IBM Visualization Data Explorer

USEM-EM42-C8

Installation and Configuration Guide

Version 3 Release 1 Modification 4

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USEM-EM42-C8

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Version 3 Release 1 Modification 4

Note!

Before using this information and the product it supports, be sure to read the general information under “Notices” on page v.

Second Edition (September 1997)

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Contents

Notices v
Products, Programs, and Services vi
Trademarks and Service Marks vi
Copyright notices vii

Chapter 1. Trademarks and Service Marks 1

Chapter 2. About this Document 3

Chapter 3. About This Guide 5

Chapter 4. Technical Support 7
4.1 Support from IBM 8
4.2 Support from the Data Explorer User Community 8

Chapter 5. Disk Space Requirements and Tape Specifications 9

Chapter 6. Special Notes for Upgrade Installations 11

Chapter 7. Installing Data Explorer or Data Explorer SMP on an IBM RISC System/6000 13
7.1 Installing on an IBM RISC System/6000 from Tape 15
7.2 Installing on an IBM RISC System/6000 from CD-ROM 16
7.3 Configuring a Data Explorer License for IBM RISC System/6000 17
Note for licensees of IBM Visualization Data Explorer SMP 17
Setting up a Node-locked License for an IBM RISC System/6000 18
Setting up a Concurrent License for an IBM RISC System/6000 18

Chapter 8. Installing Data Explorer on an HP Workstation 19
8.1 Installing on an HP Workstation from Tape 20
8.2 Installing on an HP Workstation from CD-ROM 21
8.3 Configuring a Data Explorer License for an HP Workstation 22
Setting up a Node-locked License for an HP Workstation 23
Setting up a Concurrent License for an HP Workstation 23

Chapter 9. Installing Data Explorer or Data Explorer SMP on a Sun SPARCstation 25
9.1 Installing on a Sun SPARCstation from Tape 26
9.2 Installing on a Sun SPARCstation from CD-ROM 27
9.3 Configuring a Data Explorer License for a Sun SPARCstation 28
Note for licensees of IBM Visualization Data Explorer SMP 29
Setting up a Node-locked License for a Sun SPARCstation 29
Setting up a Concurrent License for a Sun SPARCstation 29

Chapter 10. Installing Data Explorer or Data Explorer SMP on an SGI Workstation 31
10.1 Installing on an SGI Workstation from Tape 32
10.2 Installing on an SGI Workstation from CD-ROM 33
10.3 Configuring a Data Explorer License for an SGI Workstation 34
Note for Licensees of IBM Visualization Data Explorer SMP 35

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Setting up a Node-locked License for an SGI Workstation 35
Setting up a Concurrent License for an SGI Workstation 36

Chapter 11. Installing Data Explorer on a Data General AViiON 37
11.1 Installing on a Data General AViiON from Tape 38
11.2 Installing on a Data General AViiON from CD-ROM 39
11.3 Configuring a Data Explorer License for a Data General AViiON 40
Setting up a Node-locked License for a Data General AViiON 41
Setting up a Concurrent License for a Data General AViiON 41

Chapter 12. Installing Data Explorer on a DEC 3000 AXP 43
12.1 Installing on a DEC 3000 AXP from Tape 44
12.2 Installing on a DEC 3000 AXP from CD-ROM 45
12.3 Configuring a Data Explorer License for a DEC 3000 AXP 46
Setting up a Node-locked License for a DEC 3000 AXP 47
Setting up a Concurrent License for a DEC 3000 AXP 47

Chapter 13. The Configure Script 49
13.1 Command Line Options for Configure 51
13.2 Using Other Than the Default Configuration 51

Chapter 14. Troubleshooting the Data Explorer Installation 53

Chapter 15. Installing a NetLS License Server 55
15.1 Introduction 56
15.2 IMPORTANT License Server information for concurrent licensees. . . . 56
15.3 Installing a License Server for pre-AIX 4.x IBM RISC System/6000 . . . 57
Installing a License Server for IBM RISC System/6000 from Tape 57
Installing a License Server for IBM RISC System/6000 from CD-ROM . . . 57
15.4 Installing a License Server for an HP Workstation 58
Floating License Issues on an HP Workstation 58
Installing a License Server for HP Workstation from Tape 58
Installing a License Server for HP Workstation from CD-ROM 59
15.5 Installing a License Server for a Sun SPARCstation 59
Installing a License Server for Sun SPARCstation from Tape 59
Installing a License Server for Sun SPARCstation from CD-ROM 60
15.6 Installing a License Server for an SGI Workstation 60
Installing a License Server for SGI Workstation from Tape 60
Installing a License Server for SGI Workstation from CD-ROM 61
15.7 Installing a License Server for Data General AViiON 61
Installing a License Server for Data General from Tape 61
Installing a License Server for Data General from CD-ROM 62
15.8 Installing a License Server for DEC 3000 AXP 62
Installing a License Server for DEC 3000 AXP from Tape 62
Installing a License Server for DEC 3000 AXP from CD-ROM 63

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Products, Programs, and Services vi
Trademarks and Service Marks vi
Copyright notices vii

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Chapter 2. About this Document

This document describes how to install and configure IBM Visualization Data Explorer for any of the following platforms (the installation procedure for Data Explorer SMP is the same as that for Data Explorer):

- Data General AViiON
- Digital Equipment Corporation 3000 AXP Series
- Hewlett-Packard 9000/700 Series, and 817, 827, 837, 847, 857, 867
- IBM RISC System/6000
- Silicon Graphics Iris Indigo and Iris Crimson
- Sun SPARCstation 2 and 10 series

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Chapter 3. About This Guide

This document tells you how to install Data Explorer on your system. To install Data Explorer, you need to do the following:

1. Check that you have enough disk space. The disk space requirements for each architecture can be found in Chapter 5, “Disk Space Requirements and Tape Specifications” on page 9.
2. Install Data Explorer using the instructions appropriate for your architecture:
   - Chapter 7, “Installing Data Explorer or Data Explorer SMP on an IBM RISC System/6000” on page 13
   - Chapter 8, “Installing Data Explorer on an HP Workstation” on page 19
   - Chapter 9, “Installing Data Explorer or Data Explorer SMP on a Sun SPARCstation” on page 25
   - Chapter 10, “Installing Data Explorer or Data Explorer SMP on an SGI Workstation” on page 31
   - Chapter 11, “Installing Data Explorer on a Data General AViiON” on page 37
   - Chapter 12, “Installing Data Explorer on a DEC 3000 AXP” on page 43

   (It is also possible to install multiple versions of Data Explorer for different architectures. See Chapter 13, “The Configure Script” on page 49)

   If you want to use a floating, or concurrent, license of Data Explorer, and you are not currently running a NetLS license server somewhere in your network, then you also need to read Chapter 15, “Installing a NetLS License Server” on page 55.

   To check that the installation has completed successfully, type the following:

   ```
   cd /usr/lpp/dx/samples/programs
   dx -image -execute MappedIso.net
   ```

   An Image window will then open and an image of a colored cloud will appear.

   If you have trouble, see Chapter 14, “Troubleshooting the Data Explorer Installation” on page 53.

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Chapter 4. Technical Support

4.1 Support from IBM 8
4.2 Support from the Data Explorer User Community 8

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4.1 Support from IBM

If at any time you have problems installing or using Data Explorer, please send electronic mail to dxsupp@watson.ibm.com or call IBM Data Explorer Support at (800) 435-6813 (from the US and Canada) or (914) 784-5142 (from elsewhere).

4.2 Support from the Data Explorer User Community

There are a number of resources that can be used to get support, information and publicly available software related to Data Explorer from other Data Explorer users. These include the following:

- Usenet newsgroup `comp.graphics.apps.data-explorer`
- Data Explorer World Wide Web service at: `http://www.almaden.ibm.com/dx/`
- Cornell Theory Center
  - World Wide Web service at `http://www.tc.cornell.edu/DX/dx.html`
  - gopher and anonymous FTP service at `ftp.tc.cornell.edu`.

Chapter 5. Disk Space Requirements and Tape Specifications

Data Explorer is comprised of five subsystems as follows:

Base executables contains all files needed to run Data Explorer.

Development environment
contains libraries, header files and other tools needed to build a custom executive.

Samples example programs, scripts, tutorial, and makefiles.

Online help and HTML
online help available from the Data Explorer User Interface, and documentation in HTML format.

PostScript and ASCII documentation
Documentation in PostScript format and for printing and in flat ASCII format for basic minimal viewing.

If you are installing Data Explorer from tape:

8mm tapes are 2.3 GB,
1/4 inch tapes are 150 MB (QIC-150),
4mm tapes are 4 GB.

Disk space requirements for each subsystem are shown in Table 1.

Table 1. Disk space requirements in megabytes

Subsystem/Platform	Base executables	Development	Samples	Online help / HTML	PostScript / ASCII	Total
IBM	17	16	17	16	12	78
HP	15	14	17	16	12	74
Sun 4	24	16	17	16	12	85
Sun Solaris	24	17	17	16	12	86
SGI	18	23	17	16	12	86
Data General	22	13	17	16	12	80
Digital Equip.	33	40	17	16	12	118

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Chapter 6. Special Notes for Upgrade Installations

If you are installing an upgrade version of Data Explorer, you should not install the new version over your current version. You should either remove the previous version of Data Explorer, or install the new version in a different directory. If you would like to install a new version of Data Explorer, but want the prior version to remain the default, then you can use the `-noconfig` option to the installdx script. This will install the new version, but will not set up the links which cause it to be the default installation. Note that you can use the DXROOT environment variable to specify which version of Data Explorer you want to use if you have multiple versions. DXROOT should point to the top level installation directory.

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Chapter 7. Installing Data Explorer or Data Explorer SMP on an IBM RISC System/6000

7.1 Installing on an IBM RISC System/6000 from Tape 15
7.2 Installing on an IBM RISC System/6000 from CD-ROM 16
7.3 Configuring a Data Explorer License for IBM RISC System/6000 17
Note for licensees of IBM Visualization Data Explorer SMP 17
Setting up a Node-locked License for an IBM RISC System/6000 18
Setting up a Concurrent License for an IBM RISC System/6000 18

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Base executables contains all files needed to run Data Explorer.

Development environment
contains libraries, header files and other tools needed to build a custom executive.

Samples example programs, scripts, tutorial, and makefiles.

Online help and HTML
online help available from the Data Explorer User Interface, and documentation in HTML format.

PostScript and ASCII documentation
Documentation in PostScript format and for printing and in flat ASCII format for basic minimal viewing.

All subsystems are placed under a common directory (e.g. `/usr/lpp/dx`) which is referred to as the root of the Data Explorer installation tree. Architecture-specific executable and library files are placed in the directories `bin_ARCH` and `lib_ARCH` under the Data Explorer root, where *ARCH* is one of the supported architectures (alphax, aviion, hp700, ibm6000, sgi, solaris, sun4). As part of configuring Data Explorer, links and small files are placed in the public file system that reference files within the Data Explorer root directory. The default Data Explorer root directory is `/usr/lpp/dx`. In a networked environment, it is most convenient for users if all workstations have Data Explorer available through the same root directory. This makes it easier to run the User Interface on one machine and the server on another.

Data Explorer is a licensed software product and uses the NetLS licensing system to manage its licensing. Two types of licenses are supported: node-locked and floating (or concurrent-use). Node-locked licenses require a single configuration file containing an enabling password, while the floating license requires that a NetLS license server configured with at least one Data Explorer license is running somewhere within your network. If you expect to use a floating license and you do not have a NetLS license server running in your network you will need to install one (see Chapter 15, “Installing a NetLS License Server” on page 55). Please note that node-locked licenses do not require the use or installation of a NetLS license server.

Data Explorer running under AIX requires that the following software products be installed before attempting to install Data Explorer:

- For AIX 3.2.5
  - bos.obj
  - bosext1.csh.obj
  - X11rte.obj
  - X11rte.ext.obj
  - X11fnt.coreX.fnt
- For AIX 4.x
  - bos.rte
  - X11.base.rte
  - X11.fnt.coreX

If you want to use hardware rendering you will need to have the following installed:

- For AIX 3.2.5

  - X11_3d.gl.rte.obj (for GL)
  - OpenGL.rte.obj (for OpenGL)
- For AIX 4.x
  - OpenGL.GL32.rte.base (for GL)
  - OpenGL.OpenGL_X.rte.base (for OpenGL)

If you want create a customized executive, you will need the following development products:

- For AIX 3.2.5
  - X11_3d.obj
  - X11dev.obj
  - X11_3d.gl.dev.obj (for GL)
  - OpenGL.dev.obj (for OpenGL)
- For AIX 4.x
  - OpenGL.GL32.adt.include (for GL)
  - OpenGL.OpenGL_X.adt.include (for OpenGL)

You can use AIX's `lslpp` tool to determine whether or not a software product has been installed. For example, to determine if the the X11 run-time environment for AIX 4.x has been installed enter the following:

```
lslpp -h X11.base.rte
```

7.1 Installing on an IBM RISC System/6000 from Tape

Note: Data Explorer does not use installp format.

Tape distributions of Data Explorer contain three tar format files. The first contains two install scripts (installdx, install_lsk) and a PostScript file documenting Network Computing System (NCS) issues (ncs_ps.Z). The second contains the Data Explorer installation tree which contains Data Explorer for each of the supported architectures. The third file contains NetLS license server installation kits for each supported architecture. The NetLS license server is used to support the standard licensing mechanism for Data Explorer.

To install Data Explorer, log in as root, insert the tape in the drive, and type:

```
cd /tmp
tar xvf <device> installdx
./installdx <platform>
```

<device> is the appropriate tape device for the operating system from which you run installdx. Example tape devices for AIX are:

```
/dev/rmt0, /dev/rmt1, ...
```

<platform> is used to indicate the platform for which the Data Explorer files will be extracted. The supported platforms are:

```
alphax, aviion, hp700, ibm6000, sgi, solaris, sun4
```

This argument is optional and the default is the host platform (ibm6000).

The installation script will ask if you want to install or deinstall Data Explorer and then a series of questions related to the installation. You will be given the opportunity to set the installation directory and to select the Data Explorer subsystems to install.

When doing an installation for an architecture other than the current host, you may need to run the Configure script provided with Data Explorer on the workstations to which you expect to export the Data Explorer installation tree. See Chapter 13, “The Configure Script” on page 49.

Please follow the instructions presented by installdx carefully. In particular, when asked to give the name of the tape device, be sure to give the name of the non-autorewinding tape drive, examples of which are provided by the script. Also, if at anytime during the tape installation you are asked to mount the next tape, just press the <ENTER> key to have the installation continue normally.

After installation and configuration is complete, which may take as much as 30 minutes, you will be provided with a unique workstation (node) identifier that must be provided to IBM to acquire the enabling license information. See 7.3, “Configuring a Data Explorer License for IBM RISC System/6000” on page 17 for information on how to reacquire the identifier (if you lose it) and on how to use the node identifier to enable Data Explorer.

Note: On AIX systems, the block size of the tape device must be set to 512 bytes. Use “smit” to determine and change the device block size if necessary.

7.2 Installing on an IBM RISC System/6000 from CD-ROM

CD-ROM distributions of Data Explorer contain a mountable file system that includes the installation scripts (`installdx.sh` for Data Explorer and `install_lsk.sh` for the NetLS license server software), the software itself (in tar format) and documentation. The NetLS license server is used to support the standard licensing mechanism used for Data Explorer.

To install Data Explorer, log in as root, insert the distribution media in the drive, and type:

```
mkdir /cdrom
```

Mount the CD on /cdrom by entering the following command:

```
mount -r -v cdrfs <CD-ROM-Device> /cdrom
```

where <CD-ROM-device> is the actual name of the CD-ROM drive on your system. A typical name is `/dev/cd0`.

Type:

```
cd /cdrom
./installdx.sh <platform>
```

<platform> is used to indicate the platform for which the Data Explorer files will be extracted. The supported platforms are:

```
alphax, aviion, hp700, ibm6000, sgi, solaris, sun4
```

This argument is optional and the default is the host platform (ibm6000).

The installation script will ask if you want to install or deinstall Data Explorer and then a series of questions related to the installation. You will be given the opportunity to set the installation directory and to select the Data Explorer subsystems to install.

When doing an installation for an architecture other than the current host, you may need to run the Configure script provided with Data Explorer on the workstations to which you expect to export the Data Explorer installation tree. See Chapter 13, “The Configure Script” on page 49.

After installation and configuration is complete, which may take as much as 30 minutes, you will be provided with a unique workstation (node) identifier that must be provided to IBM to acquire the enabling license information. See 7.3, “Configuring a Data Explorer License for IBM RISC System/6000” for information on how to reacquire the identifier (if you lose it) and on how to use the node identifier to enable Data Explorer.

7.3 Configuring a Data Explorer License for IBM RISC System/6000

Data Explorer uses the NetLS licensing system from Gradient Technologies, Inc., to manage the two types of licenses available with Data Explorer:

Node-locked license

This license program is restricted to the machine matching the node identifier for which a license was acquired. All version 1 basic one-time charge licenses are considered node-locked licenses. Please note that this type of license does NOT require the installation of the NetLS license server software included with Data Explorer.

Floating (or concurrent use) license

This license can be used by any supported workstation on the network as long as the maximum number of concurrent Data Explorer users does not exceed the number of purchased floating licenses. Floating (or concurrent use) license installations require that a NetLS license server run somewhere in the network. If your network does not currently run a license server, see Chapter 15, “Installing a NetLS License Server” on page 55. Under a floating license, IBM waives the requirement that customers notify IBM of change in designated machine. When this program does not operate under the control of NetLS, normal customer notification of change in designated machine rules apply. For more information on the licensing software, please refer to the Gradient documentation that is provided with the Data Explorer installation kit.

Both node-locked and floating licenses require that IBM be provided with a unique workstation identifier. Identifiers are generated by the NodeID script located in the bin directory of the Data Explorer installation directory tree (e.g. `/usr/lpp/dx/bin/NodeID`). This identifier is provided at the end of a successful installation. License type specifics are covered in the following sections.

Note for licensees of IBM Visualization Data Explorer SMP

When ordering license keys for Data Explorer SMP (Symmetric Multi-Processing), the product ID which you should provide to IBM software registration is 5765-587. Providing this product number will result in two keys being issued for each 5765-587 license request: one key for product ID 5765-586, which enables uniprocessor operation, and a second key for ID 5765-587, which enables SMP functionality. Both of these keys must be installed before Data Explorer SMP will be fully functional.

Setting up a Node-locked License for an IBM RISC System/6000

To enable Data Explorer with a node-locked license:

1. Be sure that Data Explorer is installed.
2. Obtain a node identifier by executing the `NodeID` script found in the bin directory of the Data Explorer install tree (e.g. `/usr/lpp/dx/bin/NodeID`) on the machine being licensed to run Data Explorer. Note that the NodeID information is provided after a successful installation of Data Explorer.
3. Call IBM Software Registration at 1-800-446-8989 (Monday-Friday, 6AM-5PM Mountain Time) from within the continental United States, call 1-800-565-SW4U in Canada, or call your IBM representative elsewhere, and provide the information obtained in step 2 to receive your node-locked "Vendor ID" and "Product Password".

For the AIX operating system both the Vendor ID and the Product Password must be placed in the file:

```
/usr/lib/netls/conf/nodelock
```

The Vendor ID and the Product Password must appear on the same line with the Vendor ID placed first and a space between them. For example,

```
543b0f87c093.02.81.87.92.34.00.00.00 gganccupqb5d8auxabdws2a
```

Additional information on editing the `nodelock` file can be found on page 31 of Gradient's *Managing Software Products with the Network License System* included with your Data Explorer package.

Setting up a Concurrent License for an IBM RISC System/6000

To set up a floating (or concurrent use) license, you must have a license server running within your network. If you do not have a license server running, see Chapter 15, "Installing a NetLS License Server" on page 55.

Once you have a NetLS license server running within your network, you should:

1. Be sure that Data Explorer is installed.
2. On your license server host run the `NodeID` script located in the bin directory of the Data Explorer install tree (e.g. `/usr/lpp/dx/bin/NodeID`). Note that the NodeID information is provided after a successful installation of Data Explorer.
3. Call IBM Software Registration at 1-800-446-8989 (Monday-Friday, 6AM-5PM Mountain Time) from within the continental United States, call 1-800-565-SW4U in Canada, or call your IBM representative elsewhere, and provide the information returned in step 2 to receive your concurrent license password information.
4. Enter this information in the license server database using the ls_admin tool provided with the NetLS license server software. See Gradient Technologies, Inc. documentation provided with Data Explorer for more information regarding concurrent licensing issues. Page 21 of the Gradient document entitled "Managing Software Products with the Network License System" contains an example session using `ls_admin`.

Chapter 8. Installing Data Explorer on an HP Workstation

8.1 Installing on an HP Workstation from Tape 20
8.2 Installing on an HP Workstation from CD-ROM 21
8.3 Configuring a Data Explorer License for an HP Workstation 22
Setting up a Node-locked License for an HP Workstation 23
Setting up a Concurrent License for an HP Workstation 23

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Data Explorer is comprised of five subsystems as follows:

Base executables contains all files needed to run Data Explorer.

Development environment
contains libraries, header files and other tools needed to build a custom executive.

Samples example programs, scripts, tutorial, and makefiles.

Online help and HTML
online help available from the Data Explorer User Interface, and documentation in HTML format.

PostScript and ASCII documentation
Documentation in PostScript format and for printing and in flat ASCII format for basic minimal viewing.

All subsystems are placed under a common directory (e.g. `/usr/lpp/dx`) which is referred to as the root of the Data Explorer installation tree. Architecture-specific executable and library files are placed in the directories `bin_ARCH` and `lib_ARCH` under the Data Explorer root, where *ARCH* is one of the supported architectures (alphax, aviion, hp700, ibm6000, sgi, solaris, sun4). As part of configuring Data Explorer, links and small files are placed in the public file system that reference files within the Data Explorer root directory. The default Data Explorer root directory is `/usr/lpp/dx`. In a networked environment, it is most convenient for users if all workstations have Data Explorer available through the same root directory. This makes it easier to run the User Interface on one machine and the server on another.

Data Explorer is a licensed software product and uses the NetLS licensing system to manage its licensing. Two types of licenses are supported: node-locked and floating (or concurrent-use). Node-locked licenses require a single configuration file containing an enabling password, while the floating license requires that a NetLS license server configured with at least one Data Explorer license is running somewhere within your network. If you expect to use a floating license and you do not have a NetLS license server running in your network you will need to install one (see Chapter 15, “Installing a NetLS License Server” on page 55). Please note that node-locked licenses do not require the use or installation of a NetLS license server.

8.1 Installing on an HP Workstation from Tape

Tape distributions of Data Explorer contain three tar format files. The first contains two install scripts (installdx, install_lsk) and a PostScript file documenting Network Computing System (NCS) issues (ncs_ps.Z). The second contains the Data Explorer installation tree which contains Data Explorer for each of the supported architectures. The third file contains NetLS license server installation kits for each supported architecture. The NetLS license server is used to support the standard licensing mechanism for Data Explorer.

To install Data Explorer, log in as root, insert the tape in the drive, and type:

```
cd /tmp
tar xvf <device> installdx
./installdx <platform>
```

<device> is the appropriate tape device for the operating system from which you run installdx. Example tape devices for HP-UX are:

```
/dev/rmt/0
```

<platform> is used to indicate the platform for which the Data Explorer files will be extracted. The supported platforms are:

```
alphax, aviion, hp700, ibm6000, sgi, solaris, sun4
```

This argument is optional and the default is the host platform (hp700).

The installation script will ask if you want to install or deinstall Data Explorer and then a series of questions related to the installation. You will be given the opportunity to set the installation directory and to select the Data Explorer subsystems to install.

When doing an installation for an architecture other than the current host, you may need to run the Configure script provided with Data Explorer on the workstations to which you expect to export the Data Explorer installation tree. See Chapter 13, “The Configure Script” on page 49.

Please follow the instructions presented by installdx carefully. In particular, when asked to give the name of the tape device, be sure to give the name of the non-autorewinding tape drive, examples of which are provided by the script. Also, if at anytime during the tape installation you are asked to mount the next tape, just press the <ENTER> key to have the installation continue normally.

After installation and configuration is complete, which may take as much as 30 minutes, you will be provided with a unique workstation (node) identifier that must be provided to IBM to acquire the enabling license information. See 8.3, “Configuring a Data Explorer License for an HP Workstation” on page 22 for information on how to reacquire the identifier (if you lose it) and on how to use the node identifier to enable Data Explorer.

8.2 Installing on an HP Workstation from CD-ROM

CD-ROM distributions of Data Explorer contain a mountable file system that includes the installation scripts (`installdx.sh` for Data Explorer and `install_lsk.sh` for the NetLS license server software), the software itself (in tar format) and documentation. The NetLS license server is used to support the standard licensing mechanism used for Data Explorer.

To install Data Explorer, log in as root, insert the distribution media in the drive, and type:

```
mkdir /cdrom
```

Mount the CD on /cdrom by entering the following command:

```
mount -r -t cdfs <CD-ROM-Device> /cdrom
```

where <CD-ROM-device> is the actual name of the CD-ROM drive on your system. A typical name is `/dev/dsk/2s0`.

Type:

```
cd /cdrom
./installdx.sh <platform>
```

<platform> is used to indicate the platform for which the Data Explorer files will be extracted. The supported platforms are:

```
alphax, aviion, hp700, ibm6000, sgi, solaris, sun4
```

This argument is optional and the default is the host platform (hp700).

The installation script will ask if you want to install or deinstall Data Explorer and then a series of questions related to the installation. You will be given the opportunity to set the installation directory and to select the Data Explorer subsystems to install.

When doing an installation for an architecture other than the current host, you may need to run the Configure script provided with Data Explorer on the workstations to which you expect to export the Data Explorer installation tree. See Chapter 13, "The Configure Script" on page 49.

After installation and configuration is complete, which may take as much as 30 minutes, you will be provided with a unique workstation (node) identifier that must be provided to IBM to acquire the enabling license information. See 8.3, "Configuring a Data Explorer License for an HP Workstation" for information on how to reacquire the identifier (if you lose it) and on how to use the node identifier to enable Data Explorer.

Note: On HP-UX systems, the file names will appear capitalized and include a version number (e.g. INSTALLDX.SH;1). If this is the case, then you must enter:

```
'./INSTALLDX.SH;1'
```

(including the single quotes) instead of `./installdx`.

8.3 Configuring a Data Explorer License for an HP Workstation

Data Explorer uses the NetLS licensing system from Gradient Technologies, Inc., to manage the two types of licenses available with Data Explorer:

Node-locked license

This license program is restricted to the machine matching the node identifier for which a license was acquired. All version 1 basic one-time charge licenses are considered node-locked licenses. Please note that this type of license does NOT require the installation of the NetLS license server software included with Data Explorer.

Floating (or concurrent use) license

This license can be used by any supported workstation on the network as long as the maximum number of concurrent Data Explorer users does not exceed the number of purchased floating licenses. Floating (or concurrent use) license installations require that a NetLS license server run somewhere in the network. If your network does not currently run a license server, see Chapter 15, "Installing a NetLS License Server" on page 55. Under a floating license, IBM waives the requirement that customers notify IBM of change in designated machine. When this program does not operate under the control of NetLS, normal customer notification of change in designated machine rules apply. For more

information on the licensing software, please refer to the Gradient documentation that is provided with the Data Explorer installation kit.

Both node-locked and floating licenses require that IBM be provided with a unique workstation identifier. Identifiers are generated by the NodeID script located in the bin directory of the Data Explorer installation directory tree (e.g. `/usr/lpp/dx/bin/NodeID`). This identifier is provided at the end of a successful installation. License type specifics are covered in the following sections.

Setting up a Node-locked License for an HP Workstation

To enable Data Explorer with a node-locked license:

1. Be sure that Data Explorer is installed.
2. Obtain a node identifier by executing the `NodeID` script found in the bin directory of the Data Explorer install tree (e.g. `/usr/lpp/dx/bin/NodeID`) on the machine being licensed to run Data Explorer. Note that the NodeID information is provided after a successful installation of Data Explorer.
3. Call IBM Software Registration at 1-800-446-8989 (Monday-Friday, 6AM-5PM Mountain Time) from within the continental United States, call 1-800-565-SW4U in Canada, or call your IBM representative elsewhere, and provide the information obtained in step 2 to receive your node-locked "Vendor ID" and "Product Password".

For the HP-UX operating system both the Vendor ID and the Product Password must be placed in the file:

```
/usr/netls/nodelock
```

The Vendor ID and the Product Password must appear on the same line with the Vendor ID placed first and a space between them. For example,

```
543b0f87c093.02.81.87.92.34.00.00.00 gganccupqb5d8auxabdws2a
```

Additional information on editing the `nodelock` file can be found on page 31 of Gradient's *Managing Software Products with the Network License System* included with your Data Explorer package.

Setting up a Concurrent License for an HP Workstation

Note: You should refer to the section "Floating License Issues on an HP Workstation" on page 58 before continuing with this section.

To set up a floating (or concurrent use) license, you must have a license server running within your network. If you do not have a license server running, see Chapter 15, "Installing a NetLS License Server" on page 55.

Once you have a NetLS license server running within your network, you should:

1. Be sure that Data Explorer is installed.
2. On your license server host run the `NodeID` script located in the bin directory of the Data Explorer install tree (e.g. `/usr/lpp/dx/bin/NodeID`). Note that the NodeID information is provided after a successful installation of Data Explorer.
3. Call IBM Software Registration at 1-800-446-8989 (Monday-Friday, 6AM-5PM Mountain Time) from within the continental United States, call 1-800-565-SW4U in Canada, or call your IBM representative elsewhere, and provide the

information returned in step 2 to receive your concurrent license password information.

4. Enter this information in the license server database using the ls_admin tool provided with the NetLS license server software. See Gradient Technologies, Inc. documentation provided with Data Explorer for more information regarding concurrent licensing issues. Page 21 of the Gradient document entitled "Managing Software Products with the Network License System" contains an example session using `ls_admin`.

Chapter 9. Installing Data Explorer or Data Explorer SMP on a Sun SPARCstation

9.1 Installing on a Sun SPARCstation from Tape 26
9.2 Installing on a Sun SPARCstation from CD-ROM 27
9.3 Configuring a Data Explorer License for a Sun SPARCstation 28
Note for licensees of IBM Visualization Data Explorer SMP 29
Setting up a Node-locked License for a Sun SPARCstation 29
Setting up a Concurrent License for a Sun SPARCstation 29

Sun

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Data Explorer is comprised of five subsystems as follows:

Base executables contains all files needed to run Data Explorer.

Development environment
contains libraries, header files and other tools needed to build a custom executive.

Samples example programs, scripts, tutorial, and makefiles.

Online help and HTML
online help available from the Data Explorer User Interface, and documentation in HTML format.

PostScript and ASCII documentation
Documentation in PostScript format and for printing and in flat ASCII format for basic minimal viewing.

All subsystems are placed under a common directory (e.g. `/usr/lpp/dx`) which is referred to as the root of the Data Explorer installation tree. Architecture-specific executable and library files are placed in the directories `bin.ARCH` and `lib.ARCH` under the Data Explorer root, where *ARCH* is one of the supported architectures (alphax, aviion, hp700, ibm6000, sgi, solaris, sun4). As part of configuring Data Explorer, links and small files are placed in the public file system that reference files within the Data Explorer root directory. The default Data Explorer root directory is `/usr/lpp/dx`. In a networked environment, it is most convenient for users if all workstations have Data Explorer available through the same root directory. This makes it easier to run the User Interface on one machine and the server on another.

Data Explorer is a licensed software product and uses the NetLS licensing system to manage its licensing. Two types of licenses are supported: node-locked and floating (or concurrent-use). Node-locked licenses require a single configuration file containing an enabling password, while the floating license requires that a NetLS license server configured with at least one Data Explorer license is running somewhere within your network. If you expect to use a floating license and you do not have a NetLS license server running in your network you will need to install one (see Chapter 15, “Installing a NetLS License Server” on page 55). Please note that node-locked licenses do not require the use or installation of a NetLS license server.

9.1 Installing on a Sun SPARCstation from Tape

Tape distributions of Data Explorer contain three tar format files. The first contains two install scripts (installdx, install_lsk) and a PostScript file documenting Network Computing System (NCS) issues (ncs_ps.Z). The second contains the Data Explorer installation tree which contains Data Explorer for each of the supported architectures. The third file contains NetLS license server installation kits for each supported architecture. The NetLS license server is used to support the standard licensing mechanism for Data Explorer.

To install Data Explorer, log in as root, insert the tape in the drive, and type:

```
cd /tmp
tar xvf <device> installdx
./installdx <platform>
```

<device> is the appropriate tape device for the operating system from which you run installdx. Example tape devices for SunOS and Solaris are:

```
Sun4:    /dev/rst0, /dev/rst1, ...
Solaris: /dev/rmt0
```

<platform> is used to indicate the platform for which the Data Explorer files will be extracted. The supported platforms are:

```
alphax, aviion, hp700, ibm6000, sgi, solaris, sun4
```

This argument is optional and the default is the host platform (sun4 or solaris).

The installation script will ask if you want to install or deinstall Data Explorer and then a series of questions related to the installation. You will be given the opportunity to set the installation directory and to select the Data Explorer subsystems to install.

When doing an installation for an architecture other than the current host, you may need to run the Configure script provided with Data Explorer on the workstations to which you expect to export the Data Explorer installation tree. See Chapter 13, “The Configure Script” on page 49.

Please follow the instructions presented by installdx carefully. In particular, when asked to give the name of the tape device, be sure to give the name of the non-autorewinding tape drive, examples of which are provided by the script. Also, if at anytime during the tape installation you are asked to mount the next tape, just press the <ENTER> key to have the installation continue normally.

After installation and configuration is complete, which may take as much as 30 minutes, you will be provided with a unique workstation (node) identifier that must be provided to IBM to acquire the enabling license information. See 9.3, “Configuring a Data Explorer License for a Sun SPARCstation” on page 28 for information on how to reacquire the identifier (if you lose it) and on how to use the node identifier to enable Data Explorer.

9.2 Installing on a Sun SPARCstation from CD-ROM

CD-ROM distributions of Data Explorer contain a mountable file system that includes the installation scripts (`installdx.sh` for Data Explorer and `install_lsk.sh` for the NetLS license server software), the software itself (in tar format) and documentation. The NetLS license server is used to support the standard licensing mechanism used for Data Explorer.

To install Data Explorer, log in as root, insert the distribution media in the drive, and type:

```
mkdir /cdrom
```

Mount the CD on /cdrom by entering the following command:

```
SunOS:   mount -r -t hsfs <CD-ROM-Device> /cdrom
Solaris: mount -r -f hsfs <CD-ROM-Device> /cdrom
```

where <CD-ROM-device> is the actual name of the CD-ROM drive on your system. A typical name is `/dev/sr0`.

Type:

```
cd /cdrom
./installdx.sh <platform>
```

<platform> is used to indicate the platform for which the Data Explorer files will be extracted. The supported platforms are:

```
alphax, aviion, hp700, ibm6000, sgi, solaris, sun4
```

This argument is optional and the default is the host platform (sun4 or solaris).

The installation script will ask if you want to install or deinstall Data Explorer and then a series of questions related to the installation. You will be given the opportunity to set the installation directory and to select the Data Explorer subsystems to install.

When doing an installation for an architecture other than the current host, you may need to run the Configure script provided with Data Explorer on the workstations to which you expect to export the Data Explorer installation tree. See Chapter 13, "The Configure Script" on page 49.

After installation and configuration is complete, which may take as much as 30 minutes, you will be provided with a unique workstation (node) identifier that must be provided to IBM to acquire the enabling license information. See 9.3, "Configuring a Data Explorer License for a Sun SPARCstation" for information on how to reacquire the identifier (if you lose it) and on how to use the node identifier to enable Data Explorer.

Note: For Solaris, once your installation is complete, unmount and eject the disk by entering:

```
eject <CD-ROM-device>
```

9.3 Configuring a Data Explorer License for a Sun SPARCstation

Data Explorer uses the NetLS licensing system from Gradient Technologies, Inc., to manage the two types of licenses available with Data Explorer:

Node-locked license

This license program is restricted to the machine matching the node identifier for which a license was acquired. All version 1 basic one-time charge licenses are considered node-locked licenses. Please note that this type of license does NOT require the installation of the NetLS license server software included with Data Explorer.

Floating (or concurrent use) license

This license can be used by any supported workstation on the network as long as the maximum number of concurrent Data Explorer users does not exceed the number of purchased floating licenses. Floating (or concurrent use) license installations require that a NetLS license server run somewhere in the network. If your network does not currently run a license server, see Chapter 15, "Installing a NetLS License Server" on page 55. Under a floating license, IBM waives the requirement that customers notify IBM of change in designated machine. When this program does not operate under the control of NetLS, normal customer notification of change in designated machine rules apply. For more information on the licensing software, please refer to the Gradient documentation that is provided with the Data Explorer installation kit.

Both node-locked and floating licenses require that IBM be provided with a unique workstation identifier. Identifiers are generated by the NodeID script located in the bin directory of the Data Explorer installation directory tree (e.g. `/usr/lpp/dx/bin/NodeID`). This identifier is provided at the end of a successful installation. License type specifics are covered in the following sections.

Note for licensees of IBM Visualization Data Explorer SMP

When ordering license keys for Data Explorer SMP (Symmetric Multi-Processing), the product ID which you should provide to IBM software registration is 5765-587. Providing this product number will result in two keys being issued for each 5765-587 license request: one key for product ID 5765-586, which enables uniprocessor operation, and a second key for ID 5765-587, which enables SMP functionality. Both of these keys must be installed before Data Explorer SMP will be fully functional.

Setting up a Node-locked License for a Sun SPARCstation

To enable Data Explorer with a node-locked license:

1. Be sure that Data Explorer is installed.
2. Obtain a node identifier by executing the `NodeID` script found in the bin directory of the Data Explorer install tree (e.g. `/usr/lpp/dx/bin/NodeID`) on the machine being licensed to run Data Explorer. Note that the NodeID information is provided after a successful installation of Data Explorer.
3. Call IBM Software Registration at 1-800-446-8989 (Monday-Friday, 6AM-5PM Mountain Time) from within the continental United States, call 1-800-565-SW4U in Canada, or call your IBM representative elsewhere, and provide the information obtained in step 2 to receive your node-locked “Vendor ID” and “Product Password”.

For the SunOS and Solaris operating system both the Vendor ID and the Product Password must be placed in the file:

```
/var/netls/nodelock
```

The Vendor ID and the Product Password must appear on the same line with the Vendor ID placed first and a space between them. For example,

```
543b0f87c093.02.81.87.92.34.00.00.00 gganccupqb5d8auxabdws2a
```

Additional information on editing the `nodelock` file can be found on page 31 of Gradient's *Managing Software Products with the Network License System* included with your Data Explorer package.

Setting up a Concurrent License for a Sun SPARCstation

To set up a floating (or concurrent use) license, you must have a license server running within your network. If you do not have a license server running, see Chapter 15, “Installing a NetLS License Server” on page 55.

Once you have a NetLS license server running within your network, you should:

1. Be sure that Data Explorer is installed.
2. On your license server host run the `NodeID` script located in the bin directory of the Data Explorer install tree (e.g. `/usr/lpp/dx/bin/NodeID`). Note that the NodeID information is provided after a successful installation of Data Explorer.

3. Call IBM Software Registration at 1-800-446-8989 (Monday-Friday, 6AM-5PM Mountain Time) from within the continental United States, call 1-800-565-SW4U in Canada, or call your IBM representative elsewhere, and provide the information returned in step 2 to receive your concurrent license password information.
4. Enter this information in the license server database using the ls_admin tool provided with the NetLS license server software. See Gradient Technologies, Inc. documentation provided with Data Explorer for more information regarding concurrent licensing issues. Page 21 of the Gradient document entitled "Managing Software Products with the Network License System" contains an example session using `ls_admin`.

Chapter 10. Installing Data Explorer or Data Explorer SMP on an SGI Workstation

10.1 Installing on an SGI Workstation from Tape 32
10.2 Installing on an SGI Workstation from CD-ROM 33
10.3 Configuring a Data Explorer License for an SGI Workstation 34
Note for Licensees of IBM Visualization Data Explorer SMP 35
Setting up a Node-locked License for an SGI Workstation 35
Setting up a Concurrent License for an SGI Workstation 36

SGI

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Data Explorer is comprised of five subsystems as follows:

Base executables contains all files needed to run Data Explorer.

Development environment
contains libraries, header files and other tools needed to build a custom executive.

Samples example programs, scripts, tutorial, and makefiles.

Online help and HTML
online help available from the Data Explorer User Interface, and documentation in HTML format.

PostScript and ASCII documentation
Documentation in PostScript format and for printing and in flat ASCII format for basic minimal viewing.

All subsystems are placed under a common directory (e.g. `/usr/lpp/dx`) which is referred to as the root of the Data Explorer installation tree. Architecture-specific executable and library files are placed in the directories `bin_ARCH` and `lib_ARCH` under the Data Explorer root, where *ARCH* is one of the supported architectures (alphax, aviion, hp700, ibm6000, sgi, solaris, sun4). As part of configuring Data Explorer, links and small files are placed in the public file system that reference files within the Data Explorer root directory. The default Data Explorer root directory is `/usr/lpp/dx`. In a networked environment, it is most convenient for users if all workstations have Data Explorer available through the same root directory. This makes it easier to run the User Interface on one machine and the server on another.

Data Explorer is a licensed software product and uses the NetLS licensing system to manage its licensing. Two types of licenses are supported: node-locked and floating (or concurrent-use). Node-locked licenses require a single configuration file containing an enabling password, while the floating license requires that a NetLS license server configured with at least one Data Explorer license is running somewhere within your network. If you expect to use a floating license and you do not have a NetLS license server running in your network you will need to install one (see Chapter 15, “Installing a NetLS License Server” on page 55). Please note that node-locked licenses do not require the use or installation of a NetLS license server.

10.1 Installing on an SGI Workstation from Tape

Note: The block size of the tape device must be set to 512 bytes. Use the following command to determine the current block size:

```
mt -t <device> blksize
```

<device> is the appropriate tape device for the operating system from which you run installdx. Example IRIX tape devices are:

```
/dev/rmt/tps0d4ns, /dev/rmt/tps0d5ns, ...
```

On IRIX be sure to use the no-swap tape drives which have the characters “ns” in the device name.

Use the following command to set the correct block size if necessary:

```
mt -t <device> setblksz 512
```

Tape distributions of Data Explorer contain three tar format files. The first contains two install scripts (installdx, install_lsk) and a PostScript file documenting Network Computing System (NCS) issues (ncs_ps.Z). The second contains the Data Explorer installation tree which contains Data Explorer for each of the supported architectures. The third file contains NetLS license server installation kits for each supported architecture. The NetLS license server is used to support the standard licensing mechanism for Data Explorer.

To install Data Explorer, log in as root, insert the tape in the drive, and type:

```
cd /tmp
tar xvf <device> installdx
./installdx <platform>
```

<device> is the appropriate tape device for the operating system from which you run installdx. Example tape devices for IRIX are:

`/dev/rmt/tps0d4ns, /dev/rmt/tps0d5ns, ...`

<platform> is used to indicate the platform for which the Data Explorer files will be extracted. The supported platforms are:

`alphax, aviion, hp700, ibm6000, sgi, solaris, sun4`

This argument is optional and the default is the host platform (sgi).

The installation script will ask if you want to install or deinstall Data Explorer and then a series of questions related to the installation. You will be given the opportunity to set the installation directory and to select the Data Explorer subsystems to install.

When doing an installation for an architecture other than the current host, you may need to run the Configure script provided with Data Explorer on the workstations to which you expect to export the Data Explorer installation tree. See Chapter 13, “The Configure Script” on page 49.

Please follow the instructions presented by installdx carefully. In particular, when asked to give the name of the tape device, be sure to give the name of the non-autorewinding tape drive, examples of which are provided by the script. Also, if at anytime during the tape installation you are asked to mount the next tape, just press the <ENTER> key to have the installation continue normally.

After installation and configuration is complete, which may take as much as 30 minutes, you will be provided with a unique workstation (node) identifier that must be provided to IBM to acquire the enabling license information. See 10.3, “Configuring a Data Explorer License for an SGI Workstation” on page 34 for information on how to reacquire the identifier (if you lose it) and on how to use the node identifier to enable Data Explorer.

10.2 Installing on an SGI Workstation from CD-ROM

CD-ROM distributions of Data Explorer contain a mountable file system that includes the installation scripts (`installdx.sh` for Data Explorer and `install_lsk.sh` for the NetLS license server software), the software itself (in tar format) and documentation. The NetLS license server is used to support the standard licensing mechanism used for Data Explorer.

To install Data Explorer, log in as root, insert the distribution media in the drive, and type:

```
mkdir /cdrom
```

Mount the CD on /cdrom by entering the following command:

```
mount -r -t iso9660 <CD-ROM-Device> /cdrom
```

where <CD-ROM-device> is the actual name of the CD-ROM drive on your system. A typical name is `/dev/scsi/sc0d0l0`.

Type:

```
cd /cdrom
./installdx.sh <platform>
```

<platform> is used to indicate the platform for which the Data Explorer files will be extracted. The supported platforms are:

```
alphax, aviion, hp700, ibm6000, sgi, solaris, sun4
```

This argument is optional and the default is the host platform (sgi).

The installation script will ask if you want to install or deinstall Data Explorer and then a series of questions related to the installation. You will be given the opportunity to set the installation directory and to select the Data Explorer subsystems to install.

When doing an installation for an architecture other than the current host, you may need to run the Configure script provided with Data Explorer on the workstations to which you expect to export the Data Explorer installation tree. See Chapter 13, “The Configure Script” on page 49.

After installation and configuration is complete, which may take as much as 30 minutes, you will be provided with a unique workstation (node) identifier that must be provided to IBM to acquire the enabling license information. See 10.3, “Configuring a Data Explorer License for an SGI Workstation” for information on how to reacquire the identifier (if you lose it) and on how to use the node identifier to enable Data Explorer.

10.3 Configuring a Data Explorer License for an SGI Workstation

Data Explorer uses the NetLS licensing system from Gradient Technologies, Inc., to manage the two types of licenses available with Data Explorer:

Node-locked license

This license program is restricted to the machine matching the node identifier for which a license was acquired. All version 1 basic one-time charge licenses are considered node-locked licenses. Please note that this type of license does NOT require the installation of the NetLS license server software included with Data Explorer.

Floating (or concurrent use) license

This license can be used by any supported workstation on the network as long as the maximum number of concurrent Data Explorer users does not exceed the number of purchased floating licenses. Floating (or concurrent use) license installations require that a NetLS license server run somewhere in the network. If your network does not currently run a

license server, see Chapter 15, “Installing a NetLS License Server” on page 55. Under a floating license, IBM waives the requirement that customers notify IBM of change in designated machine. When this program does not operate under the control of NetLS, normal customer notification of change in designated machine rules apply. For more information on the licensing software, please refer to the Gradient documentation that is provided with the Data Explorer installation kit.

Both node-locked and floating licenses require that IBM be provided with a unique workstation identifier. Identifiers are generated by the NodeID script located in the bin directory of the Data Explorer installation directory tree (e.g. `/usr/lpp/dx/bin/NodeID`). This identifier is provided at the end of a successful installation. License type specifics are covered in the following sections.

Note for Licensees of IBM Visualization Data Explorer SMP

When ordering license keys for Data Explorer SMP (Symmetric Multi-Processing), the product ID which you should provide to IBM software registration is 5765-587. Providing this product number will result in two keys being issued for each 5765-587 license request: one key for product ID 5765-586, which enables uniprocessor operation, and a second key for ID 5765-587, which enables SMP functionality. Both of these keys must be installed before Data Explorer SMP will be fully functional.

Setting up a Node-locked License for an SGI Workstation

To enable Data Explorer with a node-locked license:

1. Be sure that Data Explorer is installed.
2. Obtain a node identifier by executing the `NodeID` script found in the bin directory of the Data Explorer install tree (e.g. `/usr/lpp/dx/bin/NodeID`) on the machine being licensed to run Data Explorer. Note that the NodeID information is provided after a successful installation of Data Explorer.
3. Call IBM Software Registration at 1-800-446-8989 (Monday-Friday, 6AM-5PM Mountain Time) from within the continental United States, call 1-800-565-SW4U in Canada, or call your IBM representative elsewhere, and provide the information obtained in step 2 to receive your node-locked “Vendor ID” and “Product Password”.

For the IRIX operating system both the Vendor ID and the Product Password must be placed in the file:

```
/usr/netls/nodelock
```

The Vendor ID and the Product Password must appear on the same line with the Vendor ID placed first and a space between them. For example,

```
543b0f87c093.02.81.87.92.34.00.00.00 gganccupqb5d8auxabdws2a
```

Additional information on editing the `nodelock` file can be found on page 31 of Gradient's *Managing Software Products with the Network License System* included with your Data Explorer package.

Setting up a Concurrent License for an SGI Workstation

To set up a floating (or concurrent use) license, you must have a license server running within your network. If you do not have a license server running, see Chapter 15, “Installing a NetLS License Server” on page 55.

Once you have a NetLS license server running within your network, you should:

1. Be sure that Data Explorer is installed.
2. On your license server host run the `NodeID` script located in the bin directory of the Data Explorer install tree (e.g. `/usr/lpp/dx/bin/NodeID`). Note that the NodeID information is provided after a successful installation of Data Explorer.
3. Call IBM Software Registration at 1-800-446-8989 (Monday-Friday, 6AM-5PM Mountain Time) from within the continental United States, call 1-800-565-SW4U in Canada, or call your IBM representative elsewhere, and provide the information returned in step 2 to receive your concurrent license password information.
4. Enter this information in the license server database using the ls_admin tool provided with the NetLS license server software. See Gradient Technologies, Inc. documentation provided with Data Explorer for more information regarding concurrent licensing issues. Page 21 of the Gradient document entitled “Managing Software Products with the Network License System” contains an example session using `ls_admin`.

Chapter 11. Installing Data Explorer on a Data General AViiON

11.1 Installing on a Data General AViiON from Tape 38
11.2 Installing on a Data General AViiON from CD-ROM 39
11.3 Configuring a Data Explorer License for a Data General AViiON 40
Setting up a Node-locked License for a Data General AViiON 41
Setting up a Concurrent License for a Data General AViiON 41

DG

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Data Explorer is comprised of five subsystems as follows:

Base executables contains all files needed to run Data Explorer.

Development environment
contains libraries, header files and other tools needed to build a custom executive.

Samples example programs, scripts, tutorial, and makefiles.

Online help and HTML
online help available from the Data Explorer User Interface, and documentation in HTML format.

PostScript and ASCII documentation
Documentation in PostScript format and for printing and in flat ASCII format for basic minimal viewing.

All subsystems are placed under a common directory (e.g. `/usr/lpp/dx`) which is referred to as the root of the Data Explorer installation tree. Architecture-specific executable and library files are placed in the directories `bin_ARCH` and `lib_ARCH` under the Data Explorer root, where *ARCH* is one of the supported architectures (alphax, aviion, hp700, ibm6000, sgi, solaris, sun4). As part of configuring Data Explorer, links and small files are placed in the public file system that reference files within the Data Explorer root directory. The default Data Explorer root directory is `/usr/lpp/dx`. In a networked environment, it is most convenient for users if all workstations have Data Explorer available through the same root directory. This makes it easier to run the User Interface on one machine and the server on another.

Data Explorer is a licensed software product and uses the NetLS licensing system to manage its licensing. Two types of licenses are supported: node-locked and floating (or concurrent-use). Node-locked licenses require a single configuration file containing an enabling password, while the floating license requires that a NetLS license server configured with at least one Data Explorer license is running somewhere within your network. If you expect to use a floating license and you do not have a NetLS license server running in your network you will need to install one (see Chapter 15, “Installing a NetLS License Server” on page 55). Please note that node-locked licenses do not require the use or installation of a NetLS license server.

11.1 Installing on a Data General AViiON from Tape

Tape distributions of Data Explorer contain three tar format files. The first contains two install scripts (installdx, install_lsk) and a PostScript file documenting Network Computing System (NCS) issues (ncs_ps.Z). The second contains the Data Explorer installation tree which contains Data Explorer for each of the supported architectures. The third file contains NetLS license server installation kits for each supported architecture. The NetLS license server is used to support the standard licensing mechanism for Data Explorer.

To install Data Explorer, log in as root, insert the tape in the drive, and type:

```
cd /tmp
tar xvf <device> installdx
./installdx <platform>
```

<device> is the appropriate tape device for the operating system from which you run installdx. Example tape devices for DG/UX are:

```
/dev/rmt/0, ...
```

<platform> is used to indicate the platform for which the Data Explorer files will be extracted. The supported platforms are:

```
alphax, aviion, hp700, ibm6000, sgi, solaris, sun4
```

This argument is optional and the default is the host platform (aviion).

The installation script will ask if you want to install or deinstall Data Explorer and then a series of questions related to the installation. You will be given the opportunity to set the installation directory and to select the Data Explorer subsystems to install.

When doing an installation for an architecture other than the current host, you may need to run the Configure script provided with Data Explorer on the workstations to which you expect to export the Data Explorer installation tree. See Chapter 13, “The Configure Script” on page 49.

Please follow the instructions presented by installdx carefully. In particular, when asked to give the name of the tape device, be sure to give the name of the non-autorewinding tape drive, examples of which are provided by the script. Also, if at anytime during the tape installation you are asked to mount the next tape, just press the <ENTER> key to have the installation continue normally.

After installation and configuration is complete, which may take as much as 30 minutes, you will be provided with a unique workstation (node) identifier that must be provided to IBM to acquire the enabling license information. See 11.3, “Configuring a Data Explorer License for a Data General AViiON” on page 40 for information on how to reacquire the identifier (if you lose it) and on how to use the node identifier to enable Data Explorer.

11.2 Installing on a Data General AViiON from CD-ROM

CD-ROM distributions of Data Explorer contain a mountable file system that includes the installation scripts (`installdx.sh` for Data Explorer and `install_lsk.sh` for the NetLS license server software), the software itself (in tar format) and documentation. The NetLS license server is used to support the standard licensing mechanism used for Data Explorer.

To install Data Explorer, log in as root, insert the distribution media in the drive, and type:

```
mkdir /cdrom
```

Mount the CD on /cdrom by entering the following command:

```
mount -r -t cdrom -o noversion <CD-ROM-Device> /cdrom
```

where <CD-ROM-device> is the actual name of the CD-ROM drive on your system. A typical name is `/dev/pdsk/1`.

Type:

```
cd /cdrom
./installdx.sh <platform>
```

<platform> is used to indicate the platform for which the Data Explorer files will be extracted. The supported platforms are:

```
alphax, aviion, hp700, ibm6000, sgi, solaris, sun4
```

This argument is optional and the default is the host platform (aviion).

The installation script will ask if you want to install or deinstall Data Explorer and then a series of questions related to the installation. You will be given the opportunity to set the installation directory and to select the Data Explorer subsystems to install.

When doing an installation for an architecture other than the current host, you may need to run the Configure script provided with Data Explorer on the workstations to which you expect to export the Data Explorer installation tree. See Chapter 13, "The Configure Script" on page 49.

After installation and configuration is complete, which may take as much as 30 minutes, you will be provided with a unique workstation (node) identifier that must be provided to IBM to acquire the enabling license information. See 11.3, "Configuring a Data Explorer License for a Data General AViiON" for information on how to reacquire the identifier (if you lose it) and on how to use the node identifier to enable Data Explorer.

11.3 Configuring a Data Explorer License for a Data General AViiON

Data Explorer uses the NetLS licensing system from Gradient Technologies, Inc., to manage the two types of licenses available with Data Explorer:

Node-locked license

This license program is restricted to the machine matching the node identifier for which a license was acquired. All version 1 basic one-time charge licenses are considered node-locked licenses. Please note that this type of license does NOT require the installation of the NetLS license server software included with Data Explorer.

Floating (or concurrent use) license

This license can be used by any supported workstation on the network as long as the maximum number of concurrent Data Explorer users does not exceed the number of purchased floating licenses. Floating (or concurrent use) license installations require that a NetLS license server run somewhere in the network. If your network does not currently run a license server, see Chapter 15, "Installing a NetLS License Server" on page 55. Under a floating license, IBM waives the requirement that customers notify IBM of change in designated machine. When this program does not operate under the control of NetLS, normal customer notification of change in designated machine rules apply. For more information on the licensing software, please refer to the Gradient documentation that is provided with the Data Explorer installation kit.

Both node-locked and floating licenses require that IBM be provided with a unique workstation identifier. Identifiers are generated by the NodeID script located in the bin directory of the Data Explorer installation directory tree (e.g.

/usr/lpp/dx/bin/NodeID). This identifier is provided at the end of a successful installation. License type specifics are covered in the following sections.

Setting up a Node-locked License for a Data General AViiON

To enable Data Explorer with a node-locked license:

1. Be sure that Data Explorer is installed.
2. Obtain a node identifier by executing the NodeID script found in the bin directory of the Data Explorer install tree (e.g. /usr/lpp/dx/bin/NodeID) on the machine being licensed to run Data Explorer. Note that the NodeID information is provided after a successful installation of Data Explorer.
3. Call IBM Software Registration at 1-800-446-8989 (Monday-Friday, 6AM-5PM Mountain Time) from within the continental United States, call 1-800-565-SW4U in Canada, or call your IBM representative elsewhere, and provide the information obtained in step 2 to receive your node-locked "Vendor ID" and "Product Password".

For the DG/UX operating system both the Vendor ID and the Product Password must be placed in the file:

```
/var/netls/nodelock
```

The Vendor ID and the Product Password must appear on the same line with the Vendor ID placed first and a space between them. For example,

```
543b0f87c093.02.81.87.92.34.00.00.00 gganccupqb5d8auxabdws2a
```

Additional information on editing the nodelock file can be found on page 31 of Gradient's *Managing Software Products with the Network License System* included with your Data Explorer package.

Setting up a Concurrent License for a Data General AViiON

To set up a floating (or concurrent use) license, you must have a license server running within your network. If you do not have a license server running, see Chapter 15, "Installing a NetLS License Server" on page 55.

Once you have a NetLS license server running within your network, you should:

1. Be sure that Data Explorer is installed.
2. On your license server host run the NodeID script located in the bin directory of the Data Explorer install tree (e.g. /usr/lpp/dx/bin/NodeID). Note that the NodeID information is provided after a successful installation of Data Explorer.
3. Call IBM Software Registration at 1-800-446-8989 (Monday-Friday, 6AM-5PM Mountain Time) from within the continental United States, call 1-800-565-SW4U in Canada, or call your IBM representative elsewhere, and provide the information returned in step 2 to receive your concurrent license password information.
4. Enter this information in the license server database using the ls_admin tool provided with the NetLS license server software. See Gradient Technologies, Inc. documentation provided with Data Explorer for more information regarding concurrent licensing issues. Page 21 of the Gradient document entitled "Managing Software Products with the Network License System" contains an example session using ls_admin.

Chapter 12. Installing Data Explorer on a DEC 3000 AXP

12.1 Installing on a DEC 3000 AXP from Tape 44
12.2 Installing on a DEC 3000 AXP from CD-ROM 45
12.3 Configuring a Data Explorer License for a DEC 3000 AXP 46
Setting up a Node-locked License for a DEC 3000 AXP 47
Setting up a Concurrent License for a DEC 3000 AXP 47

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Data Explorer is comprised of five subsystems as follows:

Base executables contains all files needed to run Data Explorer.

Development environment
contains libraries, header files and other tools needed to build a custom executive.

Samples example programs, scripts, tutorial, and makefiles.

Online help and HTML
online help available from the Data Explorer User Interface, and documentation in HTML format.

PostScript and ASCII documentation
Documentation in PostScript format and for printing and in flat ASCII format for basic minimal viewing.

All subsystems are placed under a common directory (e.g. `/usr/lpp/dx`) which is referred to as the root of the Data Explorer installation tree. Architecture-specific executable and library files are placed in the directories `bin_ARCH` and `lib_ARCH` under the Data Explorer root, where *ARCH* is one of the supported architectures (alphax, aviion, hp700, ibm6000, sgi, solaris, sun4). As part of configuring Data Explorer, links and small files are placed in the public file system that reference files within the Data Explorer root directory. The default Data Explorer root directory is `/usr/lpp/dx`. In a networked environment, it is most convenient for users if all workstations have Data Explorer available through the same root directory. This makes it easier to run the User Interface on one machine and the server on another.

Data Explorer is a licensed software product and uses the NetLS licensing system to manage its licensing. Two types of licenses are supported: node-locked and floating (or concurrent-use). Node-locked licenses require a single configuration file containing an enabling password, while the floating license requires that a NetLS license server configured with at least one Data Explorer license is running somewhere within your network. If you expect to use a floating license and you do not have a NetLS license server running in your network you will need to install one (see Chapter 15, “Installing a NetLS License Server” on page 55). Please note that node-locked licenses do not require the use or installation of a NetLS license server.

12.1 Installing on a DEC 3000 AXP from Tape

Tape distributions of Data Explorer contain three tar format files. The first contains two install scripts (installdx, install_lsk) and a PostScript file documenting Network Computing System (NCS) issues (ncs_ps.Z). The second contains the Data Explorer installation tree which contains Data Explorer for each of the supported architectures. The third file contains NetLS license server installation kits for each supported architecture. The NetLS license server is used to support the standard licensing mechanism for Data Explorer.

To install Data Explorer, log in as root, insert the tape in the drive, and type:

```
cd /tmp
tar xvf <device> installdx
./installdx <platform>
```

<device> is the appropriate tape device for the operating system from which you run installdx. Example tape devices for OSF/1 are:

```
/dev/rmt01, /dev/rmt0h, ...
```

<platform> is used to indicate the platform for which the Data Explorer files will be extracted. The supported platforms are:

```
alphax, aviion, hp700, ibm6000, sgi, solaris, sun4
```

This argument is optional and the default is the host platform (alphax).

The installation script will ask if you want to install or deinstall Data Explorer and then a series of questions related to the installation. You will be given the opportunity to set the installation directory and to select the Data Explorer subsystems to install.

When doing an installation for an architecture other than the current host, you may need to run the Configure script provided with Data Explorer on the workstations to which you expect to export the Data Explorer installation tree. See Chapter 13, “The Configure Script” on page 49.

Please follow the instructions presented by installdx carefully. In particular, when asked to give the name of the tape device, be sure to give the name of the non-autorewinding tape drive, examples of which are provided by the script. Also, if at anytime during the tape installation you are asked to mount the next tape, just press the <ENTER> key to have the installation continue normally.

After installation and configuration is complete, which may take as much as 30 minutes, you will be provided with a unique workstation (node) identifier that must be provided to IBM to acquire the enabling license information. See 12.3, “Configuring a Data Explorer License for a DEC 3000 AXP” on page 46 for information on how to reacquire the identifier (if you lose it) and on how to use the node identifier to enable Data Explorer.

12.2 Installing on a DEC 3000 AXP from CD-ROM

CD-ROM distributions of Data Explorer contain a mountable file system that includes the installation scripts (`installdx.sh` for Data Explorer and `install_lsk.sh` for the NetLS license server software), the software itself (in tar format) and documentation. The NetLS license server is used to support the standard licensing mechanism used for Data Explorer.

To install Data Explorer, log in as root, insert the distribution media in the drive, and type:

```
mkdir /cdrom
```

Mount the CD on /cdrom by entering the following command:

```
mount -r -t cdfs <CD-ROM-Device> /cdrom
```

where <CD-ROM-device> is the actual name of the CD-ROM drive on your system. A typical name is `/dev/rz4c`.

Type:

```
cd /cdrom
./installdx.sh <platform>
```

<platform> is used to indicate the platform for which the Data Explorer files will be extracted. The supported platforms are:

```
alphax, aviion, hp700, ibm6000, sgi, solaris, sun4
```

This argument is optional and the default is the host platform (alphax).

The installation script will ask if you want to install or deinstall Data Explorer and then a series of questions related to the installation. You will be given the opportunity to set the installation directory and to select the Data Explorer subsystems to install.

When doing an installation for an architecture other than the current host, you may need to run the Configure script provided with Data Explorer on the workstations to which you expect to export the Data Explorer installation tree. See Chapter 13, "The Configure Script" on page 49.

After installation and configuration is complete, which may take as much as 30 minutes, you will be provided with a unique workstation (node) identifier that must be provided to IBM to acquire the enabling license information. See 12.3, "Configuring a Data Explorer License for a DEC 3000 AXP" for information on how to reacquire the identifier (if you lose it) and on how to use the node identifier to enable Data Explorer.

Note: On OSF/1 systems, the file names will appear capitalized and include a version number (e.g. INSTALLDX.SH;1). If this is the case, then you must enter:

```
'./INSTALLDX.SH;1'
```

(including the single quotes) instead of `./installdx`.

12.3 Configuring a Data Explorer License for a DEC 3000 AXP

Data Explorer uses the NetLS licensing system from Gradient Technologies, Inc., to manage the two types of licenses available with Data Explorer:

Node-locked license

This license program is restricted to the machine matching the node identifier for which a license was acquired. All version 1 basic one-time charge licenses are considered node-locked licenses. Please note that this type of license does NOT require the installation of the NetLS license server software included with Data Explorer.

Floating (or concurrent use) license

This license can be used by any supported workstation on the network as long as the maximum number of concurrent Data Explorer users does not exceed the number of purchased floating licenses. Floating (or concurrent use) license installations require that a NetLS license server run somewhere in the network. If your network does not currently run a license server, see Chapter 15, "Installing a NetLS License Server" on page 55. Under a floating license, IBM waives the requirement that customers notify IBM of change in designated machine. When this program does not operate under the control of NetLS, normal customer notification of change in designated machine rules apply. For more

information on the licensing software, please refer to the Gradient documentation that is provided with the Data Explorer installation kit.

Both node-locked and floating licenses require that IBM be provided with a unique workstation identifier. Identifiers are generated by the NodeID script located in the bin directory of the Data Explorer installation directory tree (e.g. `/usr/lpp/dx/bin/NodeID`). This identifier is provided at the end of a successful installation. License type specifics are covered in the following sections.

Setting up a Node-locked License for a DEC 3000 AXP

To enable Data Explorer with a node-locked license:

1. Be sure that Data Explorer is installed.
2. Obtain a node identifier by executing the `NodeID` script found in the bin directory of the Data Explorer install tree (e.g. `/usr/lpp/dx/bin/NodeID`) on the machine being licensed to run Data Explorer. Note that the NodeID information is provided after a successful installation of Data Explorer.
3. Call IBM Software Registration at 1-800-446-8989 (Monday-Friday, 6AM-5PM Mountain Time) from within the continental United States, call 1-800-565-SW4U in Canada, or call your IBM representative elsewhere, and provide the information obtained in step 2 to receive your node-locked "Vendor ID" and "Product Password".

For the OSF/1 operating system both the Vendor ID and the Product Password must be placed in the file:

```
/var/netls/nodelock
```

The Vendor ID and the Product Password must appear on the same line with the Vendor ID placed first and a space between them. For example,

```
543b0f87c093.02.81.87.92.34.00.00.00 gganccupqb5d8auxabdws2a
```

Additional information on editing the `nodelock` file can be found on page 31 of Gradient's *Managing Software Products with the Network License System* included with your Data Explorer package.

Setting up a Concurrent License for a DEC 3000 AXP

To set up a floating (or concurrent use) license, you must have a license server running within your network. If you do not have a license server running, see Chapter 15, "Installing a NetLS License Server" on page 55.

Once you have a NetLS license server running within your network, you should:

1. Be sure that Data Explorer is installed.
2. On your license server host run the `NodeID` script located in the bin directory of the Data Explorer install tree (e.g. `/usr/lpp/dx/bin/NodeID`). Note that the NodeID information is provided after a successful installation of Data Explorer.
3. Call IBM Software Registration at 1-800-446-8989 (Monday-Friday, 6AM-5PM Mountain Time) from within the continental United States, call 1-800-565-SW4U in Canada, or call your IBM representative elsewhere, and provide the information returned in step 2 to receive your concurrent license password information.

4. Enter this information in the license server database using the ls_admin tool provided with the NetLS license server software. See Gradient Technologies, Inc. documentation provided with Data Explorer for more information regarding concurrent licensing issues. Page 21 of the Gradient document entitled “Managing Software Products with the Network License System” contains an example session using `ls_admin`.

Chapter 13. The Configure Script

13.1 Command Line Options for Configure 51
13.2 Using Other Than the Default Configuration 51

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The Configure script, located in the bin directory of the Data Explorer installation tree, is used to install or deinstall soft links and small files in standard places (e.g.. `/usr/local/bin`, `/usr/local/lib`, ...) that reference the Data Explorer installation tree.

Configure is run automatically from the installation script, so generally one does not need to run it directly. However, if for example, Data Explorer for architecture A (e.g. ibm6000) is installed on a machine with architecture B (e.g. hp700), then Configure may need to be run on the machine with architecture A that expects to use Data Explorer.

Configure provides the ability to configure individual subsystems of Data Explorer, but by default will attempt to configure all of them.

The run-time subsystem uses either /usr/local/bin or /usr/bin (in that order) as the directory to install executables (e.g. the `dx` driver script). If neither of these directories is writable an error will occur. A Data Explorer manual page is also installed in the appropriate manual page directory tree if that directory is writable. Note, that in a networked environment in which /usr/local/bin and the manual page directory are shared among many hosts, Configure need only be run once to configure all such machines to use the run-time subsystem of Data Explorer.

The development subsystem uses the same executable directories as the run-time subsystem to install its development related executables (e.g. mdf-c). This subsystem also uses either /usr/local/lib or /usr/lib (in that order) as the directory to install links to libraries (i.e. libDX.a, libDXlite.a). In addition, a link is made from /usr/include/dx to the include directory of the Data Explorer installation directory. Note, that in a networked environment in which /usr/local/lib and /usr/local/bin directory are shared among many hosts, Configure need only be run once to configure all such machines to use the development subsystem of Data Explorer with the exception of the /usr/include/dx directory which is generally not shared.

The samples subsystem and the online help subsystem do not require configuring.

To perform the standard configuration after installation, enter the following:

```
Configure
```

To perform the standard deconfiguration prior to removing Data Explorer from your system or to reconfigure Data Explorer, enter the following:

```
Configure deinstall
```

If the root directory is moved after installation, Data Explorer can (and should) be reconfigured to use the new root directory with the following:

```
Configure deinstall
Configure -dxroot <new directory>
```

A complete description of the usage and options for Configure are found in 13.1, “Command Line Options for Configure” on page 51.

13.1 Command Line Options for Configure

Usage is as follows:

```
Configure [ -<option> ... ] [ <platform> ] [ <operation> ]
```

Where <operation> is one of install or deinstall and <platform> is one of the supported architectures (alphax, aviion, hp700, ibm6000, sgi, solaris, sun4). The default action is to configure all Data Explorer subsystems for the architecture that is running Configure.

The options are as follows:

-bindir <**bindir**> indicates the name of the directory where executable shell scripts should be placed. The given directory must exist. The default is /usr/local/bin and if this is not writable, then /usr/bin.

-libdir <**libdir**> indicates the name of the directory where Data Explorer libraries should be placed. The given directory must exist. The default is /usr/local/lib and if this is not writable, then /usr/lib.

-check lists the actions that will be taken without actually performing them.

-dxroot indicates the root of the Data Explorer installation directory. The default is /usr/lpp/dx.

-echo the same as -check, above.

-help gives a listing of supported options.

-online-help perform the given operation for the online help subsystem.

-html perform the given operation for the HTML subsystem.

-samples perform the given operation for the samples subsystem.

-runtime perform the given operation for the run-time subsystem.

-develop perform the given operation for the develop subsystem.

13.2 Using Other Than the Default Configuration

If you would like to use a configuration other than the one provided by the default installation you can deinstall the configuration and reconfigure Data Explorer with the configuration you prefer. You can use the options as discussed in 13.1, “Command Line Options for Configure” to customize your installation. To remove the default configuration, execute the following:

```
Configure deinstall
```

So, for example, to change the configuration of the run-time subsystem to use a different library and executable directory, execute the following:

```
Configure deinstall
Configure -runtime -libdir /my/lib/dir -bindir /my/bin/dir
```

To change the configuration of all subsystems to use the default executable directory and a different library directory, execute the following:

```
Configure deinstall
Configure -libdir /my/lib/dir
```

Chapter 14. Troubleshooting the Data Explorer Installation

If the error message "./Configure: not found" occurs during a tape installation, it is likely that the autorewinding tape drive was given as the name of the tape device during installation. To fix this, rerun the installation script and be sure to give the non-autorewinding device as listed by the installation script.

If a tape installation seems to take longer than 30-40 minutes on AIX, it may be that the block size of the tape size is set to 0. If this is the case, use "smit", AIX's System Management Interface Tool, to change the block size of the device to 512 bytes.

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Chapter 15. Installing a NetLS License Server

15.1 Introduction 56
15.2 IMPORTANT License Server information for concurrent licensees. . . . 56
15.3 Installing a License Server for pre-AIX 4.x IBM RISC System/6000 . . . 57
Installing a License Server for IBM RISC System/6000 from Tape 57
Installing a License Server for IBM RISC System/6000 from CD-ROM . . . 57
15.4 Installing a License Server for an HP Workstation 58
Floating License Issues on an HP Workstation 58
Installing a License Server for HP Workstation from Tape 58
Installing a License Server for HP Workstation from CD-ROM 59
15.5 Installing a License Server for a Sun SPARCstation 59
Installing a License Server for Sun SPARCstation from Tape 59
Installing a License Server for Sun SPARCstation from CD-ROM 60
15.6 Installing a License Server for an SGI Workstation 60
Installing a License Server for SGI Workstation from Tape 60
Installing a License Server for SGI Workstation from CD-ROM 61
15.7 Installing a License Server for Data General AViiON 61
Installing a License Server for Data General from Tape 61
Installing a License Server for Data General from CD-ROM 62
15.8 Installing a License Server for DEC 3000 AXP 62
Installing a License Server for DEC 3000 AXP from Tape 62
Installing a License Server for DEC 3000 AXP from CD-ROM 63

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15.1 Introduction

It is necessary for you to read this section only if you expect to use a floating (or concurrent use) license and you are NOT presently running a NetLS license server somewhere in your network. (Please note that node-locked licenses do NOT require the installation of a NetLS license server). The job of selecting and configuring a license server is best performed by someone knowledgeable in system administration tasks. The remainder of this section is designed to assist a system/network administrator in configuring a license server.

This section describes a basic installation in which the license server and all client nodes reside on the same network segment. It also assumes that you are not currently using the Network Computing System (NCS) local or global location broker daemons llbd and glbd. For more complex NetLS configurations it is recommended that you consult both Gradient's *Managing Software Products with the Network License System* and *Managing NCS Software* which is provided in PostScript format on the distribution media in the compressed file ncs_ps.Z. You need to decompress this file using the UNIX `uncompress` command before viewing or printing it..

NetLS uses NCS to provide location services through the use of global and local location broker daemons (glbd and llbd). Therefore you must install and configure a NCS “cell” before you can run the NetLS license server daemon (netlsd).

The basic setup described here will configure a default cell and install and start all three daemons on a single “License Server” machine and configure them to start automatically when the machine is re-booted. If you decide on a different setup for your network please keep in mind that you must:

Run a glbd on at least one node in your network

Run llbd's on the node running the netlsd and the node running the glbd.

To configure a basic license server installation you must first identify the node best suited to be your license server. This should be a node which is very stable (i.e. rarely goes down) as floating licenses will be unavailable when this machine is down. A file server machine would be a good choice. Once a machine has been selected you can proceed with the installation of the license server software.

15.2 IMPORTANT License Server information for concurrent licensees.

We provide license server software on our installation media primarily to support downlevel operating systems and to resolve compatibility issues for certain platforms. With this in mind, PLEASE adhere to the following:

- USE the license server (NetLS or the newer iFOR/LS) that is already set up on your network **or** that is distributed with your operating system, **with a few exceptions**. A notable exception are certain SGI IRIX distributions containing an incompatible build of the server software.
- DO NOT use the Data Explorer distribution media and installation tools to install a license server **unless** you have determined that an appropriate level of iFOR/LS or NetLS is **not** already installed on your server or distributed with its operating system.

- PLAN the license server installation (choose an appropriate machine, etc.). SCRUTINIZE the instructions. Send email to dxsupp@watson.ibm.com if you have any questions about versions or procedures.

15.3 Installing a License Server for pre-AIX 4.x IBM RISC System/6000

Important

This section is only applicable if you are running AIX 3.2.5. For AIX 4.x, NetLS and NCS are provided as part of the operating system distribution. Users should insure that both the NCS and NetLS components of their operating system have been installed. If not they should be installed and started from your O/S vendor's distribution media.

Installing a License Server for IBM RISC System/6000 from Tape

Note: On AIX systems, the block size of the tape device must be set to 512 bytes. Use `smit` to determine and change the device block size if necessary.

Tape distributions of Data Explorer contain three tar format files. The first contains two install scripts (`installdx`, `install_lsk`) and a PostScript file documenting the Network Computing System (`ncs_ps.Z`). The second contains the Data Explorer installation tree which contains Data Explorer for all supported architectures. The third file contains NetLS license server installation kits for each supported architecture.

To install the license server, log in as root, insert the tape in the drive, and type:

```
cd /tmp
tar xvf <device> install_lsk
./install_lsk
```

<device> is the appropriate tape device for the operating system from which you run `install_lsk`. Example AIX tape devices are:

```
/dev/rmt0, /dev/rmt1, ...
```

Please follow the instructions presented by `install_lsk` carefully. In particular, when asked to give the name of the tape device, be sure to give the name of the non-autorewinding tape drive, examples of which are provided by the script. Also, if at anytime during the tape installation you are asked to mount the next tape, just press the <ENTER> key to have the installation continue normally.

Installing a License Server for IBM RISC System/6000 from CD-ROM

CD-ROM distributions of Data Explorer contain a mountable file system that includes the installation scripts (installdx.sh for Data Explorer and install_lsk.sh for the NetLS license server software), the software itself (in tar format) and documentation.

To install the license server, log in as root, insert the distribution media in the drive, and type:

```
mkdir /cdrom
```

Mount the CD on /cdrom. Mount the disk by entering the following command:

```
mount -r -v cdrfs <CD-ROM-Device> /cdrom
```

where <CD-ROM-device> is the actual name of the CD-ROM drive on your system. A typical name is `/dev/cd0`.

Type:

```
cd /cdrom
./install_lsk.sh
```

15.4 Installing a License Server for an HP Workstation

Floating License Issues on an HP Workstation

NetLS and NCS are provided as part of the operating system distribution for HP-UX. HP-UX users should insure that both the NCS and NetLS components of their operating system have been installed. If not they should be installed and started from your O/S vendor's distribution media.

The HP-UX 8.0x operating system contains an older and incompatible version of the network license server daemon (netlsd). Users of this operating system must run the install_lsk or install_lsk.sh script from the Data Explorer distribution media (see “Installing a License Server for HP Workstation from Tape” or “Installing a License Server for HP Workstation from CD-ROM” on page 59). This script will detect the older version and replace it with a current version of netlsd which is delivered on the Data Explorer distribution media.

HP-UX 9.0x users do not need to run the NetLS installation script and may proceed with the section 8.3, “Configuring a Data Explorer License for an HP Workstation” on page 22 once the NetLS software is up and running.

HP users can refer to the following documents for assistance in installing and configuring NetLS and NCS:

HP Document Numbers

11895-A02 Managing NCS Software 11272-A01 Managing Software Products with the Network License System

Installing a License Server for HP Workstation from Tape

Tape distributions of Data Explorer contain three tar format files. The first contains two install scripts (`installdx`, `install_lsk`) and a PostScript file documenting the Network Computing System (`ncs_ps.Z`). The second contains the Data Explorer installation tree which contains Data Explorer for all supported architectures. The third file contains NetLS license server installation kits for each supported architecture.

To install the license server, log in as root, insert the tape in the drive, and type:

```
cd /tmp
tar xvf <device> install_lsk
./install_lsk
```

<device> is the appropriate tape device for the operating system from which you run `install_lsk`. Example HP-UX tape devices are:

```
/dev/rmt/0
```

Please follow the instructions presented by `install_lsk` carefully. In particular, when asked to give the name of the tape device, be sure to give the name of the non-autorewinding tape drive, examples of which are provided by the script. Also, if at anytime during the tape installation you are asked to mount the next tape, just press the <ENTER> key to have the installation continue normally.

Installing a License Server for HP Workstation from CD-ROM

CD-ROM distributions of Data Explorer contain a mountable file system that includes the installation scripts (installdx.sh for Data Explorer and install_lsk.sh for the NetLS license server software), the software itself (in tar format) and documentation.

To install the license server, log in as root, insert the distribution media in the drive, and type:

```
mkdir /cdrom
```

Mount the CD on /cdrom. Mount the disk by entering the following command:

```
mount -r -t cdfs <CD-ROM-Device> /cdrom
```

where <CD-ROM-device> is the actual name of the CD-ROM drive on your system. A typical name is `/dev/dsk/2s0`.

Type:

```
cd /cdrom
./install_lsk.sh
```

Note: On HP-UX systems, the file names will appear capitalized and include a version number (e.g. INSTALL_LSK.SH;1). If this is the case, then you must enter:

```
'./INSTALL_LSK.SH;1'
```

(including the single quotes) instead of `./install_lsk`.

15.5 Installing a License Server for a Sun SPARCstation

Installing a License Server for Sun SPARCstation from Tape

Tape distributions of Data Explorer contain three tar format files. The first contains two install scripts (`installdx`, `install_lsk`) and a PostScript file documenting the Network Computing System (`ncs_ps.Z`). The second contains the Data Explorer installation tree which contains Data Explorer for all supported architectures. The third file contains NetLS license server installation kits for each supported architecture.

To install the license server, log in as root, insert the tape in the drive, and type:

```
cd /tmp
tar xvf <device> install_lsk
./install_lsk
```

<device> is the appropriate tape device for the operating system from which you run `install_lsk`. Example SunOS and Solaris tape devices are:

```
Sun4:    /dev/rst0, /dev/rst1, ...
Solaris: /dev/rmt0
```

Please follow the instructions presented by `install_lsk` carefully. In particular, when asked to give the name of the tape device, be sure to give the name of the non-autorewinding tape drive, examples of which are provided by the script. Also, if at anytime during the tape installation you are asked to mount the next tape, just press the <ENTER> key to have the installation continue normally.

Installing a License Server for Sun SPARCstation from CD-ROM

CD-ROM distributions of Data Explorer contain a mountable file system that includes the installation scripts (installdx.sh for Data Explorer and install_lsk.sh for the NetLS license server software), the software itself (in tar format) and documentation.

To install the license server, log in as root, insert the distribution media in the drive, and type:

```
mkdir /cdrom
```

Mount the CD on /cdrom. Mount the disk by entering the following command:

```
SunOS:   mount -r -t hsfs <CD-ROM-Device> /cdrom
Solaris: mount -r -f hsfs <CD-ROM-Device> /cdrom
```

where <CD-ROM-device> is the actual name of the CD-ROM drive on your system. A typical name is `/dev/sr0`.

Type:

```
cd /cdrom
./install_lsk.sh
```

Note: For Solaris, once your installation is complete, unmount and eject the disk by entering:

```
eject <CD-ROM-device>
```

15.6 Installing a License Server for an SGI Workstation

Installing a License Server for SGI Workstation from Tape

Note: The block size of the tape device must be set to 512 bytes. Use the following command to determine the current block size:

```
mt -t <device> blksize
```

<device> is the appropriate tape device for the operating system from which you run installdx. Example IRIX tape devices are:

```
/dev/rmt/tps0d4ns, /dev/rmt/tps0d5ns, ...
```

On IRIX be sure to use the no-swap tape drives which have the characters “ns” in the device name.

Use the following command to set the correct block size if necessary:

```
mt -t <device> setblksz 512
```

Tape distributions of Data Explorer contain three tar format files. The first contains two install scripts (`installdx`, `install_lsk`) and a PostScript file documenting the Network Computing System (`ncs_ps.Z`). The second contains the Data Explorer installation tree which contains Data Explorer for all supported architectures. The third file contains NetLS license server installation kits for each supported architecture.

To install the license server, log in as root, insert the tape in the drive, and type:

```
cd /tmp
tar xvf <device> install_lsk
./install_lsk
```

<device> is the appropriate tape device for the operating system from which you run `install_lsk`. Example IRIX tape devices are:

```
/dev/rmt/tps0d4ns, /dev/rmt/tps0d5ns, ...
```

Please follow the instructions presented by `install_lsk` carefully. In particular, when asked to give the name of the tape device, be sure to give the name of the non-autorewinding tape drive, examples of which are provided by the script. Also, if at anytime during the tape installation you are asked to mount the next tape, just press the <ENTER> key to have the installation continue normally.

Installing a License Server for SGI Workstation from CD-ROM

CD-ROM distributions of Data Explorer contain a mountable file system that includes the installation scripts (installdx.sh for Data Explorer and install_lsk.sh for the NetLS license server software), the software itself (in tar format) and documentation.

To install the license server, log in as root, insert the distribution media in the drive, and type:

```
mkdir /cdrom
```

Mount the CD on /cdrom. Mount the disk by entering the following command:

```
mount -r -t iso9660 <CD-ROM-Device> /cdrom
```

where <CD-ROM-device> is the actual name of the CD-ROM drive on your system. A typical name is `/dev/scsi/sc0d0l0`.

Type:

```
cd /cdrom
./install_lsk.sh
```

15.7 Installing a License Server for Data General AViiON

Installing a License Server for Data General from Tape

Tape distributions of Data Explorer contain three tar format files. The first contains two install scripts (`installdx`, `install_lsk`) and a PostScript file documenting the Network Computing System (`ncs_ps.Z`). The second contains the Data Explorer installation tree which contains Data Explorer for all supported architectures. The third file contains NetLS license server installation kits for each supported architecture.

To install the license server, log in as root, insert the tape in the drive, and type:

```
cd /tmp
tar xvf <device> install_lsk
./install_lsk
```

<device> is the appropriate tape device for the operating system from which you run `install_lsk`. Example DG/UX tape devices are:

```
/dev/rmt/0, ...
```

Please follow the instructions presented by `install_lsk` carefully. In particular, when asked to give the name of the tape device, be sure to give the name of the non-autorewinding tape drive, examples of which are provided by the script. Also, if at anytime during the tape installation you are asked to mount the next tape, just press the <ENTER> key to have the installation continue normally.

Installing a License Server for Data General from CD-ROM

CD-ROM distributions of Data Explorer contain a mountable file system that includes the installation scripts (installdx.sh for Data Explorer and install_lsk.sh for the NetLS license server software), the software itself (in tar format) and documentation.

To install the license server, log in as root, insert the distribution media in the drive, and type:

```
mkdir /cdrom
```

Mount the CD on /cdrom. Mount the disk by entering the following command:

```
mount -r -t cdrom -o noversion <CD-ROM-Device> /cdrom
```

where <CD-ROM-device> is the actual name of the CD-ROM drive on your system. A typical name is `/dev/pdsk/1`.

Type:

```
cd /cdrom
./install_lsk.sh
```

15.8 Installing a License Server for DEC 3000 AXP

Installing a License Server for DEC 3000 AXP from Tape

Tape distributions of Data Explorer contain three tar format files. The first contains two install scripts (`installdx`, `install_lsk`) and a PostScript file documenting the Network Computing System (`ncs_ps.Z`). The second contains the Data Explorer installation tree which contains Data Explorer for all supported architectures. The third file contains NetLS license server installation kits for each supported architecture.

To install the license server, log in as root, insert the tape in the drive, and type:

```
cd /tmp
tar xvf <device> install_lsk
./install_lsk
```

<device> is the appropriate tape device for the operating system from which you run `install_lsk`. Example OSF/1 tape devices are:

```
/dev/rmt01, /dev/rmt0h, ...
```

Please follow the instructions presented by `install_lsk` carefully. In particular, when asked to give the name of the tape device, be sure to give the name of the non-autorewinding tape drive, examples of which are provided by the script. Also, if at anytime during the tape installation you are asked to mount the next tape, just press the <ENTER> key to have the installation continue normally.

Installing a License Server for DEC 3000 AXP from CD-ROM

CD-ROM distributions of Data Explorer contain a mountable file system that includes the installation scripts (installdx.sh for Data Explorer and install_lsk.sh for the NetLS license server software), the software itself (in tar format) and documentation.

To install the license server, log in as root, insert the distribution media in the drive, and type:

```
mkdir /cdrom
```

Mount the CD on /cdrom. Mount the disk by entering the following command:

```
mount -r -t cdfs <CD-ROM-Device> /cdrom
```

where <CD-ROM-device> is the actual name of the CD-ROM drive on your system. A typical name is `/dev/rz4c`.

Type:

```
cd /cdrom
./install_lsk.sh
```

Note: On OSF/1 systems, the file names will appear capitalized and include a version number (e.g. INSTALL_LSK.SH;1). If this is the case, then you must enter:

```
'./INSTALL_LSK.SH;1'
```

(including the single quotes) instead of `./install_lsk`.

Readers' Comments — We'd Like to Hear from You

IBM Visualization Data Explorer
Installation and Configuration Guide
Version 3 Release 1 Modification 4

Publication No. USEM-EM42-C8

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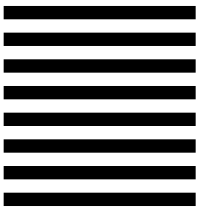

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