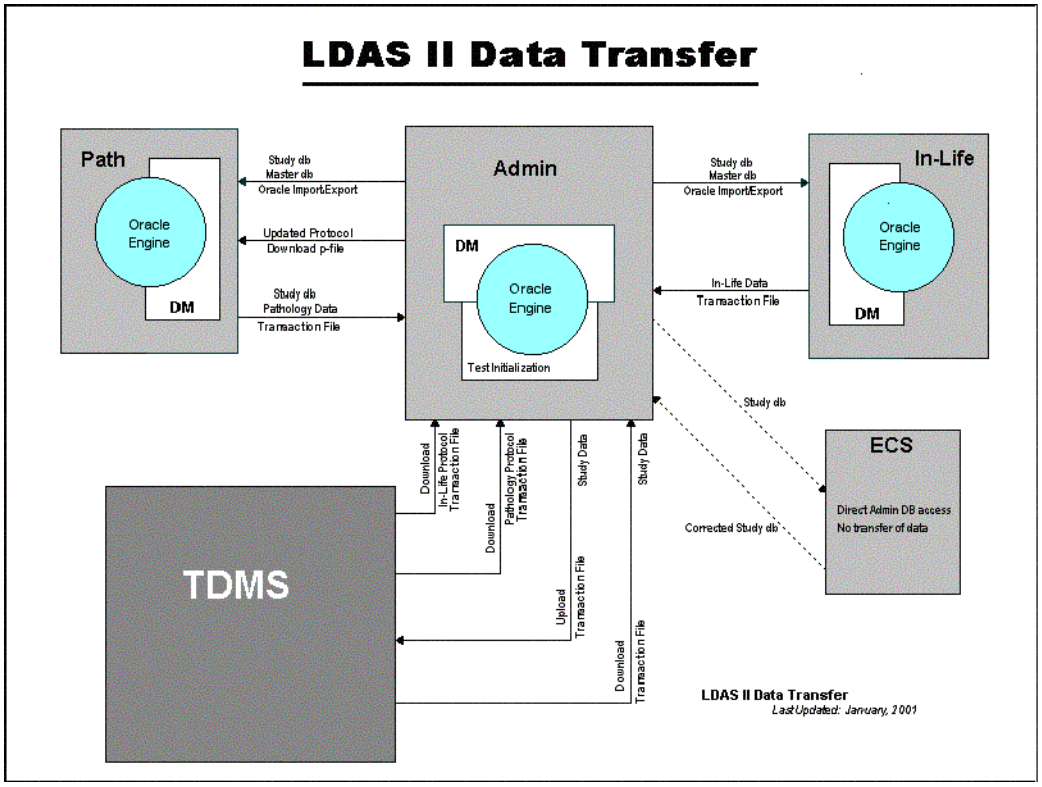

Figure B-1 LDAS II Data Transfer

B.2 TDMS to/from LDAS II Data Transfer

Transferring data from TDMS to LDAS II and from LDAS II to TDMS is accomplished by using transaction files. These are flat text files with predefined segment layout. The transaction sets\file layouts are contained in **Appendix H: Transaction Set Layouts** of this document.

B.2.1 Downloading Data from TDMS to LDAS II

TDMS contains procedures for creating transaction files of three types: In-Life protocol, Pathology protocol, and Data. The files are placed in a download directory for the applicable facility and downloaded to the local LDAS II system by using a download function on the Administrative Workstation. The download function uses HTTP to retrieve the files from the directory at NIEHS and place them in the LDASII\Comm\Download folder on the E drive of the Administrative Workstation.

After the files have been downloaded, the operator may load the information into an Oracle user account for a test by accessing the test using the **Initialize Test / Update Protocol** (Hot Key-**<I>**) function in the DB operations menu on the

Administrative Workstation. When this function is accessed, the operator is presented with a list of all tests that have files available in the download directory and indicates the state of the test and the available files. For example, the test can be a new test where no Oracle user account exists. It may be an existing test with protocol update files available in the directory, or it may be an existing test with data files available in the download directory.

The operator selects the test(s) to be initialized or updated and the system performs the required steps. For a new test, the system sets up the Oracle user account and all of the necessary tables. For an existing test, the system updates the data contained in the transaction file to the appropriate tables in the Oracle user account.

B.2.2 Uploading data from LDAS II to TDMS

When data collection has taken place on the LDAS II system(s) and all collected data has been transferred to the Oracle user account on the Administrative Workstation, the Workstation provides a function to build a transaction set for the test in a format expected by TDMS. The **Build Transaction Sets** function is located on the **Database Operations Menu** on the LDAS II Administrative Workstation. This function checks the **SESSION_REF Table** in the study schema to determine which sessions of data have already been sent to TDMS. This is done by checking a **TDMS TrnxSetNum** field in the session record. When a session ID number is found where this field is NULL, all data in the database associated with this session ID is written in the specified format in a transaction file. The data records can be easily identified as part of a session by the record ID. The record ID consists of the record number concatenated onto the session ID. After the data is written to the transaction file, the **TDMS TrnxSetNum** field is set to the number of the transaction set that was created to indicate that the data has already been processed and placed in a transaction file that can be sent to TDMS. It must be kept in mind that this flag in no way indicates that the data has been sent to TDMS, or that the data was received.

There are separate transaction sets built for In-Life, Pathology, and Operator Data. The transaction sets are stored on the **E:\ drive in the LDAS II\System\Comm\Upload** folder. These sets are named to identify the type of set, the test number, the date the set was created and the set number. The first character in the set name will be one of the following: “N” to indicate that set has not yet been transferred (uploaded) to TDMS, “T” to indicate that the set has already been transferred (uploaded) to TDMS, or “0” to indicate an operator transaction set has been built but not uploaded (“**T0**” indicates that the operator set has been uploaded). The second character in the set name will be one of the following: “**E**” to indicate an In-Life transaction set, “**P**” to indicate a Pathology transaction set, or “**0**” to indicate an operator transaction set.

After the sets are built, the operator may transfer the sets to TDMS by using the Administrative Workstation **Upload to TDMS** (Hot Key-**<D>**) function. When the upload function is accessed, the operator is presented a list of all the files in the **LDASII\COMM\Upload** folder. The user may select any number of the files in the folder and execute the upload function. The upload function sends the files to a specified directory on a server at the NIEHS computing facility to be processed by the TDMS Receive function.

When the set(s) are uploaded to TDMS, they are posted to HAZEL using HTTP (Hypertext Transfer Protocol). HTTP is now the standard method of data transfer between the laboratory Administrative Workstation and HAZEL. It must be noted that if a firewall exists at a laboratory, it may need to be configured to allow HTTP traffic on a selected port within the firewall. Typically, this is port number 80. After the file is uploaded to HAZEL, it is processed by the **LDAS2_TRANS.COM** cgi script (hazel.niehs.nih.gov/ldas-bin/ldas2_trans.com). The **LDAS2_TRANS.COM** file parses the transaction set and determines which facility is sending the data. Then, it splits the file into appropriate segment files that are used by the **RECEIVE** process to apply the set information to the database. When HAZEL first receives the set, an e-mail acknowledgement is sent to the system administrator, the laboratory Liaison and the laboratory itself for each set. Additionally, after **RECEIVE** has processed the transaction(s), a summary e-mail is sent to the lab.

B.3 Data Transfer within the LDAS II Workstation System

The LDAS II Administrative Workstation contains an Oracle user and a master account for all tests that are being processed in a facility. The Oracle user account is created and the master account is updated when an In-Life protocol file is downloaded to the Administrative Workstation, and the test is initialized. After the test has been initialized (Oracle user account created, protocol information loaded, master account updated, and animals assigned to cages), the test is ready for data collection to take place. This data collection can take place in two ways.

First, data collection can take place on the Administrative Workstation itself. In this case, there is no transfer of data from one place to another. The data is written directly into the Oracle user account.

Second, the test can be transferred to either the Animal Room Workstation or the Pathology Workstation for data to be collected by the Animal Room Technicians and Pathologists respectively. In this case, the data is transferred via “Sneaker Net” (physical data transfer using diskette media between PCs) using Zip disks.

B.3.1 Transferring a Test to and from the Animal Room Workstation

When In-Life data collection is to take place on an Animal Room Workstation, the test must be transferred from the Administrative Workstation to the Animal Room Workstation via a Zip disk. To create the Zip disk the operator selects the **Create In-Life Zip Disk** (Hot Key-**<L>**) function in the **DB Operations Menu** on the Administrative Workstation. This function creates an export of the Oracle user and master accounts from the Administrative Workstation and writes it to the Zip disk. This Zip disk is then inserted into the Animal Room Workstation. When the system is booted up, the accounts are automatically transferred to the workstation via the Oracle import function. Upon import, the exports are deleted from the Zip disk.

When data collection is completed on the Animal Room Workstation and the workstation is shutdown, the system automatically builds a transaction file of the newly collected data. This file is written to a temporary directory on the **E:\ drive in the LDASII\COMM\Backup** folder (in case recovery is required) and it is written to the Zip disk. Then the test is deleted from the workstation.

The Zip disk is then inserted into the Administrative Workstation. The operator selects the **Copy Data from Zip Disk** (Hot Key-**<C>**) function, which reads the transaction file and loads the information into the Oracle user account on the Administrative Workstation.

B.3.2 Transferring a Test to and from the Pathology Workstation

When pathology data collection is to take place on a Pathology Workstation, the test must be transferred from the Administrative Workstation to the Pathology Workstation via a Zip disk. A **Create Pathology Zip Disk** (Hot Key-**<P>**) function is available on the Administrative Workstation. Accessing this function and selecting a test will result in four items being written to the Zip disk. These files include an **Oracle export** file of the **Oracle user account**, the **master account**, a text file containing the **pathology protocol download file**, and a **synchronization file**.

The Zip disk is then inserted into the Pathology Workstation and the **Copy Data From Disk** (Hot Key-**<F>**) function is selected. If the Oracle user account does not already exist on the Pathology Workstation, then a full import of the account takes place. If the account already exists, newly created **In-Life data** (animal removal reasons, animal removal observations, animal removal weights, and treatment notes) is retrieved from the files on the Zip disk and loaded into the appropriate Oracle user accounts. In addition, the protocol file is checked to see if

any new protocol information has been sent from TDMS. If there is new protocol data, this new data is also loaded into the Oracle user account. A full import of the master account takes place each time a test is transferred. The synchronization file is used to flag any data records that have already been sent to the Administrative Workstation.

After data collection has taken place on the Pathology Workstation, the data must be transferred back to the Administrative Workstation for uploading to TDMS. This is accomplished by selecting the **Copy Data To Disk** (Hot Key-**<T>**) function on the Pathology Workstation. This function creates a pathology transaction file of all the data that has been collected but not flagged as having been sent to the Administrative Workstation. Unlike the Animal Room Workstation the test information is not deleted from the Pathology Workstation when a data transfer Zip disk is created.

The operator selects the **Copy Data from Zip Disk** (Hot Key-**<C>**) function in the **DB Operations Menu** on the Administrative Workstation to load the data into the Oracle user account. This process checks the data in the transaction file and if it does not already exist, it loads the data. Without interim transfers from the Administrative to Pathology Workstations, data will be included in the transaction file that has already been copied to the Administrative Workstation Oracle user account. The system filters this data so as not to create duplicate records. Moving data from the Administrative Workstation to the Pathology Workstation, which includes the synchronization file, will minimize the amount of redundant data included in the transaction file.

Appendix C

C. Hardware Installation Checklists

C.1 LDAS II Administrative Workstation Checklist

Connections	
	Parallel Printer cable to Parallel port, or Network cable to printer Ethernet port
	Secure Monitor cable to Video card
	Power cord from UPS to rear of computer
	Keyboard to the bottom PS/2 connector.
	Mouse to the top PS/2 connector.
	RAID and NIC cards seated firmly into Motherboard **PCI** slots.
	Processor and memory seated firmly on to respective slots on Motherboard.
	All **IDE** cables and power connectors connected firmly to all drives.
	Removable drives seated fully into bays and keys turned to the “on” position.
	Power, Reset and LED leads connected to proper pins on Motherboard.
	Proper jumpers set on Motherboard

Testing	
	Turn on machine and ensure proper boot up procedures.
	Log onto machine and enter Task Manager.
	Ensure BIOS settings are ALL correct including Date/Time
	Test keyboard and mouse to verify proper functionality.
	Add printer and drivers for 4050tn Printer
	Install Parallel cable or networking protocols.
	Configure printer properties to lab specifications.
	Test printer connection via printer test page for Windows 2000.
	Set up networking protocols as per respective lab.
	Ensure connectivity to TDMS for download of studies.

Table C-5: LDAS II Administrative Workstation Hardware Installation Checklist

C.2 LDAS II Pathology Workstation Checklist

Connections	
	Parallel Printer cable to Parallel port, or Network cable to printer Ethernet port.
	Secure Monitor cable to Video card.
	Power cord from UPS to rear of computer.
	Keyboard to the bottom PS/2 connector.
	Mouse to the top PS/2 connector.
	RAID and NIC cards seated firmly into Motherboard slots.
	Processor and memory seated firmly in their respective slots on Motherboard.
	All IDE cables and power connectors connected firmly to all drives.
	Removable drives seated fully into bays and keys turned to the “on” position.
	Power, Reset and LED leads connected to proper pins on Motherboard.
	Proper jumpers set on Motherboard

Testing	
	Turn on machine and ensure proper boot up procedures.
	Log onto machine and enter Task Manager.
	Ensure BIOS settings are ALL correct including Date/Time.
	Test keyboard and mouse to verify proper functionality.
	If necessary add printer and drivers for 4050tn Printer.
	Install Parallel cable or networking protocols.
	Configure printer properties to lab specifications.
	Test printer connection via printer test page for Windows 2000.

Table C-6: LDAS II Pathology Workstation Hardware Installation Checklist

C.3 LDAS II Animal Room Workstation Checklist

Connections	
	Power cord, male to outlet and entry to the Animal Room Workstation.
	Secure monitor cable to the video card.
	Power cord from UPS to rear of computer.
	Keyboard to the bottom PS/2 connector (neck).
	Balance connector from COM2 at rear of machine to serial port closest to the video card.
	Balance cable from the rear of balance to pigtail connector to rear of Animal Room Workstation COM2.
	UPS cable is connected from the serial port on the UPS to the serial port closest to the computer's power supply.
	RAID and NIC cards seated firmly into Motherboard slots.
	Processor and memory seated firmly on to respective slots on Motherboard.
	All IDE cables and power connectors connected firmly to all drives.
	Removable drives seated firmly into bays and keys turned to the "on" position.
	Power, Reset and LED leads connected to proper pins on Motherboard.
	Proper jumpers set on Motherboard.

Testing	
	Test power switch on the front of the Animal Room Workstation shell to ensure that power is getting to the computer.
	Using dummy study, turn on machine and ensure proper boot up procedures.
	Log onto machine and enter Task Manager.
	Ensure BIOS settings are ALL correct including Date/Time.
	Test keyboard to verify proper functionality.
	Make sure that the balance settings are properly set. Refer to **Appendix G: Balance Settings.**
	Test balance through data collection using a dummy study and ensure proper readings.
	Unplug the machine during data collection to ensure **no** loss of power or UPS warnings occur.
	Plug the Animal Room Workstation back into outlet and verify that the system resumes properly.
	Continue data collection, unplug the system and ensure that the proper shutdown procedures occur.

Table C-7: LDAS II Animal Room Workstation Hardware Installation Checklist

Appendix D

D. LDAS II v1.5 Development Workstation Setup Procedure

D.1 Development/Build Machine Setup and Configuration

The following section requires a PC pre-configured to be an LDAS II Administrative Workstation.

1) Select **Start / Settings / Control Panel** and double-click **Administrative Tools**.
2) Double-click **Services**.
3) Stop all Oracle-related services.
4) Insert **Visual Studio 6.0** disk 1 in the CD drive.
5) Click **Next** on the Installation Wizard screen.
6) Select '**I accept the agreement'** on the **License Agreement** screen and click **Next**.
7) Enter ***NTP*** and ***NIEHS*** for the user name and company name and click **Next**.
8) Select **Custom** and click the **Next** button on the **Installation Options** screen
9) Enter **F:\Program Files\Microsoft Visual Studio\Common** for the **Default folder** and click **Next**.
10) Click **Continue**.
11) Click **OK** on the **Product ID** screen.
12) From the **Options** list, make sure everything **EXCEPT Visual C++**, Visual Studio and Data Access is unchecked. Click **Continue**.
13) On the **Environment Variables** screen check the box for **Register Environment Variables** and click **OK**.
14) Click **b** on the **Installation Finished** dialog box. Click **OK** on the **Windows NT Debug Symbols** window.
15) Click **YES** on the **Visual Source Safe** dialog box.
16) Uncheck **Install MSDN** and click **Next**.

17) Click **YES** to continue.

18) Click **Next** without selecting anything from the **Other Tools** list.

19) Click **Next** without selecting anything from the **Server Setup** list.

20) Uncheck the box **Register Now** and click **Finish**.

21) From the LDAS II Setup disk, in the **Setup** folder, run **LDAS_Setup.BAT.**

22) On the '**F:**' drive create two folders, **Texas** and **BatchBuild**

23) Connect to **SourceSafe** and download everything from **LDAS2v1.5** into **F:\texas**

24) Copy all the batch files from the **Batch Build** folder on the setup disk into **F:\BatchBuild.**

25) Copy all the files from the setup disk **DLL** folder to **C:\winnt\system32.**

26) Run ***regsvr32 mscal.ocx.***

27) Open **Start / Settings / Control Panel** and double-click the **System** icon.

28) Select the **Advanced** tab then click **Environment Variables**.

29) Select **Path** from the list of **System Variables** then click **Edit**. Add ***;D:\LDASII\ SYSTEM\DLL; D:\ LDASII\SYSTEM\ OCX*** to the existing value (note the semicolon "**;**").

30) Click **OK** three times.

Appendix E

E. LDAS II Software Configuration Management

E.1 The LDAS II Software Update Process

The LDAS II software is handled by three different software packages in order to be released into a QA or production environment. These are:

- Software Configuration.
- C++ compilation and linking (building).
- Packaging executables for installation.

The LDAS II software is compressed into a zip file based on the version number of the software released and stored on a Visual SourceSafe server. The exact location of the server is **\\Catoe\Texas\LDAS2InHouseBuilds**.

The actual build of the LDAS application is created by running a series of DOS batch files that contain the executable **NMAKE**. Since there are so many dll's and executables that make up the LDAS II application, the order in which components are built is critical to the success of the build.

Once the application is built, all of the necessary components are compressed into a zip file with the name **ldasiiupdate.zip**. This is the actual file that is distributed to the laboratories for each software upgrade.

The LDAS II software application handles the actual update of the system. Below is a listing of some of the steps that could be taking place when a user upgrades their system.

- Unregister .DLL's.
- Delete tree structures and folders.
- Recreate tree structures and folders.
- Place all .DLL's, .OCX's, and .EXE's in folders.
- Register the new .DLL's.
- Set up the data source name, facility ID, version number.
- Change drives as specified in the script file.
- Create the LDAS II icon.

Figure E-1 shows the Build/Install Process and Figure E-2 shows a recent LDAS II Build Map.

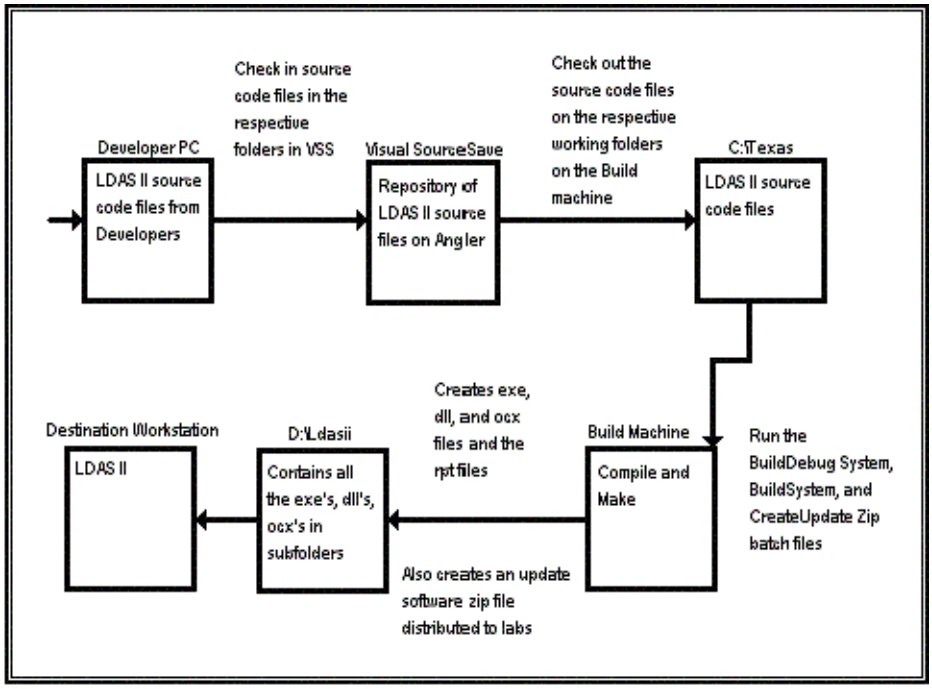

Figure E-1 LDAS II Software Build/Install Process

File extensions refer to the following file types:

.cpp files are C++ source files

.dps files are the project files that point to all the other files in a project

.bmp files are the bitmap files

.h files are the include files for C++

The other files are used in building and creating the executables.

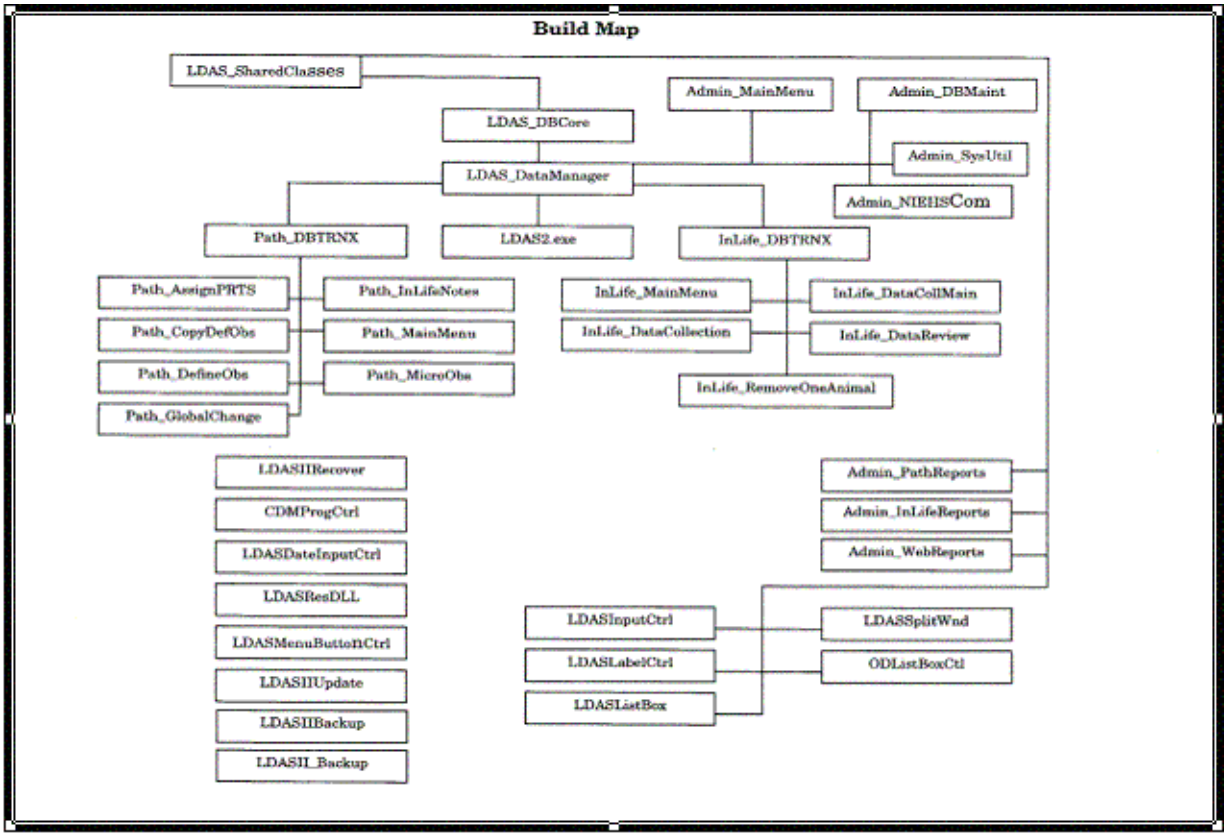

Figure E-2 LDAS II Build Map Example

E.2 Performing the LDAS II Software Build

1) On an LDAS II Development Workstation, open a command prompt window.

2) Change directory to **F:\batchbuild**.

3) Run **ASI_BuildLDASII_RunAllBat.bat**.

4) Monitor the build closely.

5) When the build is complete you will find the **ldasiiupdate.zip** file in the **D:** directory.

Appendix F

F. LDAS II v1.5 Oracle Database Components & Administration

F.1 The Oracle Database

The purpose of this section is to define the components and functions of the Oracle database used by LDAS II.

The LDAS II application creates instances of the core classes. These core classes interact with the LDAS II Oracle database. The LDAS II application makes queries, inserts and updates to the LDAS II database with the help of these core classes. The core classes encapsulate all the functionalities to interact with the database. The interaction between the LDAS II application classes and the LDAS II Oracle database is displayed in the **Figure F-1.**

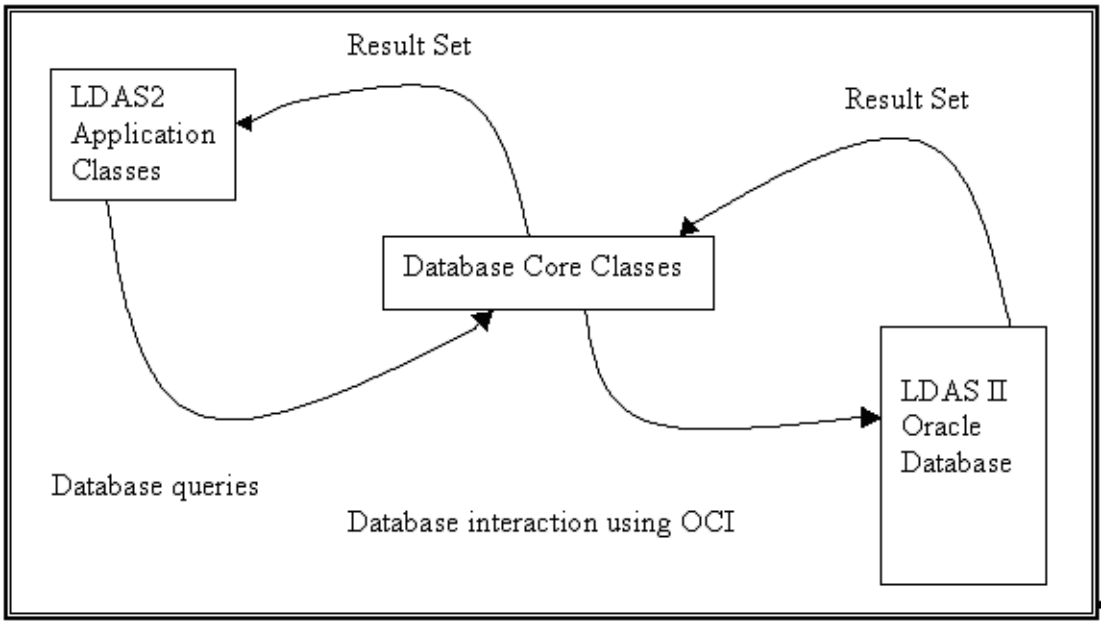

Figure F-1 Database Interaction Using OCI

F.2 Logical Database Components

All LDAS II study data is stored in an Oracle database. There is one Oracle instance installed on each LDAS II Workstation. Each workstation has four different types of user accounts.

The first is **LDASWORKSTATION**. This user account contains information specific to the workstation, such as the facility in which the workstation is located and the type of the workstation. Each LDAS II workstation has exactly one **LDASWORKSTATION** account.

The second type of user account is the **MASTER**. This user account contains information specific to the facility as well as general reference data. The facility information would include operator numbers, IDs and authorizations. The reference data would be common reference tables such as the text equivalents of test types and species types, etc. Each LDAS II Workstation has exactly one **MASTER** account.

The third type of user account is the **STUDY SCHEMA**. Each study is stored in its own schema, named by its TDMS study and test number prefixed by an "S," i.e., "S9600105" would correspond to TDMS study 96001 and test 05. This user account contains all the protocol data that is downloaded from TDMS for the study as well as all data collected in the laboratory. Each LDAS II Workstation has exactly one of these accounts for each experiment loaded on that machine.

The fourth type of user account is the **LDASREPORTTEMP**. This schema stores the temporary data that is retrieved from the database for use in the Local Reports function of LDAS II.

F.3 Oracle Software Directory Structure

D:\O8i is the Oracle home directory for LDAS II v.1.5. The exact file structure is located later in this Appendix. All Oracle files installed by the Oracle installer can be found in this directory.

The script that creates the Directory Structure and creates the Instance and Database Files, **ldas_setup.BAT**, is in the **D:\OraDBA\admin\ldas\scripts\ldas_setup** directory. An uninstall script, **ldas_reset.BAT**, is also this directory.

A script, **ldas_setup.BAT**, is used to create the directory structure on the **D**:, **E:**, and **F:** drives, add the Oracle_SID to the registry, and create the appropriate tablespaces in Oracle.

F.4 Oracle Datafile Directory Structure

All of the Oracle Datafiles for LDAS II are installed on the **F:** Drive. These are the only files located on the **F:** Drive. The directory structure begins with: **OraData\LDAS** this is done according to OFA. The subdirectories for LDAS II v.1.5 are contained later in this Appendix.

F.5 Windows 2000 Services Required for Oracle

The Windows 2000 **OracleServiceLDAS** and **OracleStartLDAS** Services must be started and the Windows 2000 Oracle System Properties (ORACLE_SID and PATH) must be defined in the

System Properties / Environment panel for the LDAS II Oracle database to be accessible by the LDAS II System. The information for LDAS II v.1.5 is contained later in this Appendix.

STOP	**Do not shut down the Oracle database using the Task Manager**. This will result in a *shutdown immediate!*.

F.6 LDAS II Oracle 8i Directory Structure

D:\O8i	D:\O8i\admin
D:\O8i\admin\LDAS	D:\O8i\admin\LDAS\adhoc
D:\O8i\admin\LDAS\bdump	D:\O8i\admin\LDAS\cdump
D:\O8i\admin\LDAS\create	D:\O8i\admin\LDAS\exp
D:\O8i\admin\LDAS\pfile	D:\O8i\admin\LDAS\udump
D:\O8i\admin\sample	D:\O8i\admin\sample\arch
D:\O8i\admin\sample\bdump	D:\O8i\admin\sample\create
D:\O8i\admin\sample\pfile	D:\O8i\admin\sample\udump
D:\O8i\Apache	D:\O8i\Apache\Apache
D:\O8i\Apache\Apache\bin	D:\O8i\Apache\Apache\cgi-bin
D:\O8i\Apache\Apache\conf	D:\O8i\Apache\Apache\conf\ssl.crl
D:\O8i\Apache\Apache\conf\ssl.crt	D:\O8i\Apache\Apache\conf\ssl.csr
D:\O8i\Apache\Apache\conf\ssl.key	D:\O8i\Apache\Apache\conf\ssl.prm
D:\O8i\Apache\Apache\htdocs	D:\O8i\Apache\Apache\htdocs_pages
D:\O8i\Apache\Apache\htdocs\demo	D:\O8i\Apache\Apache\htdocs\demo\basic
D:\O8i\Apache\Apache\htdocs\demo\basic\hellouser	D:\O8i\Apache\Apache\htdocs\demo\basic\hellouser\viewsrc
D:\O8i\Apache\Apache\htdocs\demo\basic\jspstore	D:\O8i\Apache\Apache\htdocs\demo\basic\jspstore\images
D:\O8i\Apache\Apache\htdocs\demo\basic\jspstore\viewsrc	D:\O8i\Apache\Apache\htdocs\demo\basic\lottery
D:\O8i\Apache\Apache\htdocs\demo\basic\lottery\images	D:\O8i\Apache\Apache\htdocs\demo\basic\lottery\viewsrc
D:\O8i\Apache\Apache\htdocs\demo\basic\simple	D:\O8i\Apache\Apache\htdocs\demo\basic\simple\viewsrc
D:\O8i\Apache\Apache\htdocs\demo\corba	D:\O8i\Apache\Apache\htdocs\demo\corba\viewsrc
D:\O8i\Apache\Apache\htdocs\demo\customtag	D:\O8i\Apache\Apache\htdocs\demo\customtag\viewsrc
D:\O8i\Apache\Apache\htdocs\demo\ejb	D:\O8i\Apache\Apache\htdocs\demo\ejb\viewsrc

Table F-8: LDAS II Oracle 81 Directory Structure

D:\O8i\Apache\Apache\htdocs\demo\ojspext	D:\O8i\Apache\Apache\htdocs\demo\ojspext\events
D:\O8i\Apache\Apache\htdocs\demo\ojspext\events\viewsrc	D:\O8i\Apache\Apache\htdocs\demo\ojspext\jmltype
D:\O8i\Apache\Apache\htdocs\demo\ojspext\jmltype\viewsrc	D:\O8i\Apache\Apache\htdocs\demo\ojspext\jspscope
D:\O8i\Apache\Apache\htdocs\demo\ojspext\jspscope\viewsrc	D:\O8i\Apache\Apache\htdocs\demo\sql
D:\O8i\Apache\Apache\htdocs\demo\sql\bean	D:\O8i\Apache\Apache\htdocs\demo\sql\bean\viewsrc
D:\O8i\Apache\Apache\htdocs\demo\sql\jdbc	D:\O8i\Apache\Apache\htdocs\demo\sql\jdbc\viewsrc
D:\O8i\Apache\Apache\htdocs\demo\sql\sqlj	D:\O8i\Apache\Apache\htdocs\demo\sql\sqlj\viewsrc
D:\O8i\Apache\Apache\htdocs\demo\sql\tag	D:\O8i\Apache\Apache\htdocs\demo\sql\tag\viewsrc
D:\O8i\Apache\Apache\htdocs\demo\xml	D:\O8i\Apache\Apache\htdocs\demo\xml\helloxml
D:\O8i\Apache\Apache\htdocs\demo\xml\helloxml\style	D:\O8i\Apache\Apache\htdocs\demo\xml\helloxml\viewsrc
D:\O8i\Apache\Apache\htdocs\demo\xml\xmlquery	D:\O8i\Apache\Apache\htdocs\demo\xml\xmlquery\viewsrc
D:\O8i\Apache\Apache\htdocs\doc	D:\O8i\Apache\Apache\htdocs\doc\rt
D:\O8i\Apache\Apache\htdocs\doc\rt\index-files	D:\O8i\Apache\Apache\htdocs\doc\rt\oracle
D:\O8i\Apache\Apache\htdocs\doc\rt\oracle\jbo	D:\O8i\Apache\Apache\htdocs\doc\rt\oracle\jbo\class-use
D:\O8i\Apache\Apache\htdocs\doc\rt\oracle\jbo\common	D:\O8i\Apache\Apache\htdocs\doc\rt\oracle\jbo\common\ampool
D:\O8i\Apache\Apache\htdocs\doc\rt\oracle\jbo\common\ampool\class-use	D:\O8i\Apache\Apache\htdocs\doc\rt\oracle\jbo\common\class-use
D:\O8i\Apache\Apache\htdocs\doc\rt\oracle\jbo\domain	D:\O8i\Apache\Apache\htdocs\doc\rt\oracle\jbo\domain\class-use
D:\O8i\Apache\Apache\htdocs\doc\rt\oracle\jbo\html	D:\O8i\Apache\Apache\htdocs\doc\rt\oracle\jbo\html\databeans
D:\O8i\Apache\Apache\htdocs\doc\rt\oracle\jbo\html\databeans\class-use	D:\O8i\Apache\Apache\htdocs\doc\rt\oracle\jbo\html\jsp
D:\O8i\Apache\Apache\htdocs\doc\rt\oracle\jbo\html\jsp\class-use	D:\O8i\Apache\Apache\htdocs\doc\rt\oracle\jbo\html\jsp\datatags
D:\O8i\Apache\Apache\htdocs\doc\rt\oracle\jbo\server	D:\O8i\Apache\Apache\htdocs\doc\rt\oracle\jbo\server\class-use
D:\O8i\Apache\Apache\htdocs\doc\rt\oracle\jbo\server\rules	D:\O8i\Apache\Apache\htdocs\doc\rt\oracle\jbo\server\rules\class-use
D:\O8i\Apache\Apache\htdocs\doc\rt\oracle\jbo\server\util	D:\O8i\Apache\Apache\htdocs\doc\rt\oracle\jbo\server\util\class-use
D:\O8i\Apache\Apache\htdocs\doc\rt\oracle\jdeveloper	D:\O8i\Apache\Apache\htdocs\doc\rt\oracle\jdeveloper\html
D:\O8i\Apache\Apache\htdocs\doc\rt\oracle\jdeveloper\html\class-use	D:\O8i\Apache\Apache\htdocs\doc\rt\oracle\jdeveloper\jsp
D:\O8i\Apache\Apache\htdocs\doc\rt\oracle\jdeveloper\jsp\wb	D:\O8i\Apache\Apache\htdocs\doc\rt\oracle\jdeveloper\jsp\wb\class-use
D:\O8i\Apache\Apache\htdocs\manual	D:\O8i\Apache\Apache\htdocs\manual\images
D:\O8i\Apache\Apache\htdocs\manual\misc	D:\O8i\Apache\Apache\htdocs\manual\mod

Table F-8: LDAS II Oracle 81 Directory Structure

D:\O8i\Apache\Apache\htdocs\manual\mod\mod_ssl	D:\O8i\Apache\Apache\htdocs\manual\search
D:\O8i\Apache\Apache\htdocs\manual\vhosts	D:\O8i\Apache\Apache\htdocs\OnlineOrders_html
D:\O8i\Apache\Apache\htdocs\webapp	D:\O8i\Apache\Apache\htdocs\webapp\admin
D:\O8i\Apache\Apache\htdocs\webapp\cabo	D:\O8i\Apache\Apache\htdocs\webapp\cabo\images
D:\O8i\Apache\Apache\htdocs\webapp\cabo\jslib	D:\O8i\Apache\Apache\htdocs\webapp\css
D:\O8i\Apache\Apache\htdocs\webapp\images	D:\O8i\Apache\Apache\htdocs\webapp\jsimages
D:\O8i\Apache\Apache\htdocs\webapp\jsp	D:\O8i\Apache\Apache\htdocs\WEB-INF
D:\O8i\Apache\Apache\htdocs\WEB-INF\classes	D:\O8i\Apache\Apache\htdocs\WEB-INF\classes\beans
D:\O8i\Apache\Apache\htdocs\WEB-INF\classes\examples	D:\O8i\Apache\Apache\htdocs\WEB-INF\lib
D:\O8i\Apache\Apache\icons	D:\O8i\Apache\Apache\icons\small
D:\O8i\Apache\Apache\logs	D:\O8i\Apache\Apache\modules
D:\O8i\Apache\Apache\proxy	D:\O8i\Apache\BC4J
D:\O8i\Apache\BC4J\lib	D:\O8i\Apache\BC4J\samples
D:\O8i\Apache\BC4J\samples\onlineorders	D:\O8i\Apache\BC4J\samples\onlineorders\CopyThisClient
D:\O8i\Apache\BC4J\samples\onlineorders\DACTree	D:\O8i\Apache\BC4J\samples\onlineorders\OnlineOrders
D:\O8i\Apache\BC4J\samples\onlineorders\OnlineOrders_html	D:\O8i\Apache\BC4J\samples\onlineorders\sql_install
D:\O8i\Apache\jdk	D:\O8i\Apache\jdk\bin
D:\O8i\Apache\jdk\include	D:\O8i\Apache\jdk\include\win32
D:\O8i\Apache\jdk\include-old	D:\O8i\Apache\jdk\include-old\win32
D:\O8i\Apache\jdk\jre	D:\O8i\Apache\jdk\jre\bin
D:\O8i\Apache\jdk\jre\bin\classic	D:\O8i\Apache\jdk\jre\lib
D:\O8i\Apache\jdk\jre\lib\audio	D:\O8i\Apache\jdk\jre\lib\cmm
D:\O8i\Apache\jdk\jre\lib\ext	D:\O8i\Apache\jdk\jre\lib\fonts
D:\O8i\Apache\jdk\jre\lib\images	D:\O8i\Apache\jdk\jre\lib\images\cursors
D:\O8i\Apache\jdk\jre\lib\security	D:\O8i\Apache\jdk\lib
D:\O8i\Apache\Jsdk	D:\O8i\Apache\Jsdk\bin
D:\O8i\Apache\Jsdk\doc	D:\O8i\Apache\Jsdk\doc\apidoc
D:\O8i\Apache\Jsdk\doc\apidoc\images	D:\O8i\Apache\Jsdk\doc\apidoc\images\java.awt
D:\O8i\Apache\Jsdk\doc\images	D:\O8i\Apache\Jsdk\examples
D:\O8i\Apache\Jsdk\lib	D:\O8i\Apache\Jsdk\src
D:\O8i\Apache\Jsdk\src\javax	D:\O8i\Apache\Jsdk\src\javax\servlet
D:\O8i\Apache\Jsdk\src\javax\servlet\http	D:\O8i\Apache\Jserv
D:\O8i\Apache\Jserv\conf	D:\O8i\Apache\Jserv\docs
D:\O8i\Apache\Jserv\docs\api	D:\O8i\Apache\Jserv\docs\api\images
D:\O8i\Apache\Jserv\docs\api\org	D:\O8i\Apache\Jserv\docs\api\org\apache

Table F-8: LDAS II Oracle 81 Directory Structure

D:\O8i\Apache\Jserv\docs\api\org\apache\java	D:\O8i\Apache\Jserv\docs\api\org\apache\java\io
D:\O8i\Apache\Jserv\docs\api\org\apache\java\lang	D:\O8i\Apache\Jserv\docs\api\org\apache\java\net
D:\O8i\Apache\Jserv\docs\api\org\apache\java\recycle	D:\O8i\Apache\Jserv\docs\api\org\apache\java\recycle\pool
D:\O8i\Apache\Jserv\docs\api\org\apache\java\security	D:\O8i\Apache\Jserv\docs\api\org\apache\java\util
D:\O8i\Apache\Jserv\docs\api\org\apache\jserv	D:\O8i\Apache\Jserv\docs\future
D:\O8i\Apache\Jserv\docs\images	D:\O8i\Apache\Jserv\docs\install
D:\O8i\Apache\Jserv\docs\protocol	D:\O8i\Apache\Jserv\logs
D:\O8i\Apache\Jserv\servlets	D:\O8i\Apache\jsp
D:\O8i\Apache\jsp\conf	D:\O8i\Apache\modplsql
D:\O8i\Apache\modplsql\cache	D:\O8i\Apache\modplsql\cache\cookie
D:\O8i\Apache\modplsql\cache\plsql	D:\O8i\Apache\modplsql\cfg
D:\O8i\Apache\modplsql\cfg\cs	D:\O8i\Apache\modplsql\cfg\da
D:\O8i\Apache\modplsql\cfg\de	D:\O8i\Apache\modplsql\cfg\el
D:\O8i\Apache\modplsql\cfg\es	D:\O8i\Apache\modplsql\cfg\fi
D:\O8i\Apache\modplsql\cfg\fr	D:\O8i\Apache\modplsql\cfg\help
D:\O8i\Apache\modplsql\cfg\hu	D:\O8i\Apache\modplsql\cfg\images
D:\O8i\Apache\modplsql\cfg\it	D:\O8i\Apache\modplsql\cfg\ja
D:\O8i\Apache\modplsql\cfg\ko	D:\O8i\Apache\modplsql\cfg\nl
D:\O8i\Apache\modplsql\cfg\no	D:\O8i\Apache\modplsql\cfg\pl
D:\O8i\Apache\modplsql\cfg\pt	D:\O8i\Apache\modplsql\cfg\pt-br
D:\O8i\Apache\modplsql\cfg\ro	D:\O8i\Apache\modplsql\cfg\ru
D:\O8i\Apache\modplsql\cfg\sk	D:\O8i\Apache\modplsql\cfg\sv
D:\O8i\Apache\modplsql\cfg\th	D:\O8i\Apache\modplsql\cfg\tr
D:\O8i\Apache\modplsql\cfg\zh-cn	D:\O8i\Apache\modplsql\cfg\zh-hk
D:\O8i\Apache\modplsql\cfg\zh-sg	D:\O8i\Apache\modplsql\cfg\zh-tw
D:\O8i\Apache\modplsql\log	D:\O8i\Apache\modplsql\owa
D:\O8i\Apache\open_ssl	D:\O8i\Apache\open_ssl\bin
D:\O8i\Apache\perl	D:\O8i\Apache\perl\5.00503
D:\O8i\Apache\perl\5.00503\bin	D:\O8i\Apache\perl\5.00503\bin\MSWin32-x86
D:\O8i\Apache\perl\5.00503\lib	D:\O8i\Apache\perl\5.00503\lib\auto
D:\O8i\Apache\perl\5.00503\lib\auto\Getopt	D:\O8i\Apache\perl\5.00503\lib\auto\Getopt\Long
D:\O8i\Apache\perl\5.00503\lib\B	D:\O8i\Apache\perl\5.00503\lib\CGI
D:\O8i\Apache\perl\5.00503\lib\Class	D:\O8i\Apache\perl\5.00503\lib\CPAN
D:\O8i\Apache\perl\5.00503\lib\Data	D:\O8i\Apache\perl\5.00503\lib\Devel
D:\O8i\Apache\perl\5.00503\lib\ExtUtils	D:\O8i\Apache\perl\5.00503\lib\File
D:\O8i\Apache\perl\5.00503\lib\File\Spec	D:\O8i\Apache\perl\5.00503\lib\Getopt
D:\O8i\Apache\perl\5.00503\lib\I18N	D:\O8i\Apache\perl\5.00503\lib\IPC

Table F-8: LDAS II Oracle 81 Directory Structure

D:\O8i\Apache\perl\5.00503\lib\Math	D:\O8i\Apache\perl\5.00503\lib\MSWin32-x86
D:\O8i\Apache\perl\5.00503\lib\MSWin32-x86\auto	D:\O8i\Apache\perl\5.00503\lib\MSWin32-x86\auto\attrs
D:\O8i\Apache\perl\5.00503\lib\MSWin32-x86\auto\B	D:\O8i\Apache\perl\5.00503\lib\MSWin32-x86\auto\Data
D:\O8i\Apache\perl\5.00503\lib\MSWin32-x86\auto\Data\Dumper	D:\O8i\Apache\perl\5.00503\lib\MSWin32-x86\auto\DynaLoader
D:\O8i\Apache\perl\5.00503\lib\MSWin32-x86\auto\Fcntl	D:\O8i\Apache\perl\5.00503\lib\MSWin32-x86\auto\IO
D:\O8i\Apache\perl\5.00503\lib\MSWin32-x86\auto\Opcode	D:\O8i\Apache\perl\5.00503\lib\MSWin32-x86\auto\POSIX
D:\O8i\Apache\perl\5.00503\lib\MSWin32-x86\auto\re	D:\O8i\Apache\perl\5.00503\lib\MSWin32-x86\auto\sdbm
D:\O8i\Apache\perl\5.00503\lib\MSWin32-x86\auto\SDBM_File	D:\O8i\Apache\perl\5.00503\lib\MSWin32-x86\auto\Socket
D:\O8i\Apache\perl\5.00503\lib\MSWin32-x86\auto\Thread	D:\O8i\Apache\perl\5.00503\lib\MSWin32-x86\B
D:\O8i\Apache\perl\5.00503\lib\MSWin32-x86\CORE	D:\O8i\Apache\perl\5.00503\lib\MSWin32-x86\CORE\arpa
D:\O8i\Apache\perl\5.00503\lib\MSWin32-x86\CORE\sys	D:\O8i\Apache\perl\5.00503\lib\MSWin32-x86\IO
D:\O8i\Apache\perl\5.00503\lib\MSWin32-x86\Thread	D:\O8i\Apache\perl\5.00503\lib\Net
D:\O8i\Apache\perl\5.00503\lib\Pod	D:\O8i\Apache\perl\5.00503\lib\Pod\html
D:\O8i\Apache\perl\5.00503\lib\Pod\html\ext	D:\O8i\Apache\perl\5.00503\lib\Pod\html\ext\attrs
D:\O8i\Apache\perl\5.00503\lib\Pod\html\ext\B	D:\O8i\Apache\perl\5.00503\lib\Pod\html\ext\B\B
D:\O8i\Apache\perl\5.00503\lib\Pod\html\ext\Data	D:\O8i\Apache\perl\5.00503\lib\Pod\html\ext\Data\Dumper
D:\O8i\Apache\perl\5.00503\lib\Pod\html\ext\DB_File	D:\O8i\Apache\perl\5.00503\lib\Pod\html\ext\DynaLoader
D:\O8i\Apache\perl\5.00503\lib\Pod\html\ext\Errno	D:\O8i\Apache\perl\5.00503\lib\Pod\html\ext\Fcntl
D:\O8i\Apache\perl\5.00503\lib\Pod\html\ext\GDBM_File	D:\O8i\Apache\perl\5.00503\lib\Pod\html\ext\IO
D:\O8i\Apache\perl\5.00503\lib\Pod\html\ext\IO\lib	D:\O8i\Apache\perl\5.00503\lib\Pod\html\ext\IO\lib\IO
D:\O8i\Apache\perl\5.00503\lib\Pod\html\ext\IPC	D:\O8i\Apache\perl\5.00503\lib\Pod\html\ext\IPC\SysV
D:\O8i\Apache\perl\5.00503\lib\Pod\html\ext\NDBM_File	D:\O8i\Apache\perl\5.00503\lib\Pod\html\ext\ODBM_File
D:\O8i\Apache\perl\5.00503\lib\Pod\html\ext\Opcode	D:\O8i\Apache\perl\5.00503\lib\Pod\html\ext\POSIX
D:\O8i\Apache\perl\5.00503\lib\Pod\html\ext\re	D:\O8i\Apache\perl\5.00503\lib\Pod\html\ext\SDBM_File
D:\O8i\Apache\perl\5.00503\lib\Pod\html\ext\Socket	D:\O8i\Apache\perl\5.00503\lib\Pod\html\ext\Thread

Table F-8: LDAS II Oracle 81 Directory Structure

D:\O8i\Apache\perl\5.00503\lib\Pod\html\ext\Thread\Thread	D:\O8i\Apache\perl\5.00503\lib\Pod\html\lib
D:\O8i\Apache\perl\5.00503\lib\Pod\html\lib\B	D:\O8i\Apache\perl\5.00503\lib\Pod\html\lib\CGI
D:\O8i\Apache\perl\5.00503\lib\Pod\html\lib\Class	D:\O8i\Apache\perl\5.00503\lib\Pod\html\lib\CPAN
D:\O8i\Apache\perl\5.00503\lib\Pod\html\lib\Data	D:\O8i\Apache\perl\5.00503\lib\Pod\html\lib\Devel
D:\O8i\Apache\perl\5.00503\lib\Pod\html\lib\ExtUtils	D:\O8i\Apache\perl\5.00503\lib\Pod\html\lib\File
D:\O8i\Apache\perl\5.00503\lib\Pod\html\lib\File\Spec	D:\O8i\Apache\perl\5.00503\lib\Pod\html\lib\Getopt
D:\O8i\Apache\perl\5.00503\lib\Pod\html\lib\I18N	D:\O8i\Apache\perl\5.00503\lib\Pod\html\lib\IO
D:\O8i\Apache\perl\5.00503\lib\Pod\html\lib\IPC	D:\O8i\Apache\perl\5.00503\lib\Pod\html\lib\Math
D:\O8i\Apache\perl\5.00503\lib\Pod\html\lib\Net	D:\O8i\Apache\perl\5.00503\lib\Pod\html\lib\Pod
D:\O8i\Apache\perl\5.00503\lib\Pod\html\lib\Search	D:\O8i\Apache\perl\5.00503\lib\Pod\html\lib\Sys
D:\O8i\Apache\perl\5.00503\lib\Pod\html\lib\Term	D:\O8i\Apache\perl\5.00503\lib\Pod\html\lib\Test
D:\O8i\Apache\perl\5.00503\lib\Pod\html\lib\Text	D:\O8i\Apache\perl\5.00503\lib\Pod\html\lib\Thread
D:\O8i\Apache\perl\5.00503\lib\Pod\html\lib\Tie	D:\O8i\Apache\perl\5.00503\lib\Pod\html\lib\Time
D:\O8i\Apache\perl\5.00503\lib\Pod\html\lib\User	D:\O8i\Apache\perl\5.00503\lib\Pod\html\pod
D:\O8i\Apache\perl\5.00503\lib\Search	D:\O8i\Apache\perl\5.00503\lib\Sys
D:\O8i\Apache\perl\5.00503\lib\Term	D:\O8i\Apache\perl\5.00503\lib\Test
D:\O8i\Apache\perl\5.00503\lib\Text	D:\O8i\Apache\perl\5.00503\lib\Tie
D:\O8i\Apache\perl\5.00503\lib\Time	D:\O8i\Apache\perl\5.00503\lib\User
D:\O8i\Apache\perl\site	D:\O8i\Apache\perl\site\5.00503
D:\O8i\Apache\perl\site\5.00503\lib	D:\O8i\Apache\perl\site\5.00503\lib\Apache
D:\O8i\Apache\perl\site\5.00503\lib\Apache\Constants	D:\O8i\Apache\perl\site\5.00503\lib\Bundle
D:\O8i\Apache\perl\site\5.00503\lib\MSWin32-x86	D:\O8i\Apache\perl\site\5.00503\lib\MSWin32-x86\auto
D:\O8i\Apache\perl\site\5.00503\lib\MSWin32-x86\auto\Apache	D:\O8i\Apache\perl\site\5.00503\lib\MSWin32-x86\auto\Apache\Leak
D:\O8i\Apache\perl\site\5.00503\lib\MSWin32-x86\auto\Apache\Symbol	D:\O8i\assistants
D:\O8i\assistants\dbca	D:\O8i\assistants\dbca\doc
D:\O8i\assistants\dbca\doc\help	D:\O8i\assistants\dbca\Images
D:\O8i\assistants\dbca\Images\16	D:\O8i\assistants\dbca\Images\256
D:\O8i\assistants\dbca\jlib	D:\O8i\assistants\dbca\samples
D:\O8i\assistants\dbma	D:\O8i\assistants\dbma\doc

Table F-8: LDAS II Oracle 81 Directory Structure

D:\O8i\assistants\dbma\doc\help	D:\O8i\assistants\dbma\Images
D:\O8i\assistants\dbma\Images\16	D:\O8i\assistants\dbma\Images\256
D:\O8i\assistants\dbma\jlib	D:\O8i\assistants\ifa
D:\O8i\assistants\ifa\doc	D:\O8i\assistants\ifa\doc\help
D:\O8i\assistants\ifa\images	D:\O8i\assistants\ifa\images\16
D:\O8i\assistants\ifa\images\256	D:\O8i\assistants\ifa\jlib
D:\O8i\assistants\jlib	D:\O8i\bin
D:\O8i\classes	D:\O8i\classes\classesFromIDLVisi
D:\O8i\classes\classesFromIDLVisi\oracle	D:\O8i\classes\classesFromIDLVisi\oracle\conText
D:\O8i\classes\classesFromIDLVisi\oracle\conText\ctxw	D:\O8i\classes\classesFromIDLVisi\oracle\conText\ctxw\ctxws
D:\O8i\classes\classesFromIDLVisi\oracle\conText\ctxw\ctxws\CtxwsPolicyViewPackage	D:\O8i\classes\classesFromIDLVisi\oracle\conText\ctxw\ctxws\CtxwsThesViewPackage
D:\O8i\classes\classesFromIDLVisi\oracle\sysman	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\emSDK
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\emSDK\adminObj	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\emSDK\adminObj\server
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\emSDK\client	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\emSDK\client\omsClient
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\emSDK\common	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\emSDK\common\registry
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\emSDK\oms	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\emSDK\oms\service
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\prv	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\prv\prvbo
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\prv\prvbo\prvboi	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\prv\prvbo\prvboi\PrvboiOPSPackage
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\sdo	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\sdo\sdob
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\sdo\sdob\SdobLayerPackage	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\test
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\test\library	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\test\library\oms
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\test\library\oms\notifications	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\jserver	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\olap
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\olap\CubePackage	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\VboDBJobObjectPackage
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vboe	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vboe\VboeDomainPackage
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbog	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbog\VbogControlfilePackage
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbog\VbogRedoLogGroupPackage	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbog\VbogTablespacePackage

Table F-8: LDAS II Oracle 81 Directory Structure

D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vboi	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vboi\VboiDatabasePackage
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vboi\VboiInitParamCurConfigPackage	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vboi\VboiInitParametersPackage
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vboi\VboiResourceConsumerGroupPackage	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vboi\VboiResourcePlanPackage
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vboi\VboiResourcePlanSchedulePackage	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vboi\VboiSessionPackage
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vboIcache	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbol
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbol\repmgr	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbol\repmgr\VbolDatabasePackage
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbol\repmgr\VbolDefCallPackage	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbol\repmgr\VbolDefTranDestPackage
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbol\repmgr\VbolDefTranPackage	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbol\repmgr\VbolLocalErrorPackage
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbol\repmgr\VbolLocalJobPackage	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbol\repmgr\VbolMasterGroupPackage
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbol\repmgr\VbolMasterRepTablePackage	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbol\repmgr\VbolMasterSitePackage
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbol\repmgr\VbolOffLinePackage	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbol\repmgr\VbolRepGroupPackage
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbol\repmgr\VbolRepGrpObjPackage	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbol\repmgr\VbolScheduledLinkPackage
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbol\repmgr\VbolSetupWizObjPackage	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbol\repmgr\VbolSiteTemplatePackage
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbol\repmgr\VbolSnapGroupWizObjPackage	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbol\repmgr\VbolTemplateAuthorizedUsersPackage
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbol\repmgr\VbolTemplatePackage	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbol\repmgr\VbolTemplateSnapshotPackage
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbol\VbolOneSnapshotItemPackage	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbol\VbolRefreshGroupPackage
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbol\VbolSnapshotLogPackage	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\VboObjectPackageD:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbon
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vboq	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vboq\VboqExplainPlanPackage
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbor	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbor\VborBackupConfigPackage
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbor\VborBackupObjectPackage	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbor\VborCreateJobObjectPackage
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbos	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbos\VbosAnalyzePackage

Table F-8: LDAS II Oracle 81 Directory Structure

D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbos\VbosClusterPackage	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbos\VbosDimensionPackage
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbos\VbosIndexPackage	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbos\VbosJavaObjectPackage
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbos\VbosJavaSourcePackage	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbos\VbosObjectBasePackage
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbos\VbosObjectTypePackage	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbos\VbosOnePartitionPackage
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbos\VbosPartitionedStoragePackage	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbos\VbosPLSqlObjectPackage
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbos\VbosQueuePackage	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbos\VbosQueueTablePackage
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbos\VbosSdoIndexPackage	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbos\VbosSdoTilingLevelPackage
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbos\VbosSummaryAdvisorPackage	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbos\VbosTablePackage
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbos\VbosTriggerPackage	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vbos\VbosViewPackage
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vboy	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vboy\VboyGranteePackage
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vboy\VboyPrivilegePackage	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vboy\VboyRolePackage
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vboy\VboyUserPackage	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vboz
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vboz\VbozComparisonPackage	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vboz\VbozComparisonStatusCallbackPackage
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vboz\VbozDestinationPackage	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vboz\VbozExemplarPackage
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbo\vboz\VbozScopeSpecPackage	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbw
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbz	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vbz\vbzt
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vd	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vd\jserver
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vda	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vda\vdae
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vdb	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vde
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vdg	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vdiBaseComps
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vdj	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vdkb
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vdkb\rew	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vdkb\rew\VdkbReorgObjectPackage
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vdkb\rew\VdkbReorgScriptGeneratorPackage	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vdm

Table F-8: LDAS II Oracle 81 Directory Structure

D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vdm\test	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vdn
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vdo	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vdp
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vdrRegistry	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vds
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vdu	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vdv
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vni	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vnn
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vxa	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vxx
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vxx\vxxo	D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vxx\vxxo\test
D:\O8i\classes\classesFromIDLVisi\oracle\sysman\vxx\vxxSchedule	D:\O8i\classes\classesFromIDLVisi\org
D:\O8i\classes\classesFromIDLVisi\org\omg	D:\O8i\classes\classesFromIDLVisi\org\omg\CosNaming
D:\O8i\classes\classesFromIDLVisi\org\omg\CosNaming\NamingContextPackage	D:\O8i\classes\lib
D:\O8i\classes\META-INF	D:\O8i\classes\oracle
D:\O8i\classes\oracle\conText	D:\O8i\classes\oracle\conText\ctxw
D:\O8i\classes\oracle\conText\ctxw\help	D:\O8i\classes\oracle\conText\ctxw\resources
D:\O8i\classes\oracle\conText\ctxw\resources\images	D:\O8i\classes\oracle\ldap
D:\O8i\classes\oracle\ldap\admin	D:\O8i\classes\oracle\ldap\admin\appserver
D:\O8i\classes\oracle\ldap\admin\client	D:\O8i\classes\oracle\ldap\admin\client\common
D:\O8i\classes\oracle\ldap\admin\client\images	D:\O8i\classes\oracle\ldap\admin\client\propEditors
D:\O8i\classes\oracle\ldap\admin\common	D:\O8i\classes\oracle\ldap\admin\common\ICoordinatorPackage
D:\O8i\classes\oracle\ldap\admin\common\IProxyPackage	D:\O8i\classes\oracle\ldap\admin\commonNLS
D:\O8i\classes\oracle\ldap\admin\help	D:\O8i\classes\oracle\ldap\admin\help\ldap
D:\O8i\classes\oracle\ldap\admin\help\ldap_de_DE	D:\O8i\classes\oracle\ldap\admin\help\ldap_fr_FR
D:\O8i\classes\oracle\ldap\admin\help\ldap_ja_EUC	D:\O8i\classes\oracle\ldap\admin\help\ldap_ja_SJIS
D:\O8i\classes\oracle\ldap\admin\help\ldap_pt_BR	D:\O8i\classes\oracle\ldap\admin\help\ldap_zh_CN
D:\O8i\classes\oracle\ldap\admin\oemclient	D:\O8i\classes\oracle\ldap\admin\oemclient\images
D:\O8i\classes\oracle\ldap\adminNLS	D:\O8i\classes\oracle\security
D:\O8i\classes\oracle\security\admin	D:\O8i\classes\oracle\security\admin\base
D:\O8i\classes\oracle\security\admin\database	D:\O8i\classes\oracle\security\admin\directory
D:\O8i\classes\oracle\security\admin\directory\resources	D:\O8i\classes\oracle\security\admin\enterprise

Table F-8: LDAS II Oracle 81 Directory Structure

D:\O8i\classes\oracle\security\admin\enterprise\Esma	D:\O8i\classes\oracle\security\admin\enterprise\Esma\help
D:\O8i\classes\oracle\security\admin\enterprise\Esmc	D:\O8i\classes\oracle\security\admin\enterprise\Esmo
D:\O8i\classes\oracle\security\admin\enterprise\Esmr	D:\O8i\classes\oracle\security\admin\enterprise\Esms
D:\O8i\classes\oracle\security\admin\enterprise\Esms\common	D:\O8i\classes\oracle\security\admin\enterprise\Esms\EsmsEdObjectPackage
D:\O8i\classes\oracle\security\admin\enterprise\Esms\jndi	D:\O8i\classes\oracle\security\admin\enterprise\Esmt
D:\O8i\classes\oracle\security\admin\enterprise\Esmt\images	D:\O8i\classes\oracle\security\admin\enterprise\Esmt\searchDialog
D:\O8i\classes\oracle\security\admin\enterprise\Esmv	D:\O8i\classes\oracle\security\admin\enterprise\Esmv\images
D:\O8i\classes\oracle\security\admin\enterprise\images	D:\O8i\classes\oracle\security\admin\net
D:\O8i\classes\oracle\security\admin\net\oid	D:\O8i\classes\oracle\security\admin\net\winnt
D:\O8i\classes\oracle\security\admin\object	D:\O8i\classes\oracle\security\admin\user
D:\O8i\classes\oracle\security\admin\user\operations	D:\O8i\classes\oracle\security\admin\user\resources
D:\O8i\classes\oracle\security\admin\util	D:\O8i\classes\oracle\security\resources
D:\O8i\classes\oracle\sysman	D:\O8i\classes\oracle\sysman\charts
D:\O8i\classes\oracle\sysman\dateFormat	D:\O8i\classes\oracle\sysman\emSDK
D:\O8i\classes\oracle\sysman\emSDK\adminObj	D:\O8i\classes\oracle\sysman\emSDK\adminObj\client
D:\O8i\classes\oracle\sysman\emSDK\adminObj\server	D:\O8i\classes\oracle\sysman\emSDK\agent
D:\O8i\classes\oracle\sysman\emSDK\agent\target	D:\O8i\classes\oracle\sysman\emSDK\agent\targetLibrary
D:\O8i\classes\oracle\sysman\emSDK\agent\targetLibrary\database	D:\O8i\classes\oracle\sysman\emSDK\agent\targetLibrary\listener
D:\O8i\classes\oracle\sysman\emSDK\agent\targetLibrary\node	D:\O8i\classes\oracle\sysman\emSDK\client
D:\O8i\classes\oracle\sysman\emSDK\client\appComponent	D:\O8i\classes\oracle\sysman\emSDK\client\appContainer
D:\O8i\classes\oracle\sysman\emSDK\client\appContainer\contextLibrary	D:\O8i\classes\oracle\sysman\emSDK\client\consoleIntegration
D:\O8i\classes\oracle\sysman\emSDK\client\consoleIntegration\images	D:\O8i\classes\oracle\sysman\emSDK\client\dataComponent
D:\O8i\classes\oracle\sysman\emSDK\client\dataComponent\dataDrivenTree	D:\O8i\classes\oracle\sysman\emSDK\client\dataComponent\dataSource
D:\O8i\classes\oracle\sysman\emSDK\client\dataComponent\multiColumnWidget	D:\O8i\classes\oracle\sysman\emSDK\client\guiComponent
D:\O8i\classes\oracle\sysman\emSDK\client\guiComponent\alert	D:\O8i\classes\oracle\sysman\emSDK\client\guiComponent\commandAdapter

Table F-8: LDAS II Oracle 81 Directory Structure

D:\O8i\classes\oracle\sysman\emSDK\client\guiComponent\helpButton	D:\O8i\classes\oracle\sysman\emSDK\client\guiComponent\menu
D:\O8i\classes\oracle\sysman\emSDK\client\guiComponent\popupMenu	D:\O8i\classes\oracle\sysman\emSDK\client\guiComponent\selection
D:\O8i\classes\oracle\sysman\emSDK\client\guiComponent\splashScreen	D:\O8i\classes\oracle\sysman\emSDK\client\guiComponent\util
D:\O8i\classes\oracle\sysman\emSDK\client\guiComponent\validation	D:\O8i\classes\oracle\sysman\emSDK\client\omsClient
D:\O8i\classes\oracle\sysman\emSDK\client\util	D:\O8i\classes\oracle\sysman\emSDK\client\util\printComponent
D:\O8i\classes\oracle\sysman\emSDK\client\util\saveComponent	D:\O8i\classes\oracle\sysman\emSDK\common
D:\O8i\classes\oracle\sysman\emSDK\common\corba	D:\O8i\classes\oracle\sysman\emSDK\common\credentials
D:\O8i\classes\oracle\sysman\emSDK\common\enum	D:\O8i\classes\oracle\sysman\emSDK\common\nls
D:\O8i\classes\oracle\sysman\emSDK\common\notification	D:\O8i\classes\oracle\sysman\emSDK\common\registry
D:\O8i\classes\oracle\sysman\emSDK\common\target	D:\O8i\classes\oracle\sysman\emSDK\common\taskLibrary
D:\O8i\classes\oracle\sysman\emSDK\common\taskLibrary\database	D:\O8i\classes\oracle\sysman\emSDK\common\taskLibrary\host
D:\O8i\classes\oracle\sysman\emSDK\common\taskLibrary\listener	D:\O8i\classes\oracle\sysman\emSDK\common\tasks
D:\O8i\classes\oracle\sysman\emSDK\common\testLibrary	D:\O8i\classes\oracle\sysman\emSDK\common\testLibrary\cmanager
D:\O8i\classes\oracle\sysman\emSDK\common\testLibrary\database	D:\O8i\classes\oracle\sysman\emSDK\common\testLibrary\host
D:\O8i\classes\oracle\sysman\emSDK\common\testLibrary\listener	D:\O8i\classes\oracle\sysman\emSDK\common\util
D:\O8i\classes\oracle\sysman\emSDK\common\xml	D:\O8i\classes\oracle\sysman\emSDK\database
D:\O8i\classes\oracle\sysman\emSDK\oms	D:\O8i\classes\oracle\sysman\emSDK\oms\eventAdapter
D:\O8i\classes\oracle\sysman\emSDK\oms\service	D:\O8i\classes\oracle\sysman\emSDK\repository
D:\O8i\classes\oracle\sysman\emSDK\repository\repmgr	D:\O8i\classes\oracle\sysman\emSDK\util
D:\O8i\classes\oracle\sysman\emSDKSamples	D:\O8i\classes\oracle\sysman\emSDKSamples\appComponent
D:\O8i\classes\oracle\sysman\emSDKSamples\appComponent\Base	D:\O8i\classes\oracle\sysman\emSDKSamples\appComponent\Base\images
D:\O8i\classes\oracle\sysman\emSDKSamples\appComponent\Base\SampleHelp	D:\O8i\classes\oracle\sysman\emSDKSamples\appComponent\TreeDetail
D:\O8i\classes\oracle\sysman\emSDKSamples\appComponent\TreeDetail\images	D:\O8i\classes\oracle\sysman\emSDKSamples\navigator

Table F-8: LDAS II Oracle 81 Directory Structure

D:\O8i\classes\oracle\sysman\emSDKSamples\navigator\Generic	D:\O8i\classes\oracle\sysman\emSDKSamples\navigator\Generic\images
D:\O8i\classes\oracle\sysman\emSDKSamples\navigator\Level0	D:\O8i\classes\oracle\sysman\emSDKSamples\navigator\Level0\images
D:\O8i\classes\oracle\sysman\emSDKSamples\navigator\Level1	D:\O8i\classes\oracle\sysman\emSDKSamples\navigator\Level1\images
D:\O8i\classes\oracle\sysman\emSDKSamples\navigator\Level2	D:\O8i\classes\oracle\sysman\emSDKSamples\navigator\Level2\images
D:\O8i\classes\oracle\sysman\emSDKSamples\omsClient	D:\O8i\classes\oracle\sysman\help
D:\O8i\classes\oracle\sysman\help\vdktitw	D:\O8i\classes\oracle\sysman\help\vdktrew
D:\O8i\classes\oracle\sysman\help\vdkttem	D:\O8i\classes\oracle\sysman\help\viw
D:\O8i\classes\oracle\sysman\help\vtc	D:\O8i\classes\oracle\sysman\help\vtc_qt
D:\O8i\classes\oracle\sysman\help\vtl	D:\O8i\classes\oracle\sysman\help\vtm
D:\O8i\classes\oracle\sysman\help\vtp	D:\O8i\classes\oracle\sysman\help\vtz
D:\O8i\classes\oracle\sysman\migration	D:\O8i\classes\oracle\sysman\migration\v21
D:\O8i\classes\oracle\sysman\migration\v22	D:\O8i\classes\oracle\sysman\prv
D:\O8i\classes\oracle\sysman\prv\prvbo	D:\O8i\classes\oracle\sysman\prv\prvbo\prvboi
D:\O8i\classes\oracle\sysman\prv\prvta	D:\O8i\classes\oracle\sysman\prv\prvtcConsole
D:\O8i\classes\oracle\sysman\prv\prvtcConsole\prvtcGroup	D:\O8i\classes\oracle\sysman\prv\prvtcConsole\prvtcGroup\images
D:\O8i\classes\oracle\sysman\prv\prvtcConsole\prvtcJob	D:\O8i\classes\oracle\sysman\prv\prvtcConsole\prvtcJob\prvtcjTasks
D:\O8i\classes\oracle\sysman\prv\prvtcConsole\prvtcn	D:\O8i\classes\oracle\sysman\prv\prvtcConsole\prvtcx
D:\O8i\classes\oracle\sysman\prv\prvto	D:\O8i\classes\oracle\sysman\prv\prvto\prvtoi
D:\O8i\classes\oracle\sysman\prv\prvtt	D:\O8i\classes\oracle\sysman\prv\prvtt\prvttg
D:\O8i\classes\oracle\sysman\prv\prvtt\prvtti	D:\O8i\classes\oracle\sysman\prv\prvtt\prvtti\images
D:\O8i\classes\oracle\sysman\prv\prvtt\prvtty	D:\O8i\classes\oracle\sysman\prv\prvxx
D:\O8i\classes\oracle\sysman\prv\resources	D:\O8i\classes\oracle\sysman\qtour
D:\O8i\classes\oracle\sysman\qtour\change	D:\O8i\classes\oracle\sysman\qtour\console
D:\O8i\classes\oracle\sysman\qtour\dbapack	D:\O8i\classes\oracle\sysman\qtour\dbapack\icache
D:\O8i\classes\oracle\sysman\qtour\diag	D:\O8i\classes\oracle\sysman\qtour\index
D:\O8i\classes\oracle\sysman\qtour\oapps	D:\O8i\classes\oracle\sysman\qtour\sap
D:\O8i\classes\oracle\sysman\qtour\standard	D:\O8i\classes\oracle\sysman\qtour\tuning
D:\O8i\classes\oracle\sysman\resources	D:\O8i\classes\oracle\sysman\resources\images
D:\O8i\classes\oracle\sysman\sdo	D:\O8i\classes\oracle\sysman\sdo\sdoa
D:\O8i\classes\oracle\sysman\sdo\sdoa\help	D:\O8i\classes\oracle\sysman\sdo\sdoa\images
D:\O8i\classes\oracle\sysman\sdo\sdoa\META-INF	D:\O8i\classes\oracle\sysman\sdo\sdob
D:\O8i\classes\oracle\sysman\sdo\sdos	D:\O8i\classes\oracle\sysman\sdo\sdox
D:\O8i\classes\oracle\sysman\vbo	D:\O8i\classes\oracle\sysman\vbo\jserver

Table F-8: LDAS II Oracle 81 Directory Structure

D:\O8i\classes\oracle\sysman\vbo\vboe	D:\O8i\classes\oracle\sysman\vbo\vboe\repmgr
D:\O8i\classes\oracle\sysman\vbo\vbog	D:\O8i\classes\oracle\sysman\vbo\vbog\segment
D:\O8i\classes\oracle\sysman\vbo\vboi	D:\O8i\classes\oracle\sysman\vbo\vboIcache
D:\O8i\classes\oracle\sysman\vbo\vboIcache\me	D:\O8i\classes\oracle\sysman\vbo\vbol
D:\O8i\classes\oracle\sysman\vbo\vbol\repmgr	D:\O8i\classes\oracle\sysman\vbo\vbon
D:\O8i\classes\oracle\sysman\vbo\vboq	D:\O8i\classes\oracle\sysman\vbo\vbor
D:\O8i\classes\oracle\sysman\vbo\vbos	D:\O8i\classes\oracle\sysman\vbo\vbox
D:\O8i\classes\oracle\sysman\vbo\vboy	D:\O8i\classes\oracle\sysman\vbw
D:\O8i\classes\oracle\sysman\vbz	D:\O8i\classes\oracle\sysman\vbz\vbzu
D:\O8i\classes\oracle\sysman\vd	D:\O8i\classes\oracle\sysman\vd\jserver
D:\O8i\classes\oracle\sysman\vda	D:\O8i\classes\oracle\sysman\vda\vdae
D:\O8i\classes\oracle\sysman\vdb	D:\O8i\classes\oracle\sysman\vdc
D:\O8i\classes\oracle\sysman\vdd	D:\O8i\classes\oracle\sysman\vde
D:\O8i\classes\oracle\sysman\vdf	D:\O8i\classes\oracle\sysman\vdg
D:\O8i\classes\oracle\sysman\vdg\vdgConn	D:\O8i\classes\oracle\sysman\vdg\vdgRegistry
D:\O8i\classes\oracle\sysman\vdg\vdgStore	D:\O8i\classes\oracle\sysman\vdiBaseComps
D:\O8i\classes\oracle\sysman\vdiPOS	D:\O8i\classes\oracle\sysman\vdj
D:\O8i\classes\oracle\sysman\vdk	D:\O8i\classes\oracle\sysman\vdkb
D:\O8i\classes\oracle\sysman\vdkb\admin	D:\O8i\classes\oracle\sysman\vdkb\utilities
D:\O8i\classes\oracle\sysman\vdkb\utilities\reports	D:\O8i\classes\oracle\sysman\vdkb\utilities\sqlexec
D:\O8i\classes\oracle\sysman\vdkt	D:\O8i\classes\oracle\sysman\vdkt\images
D:\O8i\classes\oracle\sysman\vdm	D:\O8i\classes\oracle\sysman\vdn
D:\O8i\classes\oracle\sysman\vdo	D:\O8i\classes\oracle\sysman\vdo\images
D:\O8i\classes\oracle\sysman\vdp	D:\O8i\classes\oracle\sysman\vdrRegistry
D:\O8i\classes\oracle\sysman\vds	D:\O8i\classes\oracle\sysman\vdu
D:\O8i\classes\oracle\sysman\vdv	D:\O8i\classes\oracle\sysman\via
D:\O8i\classes\oracle\sysman\via\images	D:\O8i\classes\oracle\sysman\vic
D:\O8i\classes\oracle\sysman\vif	D:\O8i\classes\oracle\sysman\vif\d
D:\O8i\classes\oracle\sysman\vif\f	D:\O8i\classes\oracle\sysman\vif\images
D:\O8i\classes\oracle\sysman\vif\ja	D:\O8i\classes\oracle\sysman\vif\ptb
D:\O8i\classes\oracle\sysman\vif\zhs	D:\O8i\classes\oracle\sysman\vis
D:\O8i\classes\oracle\sysman\vis\images	D:\O8i\classes\oracle\sysman\vni
D:\O8i\classes\oracle\sysman\vnn	D:\O8i\classes\oracle\sysman\vt
D:\O8i\classes\oracle\sysman\vt\eCommerce	D:\O8i\classes\oracle\sysman\vt\eCommerce\tasks
D:\O8i\classes\oracle\sysman\vt\olap	D:\O8i\classes\oracle\sysman\vt\reports
D:\O8i\classes\oracle\sysman\vt\reports\images	D:\O8i\classes\oracle\sysman\vt\utils
D:\O8i\classes\oracle\sysman\vt\webServer	D:\O8i\classes\oracle\sysman\vt\webServer\images

Table F-8: LDAS II Oracle 81 Directory Structure

D:\O8i\classes\oracle\sysman\vtaDbApp	D:\O8i\classes\oracle\sysman\vtaDbApp\images
D:\O8i\classes\oracle\sysman\vtaFramework	D:\O8i\classes\oracle\sysman\vtaGallery
D:\O8i\classes\oracle\sysman\vtaGallery\appComponent	D:\O8i\classes\oracle\sysman\vtaGallery\appComponent\images
D:\O8i\classes\oracle\sysman\vtaGallery\dbConnect	D:\O8i\classes\oracle\sysman\vtaGallery\dbConnect\images
D:\O8i\classes\oracle\sysman\vtaGallery\detailComponent	D:\O8i\classes\oracle\sysman\vtaGallery\detailPanel
D:\O8i\classes\oracle\sysman\vtaGallery\dndTree	D:\O8i\classes\oracle\sysman\vtaGallery\dragDrop
D:\O8i\classes\oracle\sysman\vtaGallery\glassComponent	D:\O8i\classes\oracle\sysman\vtaGallery\jserver
D:\O8i\classes\oracle\sysman\vtaGallery\jserver\connect	D:\O8i\classes\oracle\sysman\vtaGallery\jserver\connect\images
D:\O8i\classes\oracle\sysman\vtaGallery\jserver\mcw	D:\O8i\classes\oracle\sysman\vtaGallery\masterComponent
D:\O8i\classes\oracle\sysman\vtaGallery\propertySheet	D:\O8i\classes\oracle\sysman\vtaGallery\radioButtonGrid
D:\O8i\classes\oracle\sysman\vtaGallery\radioButtonGrid\images	D:\O8i\classes\oracle\sysman\vtaGallery\threadPoolManager
D:\O8i\classes\oracle\sysman\vtaGallery\ticker	D:\O8i\classes\oracle\sysman\vtaGallery\vtaEmTree
D:\O8i\classes\oracle\sysman\vtaGallery\VtaScheduleWidget	D:\O8i\classes\oracle\sysman\vtcConsole
D:\O8i\classes\oracle\sysman\vtcConsole\images	D:\O8i\classes\oracle\sysman\vtcConsole\vtcCredentials
D:\O8i\classes\oracle\sysman\vtcConsole\vtcd	D:\O8i\classes\oracle\sysman\vtcConsole\vtcd\images
D:\O8i\classes\oracle\sysman\vtcConsole\vtcEvent	D:\O8i\classes\oracle\sysman\vtcConsole\vtcEvent\vtceTests
D:\O8i\classes\oracle\sysman\vtcConsole\vtcEvent\vtceTests\images	D:\O8i\classes\oracle\sysman\vtcConsole\vtcgroup
D:\O8i\classes\oracle\sysman\vtcConsole\vtcgroup\images	D:\O8i\classes\oracle\sysman\vtcConsole\vtcJob
D:\O8i\classes\oracle\sysman\vtcConsole\vtcJob\vtcjTasks	D:\O8i\classes\oracle\sysman\vtcConsole\vtcn
D:\O8i\classes\oracle\sysman\vtcConsole\vtcn\images	D:\O8i\classes\oracle\sysman\vtcConsole\vtcr
D:\O8i\classes\oracle\sysman\vtcConsole\vtcr\images	D:\O8i\classes\oracle\sysman\vtcConsole\vtcx
D:\O8i\classes\oracle\sysman\vtce	D:\O8i\classes\oracle\sysman\vtce\images
D:\O8i\classes\oracle\sysman\vtcj	D:\O8i\classes\oracle\sysman\vtcj\images
D:\O8i\classes\oracle\sysman\vtcm	D:\O8i\classes\oracle\sysman\vtcv
D:\O8i\classes\oracle\sysman\vtcv\images	D:\O8i\classes\oracle\sysman\vtd
D:\O8i\classes\oracle\sysman\vtd\guiUtil	D:\O8i\classes\oracle\sysman\vtd\images
D:\O8i\classes\oracle\sysman\vtd\vtdxD:\O8i\classes\oracle\sysman\vtd\vtdNavigator	D:\O8i\classes\oracle\sysman\vte

Table F-8: LDAS II Oracle 81 Directory Structure

D:\O8i\classes\oracle\sysman\vte\images	D:\O8i\classes\oracle\sysman\vte\repmgr
D:\O8i\classes\oracle\sysman\vtg	D:\O8i\classes\oracle\sysman\vtg\images
D:\O8i\classes\oracle\sysman\vth	D:\O8i\classes\oracle\sysman\vth\images
D:\O8i\classes\oracle\sysman\vti	D:\O8i\classes\oracle\sysman\vti\images
D:\O8i\classes\oracle\sysman\vtk	D:\O8i\classes\oracle\sysman\vtk\images
D:\O8i\classes\oracle\sysman\vtl	D:\O8i\classes\oracle\sysman\vtl\graph
D:\O8i\classes\oracle\sysman\vtl\images	D:\O8i\classes\oracle\sysman\vtm
D:\O8i\classes\oracle\sysman\vtm\chart	D:\O8i\classes\oracle\sysman\vtm\detailPanel
D:\O8i\classes\oracle\sysman\vtm\dgData	D:\O8i\classes\oracle\sysman\vtm\dialog
D:\O8i\classes\oracle\sysman\vtm\images	D:\O8i\classes\oracle\sysman\vtm\navigator
D:\O8i\classes\oracle\sysman\vtm\table	D:\O8i\classes\oracle\sysman\vtm\util
D:\O8i\classes\oracle\sysman\vtm\vtmResources	D:\O8i\classes\oracle\sysman\vto
D:\O8i\classes\oracle\sysman\vto\jserver	D:\O8i\classes\oracle\sysman\vto\jserver\images
D:\O8i\classes\oracle\sysman\vto\olap	D:\O8i\classes\oracle\sysman\vto\vtobui
D:\O8i\classes\oracle\sysman\vto\vtoe	D:\O8i\classes\oracle\sysman\vto\vtoe\images
D:\O8i\classes\oracle\sysman\vto\vtoe\repmgr	D:\O8i\classes\oracle\sysman\vto\vtog
D:\O8i\classes\oracle\sysman\vto\vtog\images	D:\O8i\classes\oracle\sysman\vto\vtoi
D:\O8i\classes\oracle\sysman\vto\vtoi\images	D:\O8i\classes\oracle\sysman\vto\vtoIcache
D:\O8i\classes\oracle\sysman\vto\vtoIcache\images	D:\O8i\classes\oracle\sysman\vto\vtoIcache\wizards
D:\O8i\classes\oracle\sysman\vto\vtoIcache\wizards\images	D:\O8i\classes\oracle\sysman\vto\vtoI
D:\O8i\classes\oracle\sysman\vto\vtoI\repmgr	D:\O8i\classes\oracle\sysman\vto\vtoI\wizards
D:\O8i\classes\oracle\sysman\vto\vtoI\wizards\copytemplate	D:\O8i\classes\oracle\sysman\vto\vtoI\wizards\offlineinstant
D:\O8i\classes\oracle\sysman\vto\vtoI\wizards\setup	D:\O8i\classes\oracle\sysman\vto\vtoI\wizards\snapshotgroup
D:\O8i\classes\oracle\sysman\vto\vtoI\wizards\template	D:\O8i\classes\oracle\sysman\vto\vton
D:\O8i\classes\oracle\sysman\vto\vton\images	D:\O8i\classes\oracle\sysman\vto\vtoq
D:\O8i\classes\oracle\sysman\vto\vtoq\images	D:\O8i\classes\oracle\sysman\vto\vtoq\resources
D:\O8i\classes\oracle\sysman\vto\vtor	D:\O8i\classes\oracle\sysman\vto\vtor\images
D:\O8i\classes\oracle\sysman\vto\vtos	D:\O8i\classes\oracle\sysman\vto\vtos\images
D:\O8i\classes\oracle\sysman\vto\vtox	D:\O8i\classes\oracle\sysman\vto\vtox\images
D:\O8i\classes\oracle\sysman\vto\vtoy	D:\O8i\classes\oracle\sysman\vto\vtoy\images
D:\O8i\classes\oracle\sysman\vto\webServer	D:\O8i\classes\oracle\sysman\vtp
D:\O8i\classes\oracle\sysman\vtp\images	D:\O8i\classes\oracle\sysman\vts
D:\O8i\classes\oracle\sysman\vts\images	D:\O8i\classes\oracle\sysman\vtt
D:\O8i\classes\oracle\sysman\vtt\images	D:\O8i\classes\oracle\sysman\vtt\jserver

Table F-8: LDAS II Oracle 81 Directory Structure

D:\O8i\classes\oracle\sysman\vtt\jserver\images	D:\O8i\classes\oracle\sysman\vtt\vttg
D:\O8i\classes\oracle\sysman\vtt\vttg\images	D:\O8i\classes\oracle\sysman\vtt\vtti
D:\O8i\classes\oracle\sysman\vtt\vtti\images	D:\O8i\classes\oracle\sysman\vtt\vttIcache
D:\O8i\classes\oracle\sysman\vtt\vttIcache\images	D:\O8i\classes\oracle\sysman\vtt\vttl
D:\O8i\classes\oracle\sysman\vtt\vtts	D:\O8i\classes\oracle\sysman\vtt\vtts\images
D:\O8i\classes\oracle\sysman\vtt\vtty	D:\O8i\classes\oracle\sysman\vtt\vtty\images
D:\O8i\classes\oracle\sysman\vtv	D:\O8i\classes\oracle\sysman\vtw
D:\O8i\classes\oracle\sysman\vtw\images	D:\O8i\classes\oracle\sysman\vtx
D:\O8i\classes\oracle\sysman\vtx\font	D:\O8i\classes\oracle\sysman\vtx\images
D:\O8i\classes\oracle\sysman\vtx\layout	D:\O8i\classes\oracle\sysman\vtx\regedit
D:\O8i\classes\oracle\sysman\vtx\vtxOemApp	D:\O8i\classes\oracle\sysman\vty
D:\O8i\classes\oracle\sysman\vty\images	D:\O8i\classes\oracle\sysman\vxa
D:\O8i\classes\oracle\sysman\vxn	D:\O8i\classes\oracle\sysman\vxs
D:\O8i\classes\oracle\sysman\vxx	D:\O8i\classes\oracle\sysman\vxx\constants
D:\O8i\classes\oracle\sysman\vxx\vxxc	D:\O8i\classes\oracle\sysman\vxx\vxxd
D:\O8i\classes\oracle\sysman\vxx\vxxIcache	D:\O8i\classes\oracle\sysman\vxx\vxxl
D:\O8i\classes\oracle\sysman\vxx\vxxm	D:\O8i\classes\oracle\sysman\vxx\vxxn
D:\O8i\classes\oracle\sysman\vxx\vxxo	D:\O8i\classes\oracle\sysman\vxx\vxxo\test
D:\O8i\classes\oracle\sysman\vxx\vxxq	D:\O8i\classes\oracle\sysman\vxx\vxxSchedule
D:\O8i\classes\oracle\sysman\vxx\vxxt	D:\O8i\classes\oracle\sysman\vxx\vxxTNS
D:\O8i\classes\oracle\sysman\vxx\vxxx	D:\O8i\com
D:\O8i\com\demos	D:\O8i\com\mesg
D:\O8i\converters	D:\O8i\ctx
D:\O8i\ctx\admin	D:\O8i\ctx\admin\defaults
D:\O8i\ctx\admin\upgrade	D:\O8i\ctx\data
D:\O8i\ctx\data\delx	D:\O8i\ctx\data\enlx
D:\O8i\ctx\data\eslx	D:\O8i\ctx\data\frlx
D:\O8i\ctx\data\itlx	D:\O8i\ctx\data\kolx
D:\O8i\ctx\data\nllx	D:\O8i\ctx\data\template
D:\O8i\ctx\data\zhlx	D:\O8i\ctx\doc
D:\O8i\ctx\log	D:\O8i\ctx\mesg
D:\O8i\ctx\migrate	D:\O8i\ctx\sample
D:\O8i\ctx\sample\api	D:\O8i\ctx\sample\api\Ctx_Packages
D:\O8i\ctx\sample\api\Ctx_Packages\Describe	D:\O8i\ctx\sample\api\Ctx_Packages\Using
D:\O8i\ctx\sample\api\Ctx_Packages\Using\Ctx_Adm	D:\O8i\ctx\sample\api\Ctx_Packages\Using\Ctx_Output
D:\O8i\ctx\sample\api\Data_Dictionary	D:\O8i\ctx\sample\api\Exp_Imp
D:\O8i\ctx\sample\api\Hilite	D:\O8i\ctx\sample\api\Img

Table F-8: LDAS II Oracle 81 Directory Structure

D:\O8i\ctx\sample\api\Index_dml	D:\O8i\ctx\sample\api\Indexing
D:\O8i\ctx\sample\api\Indexing\Datastores	D:\O8i\ctx\sample\api\Indexing\Datastores\Detail_Datastore
D:\O8i\ctx\sample\api\Indexing\Datastores\Direct_Datastore	D:\O8i\ctx\sample\api\Indexing\Datastores\File_Datastore
D:\O8i\ctx\sample\api\Indexing\Datastores\File_Datastore\filename	D:\O8i\ctx\sample\api\Indexing\Datastores\File_Datastore\path
D:\O8i\ctx\sample\api\Indexing\Datastores\Nested_Datastore	D:\O8i\ctx\sample\api\Indexing\Datastores\URL_Datastore
D:\O8i\ctx\sample\api\Indexing\Datastores\URL_Datastore\Ftp_Proxy	D:\O8i\ctx\sample\api\Indexing\Datastores\URL_Datastore\Http_Proxy
D:\O8i\ctx\sample\api\Indexing\Datastores\URL_Datastore\maxdocsize	D:\O8i\ctx\sample\api\Indexing\Datastores\URL_Datastore\maxthreads
D:\O8i\ctx\sample\api\Indexing\Datastores\URL_Datastore\maxurls	D:\O8i\ctx\sample\api\Indexing\Datastores\URL_Datastore\No_Proxy
D:\O8i\ctx\sample\api\Indexing\Datastores\URL_Datastore\timeout	D:\O8i\ctx\sample\api\Indexing\Datastores\URL_Datastore\urlsize
D:\O8i\ctx\sample\api\Indexing\Datastores\User_Datastore	D:\O8i\ctx\sample\api\Indexing\Filters
D:\O8i\ctx\sample\api\Indexing\Filters\Charset_Filter	D:\O8i\ctx\sample\api\Indexing\Filters\INSO_Filter
D:\O8i\ctx\sample\api\Indexing\Filters\Null_Filter	D:\O8i\ctx\sample\api\Indexing\Filters\User_Filter
D:\O8i\ctx\sample\api\Indexing\Index_Values	D:\O8i\ctx\sample\api\Indexing\Lexers
D:\O8i\ctx\sample\api\Indexing\Lexers\Basic_Lexer	D:\O8i\ctx\sample\api\Indexing\Lexers\Basic_Lexer\Alternate_Spelling
D:\O8i\ctx\sample\api\Indexing\Lexers\Basic_Lexer\Base_Letter	D:\O8i\ctx\sample\api\Indexing\Lexers\Basic_Lexer\Composite
D:\O8i\ctx\sample\api\Indexing\Lexers\Basic_Lexer\Continuation	D:\O8i\ctx\sample\api\Indexing\Lexers\Basic_Lexer\Endjoins
D:\O8i\ctx\sample\api\Indexing\Lexers\Basic_Lexer\Index_Text	D:\O8i\ctx\sample\api\Indexing\Lexers\Basic_Lexer\Index_Text\index_to
D:\O8i\ctx\sample\api\Indexing\Lexers\Basic_Lexer\Index_Text\index_tt	D:\O8i\ctx\sample\api\Indexing\Lexers\Basic_Lexer\Index_Themes
D:\O8i\ctx\sample\api\Indexing\Lexers\Basic_Lexer\Mixed_Case	D:\O8i\ctx\sample\api\Indexing\Lexers\Basic_Lexer\Newline
D:\O8i\ctx\sample\api\Indexing\Lexers\Basic_Lexer\Numgroup	D:\O8i\ctx\sample\api\Indexing\Lexers\Basic_Lexer\Numjoin
D:\O8i\ctx\sample\api\Indexing\Lexers\Basic_Lexer\Printjoins	D:\O8i\ctx\sample\api\Indexing\Lexers\Basic_Lexer\Punctuations
D:\O8i\ctx\sample\api\Indexing\Lexers\Basic_Lexer\Skipjoins	D:\O8i\ctx\sample\api\Indexing\Lexers\Basic_Lexer\Startjoins
D:\O8i\ctx\sample\api\Indexing\Lexers\Basic_Lexer\Whitespace	D:\O8i\ctx\sample\api\Indexing\Lexers\Chinese_Lexer
D:\O8i\ctx\sample\api\Indexing\Lexers\Japanese_Lexer	D:\O8i\ctx\sample\api\Indexing\Lexers\Korean_Lexer
D:\O8i\ctx\sample\api\Indexing\Memory	D:\O8i\ctx\sample\api\Indexing\Nopopulate

Table F-8: LDAS II Oracle 81 Directory Structure

D:\O8i\ctx\sample\api\Indexing\Populate	D:\O8i\ctx\sample\api\Indexing\Preferences
D:\O8i\ctx\sample\api\Indexing\Sections	D:\O8i\ctx\sample\api\Indexing\Sections\Auto_section
D:\O8i\ctx\sample\api\Indexing\Sections\Basic_section	D:\O8i\ctx\sample\api\Indexing\Sections\HTML_section
D:\O8i\ctx\sample\api\Indexing\Sections\News_section	D:\O8i\ctx\sample\api\Indexing\Sections\Null_section
D:\O8i\ctx\sample\api\Indexing\Sections\XML_section	D:\O8i\ctx\sample\api\Indexing\Shipped_Prefs
D:\O8i\ctx\sample\api\Indexing\StopList	D:\O8i\ctx\sample\api\Indexing\Storage
D:\O8i\ctx\sample\api\Indexing\Wordlist	D:\O8i\ctx\sample\api\Indexing\Wordlist\fuzzy
D:\O8i\ctx\sample\api\Indexing\Wordlist\stem_fuzzy	D:\O8i\ctx\sample\api\Indexing\Wordlist\stemmer
D:\O8i\ctx\sample\api\Misc_SQL	D:\O8i\ctx\sample\api\Queries
D:\O8i\ctx\sample\api\Queries\Browse	D:\O8i\ctx\sample\api\Queries\Explain
D:\O8i\ctx\sample\api\Queries\Hfeedback	D:\O8i\ctx\sample\api\Queries\Operators
D:\O8i\ctx\sample\api\Queries\Operators\About	D:\O8i\ctx\sample\api\Queries\Operators\Accumulate
D:\O8i\ctx\sample\api\Queries\Operators\And	D:\O8i\ctx\sample\api\Queries\Operators\Equivalence
D:\O8i\ctx\sample\api\Queries\Operators\Fuzzy	D:\O8i\ctx\sample\api\Queries\Operators\Minus
D:\O8i\ctx\sample\api\Queries\Operators\Near	D:\O8i\ctx\sample\api\Queries\Operators\Near\max_span
D:\O8i\ctx\sample\api\Queries\Operators\Near\order	D:\O8i\ctx\sample\api\Queries\Operators\Not
D:\O8i\ctx\sample\api\Queries\Operators\Or	D:\O8i\ctx\sample\api\Queries\Operators\Soundex
D:\O8i\ctx\sample\api\Queries\Operators\Sqe	D:\O8i\ctx\sample\api\Queries\Operators\Stem
D:\O8i\ctx\sample\api\Queries\Operators\Thesaurus	D:\O8i\ctx\sample\api\Queries\Operators\Threshold
D:\O8i\ctx\sample\api\Queries\Operators\Weight	D:\O8i\ctx\sample\api\Queries\Operators\Within
D:\O8i\ctx\sample\api\Queries\Word_qry	D:\O8i\ctx\sample\api\Queries\Word_qry\Phrase
D:\O8i\ctx\sample\api\Queries\Word_qry\Word	D:\O8i\ctx\sample\api\Quick_Start
D:\O8i\ctx\sample\api\Schema_Objects	D:\O8i\ctx\sample\api\Text_Qry_Expr
D:\O8i\ctx\sample\api\Themes_and_Gists	D:\O8i\ctx\sample\api\Themes_and_Gists\Gists
D:\O8i\ctx\sample\api\Themes_and_Gists\Kb_Extend	D:\O8i\ctx\sample\api\Themes_and_Gists\Kb_Extend\Overview
D:\O8i\ctx\sample\api\Themes_and_Gists\Themes	D:\O8i\ctx\sample\api\To_Do_Synthetic_Text
D:\O8i\ctx\sample\script	D:\O8i\ctx\sample\thes
D:\O8i\ctx\sample\util	D:\O8i\database
D:\O8i\database\archive	D:\O8i\dbs
D:\O8i\doc	D:\O8i\doc\Output
D:\O8i\doc\Output\img_text	D:\O8i\doc\Support
D:\O8i\doc\Support\gifs	D:\O8i\doc\Support\html
D:\O8i\hs	D:\O8i\hs\admin

Table F-8: LDAS II Oracle 81 Directory Structure

D:\O8i\hs\bin	D:\O8i\hs\nls
D:\O8i\hs\nls\eng	D:\O8i\hs\trace
D:\O8i\install	D:\O8i\jar
D:\O8i\javavm	D:\O8i\javavm\admin
D:\O8i\javavm\demo	D:\O8i\javavm\doc
D:\O8i\javavm\install	D:\O8i\javavm\install\sbs
D:\O8i\javavm\jahome	D:\O8i\javavm\lib
D:\O8i\javavm\lib\security	D:\O8i\jdbc
D:\O8i\jdbc\demo	D:\O8i\jdbc\doc
D:\O8i\jdbc\lib	D:\O8i\jis
D:\O8i\jis\admin	D:\O8i\jis\admin\public_html
D:\O8i\jis\admin\public_html\doc	D:\O8i\jis\admin\public_html\images
D:\O8i\jis\admin\public_html\system	D:\O8i\jis\admin\public_html\system\errors
D:\O8i\jis\idl	D:\O8i\jis\install
D:\O8i\jis\install\sbs	D:\O8i\jis\lib
D:\O8i\jis\patch	D:\O8i\jis\patch\816
D:\O8i\jis\patch\c++	D:\O8i\jis\public
D:\O8i\jis\utl	D:\O8i\jlib
D:\O8i\jsp	D:\O8i\jsp\demo
D:\O8i\jsp\doc	D:\O8i\jsp\doc\javadoc
D:\O8i\jsp\doc\javadoc\oracle	D:\O8i\jsp\doc\javadoc\oracle\jsp
D:\O8i\jsp\doc\javadoc\oracle\jsp\dbutil	D:\O8i\jsp\doc\javadoc\oracle\jsp\event
D:\O8i\jsp\doc\javadoc\oracle\jsp\jml	D:\O8i\jsp\install
D:\O8i\jsp\install\sbs	D:\O8i\jsp\lib
D:\O8i\ldap	D:\O8i\ldap\admin
D:\O8i\ldap\admin\LOGS	D:\O8i\ldap\bin
D:\O8i\ldap\demo	D:\O8i\ldap\demo\plsql
D:\O8i\ldap\demo\samples	D:\O8i\ldap\demo\samples\training
D:\O8i\ldap\demo\samples\training\ldifdata	D:\O8i\ldap\install
D:\O8i\ldap\load	D:\O8i\ldap\log
D:\O8i\ldap\mesg	D:\O8i\ldap\oidadmin
D:\O8i\ldap\public	D:\O8i\lib
D:\O8i\md	D:\O8i\md\admin
D:\O8i\md\demo	D:\O8i\md\demo\examples
D:\O8i\md\demo\geocoder	D:\O8i\md\demo\geocoder\java
D:\O8i\md\demo\geocoder\java\httpbatch	D:\O8i\md\demo\geocoder\java\withindist
D:\O8i\md\demo\NT	D:\O8i\md\demo\NT\bin
D:\O8i\md\demo\NT\lib	D:\O8i\md\demo\NT\SDOConnCur
D:\O8i\md\demo\NT\SDOConnCur\res	D:\O8i\md\demo\NT\VisualSdo

Table F-8: LDAS II Oracle 81 Directory Structure

D:\O8i\md\demo\NT\VisualSdo\include	D:\O8i\md\demo\NT\VisualSdo\res
D:\O8i\md\demo\orascv	D:\O8i\md\demo\orascv\doc
D:\O8i\md\demo\orascv\doc\images	D:\O8i\md\demo\orascv\doc\sdoOracle
D:\O8i\md\demo\orascv\images	D:\O8i\md\demo\orascv\source
D:\O8i\md\demo\orascv\source\sdoApp	D:\O8i\md\demo\orascv\source\sdoOracle
D:\O8i\md\doc	D:\O8i\Mshelp
D:\O8i\network	D:\O8i\network\ADMIN
D:\O8i\network\ADMIN\SAMPLE	D:\O8i\network\agent
D:\O8i\network\agent\config	D:\O8i\network\agent\events
D:\O8i\network\agent\events\oracle	D:\O8i\network\agent\events\oracle\cmanager
D:\O8i\network\agent\events\oracle\cmanager\fault	D:\O8i\network\agent\events\oracle\cmanager\perf
D:\O8i\network\agent\events\oracle\cmanager\space	D:\O8i\network\agent\events\oracle\forms
D:\O8i\network\agent\events\oracle\forms\fault	D:\O8i\network\agent\events\oracle\generic
D:\O8i\network\agent\events\oracle\generic\metric	D:\O8i\network\agent\events\oracle\host
D:\O8i\network\agent\events\oracle\host\fault	D:\O8i\network\agent\events\oracle\host\perf
D:\O8i\network\agent\events\oracle\host\space	D:\O8i\network\agent\events\oracle\rdbms
D:\O8i\network\agent\events\oracle\rdbms\audit	D:\O8i\network\agent\events\oracle\rdbms\fault
D:\O8i\network\agent\events\oracle\rdbms\generic	D:\O8i\network\agent\events\oracle\rdbms\perf
D:\O8i\network\agent\events\oracle\rdbms\resource	D:\O8i\network\agent\events\oracle\rdbms\space
D:\O8i\network\agent\events\oracle\sqlnet	D:\O8i\network\agent\events\oracle\sqlnet\fault
D:\O8i\network\agent\events\oracle\sqlserver	D:\O8i\network\agent\events\oracle\sqlserver\sql_srv
D:\O8i\network\agent\events\oracle\webserver	D:\O8i\network\agent\events\oracle\webserver\fault
D:\O8i\network\agent\jobout	D:\O8i\network\agent\jobs
D:\O8i\network\agent\jobs\oracle	D:\O8i\network\agent\jobs\oracle\cmanager
D:\O8i\network\agent\jobs\oracle\cmanager\general	D:\O8i\network\agent\jobs\oracle\ecom
D:\O8i\network\agent\jobs\oracle\ecom\reports	D:\O8i\network\agent\jobs\oracle\ecom\reports\images
D:\O8i\network\agent\jobs\oracle\forms	D:\O8i\network\agent\jobs\oracle\forms\general
D:\O8i\network\agent\jobs\oracle\host	D:\O8i\network\agent\jobs\oracle\host\general
D:\O8i\network\agent\jobs\oracle\otrace	D:\O8i\network\agent\jobs\oracle\otrace\general
D:\O8i\network\agent\jobs\oracle\rdbms	D:\O8i\network\agent\jobs\oracle\rdbms\backup
D:\O8i\network\agent\jobs\oracle\rdbms\general	D:\O8i\network\agent\jobs\oracle\sqlnet
D:\O8i\network\agent\jobs\oracle\sqlnet\general	D:\O8i\network\agent\jobs\oracle\webserver

Table F-8: LDAS II Oracle 81 Directory Structure

D:\O8i\network\agent\jobs\oracle\webserver\general	D:\O8i\network\agent\library
D:\O8i\network\agent\mibs	D:\O8i\network\agent\reports
D:\O8i\network\agent\reports\htx	D:\O8i\network\agent\reports\web
D:\O8i\network\agent\tcl	D:\O8i\network\doc
D:\O8i\network\docs	D:\O8i\network\install
D:\O8i\network\jlib	D:\O8i\network\log
D:\O8i\network\mesg	D:\O8i\network\Names
D:\O8i\network\tnsapi	D:\O8i\network\tnsapi\bin
D:\O8i\network\tnsapi\INCLUDE	D:\O8i\network\tnsapi\lib
D:\O8i\network\tnsapi\SRC	D:\O8i\network\tools
D:\O8i\network\tools\config	D:\O8i\network\tools\help
D:\O8i\network\tools\help\asst	D:\O8i\network\tools\help\asst\help
D:\O8i\network\tools\help\ca	D:\O8i\network\tools\help\ca\help
D:\O8i\network\tools\images	D:\O8i\network\trace
D:\O8i\oci	D:\O8i\oci\include
D:\O8i\oci\lib	D:\O8i\oci\lib\bc
D:\O8i\oci\lib\msvc	D:\O8i\oci\samples
D:\O8i\ocommon	D:\O8i\ocommon\nls
D:\O8i\ocommon\nls\ADMIN	D:\O8i\ocommon\nls\ADMIN\DATA
D:\O8i\ocommon\nls\demo	D:\O8i\ocommon\nls\mesg
D:\O8i\ODBC	D:\O8i\odg
D:\O8i\odg\html	D:\O8i\odg\log
D:\O8i\odg\mesg	D:\O8i\odg\reco
D:\O8i\oledb	D:\O8i\oledb\doc
D:\O8i\oledb\doc\html	D:\O8i\oledb\doc\html\img_text
D:\O8i\oledb\doc\html\support	D:\O8i\oledb\doc\html\support\gifs
D:\O8i\oledb\doc\html\support\html	D:\O8i\oledb\include
D:\O8i\oledb\lib	D:\O8i\oledb\mesg
D:\O8i\oledb\samples	D:\O8i\oo4o
D:\O8i\oo4o\CODEWIZ	D:\O8i\oo4o\CODEWIZ\DOC
D:\O8i\oo4o\CODEWIZ\DOC\HTML	D:\O8i\oo4o\CODEWIZ\SAMPLES
D:\O8i\oo4o\CODEWIZ\SAMPLES\CLOB	D:\O8i\oo4o\CODEWIZ\SAMPLES\EMP
D:\O8i\oo4o\CODEWIZ\SAMPLES\OBJECTS	D:\O8i\oo4o\CODEWIZ\SAMPLES\VARRAY
D:\O8i\oo4o\CPP	D:\O8i\oo4o\CPP\INCLUDE
D:\O8i\oo4o\CPP\LIB	D:\O8i\oo4o\CPP\MFC
D:\O8i\oo4o\CPP\MFC\INCLUDE	D:\O8i\oo4o\CPP\MFC\LIB
D:\O8i\oo4o\CPP\MFC\SAMPLES	D:\O8i\oo4o\CPP\MFC\SAMPLES\EMPEDIT
D:\O8i\oo4o\CPP\MFC\SAMPLES\EMPEDIT\RES	D:\O8i\oo4o\CPP\MFC\SRC

Table F-8: LDAS II Oracle 81 Directory Structure

D:\O8i\oo4o\CPP\WORKBOOK	D:\O8i\oo4o\CPP\WORKBOOK\ACTIVEX
D:\O8i\oo4o\CPP\WORKBOOK\ACTIVEX\RELEASE	D:\O8i\oo4o\CPP\WORKBOOK\ACTIVEX\RES
D:\O8i\oo4o\CPP\WORKBOOK\AQ	D:\O8i\oo4o\CPP\WORKBOOK\AQ\DEQ
D:\O8i\oo4o\CPP\WORKBOOK\AQ\ENQ	D:\O8i\oo4o\CPP\WORKBOOK\BOUNDVAL
D:\O8i\oo4o\CPP\WORKBOOK\EMPEDT	D:\O8i\oo4o\CPP\WORKBOOK\EMPEDT\RES
D:\O8i\oo4o\CPP\WORKBOOK\LOB	D:\O8i\oo4o\CPP\WORKBOOK\LOGDLG
D:\O8i\oo4o\CPP\WORKBOOK\METADATA	D:\O8i\oo4o\CPP\WORKBOOK\MULTTHRD
D:\O8i\oo4o\CPP\WORKBOOK\NONBLOCK	D:\O8i\oo4o\CPP\WORKBOOK\OBJECTS
D:\O8i\oo4o\CPP\WORKBOOK\POSADV	D:\O8i\oo4o\CPP\WORKBOOK\RAW
D:\O8i\oo4o\CPP\WORKBOOK\VARRAY	D:\O8i\oo4o\EXCEL
D:\O8i\oo4o\EXCEL\SAMPLES	D:\O8i\oo4o\IIS
D:\O8i\oo4o\IIS\SAMPLES	D:\O8i\oo4o\IIS\SAMPLES\ASP
D:\O8i\oo4o\IIS\SAMPLES\ASP\ComputerOrderEntry	D:\O8i\oo4o\IIS\SAMPLES\ASP\CONNPOOL
D:\O8i\oo4o\IIS\SAMPLES\ASP\StockQuotes	D:\O8i\oo4o\IIS\SAMPLES\ISAPI
D:\O8i\oo4o\IIS\SAMPLES\ISAPI\OO4O	D:\O8i\oo4o\IIS\SAMPLES\ISAPI\ORAGATE
D:\O8i\oo4o\mesg	D:\O8i\oo4o\VB
D:\O8i\oo4o\VB\SAMPLES	D:\O8i\oo4o\VB\SAMPLES\AQ
D:\O8i\oo4o\VB\SAMPLES\AQ\DEQUEUE	D:\O8i\oo4o\VB\SAMPLES\AQ\DEQUEUE_RAW
D:\O8i\oo4o\VB\SAMPLES\AQ\ENQUEUE	D:\O8i\oo4o\VB\SAMPLES\AQ\ENQUEUE_RAW
D:\O8i\oo4o\VB\SAMPLES\CONNPOOL	D:\O8i\oo4o\VB\SAMPLES\CONNPOOL\CLIENT
D:\O8i\oo4o\VB\SAMPLES\CONNPOOL\SERVER	D:\O8i\oo4o\VB\SAMPLES\DATACTRL
D:\O8i\oo4o\VB\SAMPLES\DEPT	D:\O8i\oo4o\VB\SAMPLES\EMP
D:\O8i\oo4o\VB\SAMPLES\FAILOVER	D:\O8i\oo4o\VB\SAMPLES\LOB
D:\O8i\oo4o\VB\SAMPLES\LOGIN	D:\O8i\oo4o\VB\SAMPLES\LONGRAW
D:\O8i\oo4o\VB\SAMPLES\LOOKUP	D:\O8i\oo4o\VB\SAMPLES\METADATA
D:\O8i\oo4o\VB\SAMPLES\NESTEDTABLE	D:\O8i\oo4o\VB\SAMPLES\NONBLOCK
D:\O8i\oo4o\VB\SAMPLES\OBJECTS	D:\O8i\oo4o\VB\SAMPLES\ORANUMBER
D:\O8i\oo4o\VB\SAMPLES\PARM	D:\O8i\oo4o\VB\SAMPLES\PLSQLCURSOR
D:\O8i\oo4o\VB\SAMPLES\QT	D:\O8i\oo4o\VB\SAMPLES\RAW
D:\O8i\oo4o\VB\SAMPLES\VARRAY	D:\O8i\oracore
D:\O8i\oracore\admin	D:\O8i\oracore\mesg
D:\O8i\oradata	D:\O8i\oradata\LDAS
D:\O8i\oradata\LDAS\archive	D:\O8i\oradata\sample
D:\O8i\ORAINST	D:\O8i\ord
D:\O8i\ord\admin	D:\O8i\ord\aud
D:\O8i\ord\aud\demo	D:\O8i\ord\aud\demo\java
D:\O8i\ord\im	D:\O8i\ord\im\admin

Table F-8: LDAS II Oracle 81 Directory Structure

D:\O8i\ord\img	D:\O8i\ord\img\demo
D:\O8i\ord\img\demo\java	D:\O8i\ord\img\demo\vc
D:\O8i\ord\img\demo\vc\ImgSamp	D:\O8i\ord\img\demo\vc\ImgSamp\catalog
D:\O8i\ord\img\demo\vc\ImgSamp\emp	D:\O8i\ord\img\demo\vc\ImgSamp\realty
D:\O8i\ord\img\demo\vc\ImgSamp\SimpImg	D:\O8i\ord\img\demo\vc\ImgSamp\SimpImg\res
D:\O8i\ord\jlib	D:\O8i\ord\mesg
D:\O8i\ord\ts	D:\O8i\ord\ts\admin
D:\O8i\ord\ts\demo	D:\O8i\ord\ts\demo\applet
D:\O8i\ord\ts\demo\dev2k	D:\O8i\ord\ts\demo\extend
D:\O8i\ord\ts\demo\java	D:\O8i\ord\ts\demo\oci
D:\O8i\ord\ts\demo\oci\inc	D:\O8i\ord\ts\demo\oci\src
D:\O8i\ord\ts\demo\proc	D:\O8i\ord\ts\demo\proc\src
D:\O8i\ord\ts\demo\retrofit	D:\O8i\ord\ts\demo\tsquick
D:\O8i\ord\ts\demo\usage	D:\O8i\ord\ts\demo\usageutl
D:\O8i\ord\ts\doc	D:\O8i\ord\ts\doc\images
D:\O8i\ord\ts\jlib	D:\O8i\ord\vid
D:\O8i\ord\vid\demo	D:\O8i\ord\vid\demo\java
D:\O8i\ord\vir	D:\O8i\ord\vir\admin
D:\O8i\ord\vir\demo	D:\O8i\ord\vir\demo\java
D:\O8i\otrace	D:\O8i\otrace\admin
D:\O8i\otrace\admin\cdf	D:\O8i\otrace\admin\fdf
D:\O8i\otrace\demo	D:\O8i\otrace\lib
D:\O8i\otrace\publicD:\O8i\otrace\mesg	D:\O8i\owm
D:\O8i\owm\install	D:\O8i\owm\jlib
D:\O8i\owm\jlib\help	D:\O8i\owm\jlib\help\elogin
D:\O8i\owm\jlib\help\elogin\help	D:\O8i\owm\jlib\help\owm
D:\O8i\owm\jlib\help\owm\help	D:\O8i\plsql
D:\O8i\plsql\demo	D:\O8i\plsql\jlib
D:\O8i\plsql\mesg	D:\O8i\precomp
D:\O8i\precomp\admin	D:\O8i\precomp\demo
D:\O8i\precomp\demo\sql	D:\O8i\precomp\doc
D:\O8i\precomp\doc\ott	D:\O8i\precomp\mesg
D:\O8i\precomp\public	D:\O8i\RDBMS
D:\O8i\RDBMS\ADMIN	D:\O8i\RDBMS\demo
D:\O8i\RDBMS\doc	D:\O8i\RDBMS\extproc
D:\O8i\RDBMS\jlib	D:\O8i\RDBMS\mesg
D:\O8i\RDBMS\trace	D:\O8i\RDBMS\xa
D:\O8i\relnotes	D:\O8i\relnotes\com
D:\O8i\relnotes\EM	D:\O8i\relnotes\intermedia

Table F-8: LDAS II Oracle 81 Directory Structure

D:\O8i\relnotes\javavm	D:\O8i\relnotes\oo4o
D:\O8i\relnotes\precomp	D:\O8i\relnotes\sqlj
D:\O8i\slax	D:\O8i\slax\mesg
D:\O8i\sqlj	D:\O8i\sqlj\demo
D:\O8i\sqlj\demo\applets	D:\O8i\sqlj\demo\components
D:\O8i\sqlj\demo\components\checker	D:\O8i\sqlj\demo\components\customizer
D:\O8i\sqlj\demo\jdbc20	D:\O8i\sqlj\demo\jpub
D:\O8i\sqlj\demo\Objects	D:\O8i\sqlj\demo\server
D:\O8i\sqlj\doc	D:\O8i\sqlj\doc\runtime
D:\O8i\sqlj\doc\runtime\javadoc	D:\O8i\sqlj\doc\runtime\javadoc\oracle
D:\O8i\sqlj\doc\runtime\javadoc\oracle\sqlj	D:\O8i\sqlj\doc\runtime\javadoc\oracle\sqlj\runtime
D:\O8i\sqlj\doc\runtime\javadoc\sqlj	D:\O8i\sqlj\doc\runtime\javadoc\sqlj\runtime
D:\O8i\sqlj\doc\runtime\javadoc\sqlj\runtime\ref	D:\O8i\sqlj\lib
D:\O8i\sqlplus	D:\O8i\sqlplus\admin
D:\O8i\sqlplus\admin\help	D:\O8i\sqlplus\demo
D:\O8i\sqlplus\doc	D:\O8i\sqlplus\mesg
D:\O8i\starterdb	D:\O8i\svrmgr
D:\O8i\svrmgr\admin	D:\O8i\sysman
D:\O8i\sysman\admin	D:\O8i\sysman\admin\migration
D:\O8i\sysman\admin\migration\v21	D:\O8i\sysman\admin\migration\v22
D:\O8i\sysman\config	D:\O8i\sysman\doc
D:\O8i\sysman\doc\readme	D:\O8i\sysman\ifiles
D:\O8i\sysman\jlib	D:\O8i\sysman\jlib\lib
D:\O8i\sysman\log	D:\O8i\sysman\mesg
D:\O8i\sysman\report	D:\O8i\sysman\system
D:\O8i\sysman\temp	D:\O8i\wwg
D:\O8i\wwg\admin	D:\O8i\wwg\admin\help
D:\O8i\wwg\admin\images	D:\O8i\xdk
D:\O8i\xdk\admin	D:\O8i\xdk\c
D:\O8i\xdk\c\parser	D:\O8i\xdk\c\parser\demo
D:\O8i\xdk\c\parser\doc	D:\O8i\xdk\c\parser\doc\images
D:\O8i\xdk\c\parser\include	D:\O8i\xdk\cpp
D:\O8i\xdk\cpp\classgen	D:\O8i\xdk\cpp\classgen\demo
D:\O8i\xdk\cpp\classgen\doc	D:\O8i\xdk\cpp\classgen\doc\images
D:\O8i\xdk\cpp\classgen\include	D:\O8i\xdk\cpp\parser
D:\O8i\xdk\cpp\parser\demo	D:\O8i\xdk\cpp\parser\doc
D:\O8i\xdk\cpp\parser\doc\images	D:\O8i\xdk\cpp\parser\include
D:\O8i\xdk\images	D:\O8i\xdk\java
D:\O8i\xdk\java\classgen	D:\O8i\xdk\java\classgen\demo

Table F-8: LDAS II Oracle 81 Directory Structure

D:\O8i\xdk\java\parser	D:\O8i\xdk\java\parser\bin
D:\O8i\xdk\java\parser\demo	D:\O8i\xdk\java\transviewer
D:\O8i\xdk\java\transviewer\demo	D:\O8i\xdk\java\xsql
D:\O8i\xdk\java\xsql\bin	D:\O8i\xdk\java\xsql\demo
D:\O8i\xdk\java\xsql\demo\actions	D:\O8i\xdk\java\xsql\demo\adhocsql
D:\O8i\xdk\java\xsql\demo\airport	D:\O8i\xdk\java\xsql\demo\classerr
D:\O8i\xdk\java\xsql\demo\common	D:\O8i\xdk\java\xsql\demo\cursor
D:\O8i\xdk\java\xsql\demo\document	D:\O8i\xdk\java\xsql\demo\doyouxml
D:\O8i\xdk\java\xsql\demo\emp	D:\O8i\xdk\java\xsql\demo\empdept
D:\O8i\xdk\java\xsql\demo\helloworld	D:\O8i\xdk\java\xsql\demo\images
D:\O8i\xdk\java\xsql\demo\insclaim	D:\O8i\xdk\java\xsql\demo\insertxml
D:\O8i\xdk\java\xsql\demo\point	D:\O8i\xdk\java\xsql\demo\svg
D:\O8i\xdk\java\xsql\demo\uri	D:\O8i\xdk\java\xsql\home
D:\O8i\xdk\java\xsql\images	D:\O8i\xdk\lib
D:\O8i\xdk\plsql	D:\O8i\xdk\plsql\demo
D:\O8i\xdk\plsql\parser	D:\O8i\xdk\plsql\parser\bin

Table F-8: LDAS II Oracle 81 Directory Structure

F.7 LDAS II Default Oracle Service Status

Name	Startup Type
OracleO8iAgent	Manual
OracleO8iClientCache	Manual
OracleO8iDataGatherer	Manual
OracleO8iHTTPServer	Manual
OracleO8iPagingServer	Manual
OracleO8iTNSListener	Automatic
OracleServiceLDAS	Automatic

Table F-9: LDAS II Default Oracle Service Status Table

F.8 LDAS II Listener.ORA File Listing

```
# LISTENER.ORA Network Configuration File: D:\O8i\network\admin\listener.ora
# Generated by Oracle configuration tools.

LISTENER =
  (DESCRIPTION_LIST =
```

```
    (DESCRIPTION =
      (ADDRESS_LIST =

        (ADDRESS = (PROTOCOL = IPC)(KEY = EXTPROC0))
      )
      (ADDRESS_LIST =
        (ADDRESS = (PROTOCOL = TCP)(HOST = 15master_c1)(PORT = 1521))
      )
    )
    (DESCRIPTION =
      (PROTOCOL_STACK =
        (PRESENTATION = GIOP)
        (SESSION = RAW)
      )
      (ADDRESS = (PROTOCOL = TCP)(HOST = 15master_c1)(PORT = 2481))
    )
  )

SID_LIST_LISTENER =
  (SID_LIST =
    (SID_DESC =
      (SID_NAME = PLSExtProc)
      (ORACLE_HOME = D:\O8i)
      (PROGRAM = extproc)
    )
    (SID_DESC =
      (GLOBAL_DBNAME = LDAS)
      (ORACLE_HOME = D:\O8i)
      (SID_NAME = LDAS)
    )
  )
```

F.9 LDAS II SQLNet.ORA File Listing

```
# SQLNET.ORA Network Configuration File: D:\O8i\network\admin\sqlnet.ora
# Generated by Oracle configuration tools.

SQLNET.AUTHENTICATION_SERVICES= (NTS)

NAMES.DIRECTORY_PATH= (TNSNAMES, ONAMES, HOSTNAME)
```

F.10 LDAS II TNSNames.ORA File Listing

```
# TNSNAMES.ORA Network Configuration File: D:\O8i\network\admin\tnsnames.ora
# Generated by Oracle configuration tools.

LDAS =
  (DESCRIPTION =
    (ADDRESS_LIST =
      (ADDRESS = (PROTOCOL = TCP)(HOST = 15master_c1)(PORT = 1521))
    )
```

```
    (CONNECT_DATA =
      (SERVICE_NAME = LDAS)
    )
  )

INST1_HTTP =
  (DESCRIPTION =
    (ADDRESS_LIST =
      (ADDRESS = (PROTOCOL = TCP)(HOST = 15master_c1)(PORT = 1521))
    )
    (CONNECT_DATA =
      (SERVER = SHARED)
      (SERVICE_NAME = LDAS)
      (PRESENTATION = http://admin)
    )
  )

EXTPROC_CONNECTION_DATA =
  (DESCRIPTION =
    (ADDRESS_LIST =
      (ADDRESS = (PROTOCOL = IPC)(KEY = EXTPROC0))
    )
    (CONNECT_DATA =
      (SID = PLSExtProc)
      (PRESENTATION = RO)
    )
  )
```

F.11 LDAS II Init.ORA File Listing

O7_DICTIONARY_ACCESSIBILITY	boolean TRUE
active_instance_count	integer
always_anti_join	string NESTED_LOOPS
always_semi_join	string standard
aq_tm_processes	integer 0
audit_trail	string NONE
background_core_dump	string partial
background_dump_dest	string D:\O8i\admin\LDAS\bdump
backup_tape_io_slaves	boolean FALSE
bitmap_merge_area_size	integer 1048576
blank_trimming	boolean FALSE
buffer_pool_keep	string
buffer_pool_recycle	string
commit_point_strength	integer 1
compatible	string 8.1.0
control_file_record_keep_time	integer 7
control_files	string D:\O8i\oradata\LDAS\control01.ctl, D:\O8i\oradata\LDAS\control02.ctl, D:\O8i\oradata\LDAS\control03.ctl
core_dump_dest	string %ORACLE_HOME%\RDBMS\TRACE
cpu_count	integer 1
create_bitmap_area_size	integer 8388608
cursor_sharing	string EXACT
cursor_space_for_time	boolean FALSE
db_block_buffers	integer 4459
db_block_checking	boolean FALSE
db_block_checksum	boolean FALSE
db_block_lru_latches	integer 1
db_block_max_dirty_target	integer 4459
db_block_size	integer 8192
db_domain	string
db_file_direct_io_count	integer 64
db_file_multiblock_read_count	integer 8
db_file_name_convert	string
db_files	integer 1024
db_name	string
db_writer_processes	integer 1
dblink_encrypt_login	boolean FALSE
dbwr_io_slaves	integer 0
disk_asynch_io	boolean TRUE
distributed_transactions	integer 500

Table F-10: LDAS II Init.ORA File Listing

dml_locks	integer 748
enqueue_resources	integer 1792
event	string
fast_start_io_target	integer 4459
fast_start_parallel_rollback	string LOW
fixed_date	string
gc_defer_time	integer 10
gc_files_to_locks	string
gc_releasable_locks	integer 0
gc_rollback_locks	string 0-128=32!8REACH
global_names	boolean TRUE
hash_area_size	integer 131072
hash_join_enabled	boolean TRUE
hash_multiblock_io_count	integer 0
hi_shared_memory_address	integer 0
hs_autoregister	boolean TRUE
ifile	file
instance_groups	string
instance_name	string LDAS
instance_number	integer 0
java_max_sessionspace_size	integer 0
java_pool_size	string 20971520
java_soft_sessionspace_limit	integer 0
job_queue_interval	integer 10
job_queue_processes	integer 4
large_pool_size	string 614400
license_max_sessions	integer 0
license_max_users	integer 0
license_sessions_warning	integer 0
lm_locks	integer 12000
lm_ress	integer 6000
local_listener	string
lock_name_space	string
lock_sga	boolean FALSE
log_archive_dest	string
log_archive_dest_1	string
log_archive_dest_2	string
log_archive_dest_3	string
log_archive_dest_4	string
log_archive_dest_5	string
log_archive_dest_state_1	string enable
log_archive_dest_state_2	string enable

Table F-10: LDAS II Init.ORA File Listing

log_archive_dest_state_3	string enable
log_archive_dest_state_4	string enable
log_archive_dest_state_5	string enable
log_archive_duplex_dest	string
log_archive_format	string ARC%S.%T
log_archive_max_processes	integer 1
log_archive_min_succeed_dest	integer 1
log_archive_start	boolean FALSE
log_archive_trace	integer 0
log_buffer	integer 32768
log_checkpoint_interval	integer 10000
log_checkpoint_timeout	integer 1800
log_checkpoints_to_alert	boolean FALSE
log_file_name_convert	string
max_commit_propagation_delay	integer 700
max_dump_file_size	string 10240
max_enabled_roles	integer 30
max_rollback_segments	integer 37
mts_circuits	integer 170
mts_dispatchers	string (PROTOCOL=TCP)(PRE=oracle.aurora.server.SGiopServer)
mts_listener_address	string
mts_max_dispatchers	integer 5
mts_max_servers	integer 20
mts_multiple_listeners	boolean FALSE
mts_servers	integer 1
mts_service	string LDAS
mts_sessions	integer 165
nls_calendar	string
nls_comp	string
nls_currency	string
nls_date_format	string
nls_date_language	string
nls_dual_currency	string
nls_iso_currency	string
nls_language	string AMERICAN
nls_numeric_characters	string
nls_sort	string
nls_territory	string AMERICAN
nls_time_format	string
nls_time_tz_format	string
nls_timestamp_format	string

Table F-10: LDAS II Init.ORA File Listing

nls_timestamp_tz_format	string
object_cache_max_size_percent	integer 10
object_cache_optimal_size	integer 102400
open_cursors	integer 300
open_links	integer 4
open_links_per_instance	integer 4
ops_interconnects	string
optimizer_features_enable	string 8.1.7
optimizer_index_caching	integer 0
optimizer_index_cost_adj	integer 100
optimizer_max_permutations	integer 80000
optimizer_mode	string CHOOSE
optimizer_percent_parallel	integer 0
oracle_trace_collection_name	string
oracle_trace_collection_path	string %ORACLE_HOME%\OTRACE\ADMIN\CDF\
oracle_trace_collection_size	integer 5242880
oracle_trace_enable	boolean FALSE
oracle_trace_facility_name	string oracled
oracle_trace_facility_path	string %ORACLE_HOME%\OTRACE\ADMIN\FDF\
os_authent_prefix	string
os_roles	boolean FALSE
parallel_adaptive_multi_user	boolean FALSE
parallel_automatic_tuning	boolean FALSE
parallel_broadcast_enabled	boolean FALSE
parallel_execution_message_size	integer 2148
parallel_instance_group	string
parallel_max_servers	integer 5
parallel_min_percent	integer 0
parallel_min_servers	integer 0
parallel_server	boolean FALSE
parallel_server_instances	integer 1
parallel_threads_per_cpu	integer 2
partition_view_enabled	boolean FALSE
plsql_v2_compatibility	boolean FALSE
pre_page_sga	boolean FALSE
processes	integer 150
query_rewrite_enabled	boolean FALSE
query_rewrite_integrity	string enforced
rdbms_server_dn	string
read_only_open_delayed	boolean FALSE
recovery_parallelism	integer 0

Table F-10: LDAS II Init.ORA File Listing

remote_dependencies_mode	string TIMESTAMP
remote_login_passwordfile	string EXCLUSIVE
remote_os_authent	boolean FALSE
remote_os_roles	boolean FALSE
replication_dependency_tracking	boolean TRUE
resource_limit	boolean FALSE
resource_manager_plan	string
rollback_segments	string
row_locking	string
serial_reuse	string DISABLE
serializable	boolean FALSE
service_names	string LDAS
session_cached_cursors	integer 0
session_max_open_files	integer 10
sessions	integer 170
shadow_core_dump	string partial
shared_memory_address	integer 0
shared_pool_reserved_size	string 1572864
shared_pool_size	string 31457280
sort_area_retained_size	integer 65536
sort_area_size	integer 65536
sort_multiblock_read_count	integer 2
sql92_security	boolean FALSE
sql_trace	boolean FALSE
sql_version	string NATIVE
standby_archive_dest	string %ORACLE_HOME%\RDBMS
star_transformation_enabled	string FALSE
tape_asynch_io	boolean TRUE
text_enable	boolean FALSE
thread	integer 0
timed_os_statistics	integer 0
timed_statistics	boolean FALSE
tracefile_identifier	string
transaction_auditing	boolean TRUE
transactions	integer 187
transactions_per_rollback_segment	integer 5
use_indirect_data_buffers	boolean FALSE
user_dump_dest	string D:\O8i\admin\LDAS\udump
utl_file_dir	string

Table F-10: LDAS II Init.ORA File Listing

Appendix G

G. LDAS II Workstation Maintenance Procedures

G.1 Procedure for Shutting Down and Starting the LDAS II Oracle Database Service

G.1.1 To Shut Down the Oracle Database Service for v.1.5

1) Go to Task Manager by pressing **CTRL+ALT+DEL.**
2) Click the **New Task** Button
3) Type **CONTROL** in the box provided.
4) After the **Control Panel** comes up, click on the **Administrative Tools** icon.
5) Click on **Services** at the next window.
6) Right click on the appropriate service and choose **Stop**.

G.1.2 To Restart Oracle Service for v.1.5

1) Go to Task Manager by pressing **CTRL+ALT+DEL**.
2) Click the **New Task** Button
3) Type **CONTROL** in the box provided.
4) After the **Control Panel** comes up, click on the **Administrative Tools** icon.
5) Click on **Services** at the next window.
6) Right click on the appropriate service and choose **Start**.

G.2 LDAS II Oracle Database Backup

G.2.1 Administrative Workstation Backup

- The backup process is scheduled at 4:00am daily.
- The backed up files will be transferred through FTP to a remote server (Odin).
- After each backup, the backup status (successful/fail) will be sent to relevant personnel through E-mail automatically.
- In case of network failure, a warning log will be generated automatically on the local machine indicating the reason of failure.
- The workstation will restart automatically at 6:00am.

G.2.2 Pathology Workstation

- The backup process is scheduled at 4:00am daily.
- The backed up files will be saved to the local backup zip drive, only one day's backup files will be saved (the zip disk has limited capacity).
- In case of backup failure, a warning log will be generated automatically on the local machine.
- The workstation will restart at 6:00am daily.

G.3 Virus Definition Upgrade Procedure

1) Press **CTRL+ALT+DEL**.
2) Click on **Task Manager**.
3) Select **LDASII v1.5** from the list and click **End Task**.

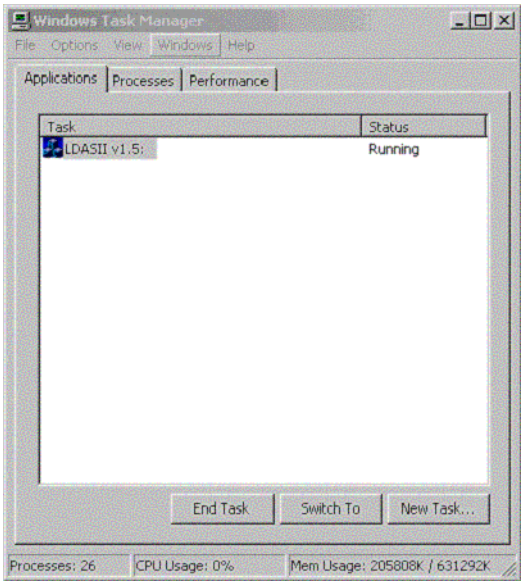

Figure G-1 Windows Task Manager

4) Click **New Task**.

5) Type **cmd** and click **OK**.

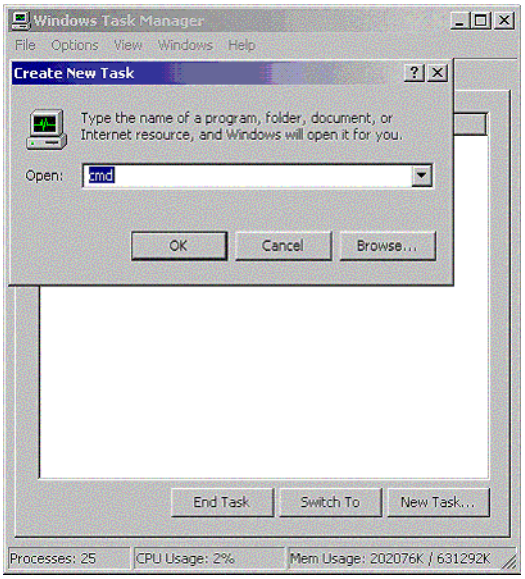

Figure G-2 Create New Task Screen

6) Close **Task Manager**.

7) Type **Y:** at the command prompt and press **ENTER**.

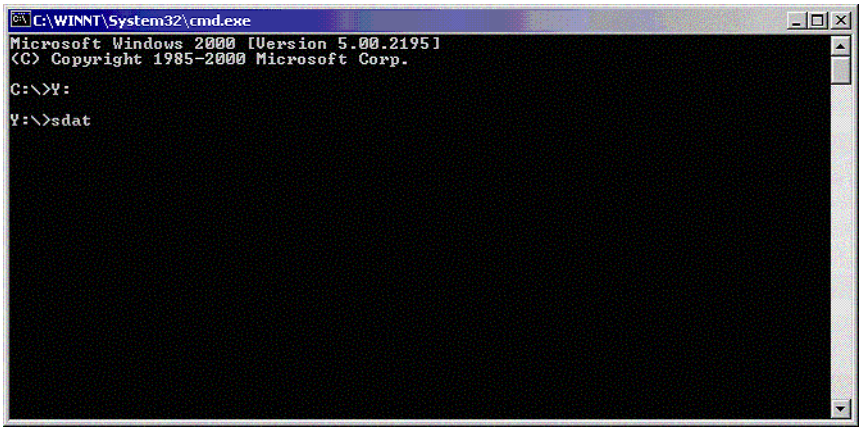

Figure G-3 cmd.exe Screen

8) Type **sdat** and press **ENTER**.

9) In the **SuperDAT** Window, click **Next**.

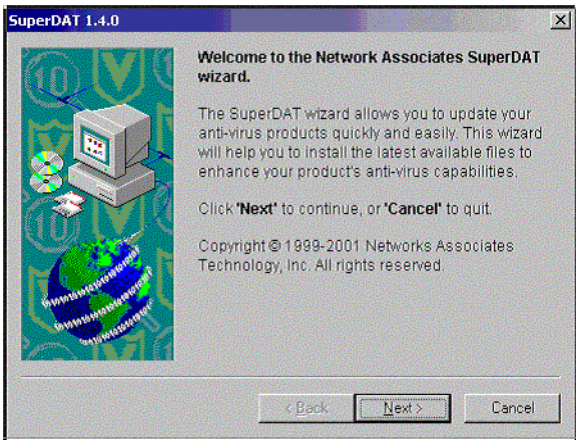

Figure G-4 SuperDat Wizard Screen

10) After the progress bar completes, click **Finish**.

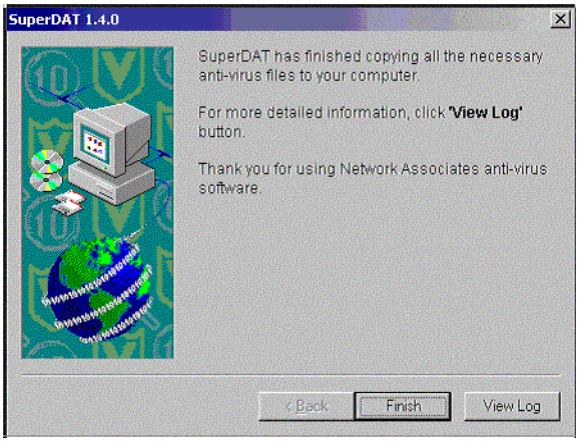

Figure G-5 SuperDat Finished Copy Screen

11) Press **CTRL+ALT+DEL**.

12) Click **Shutdown**.

13) Choose **Shutdown** from the dropdown menu.

14) Click **OK.**

15) Restart the system.

G.4 Running CHKDSK under LDAS II and Windows 2000 Professional

1) With LDAS running, press **CTRL+ALT+DEL** and bring up Task Manager.

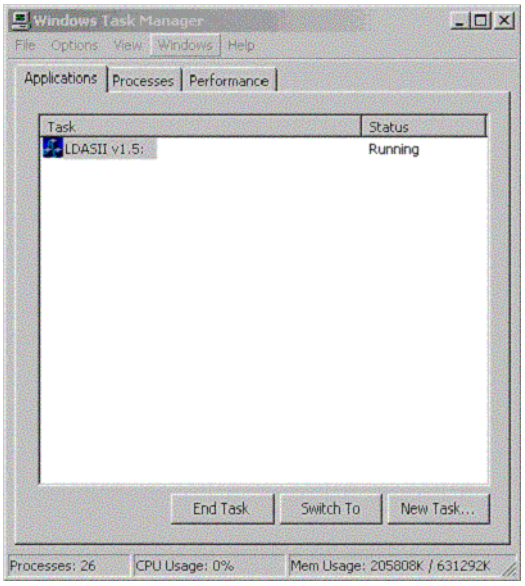

Figure G-6 Windows Task Manager Screen

2) Choose **End Task**.

3) Click on **New Task**.

4) Type **cmd**

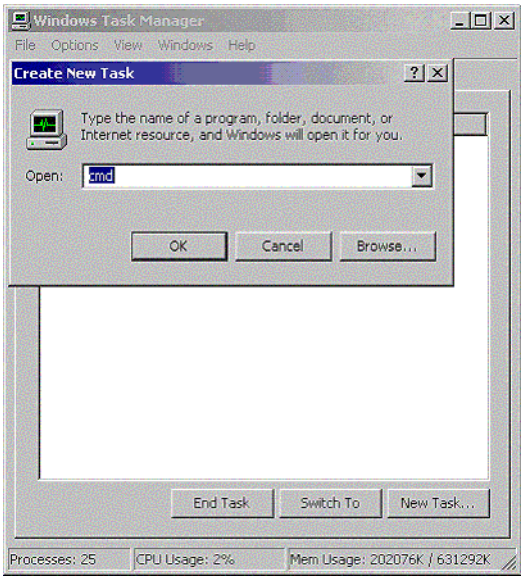

Figure G-7 Create New Task Screen

5) Click **OK**.

6) Close **Task Manager**.

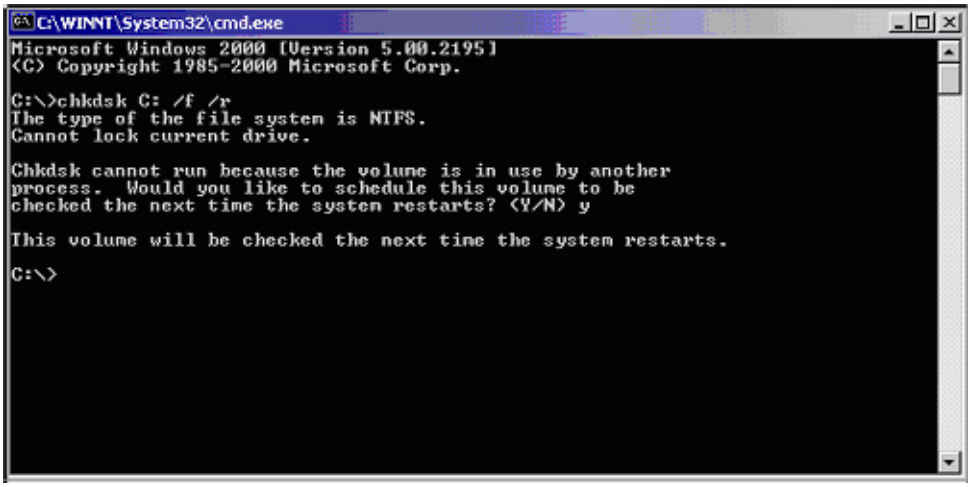

Figure G-8 Run chkdsk Command Screen

7) At the Command Prompt type **chkdsk C: /f /r** and press **ENTER**.

8) Press **Y** when asked if you want to run on restart and press **ENTER**.

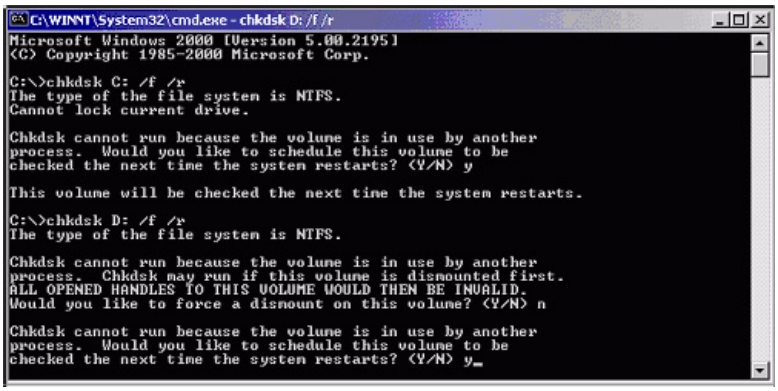

Figure G-9 chkdsk D:/f/r Command Screen

9) Type **chkdsk D: /f /r** and press **ENTER**.

10) At the dismount warning, choose **N** and press **ENTER**.

11) Press **Y** when asked if you want to run on restart and press **ENTER**.

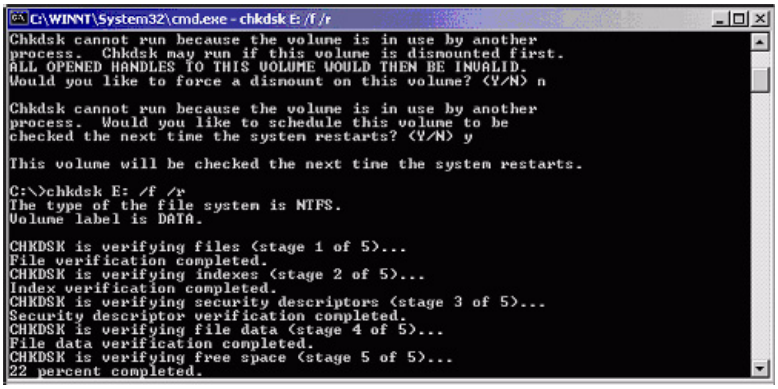

Figure G-10 chkdsk E:/f/r Command Screen

12) Type **chkdsk E: /f /r** and press **ENTER**.

13) Wait for the progress to complete.

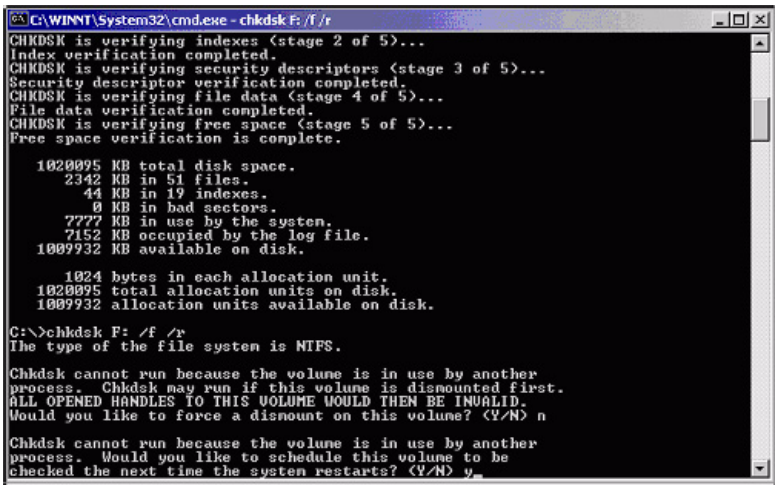

Figure G-11 chkdsk F:/f/r Command Screen

14) Upon completion, type **chkdsk F: /f /r** and press **ENTER**.

15) At the dismount warning, choose **N** and press **ENTER**.

16) Press **Y** when asked if you want to run on restart and press **ENTER**.

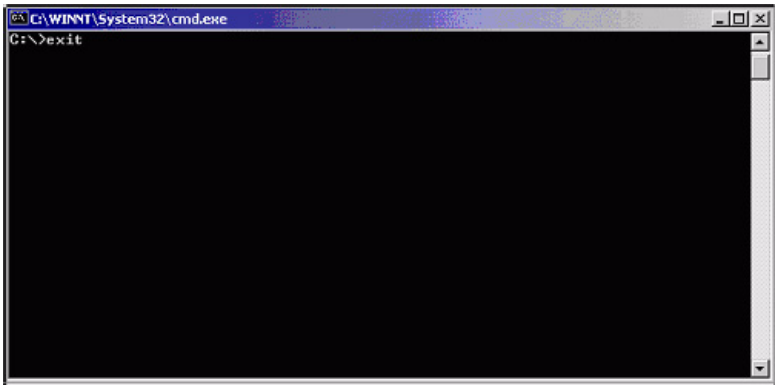

Figure G-12 Exit cmd.exe Screen

17) Type **exit** at the command prompt and press **ENTER**.

18) Press **CTRL+ALT+DEL** and click **Shutdown**.

19) Choose **Shutdown and Reboot** from the following the dropdown menu and click **OK**.

20) Restart the system.

21) Allow ChkDsk to run after reboot. This may take several minutes and cause a few automatic reboots.

G.5 Running Disk Defrag under LDAS II and Windows 2000 Professional

1) From the LDAS II screen, press **CTRL+ALT+DEL**

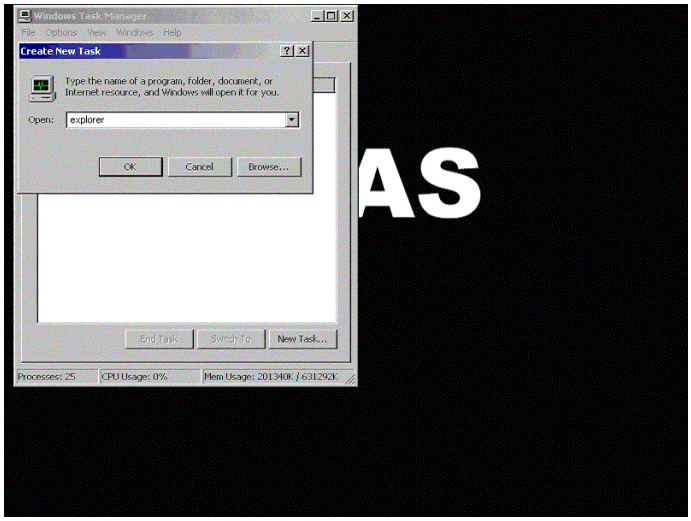

Figure G-13 LDAS II Task Manager Screen

2) Click on **Task Manager**.

3) Click on **End Task** to end LDAS II.

4) Click on **New Task** and type **explorer** in the text box.

5) Minimize the **Task Manager** window.

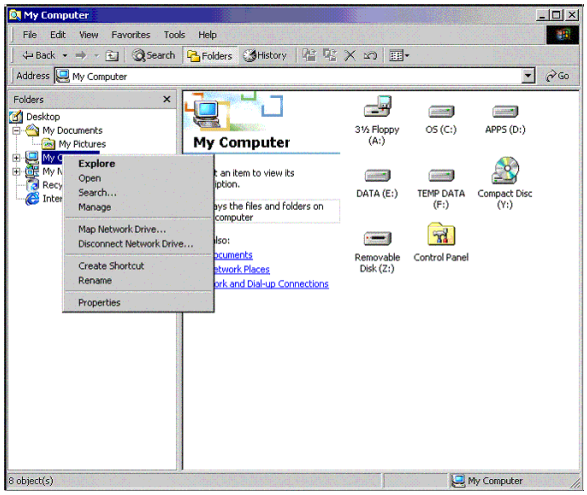

Figure G-14 Explorer - My Computer Screen

6) Right-click on **My Computer** and choose **Manage** from the menu.

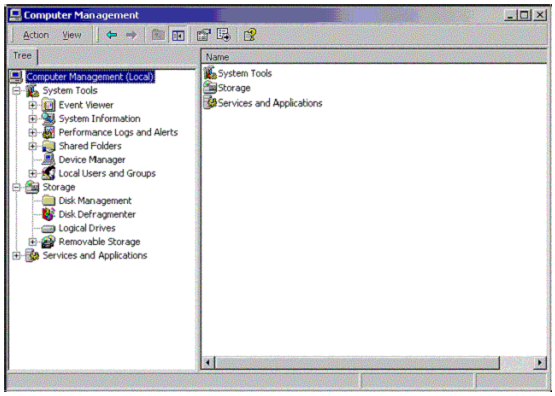

Figure G-15 Computer Management Screen

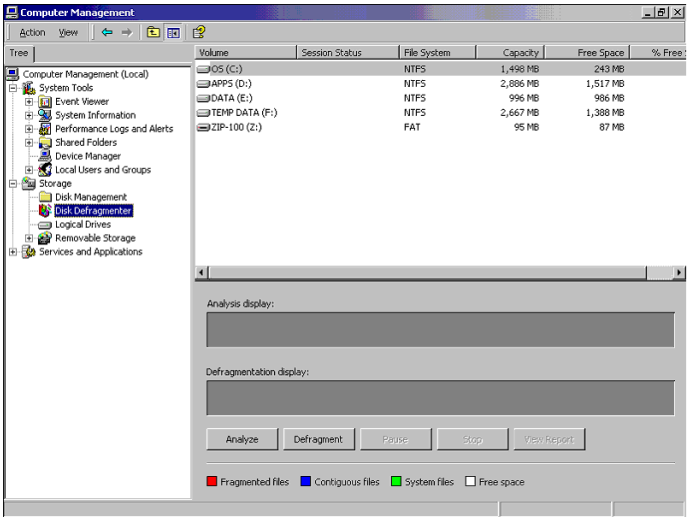

Figure G-16 Choosing Disk Defrag from Computer Management Screen

7) From the **Computer Management** window, click on **Disk Defragmenter**.

8) Highlight **OS (C:)** and click **Defragment** at the bottom of the window.

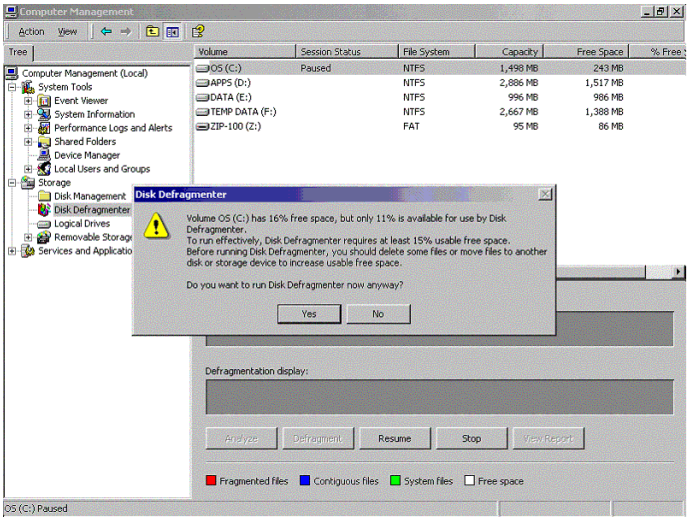

Figure G-17 Disk Defragmenter Confirm Dialog Box

9) Click **Yes** when asked if you want to run Disk Defragmenter anyway.

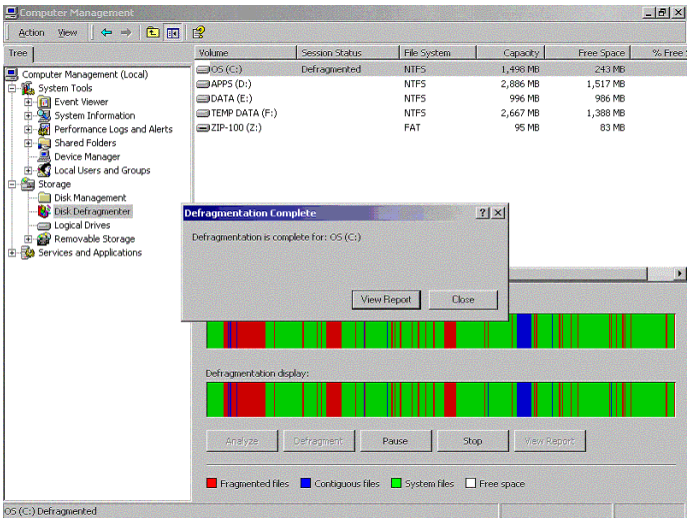

Figure G-18 Defragmentation Complete Screen

10) Wait for Defragmentation Complete window and click **Close**

11) Repeat steps 8-10 for drives **Apps (D:)**, **Data (E:)**, and **Temp Data (F:)**.

12) Click **CTRL+ALT+DEL** and click **Shutdown**.

13) Choose **Shutdown and Restart** from the dropdown menu.

14) Restart the machine.

Appendix H

H. Transaction Set Layouts

H.1 Transaction Set Layout Design

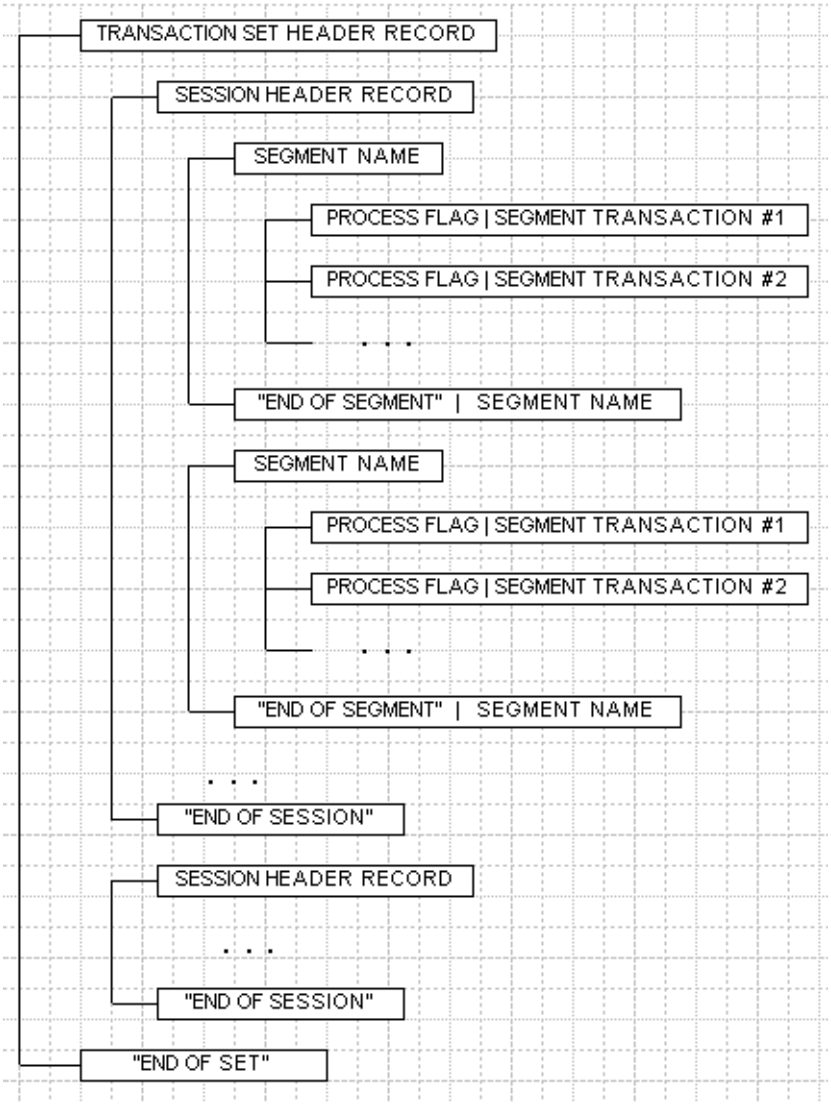

Figure H-1 Transaction Set Layout

H.1.1 Transaction Set Header Record

The first record in any transaction set file for data imported or exported to or from the LDAS II database is a transaction set header record.

H.1.2 Session Header Record

A session header record precedes each data collection session.

H.1.3 Segment Name

Each data segment is prefixed by an abbreviation (up to 16 characters) indicating the type of segment data records follow in the segment. This abbreviated name is indicated by ( ) after the layout name.

H.1.4 Process Flag

The first data field in each segment record is the process flag. The process flag indicates the type of process that should occur:

A Add process.

AA Add with audit.

R Retrieve process (used in combination with change).

RA Retrieve with audit.

C Change (or update) process.

D Delete process.

DA Delete with audit.

H.1.5 Segment Transaction

Each transaction is a variable length ASCII data record. Each of the data field within the segment are delimited by a vertical bar ("|"). Audit trail information is added to the end of each segment when applicable.

H.1.6 "End of Segment"

An "END OF SEGMENT" record terminates each data segment. The segment name is repeated to guard against a missing data condition.

H.1.7 "End of Session"

An "END OF SESSION" record terminates each data collection session.

H.1.8 "End of Set"

An "END OF SET" record terminates each transaction set.

H.2 Raw In-Life Data Transaction Layouts

H.2.1 Audit Trail

CORR_DATE*	CORR_CODE	CORR_NOTE	CORR_OPER

Field	Description
CORR_DATE*	Date and time the correction was made.
CORR_CODE	TDMS code for the correction reason.
CORR_NOTE	Note text to support the correction reason “OTHER”.
CORR_OPER	Operator identification of the operator who made the correction.

Table H-11: Field Descriptions for Data Transaction Audit Trail

* This field includes the date followed by the time of data collection.

H.2.2 Transaction Set Header

SOFTWARE_VER	TRANS_SET	TEST_NUM	TRANS_DATE*	FACILITY_NUM

Field	Description
SOFTWARE_VER	LDAS II software version producing the transaction set.
TRANS_SET	Transaction set number (unique to test).
TEST_NUM	TDMS test number.
TRANS_DATE*	Date of the data collection session.
FACILITY_NUM	Number associated with the facility transmitting the data.

Table H-12: Transaction Set Field Descriptions

* This field includes the date followed by the time of data collection.

H.2.3 Session Header

"SESSION"	**SESSION_DATE***	**TERM_NUM**

Field	Description
"SESSION"	The word "SESSION".
SESSION_DATE*	Date of the data collection session.
TERM_NUM	Terminal number of the machine used for data collection.

Table H-13: Session Field Descriptions

* This field includes the date followed by the time of data collection.

H.2.4 Animal Allocation/Transfer (ANIMAL ALLOC)

CAGE_NUM	**ANIMAL_NUM**	**TRANS_FLAG**	**ALLOC_DATE***	**ALLOC_OPER**

Field	Description
CAGE_NUM	Cage number.
ANIMAL_NUM	Animal allocated (or transferred) to this cage.
TRANS_FLAG	Animal transfer flag T = Animal 'Transfer' transaction. (No longer used.) A = Animal 'Allocation' transaction.
ALLOC_DATE	Animal allocation date.
ALLOC_OPER	Operator assigning animal to cage.

Table H-14: Animal ALLOC Field Descriptions

* This field includes the date followed by the time of data collection.

H.2.5 Animal Note (ANIMAL NOTE)

ANIMAL_NUM	NOTE_DATE*	NOTE_OPER	NOTE_MANUAL	NOTE_TEXT

Field	Description
ANIMAL_NUM	Animal identification number (unique within a test).
NOTE_DATE*	Animal note date.
NOTE_OPER	Animal note operator identification.
NOTE_MANUAL	Flag indicating whether the note was entered manually. M = Manual entry (otherwise blank).
NOTE_TEXT	Free text animal note (up to 80 characters).

Table H-15: Animal Note Field Descriptions

* This field includes the date followed by the time of data collection.

H.2.6 Animal Observation (ANIMAL OBS)

ANIMAL_NUM	CLNOBS_NUM	OBS_DATE*	CLNOBS_SITE	OBS_OPER

OBS_MANUAL	SIZE	COUNT

Field	Description
ANIMAL_NUM	Animal identification number (unique within a test).
CLNOBS_NUM	Clinical sign.
OBS_DATE*	Date of animal observation.
CLNOBS_SITE	Site where the clinical sign was found.
OBS_OPER	Operator entering the animal observation.
OBS_MANUAL	Animal observation manual data entry flag. M = Manual entry (otherwise blank).
SIZE	Size qualifier.
COUNT	Count qualifier.

Table H-16: Animal Obs Field Descriptions

* This field includes the date followed by the time of data collection.

H.2.7 Animal Removal (ANIMAL REMOVAL)

ANIMAL_NUM	REMVL_OPER	REMVL_DATE*	REMVL_MANUAL

REMVL_REASON	WGT_MANUAL	WGT_STATUS	WEIGHT

Field	Description
ANIMAL_NUM	Animal identification number (unique within a test).
REMVL_OPER	Animal removal operator identification.
REMVL_DATE*	Animal removal date.
REMVL_MANUAL	Flag indicating whether the animal removal was entered manually. M = Manual entry (otherwise blank).
REMVL_REASON	Reason for removal code.
WGT_MANUAL	Removal weight manual data entry flag. M = Manual entry (otherwise blank).
WGT_STATUS	Removal weight status code.
WEIGHT	Animal removal weight.

Table H-17: Animal Removal Field Descriptions

* This field includes the date followed by the time of data collection.

H.2.8 Removal Observation (REMOVAL OBS)

ANIMAL_NUM	CLNOBS_NUM	CLNOBS_SITE	OBS_MANUAL	SIZE	COUNT

Field	Description
ANIMAL_NUM	Animal identification number (unique within a test).
CLNOBS_NUM	Clinical observation code.
CLNOBS_SITE	Site where clinical sign occurs.
OBS_MANUAL	Flag indicating whether the removal observation was entered manually. M = Manual entry (otherwise blank).
SIZE	Size qualifier.
COUNT	Count qualifier.

Table H-18: Removal Observation Field Descriptions

* This field includes the date followed by the time of data collection.

H.2.9 Animal Weight (ANIMAL WEIGHT)

ANIMAL_NUM	WGT_DATE*	WGT_OPER	WGT_MANUAL	WEIGHT	WGT_STATUS

Field	Description
ANIMAL_NUM	Animal identification number (unique within a test).
WGT_DATE*	Date of animal weight data collection.
WGT_OPER	Operator entering the animal weight.
WGT_MANUAL	Flag indicating whether the animal weight was entered manually. M = Manual entry (otherwise blank).
WEIGHT	Animal weight (in decigrams).
WGT_STATUS	Animal weight status number.

Table H-19: Animal Weight Field Descriptions

* This field includes the date followed by the time of data collection.

H.2.10 Bottle Weight (BOTTLE WEIGHT)

CAGE_NUM	WGT_TYPE	WGT_DATE*	WGT_OPER

WGT_MANUAL	WEIGHT	WGT_STATUS	WGT_MANUAL

Field	Description
CAGE_NUM	Cage number.
WGT_TYPE	Indicates the type of bottle weight. F = Full bottle weight. U= Used bottle weight.
WGT_DATE*	Date the bottle was weighed.
WGT_OPER	Operator entering the bottle weight.
WGT_MANUAL	Flag indicating whether the bottle weight was entered manually. M = Manual entry (otherwise blank).
WEIGHT	Weight of the bottle (in decigrams).
WGT_STATUS	Weight status code of the bottle (for used bottle weight only).

Table H-20: Bottle Weight Field Descriptions

* This field includes the date followed by the time of data collection.

H.2.11 Cage Initialization (CAGE INIT)

CAGE_NUM	TREAT_NUM	PROC_NUM	AREA_NUM	INIT_DATE*	INIT_OPER	DOSE_DATE

Field	Description
CAGE_NUM	Cage number.
TREAT_NUM	Treatment group number.
PROC_NUM	Procedure action set number.
AREA_NUM	Area or room (location) of cage.
INIT_DATE*	Date the cage was initialized (date animals were assigned).
INIT_OPER	Operator that initialized the cage.
DOSE_DATE	Date that animal dosing is scheduled to begin (this is the date that the experiment begins).

Table H-21: Cage Initialization Field Descriptions

* This field includes the date followed by the time of data collection.

H.2.12 Cage Note (CAGE NOTE)

CAGE_NUM	NOTE_DATE*	NOTE_OPER	NOTE_MANUAL	NOTE_TEXT

Field	Description
CAGE_NUM	Cage number.
NOTE_DATE*	Date the cage note was entered.
NOTE_OPER	The operator who entered the cage note.
NOTE_MANUAL	Flag indicating whether the note was entered manually. M = Manual entry (otherwise blank).
NOTE_TEXT	Free text cage note (up to 80 characters).

Table H-22: Cage Note Field Descriptions

* This field includes the date followed by the time of data collection.

H.2.13 Balance Calibration (CALIBRATION)

BALANCE_NUM	WEIGHT_SEQ	CALI_DATE*	CALI_WGT	CALI_OPER	CALI_MANUAL

Field	Description
BALANCE_NUM	Balance Number.
WEIGHT_SEQ	Calibration weight sequence number.
CALI_DATE*	Date of current balance calibration.
CALI_WGT	Actual weight recorded when calibrating the balance.
CALI_OPER	Operator performing the calibration.
CALI_MANUAL	Flag indicating whether the calibration data was entered manually. M = Manual entry (blank otherwise).

Table H-23: Balance Calibration Field Descriptions

* This field includes the date followed by the time of data collection.

H.2.14 Feeder Weight (FEEDER WEIGHT)

CAGE_NUM	WGT_TYPE	WGT_DATE*	WGT_OPER	WGT_MANUAL	WEIGHT	WGT_STATUS

Field	Description
CAGE_NUM	Cage number.
WGT_TYPE	Indicates the type of feeder weight. F = Full feeder weight. U= Used feeder weight.
WGT_DATE*	Date the feeder was weighed.
WGT_OPER	Operator entering the feeder weight.
WGT_MANUAL	Flag indicating whether the feeder weight was entered manually. M = Manual entry (otherwise blank).
WEIGHT	Weight of the feeder (in decigrams).
WGT_STATUS	Weight status code of the feeder (for used bottle weight only).

Table H-24: Feeder Weight Field Descriptions

* This field includes the date followed by the time of data collection.

H.2.15 Test Note (TEST NOTE)

NOTE_DATE*	OPER_NUM	NOTE_TEXT

Field	Description
NOTE_DATE*	Date the test note was entered.
OPER_NUM	The operator who entered the test note.
NOTE_TEXT	Free text test note (up to 80 characters).

Table H-25: Test Note Field Descriptions

* This field includes the date followed by the time of data collection.

H.2.16 Treatment Group Note (TREATMENT NOTE)

TREAT_GROUP	NOTE_DATE*	OPER_NUM	NOTE_TEXT

Field	Description
TREAT_GROUP	Treatment group number.
NOTE_DATE*	Date the treatment group note was entered.
OPER_NUM	The operator who entered the treatment group note.
NOTE_TEXT	Free text treatment group note (up to 160 characters).

Table H-26: Treatment Group Note Field Descriptions

* This field includes the date followed by the time of data collection.

H.3 Raw Pathology Data Transaction Layouts

H.3.1 Animal Not Examined Microscopically (NOT EXAMINED)

ANIMAL_NUM	NOEXAM_DATE*	NOEXAM_OPER	NOEXAM_PATH

Field	Description
ANIMAL_NUM	Animal identification number (unique within test).
NOEXAM_DATE*	Date the “Not Examined” flag was entered.
NOEXAM_OPER	The operator who entered the “Not Examined” flag.
NOEXAM_PATH	Pathologist determining that the animal will not be examined microscopically.

Table H-27: Animal Not Examined Microscopically Field Descriptions

* This field includes the date followed by the time of data collection.

H.3.2 Histology (HISTOLOGY)

ANIMAL_NUM	HIST_NUM	HIST_OPER	HIST_DATE*	HIST_PATH

Field	Description
ANIMAL_NUM	Animal identification number (unique within test).
HIST_NUM	Animal histology number.
HIST_OPER	The operator who entered the histology number.
HIST_DATE*	Date the histology number was entered.
HIST_PATH	Pathologist responsible for assignment of the histology number.

Table H-28: Histology Field Descriptions

* This field includes the date followed by the time of data collection.

H.3.3 Lock Date (LOCK DATE)

LOCK_DATE*	**ENTRY_DATE***

Field	Description
LOCK_DATE*	Pathology data study (audit) lock date.
ENTRY_DATE*	The date the pathology lock date was entered by NTP.

Table H-29: Lock Date Field Descriptions

* This field includes the date followed by the time of data collection.

H.3.4 Micropathology Animal Note (MICRO ANML NOTE)

ANIMAL_NUM	**NOTE_DATE***	**NOTE_OPER**	**NOTE_PATH**	**COD_FLAG**	**NOTE_TEXT**

Field	Description
ANIMAL_NUM	Animal identification number (unique within a test).
NOTE_DATE*	Date the animal note was collected.
NOTE_OPER	Animal note operator identification.
NOTE_PATH	Pathologist entering the animal note.
COD_FLAG	Flag indicating cause of death. P = Note is related to the ‘Primary cause of death’ (otherwise blank).
NOTE_TEXT	Free text animal note (up to 160 characters).

Table H-30: Micropathology Animal Note Field Description

* This field includes the date followed by the time of data collection.

H.3.5 Micropathology Observation (MICRO OBS)

ANIMAL_NUM	TISSUE_NUM	OBS_DATE*	MORPH_NUM	PRIMARY_SITE

OPER_NUM	PATH_NUM	COD_FLAG

TGL_TEXT	SITE_NUM1	SITE_NUM2	SITE_NUM3	QUAL_NUM1

QUAL_NUM3	QUAL_NM3	QUAL_NUM4

Field	Description
ANIMAL_NUM	Animal identification number.
TISSUE_NUM	Animal tissue code.
OBS_DATE*	Date of the micro observation data entry.
MORPH_NUM	Morphology code.
PRIMARY_SITE	Primary site code for a Metastatic morphology.
OPER_NUM	Operator entering the observation.
PATH_NUM	Pathologist performing the micropathology observation.
COD_FLAG	Flag indicating whether this condition contributed to the death of the animal (for natural death, moribund sacrifice). P = Condition was the 'Primary cause of death'. C = Condition 'Contributing cause of death'. (Otherwise blank.)
TGL_TEXT	Trace Gross Lesion text.
SITE_NUM1	First site code describing the location of the morphology.
SITE_NUM2	Second site code describing the location of the morphology.
SITE_NUM3	Third site code describing the location of the morphology.
QUAL_NUM1	First qualifier code describing the morphology.
QUAL_NUM2	Second qualifier code describing the morphology.
QUAL_NUM3	Third qualifier code describing the morphology.
QUAL_NUM4	Fourth qualifier code describing the morphology.

Table H-31: Micropathology Observation Field Descriptions

* This field includes the date followed by the time of data collection.

H.3.6 Micropathology Tissue Status (MICRO TISS STAT)

ANIMAL_NUM	TISSUE_NUM	STATUS_NUM	OPER_NUM	PATH_NUM	STATUS_DATE*

Field	Description
ANIMAL_NUM	Animal identification number (unique within a test).
TISSUE_NUM	Animal tissue code.
STATUS_NUM	Tissue status code.
OPER_NUM	Operator entering the tissue status code.
PATH_NUM	Pathologist making the tissue status observation.
STATUS_DATE*	Date the tissue status was entered.

Table H-32: Micropathology Tissue Status Field Descriptions

* This field includes the date followed by the time of data collection.

H.3.7 Tissue Note (TISSUE NOTE)

ANIMAL_NUM	TISSUE_NUM	NOTE_DATE*	NOTE_OPER	NOTE_PATH	NOTE_TEXT

Field	Description
ANIMAL_NUM	Animal identification number (unique within a test).
TISSUE_NUM	Tissue number.
NOTE_DATE*	Date the tissue note was entered.
NOTE_OPER	The operator who entered the tissue note.
NOTE_PATH	Pathologist entering the tissue note.
NOTE_TEXT	Free text tissue note (up to 160 characters).

Table H-33: Tissue Note Field Descriptions

* This field includes the date followed by the time of data collection.

H.3.8 Uncertain Cause of Death (UNCERTAIN COD)

ANIMAL_NUM	COD_DATE*	COD_OPER	COD_PATH

Field	Description
ANIMAL_NUM	Animal identification number (unique within a test).
COD_DATE*	Date that the uncertain cause of death was entered.
COD_OPER	Operator entering the uncertain cause of death.
COD_PATH	Pathologist entering the uncertain cause of death.

Table H-34: Uncertain Cause of Death Field Descriptions

* This field includes the date followed by the time of data collection.

H.4 Raw Facility Data Transaction Layouts

H.4.1 Operator (OPERATOR)

OPER_NUM	OPER_NAME	START_DATE	STOP_DATE

Field	Description
OPER_NUM	Operator number.
OPER_NAME	Operator name.
START_DATE	Date this operator number became active.
STOP_DATE	Date this operator number became inactive.

Table H-35: Operator Field Descriptions

This transaction set may go up to or down from the TDMS system.

H.4.2 Operator Assigned To Test (OPERATOR ASSIGN)

OPER_NUM	OPER_NAME	OPER_TYPE	TEST_NUM

Field	Description
OPER_NUM	Operator number.
OPER_NAME	Operator name.
OPER_TYPE	Operator type code**.
TEST_NUM	Test number that operator gets pathology access to.

Table H-36: Operator Assigned To Test Field Descriptions

**** Operator Type**

S = Security Administrator

D = Data Administrator

T = Technician

P = Pathologist

X = Toxicologist

A = Auditor

This transaction set only goes up to the TDMS system from the labs.

H.5 In-Life Protocol Transaction Layouts

H.5.1 Cage (CAGE)

CAGE _NUM	AREA _NUM	RACK _NUM	ROW	COLUMN	SIDE_ FLAG	PROC _NUM	TREAT _NUM	NUM_ANIMALS

Field	Description
CAGE_NUM	Cage number.
AREA_NUM	Area (or room) location of cage.
RACK_NUM	Rack number.
ROW	Row number

Table H-37: Cage Field Descriptions

COLUMN	Column number.
SIDE_FLAG	Side flag. A = Side “A” of rack. B = Side “B” of rack.
PROC_NUM	Procedure action set number.
TREAT_NUM	Treatment group number.
NUM_ANIMALS	Number of animals assigned to this cage.

Table H-37: Cage Field Descriptions

H.5.2 Calibration Weight (CALIBRATION WGT)

WEIGHT_SEQ	**WEIGHT_TEXT**	**MIN_WEIGHT**	**MAX_WEIGHT**

Field	Description
WEIGHT_SEQ	Calibration weight sequence number.
WEIGHT_TEXT	Text describing the calibration weight.
MIN_WEIGHT	Minimum acceptable weight in decigrams for the calibration weight.
MAX_WEIGHT	Maximum acceptable weight in decigrams for the calibration weight.

Table H-38: Calibration Weight Field Descriptions

H.5.3 Clinical Sign Groups (CLNOBS GROUP)

CLINOBS_GROUP	**SHORT_TEXT**	**GROUP_TEXT**

Field	Description
CLINOBS_GROUP	Clinical sign group number.
SHORT_TEXT	Abbreviated group text.
GROUP_TEXT	Clinical sign group text.

Table H-39: Clinical Sign Groups Field Descriptions

H.5.4 Clinical Signs (CLINICAL SIGNS)

CLNOBS_NUM	CLNOBS_GROUP	CLNOBS_TEXT	SHORT_TEXT	CLNOBS_SEX

Field	Description
CLNOBS_NUM	Clinical sign number.
CLNOBS_GROUP	Group to which the clinical sign belongs.
CLNOBS_TEXT	Clinical sign text.
SHORT_TEXT	Abbreviated clinical sign text.
CLNOBS_SEX	Flag indicating whether the clinical sign is sex specific. M = Male. F = Female. (Otherwise blank)

Table H-40: Clinical Signs Field Descriptions

H.5.5 Correction Reason (CORRECTION)

REASON_CODE	REASON_TEXT

Field	Description
REASON_CODE	Correction reason (entered as part of the audit trail).
REASON_TEXT	Text associated with correction reason code.

Table H-41: Correction Reason Field Descriptions

H.5.6 In-Life Qualifier Groups (QUAL GROUP)

EIQUAL_GROUP	SHORT_TEXT	GROUP_TEXT

Field	Description
EIQUAL_GROUP	In-Life qualifier group number.
SHORT_TEXT	Abbreviated group text.

Table H-42: In-Life Qualifier Groups Field Descriptions

GROUP_TEXT	Qualifier group text.

Table H-42: In-Life Qualifier Groups Field Descriptions

* This field includes the date followed by the time of data collection.

H.5.7 In-Life Qualifiers (IN-LIFE QUAL)

EIQUAL_NUM	**EIQUAL_GROUP**	**SHORT_TEXT**	**QUAL_TEXT**

Field	Description
EIQUAL_NUM	Qualifier code.
EIQUAL_GROUP	Qualifier group to which the In-Life qualifier belongs.
SHORT_TEXT	Abbreviated qualifier text.
QUAL_TEXT	Text associated with the qualifier number.

Table H-43: In-Life Qualifiers Field Descriptions

* This field includes the date followed by the time of data collection.

H.5.8 In-Life Sites (IN-LIFE SITES)

SITE_NUM	**SITE_TEXT**	**SHORT_TEXT**	**SITE_SEX**

Field	Description
SITE_NUM	Site code.
SITE_TEXT	Text associated with In-Life sites.
SHORT_TEXT	Abbreviated site text.
SITE_SEX	Flag indicating sex. M = Male. F = Female. (Otherwise blank)

Table H-44: In-Life Sites Field Descriptions

H.5.9 In-Life Term Definitions (INLIFE TERMS)

TERM_NUM	DEFINE_TEXT

Field	Description
TERM_NUM	Term number.
DEFINE_TEXT	Definition of the term (up to 200 characters).

Table H-45: In-Life Term Definitions Field Descriptions

H.5.10 Preparation (PREPARATION)

PREP _NUM	COMP _SEQ	COMP _TEXT	COMP_PERCENT	COMP _MEAS	ROLE _TEXT	ROUTE _NUM	ROUTE _TEXT

Field	Description
PREP_NUM	Preparation number.
COMP_SEQ	Compound sequence number.
COMP_TEXT	Compound text associated with this sequence number.
COMP_PERCENT	Percent of compound contained in this preparation.
COMP_MEAS	Unit of measure for the compound percentage. WW = Weight of compound / weight of preparation. VV = Volume of compound / volume of preparation. WV = Weight of compound / volume of preparation. VW = Volume of compound / weight of preparation.
ROLE_TEXT	Text associated with the role of compound in this preparation.
ROUTE_NUM	Route of administration code.
ROUTE_TEXT	Text associated with the route of administration.

Table H-46: Preparation Field Descriptions

H.5.11 Preparation Associated With Treatment Groups (PREP/TREAT)

TREAT_ NUM	PREP_ NUM	REL_ START	REL_ STOP	DOSE_ VOLUME	DAY_OF_ WEEK	WEEK_ INTRVL	REL_OR_ SPEC

Field	Description
TREAT_NUM	Treatment group number.
PREP_NUM	Preparation number.
REL_START	Preparation start day relative to the first day of dosing.
REL_STOP	Preparation stop day relative to the first day of dosing.
DOSE_VOLUME	Volume of dose used only for gavage and injection studies (measured in thousandths of cc/gram).
DAY_OF_WEEK	Seven-character list representing the days of the week that the preparation is scheduled to be administered.
WEEK_INTRVL	Weekly interval indicator (i.e. “1” means every week).
REL_OR_SPEC	Relative or specific flag indicating whether the day of week fields indicate actual days of the week or days relative to the study start day. R = Relative. S = Specific.

Table H-47: Preparation Associated With Treatment Groups Field Descriptions

H.5.12 Procedure (PROCEDURE)

PROC_ NUM	ACTION_ NUM	ACTION_ TEXT	REL_START	REL_STOP	WEEK_ INTRVL	DAY_OF_ WEEK	REL_OR_ SPEC

Field	Description
PROC_NUM	Procedure set number.
ACTION_NUM	Procedure action number.
ACTION_TEXT	Text associated with this action number.
REL_START	Day to begin this action relative to the study start day.
REL_STOP	Day to end this action relative to the study start day.
WEEK_INTRVL	Weekly interval indicator (i.e. “1” means every week).

Table H-48: Procedure Field Descriptions

DAY_OF_WEEK	Seven-character list representing the days of the week for which this action is scheduled.
REL_OR_SPEC	Relative or specific flag indicating whether the day of week fields indicate actual days of the week or days relative to the study start day. R = Relative. S = Specific.

Table H-48: Procedure Field Descriptions

H.5.13 Qualifier Groups Associated With Clinical Signs (QUAL GRP/CLNOBS)

CLNOBS_NUM	**EIQUAL_GROUP**

Field	Description
CLNOBS_NUM	Clinical sign code.
EIQUAL_GROUP	Number of the qualifier group associated with the clinical sign.

Table H-49: QUAL GRP/CLNOBS Field Description

H.5.14 Removal Actions (REMOVAL ACTIONS)

ACTION_NUM	**REMVL_SEQ**	**ACTION_TEXT**

Field	Description
ACTION_NUM	Procedure action number.
REMVL_SEQ	Removal action sequence number.
ACTION_TEXT	Text associated with this action number.

Table H-50: Removal Actions Field Descriptions

H.5.15 Removal Reason (REMOVAL REASON)

REASON_NUM	REASON_TEXT

Field	Description
REASON_NUM	Reason for removal code.
REASON_TEXT	Reason for removal text.

Table H-51: Removal Reason Field Descriptions

H.5.16 Sites Associated With Clinical Signs (SITE/CLNOBS)

CLNOBS_NUM	EISITE_NUM

Field	Description
CLNOBS_NUM	Clinical sign code.
EISITE_NUM	Site code that is associated with the clinical sign.

Table H-52: Sites Associated With Clinical Signs Field Descriptions

H.5.17 Test (TEST)

TEST_ NUM	HAZARD_T EXT	TEST_ NAME	TYPE_ NUM	TYPE_ TEXT	ROUTE_ TEXT	CONTRACT_ NUM	SUPPLR_ TEXT

CAS_ NUMBER	NTP_ NUMBER	CALI_ NUM	ANML_ SPECIES	SPECIES_ TEXT	FACILITY_ NUM	FACILITY	PRT_ FLAG

Field	Description
TEST_NUM	TDMS experiment/test number.
HAZARD_TEXT	Hazardous material warning text (not required).
TEST_NAME	Name assigned to the test.

Table H-53: Test Field Descriptions

TYPE_NUM	Test type code.
TYPE_TEXT	Text associated with the test type code.
ROUTE_TEXT	Text associated with the primary route of administration code.
CONTRACT_NUM	NTP contract number.
SUPPLR_TEXT	Text associated with the animal supplier code.
CAS_NUMBER	CAS number associated with the primary test chemical.
NTP_NUMBER	NTP “C” number for the experiment.
CALI_NUM	The number of weight taken before a balance calibration is required.
ANML_SPECIES	Species code of the animals used for the test
SPECIES_TEXT	Text associated with the species code.
FACILITY_NUM	Identification number of the facility conducting the test.
FACILITY	Name of the facility conducting the test.
PRT_FLAG	Flag indicating where protocol required tissues are determined. M = Downloaded from TDMS mainframe (Chronic test). L = Set up at the Laboratory (Sub-chronic test). (Blank if not required for test)

Table H-53: Test Field Descriptions

H.5.18 Treatment (TREATMENT)

TREAT_ NUM	**TREAT_ TEXT**	**ROLE_ TEXT**	**TREAT_ SEX**	**STRAIN_ NUM**	**STRAIN_ TEXT**	**SHORT_ TEXT**	**TREAT_ AGE**

WEIGHT_ CURVE	**WEIGHT_ GROUP**	**MIN_ WATER**	**MAX_ WATER**	**MIN_ FOOD**	**MAX_ FOOD**

Field	Description
TREAT_NUM	Treatment group number.
TREAT_TEXT	Text associated with the treatment group number for the test.
ROLE_TEXT	Text associated with the treatment group role code.
TREAT_SEX	Sex flag associated with the treatment group. M = Male. F = Female.
STRAIN_NUM	Strain code of the animals contained in the treatment group.
STRAIN_TEXT	Text associated with the strain code.

Table H-54: Treatment Field Descriptions

SHORT_TEXT	Abbreviated strain text.
TREAT_AGE	Desired age of the animals in the treatment group at the beginning of the test.
WEIGHT_CURVE	Animal weight curve for the treatment group.
WEIGHT_GROUP	The weight group number associated with the treatment group.
MIN_WATER	The minimum allowable average water consumption per animal/day.
MAX_WATER	The maximum allowable average water consumption per animal/day.
MIN_FOOD	The minimum allowable average food consumption per animal/day.
MAX_FOOD	The maximum allowable average food consumption per animal/day.

Table H-54: Treatment Field Descriptions

H.5.19 Weight Curve (WEIGHT CURVE)

WEIGHT_CURVE	START_WEEK	MIN_CHANGE	MAX_CHANGE

Field	Description
WEIGHT_CURVE	Animal weight curve number.
START_WEEK	Week on dose for which minimum and maximum weight change apply.
MIN_CHANGE	Minimum acceptable percentage change in body weight.
MAX_CHANGE	Maximum acceptable percentage change in body weight.

Table H-55: Weight Curve Field Descriptions

Curve Number	Sex	Species
1	Male	Rats
2	Female	Rats
3	Male	Mice
4	Female	Mice

H.5.20 Weight Group (WEIGHT GROUP)

GROUP_NUM	ITEM_NUM	ITEM_TEXT	MIN_WEIGHT	MAX_WEIGHT

Field	Description
GROUP_NUM	Weight group number.
ITEM_NUM	Code for the weighed item.
ITEM_TEXT	Text associated with the weighed item code.
MIN_WEIGHT	Minimum acceptable weight in decigrams for the weighed item.
MAX_WEIGHT	Maximum acceptable weight in decigrams for the weighed item.

Table H-56: Weight Group Field Descriptions

H.5.21 Weight Status (WGT STATUS)

STATUS_NUM	STATUS_TEXT	SHORT_TEXT	STATUS_FLAG

Field	Description
STATUS_NUM	Weight status number.
STATUS_TEXT	Weight status text.
SHORT_TEXT	Abbreviated weight status text.
STATUS_FLAG	Flag indicating status usage. A = Animal weight status. C = Container weight status. R = Removal weight status.

Table H-57: Weight Status Field Descriptions

H.6 Pathology Protocol Transaction Layouts

H.6.1 Anatomical Systems (SYSTEMS)

SYSTEM_NUM	SHORT_TEXT	SYSTEM_TEXT

Field	Description
SYSTEM_NUM	Anatomical system code number.
SHORT_TEXT	Abbreviated system text.
SYSTEM_TEXT	System text.

Table H-58: Anatomical Systems Field Descriptions

H.6.2 Morphology (MORPHOLOGY)

MORPH_NUM	SHORT_TEXT	MORPH_TEXT	GEN_MORPH	SYSTEMIC	METASTATIC

NEOPLASTIC	BEN_MAL	ALL_TISSUE	SEX	SPECIES	FORCED_GROUP

Field	Description
MORPH_NUM	Morphology code.
SHORT_TEXT	Abbreviated text associated with the morphology code.
MORPH_TEXT	Text associated with the morphology code.
GEN_MORPH	Generic morphology type code.
SYSTEMIC	Flag indicating whether the morphology is systemic. S = Systemic (otherwise blank).
METASTATIC	Flag indicating whether the neoplastic morphology has the capability of metastasizing M = Metastatic. N = Non-Metastatic. U = Uncertain.

Table H-59: Morphology Field Descriptions

NEOPLASTIC	Flag indicating whether the morphology is neoplastic. N = Neoplastic (blank otherwise).
BEN_MAL	Flag indicating whether the neoplastic morphology is benign or malignant. B = Benign. M = Malignant. U = Uncertain.
ALL_TISSUE	Flag indicating if the morphology applies to all tissues. A = All tissues (blank otherwise).
SEX	Sex flag indicating if the morphology is sex specific. M = Male only. F = Female only. (Blank if the morphology is not sex specific.)
SPECIES	Species code if the morphology applies only to a specific species (blank if the morphology is not species specific).
FORCED_GROUP	Flag indicating qualification of the morphology. F = Forced qualification using a severity qualifier. N = NOT qualified. Q = May be qualified.

Table H-59: Morphology Field Descriptions

H.6.3 Micropathology Qualifier Groups (MICRO QUAL GRP)

PEQUAL_GROUP	SHORT_TEXT	GROUP_TEXT

Field	Description
PEQUAL_GROUP	Micropathology qualifier group number.
SHORT_TEXT	Abbreviated qualifier group text.
GROUP_TEXT	Qualifier group text.

Table H-60: Micropathology Qualifier Groups Field Descriptions

H.6.4 Micropathology Qualifiers (MICRO QUALIFIER)

PEQUAL_NUM	SHORT_TEXT	QUAL_TEXT	SORT_SEQ	PEQUAL_GROUP

Field	Description
PEQUAL_NUM	Micropathology qualifier code.
SHORT_TEXT	Abbreviated qualifier text field.
QUAL_TEXT	Qualifier text field.
SORT_SEQ	Sequence number to control ordering of multiple qualifiers.
PEQUAL_GROUP	Micropathology qualifier group number.

Table H-61: Micropathology Qualifiers Field Descriptions

H.6.5 Micropathology Sites (MICRO SITES)

SITE_NUM	SITE_TEXT	SHORT_TEXT

Field	Description
SITE_NUM	Micropathology site code.
SITE_TEXT	Site text field.
SHORT_TEXT	Abbreviated site text field.

Table H-62: Micropathology Sites Field Descriptions

H.6.6 Protocol Required Tissues (PROTO REQ TISSUE)

TREAT_ NUM	TISSUE_ NUM	REASON_ NUM	REM_BEG_ DATE	REM_END_ DATE	PRT_ PATH	PRT_ OPER	PRT_ DATE*

Field	Description
TREAT_NUM	Treatment group number. A = All treatment groups.
TISSUE_NUM	Protocol required tissue code.

Table H-63: Protocol Required Tissues Field Descriptions

REASON_NUM	Reason for removal code. A = All removal reasons.
REM_BEG_DATE	Beginning animal removal date.
REM_END_DATE	Ending animal removal date.
PRT_PATH	Pathologist responsible for the protocol required tissues.
PRT_OPER	Operator entering the protocol required tissues.
PRT_DATE*	Date of protocol required tissue data collection.

Table H-63: Protocol Required Tissues Field Descriptions

* This field includes the date followed by the time of data collection.

H.6.7 Qualifier Groups Associated With Morphologies (QUAL GRP MORPH)

MORPH_NUM	**PEQUAL_GROUP**

Field	Description
MORPH_NUM	Morphology code.
PEQUAL_GROUP	Qualifier group number associated with this morphology.

Table H-64: QUAL GRP MORPH Field Descriptions

H.6.8 Tissue (TISSUE)

TISSUE_ NUM	**SHORT_ TEXT**	**TISSUE_ TEXT**	**SEX**	**SPECIES**	**PAIRED_ ORGAN**	**SYSTEM_NUM**

Field	Description
TISSUE_NUM	Animal tissue code.
SHORT_TEXT	Abbreviated tissue text
TISSUE_TEXT	Tissue text field.

Table H-65: Tissue Field Descriptions

SEX	Tissue sex dependency flag. M = Male. F = Female. (Otherwise blank.)
SPECIES	Species-specific code.
PAIRED_ORGAN	Paired organ flag. P = Paired organ (blank otherwise).
SYSTEM_NUM	Anatomical system number associated with this tissue.

Table H-65: Tissue Field Descriptions

* This field includes the date followed by the time of data collection.

H.6.9 Tissue Specific Sites (SITE/TISSUE)

TISSUE_NUM	**SITE_NUM**

Field	Description
TISSUE_NUM	Tissue code number.
SITE_NUM	Site code associated with this tissue.

Table H-66: Tissue Specific Sites Field Descriptions

H.6.10 Tissue Specific Morphologies (TISSUE/MORPH)

TISSUE_NUM	**MORPH_NUM**

Field	Description
TISSUE_NUM	Tissue code number.
MORPH_NUM	Morphology code associated specifically with this tissue.

Table H-67: Tissue Specific Morphologies Field Descriptions

H.6.11 Tissue Status (TISSUE STATUS)

STATUS_NUM	STATUS_TEXT

Field	Description
STATUS_NUM	Tissue status code number.
STATUS_TEXT	Status text.

Table H-68: Tissue Status Field Descriptions

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