ENTEGRITY *Solutions* ®

PC-DCE™

Installation and
Release Notes

Software Version 5.0.2

Notices

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Preface

Intended Audience

This guide is intended for users who have a general knowledge of The Open Group (formerly Open Software Foundation) Distributed Computing Environment (DCE), and who want information about the current release of the Entegrity® DCE implementation for Windows® called PC-DCE.

Entegrity PC-DCE is a Windows implementation of OSF DCE Version 1.2.2, and is fully compliant with OSF DCE standards.

Documentation

This section describes the documentation that Entegrity provides with PC-DCE on both the product CD and on the Entegrity Support web site (**support.entegrity.com**):

■ *PC-DCE Documentation Set*
■ *The Open Group Documentation*

We are always trying to improve our documentation. If you notice any inaccuracies or cannot find information, please send email to **docs@entegrity.com**. We welcome any comments or suggestions.

PC-DCE Documentation Set

The following documents are provided with PC-DCE:

■ *PC-DCE Installation and Release Notes* (this book)
■ *PC-DCE Overview Guide*
■ *PC-DCE Administrator's Guide*
■ *PC-DCE Developer's Notes*
■ *PC-DCE Guide to CAS*

PC-DCE also provides online help with the following tools:

■ PC-DCE Service Panel
■ PC-DCE Configuration Panel
■ DCE Director
■ Visual DCE ACL Editor
■ DCE setup

Entegrity also provides OSF DCE Version 1.2.2 documentation on the product CD and the Entegrity web site.

The Open Group Documentation

The PC-DCE product CD and the Entegrity Support web site also provide The Open Group (formerly OSF) DCE Version 1.2.2 documentation, including the following guides:

- *OSF DCE Administration Guide — Core Components*
- *OSF DCE Administration Guide — Introduction*
- *OSF DCE Application Development Guide — Core Components*
- *OSF DCE Application Development Guide — Directory Services*
- *OSF DCE Application Development Guide — Introduction and Style Guide*
- *OSF DCE Application Development Reference*
- *OSF DCE Command Reference*
- *Introduction to OSF DCE*
- *OSF DCE Problem Determination Guide*
- *OSF DCE/File-Access Administration Guide and Reference*
- *OSF DCE/File-Access Users' Guide*
- *OSF DFS Administration Guide and Reference*
- *OSF GDS Administration Guide and Reference*

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For a complete listing of Entegrity Solutions Corporation sales, research and development, and solutions centers worldwide, please see the Entegrity web site at **http://www.entegrity.com**.

Obtaining Technical Support

If you purchased PC-DCE directly from Entegrity Solutions, you are entitled to 30 days of limited technical support beginning on the day the product is expected to arrive.

You may also purchase a support plan that entitles you to additional services. You *must* register prior to receiving this support. For details, refer to the customer support information package that accompanied your shipment or refer to **http://support.entegrity.com**. The web site also contains online forms for easy registration.

If you purchased PC-DCE from a reseller, please contact the reseller for information on obtaining technical support.

Obtaining Additional Technical Information

Contact	Address	Phone/Fax/Email
The Open Group™ Developer of DCE (Distributed Computing Architecture) software and standards.	The Open Group 8 New England Executive Park Suite 325 Burlington, MA 01803-5007 USA	Tel: +1 781-425 6733 **http://www.opengroup.org**

Obtaining Additional Documentation

All documentation for PC-DCE is provided in electronic format on the same CD on which the product ships. See the product CD for information on accessing this documentation.

Documentation for Entegrity DCE products is available at **http://support.entegrity.com**. Enter the product's support area and click the Documentation link.

We are always trying to improve our documentation. If you notice any inaccuracies or cannot find information, please send email to **docs@entegrity.com**. We welcome any comments or suggestions.

CHAPTER 1

Release Notes

1

This chapter provides DCE developers and administrators information about the current release of PC-DCE and contains the following sections:

NOTE: Throughout documents related to Entegrity PC-DCE, use of the term Windows refers to all supported Windows operating systems unless noted otherwise.

1.1 New Features Introduced in v5.0.2

There are no new major features in this release.

1.2 Problems Fixed in v5.0.2

This section describes problem fixes contained in this release.

Fix for Denial of Service Attack Worm (RPC Attack)

Implemented a fix for the vulnerability to RPC attacks described in CERT Vulnerability VU#377804 (http://www.kb.cert.org/vuls/id/377804). A worm that exploits that vulnerability had been reported to seek out systems that support the RPC endpoint map service on port 135 and attempt to attack those systems.

The Entegrity implementations of DCE RPC were not vulnerable to the DCOM buffer overflow attacks described in CERT VU#568148, however, the exploit tools did cause an error path to be executed that resulted in a NULL pointer dereference and a subsequent service termination, resulting in a denial of service.

dcecp Commands Failed Unexpectedly

Occasionally users would see a dcecp command fail unexpectedly. For example, the object show command would fail on a perfectly valid CDS object. The only way to recover was to restart dcecp. This was due to a stack corruption, which has been fixed.

Configuration Failure When Creating CDS

Occasionally a configuration failure would occur, usually around the point where dce_config was creating CDS entries. It would create an entry, then fail to find it, thus preventing the user from configuring the machine. This was caused by a problem in a CDS routine, which has been fixed.

Endpoints Not Registered

A workaround has been implemented for a bug in the Windows NT 4.0 endpoint mapper where it occasionally would not register an endpoint.

Maximum Ticket Lifetime Incorrectly Recorded

Fixed a problem with sec_salvage_db where it failed to correctly record the maximum ticket lifetime if it was set to the default value.

Configuration Problems in UDP-Only Environment

As of this release, **dce_config** will now work in a UDP-only environment.

Load Balancing

Enhanced load balancing through further improvements to how threads randomly select a binding from a binding vector.

Symbol Files for secd.exe and gdad.exe

The symbol files for secd.exe and gdad.exe were not included in previous releases of this product. If you have symbol files installed on a machine and a demon crashes, the resulting report for third party tools such as Dr. Watson can now more accurately show where the crash occurred.

1.3 Notes on Operation

This section describes operational and other minor changes for the 5.0 release. These are not documented in the PC-DCE guides.

1.3.1 Installing PC-DCE on Hosts Configured with Compaq DCE

Before installing PC-DCE on any Compaq DCE host, Compaq DCE must first be uninstalled. To preserve cell configuration information, replicate any Compaq DCE servers to PC-DCE server hosts prior to uninstalling Compaq DCE from cell server hosts.

1.3.2 DCE Director

Concurrent Access to Security Registry Entries

While DCE Director is accessing security registry entities (principals, accounts, groups, and so on), operations referencing these entities will fail if the entries are deleted from the registry by another DCE user.

Create Group Option in User Account Dialog Boxes

After creating a new group from the User Account dialog boxes, there is no immediate update to the group page or UNIX page. When you select a new page from the view or modify dropdown list, or press OK to proceed, the new group is added to the group page and the UNIX page.

DCE Director Failure

If DCE has not been properly configured and you try to start DCE Director, the application fails, but you may not receive any error messages.

Multiple Copies of the Same View

DCE Director allows the same view to be shown multiple times.

Changing User Account Passwords

To use the DCE Integrated Login feature, you must keep password information in the DCE Registry synchronized with password information in the NT security registry. Currently, modifying user account passwords with DCE Director changes the password only in the DCE Registry; the password in the NT security registry remains unchanged. At present, the only supported method for changing user passwords in both registries simultaneously is by using the Change Password button on the Windows NT Security dialog box (press Ctrl+Alt+Del to get this). Passwords will not remain synchronized if they are changed with the User Manager utility.

1.3.3 Configuration

Multi-homing

For Windows NT v4.0 systems: If you want to export bindings onto multiple network interfaces, you must either install Service Pack 4 or later service pack, or if you want to continue using Service Pack 3, obtain a hotfix from Microsoft. To obtain the hotfix, contact Microsoft, specify article Q188879, and request the hotfix. In addition, read the section in the *PC-DCE Administrator's Guide* on the environment variable RPC_UNSUPPORTED_NETIFS.

1.3.4 Administration

Running Applications With Old Runtime Versions Not Supported

If you build applications using the current PC-DCE Application Developer's Kit, you must run them with the PC-DCE runtime at the current revision or later.

DHCP Support

DHCP is supported on clients; however, DCE interfaces rely on a stable underlying address, and therefore DCE servers do not support DHCP.

ACL_EDIT, DTSCP, RGY_EDIT, and RPCCP

These programs are currently still available in PC-DCE but are no longer officially supported as most of their functionality is now encompassed in the DCE control program (dcecp). In addition, it is likely that these programs will be removed in future releases.

CDSCP

Because of The Open Group licensing changes, we no longer included **cdscp** with our Runtime Kits; however, it is included with our CDS servers.

Synchronizing Client Time with the Security Server

For synchronization to work from the client without the DTS daemon, you must run a DTS server (local or global) on the same machine as your master Security server.

Public Key Infrastructure Implementation

Because of incompatibilities between RFCs 68.3 and 68.4, PC-DCE Version 5.0 does not implement the OSF Version 1.2.2 Public Key Infrastructure (PKI) enhancement.

1.4 Known Problems and Restrictions

This section describes known problems and other restrictions for this and previous releases.

Known problems in previous releases are still in effect.

1.4.1 Known Problems and Restrictions in v4.0.1

1.4.1.1 DCE Setup

While DCE Setup is included with PC-DCE 5.0, it is not fully functional with this release. To configure DCE services, use the PC-DCE Configuration Panel.

1.4.1.2 DCE Director

Policy and Organization Restrictions

You cannot change the organization attribute of an account, and you cannot set policies such as minimum password length.

Removal of the ACL Entry Allowing the Group's Members to Add/Remove Members Does Not Work

If you modify a group to remove the ACL entry permitting its members to add or remove members, the change does not take effect.

To remove the ACL entry you must use the Visual DCE ACL Editor. With the CDS object highlighted in the Select a kind of object list, choose Access Control from the Actions Menu. Type in /.:/sec/group/*groupname* for the ACL path. Modify the ACL to remove the *groupname* entry.

1.4.1.3 Visual DCE ACL Editor

Displaying ACLs with More Than Eight Permissions

If you are editing an ACL belonging to a user-written ACL Manager that supports more than eight permissions, the necessary display width required may be larger than expected by the Visual DCE ACL Editor. If this is the case, the Visual DCE ACL Editor will cause an exception and not display the ACL.

To edit the ACL, use **dcecp** or acl_edit.

ACL Name not Passed to the Editor

If an instance of the Visual DCE ACL Editor is already running, and you select a directory using DCE Director and press the Access Control button, the existing Visual DCE ACL Editor window will be brought to the foreground but the new ACL will not be opened.

To open the ACL, choose Open from the ACL menu and type in the desired path.

Visual DCE ACL Editor Failure

If your machine has not been properly configured for DCE, and you try to start the Visual DCE ACL Editor, you may get the following error message:

```
An application error has occurred and an application error log is being
generated.
```

To correct the problem, you need to properly configure DCE on your machine.

1.4.1.4 Development

Applications Developed Using Compaq DCE ADK

Applications developed with the Compaq DCE ADK are not compatible with PC-DCE. Such applications must be recompiled and relinked using the PC-DCE ADK. See the *PC-DCE Developer's Notes* for more information about migrating Compaq DCE applications.

Incorrect Dependency Error

During a compile, Microsoft Visual C/C++ Versions 4.2 and earlier may report the following dependent files are missing:

> **sys/file.h**
> **sys/lic.h**

These Entegrity internal include files are commented out, but the Microsoft compiler fails to detect this. You can either ignore the error or upgrade to Visual C/C++ 5.0.

1.4.1.5 Other

Name Service Interface Daemon (nsid) and Windows 98

nsid is not currently functional on the Windows 98 operating system.

DCE Director and DCEsetup Help Files

Accessing DCE Director and DCEsetup help files though help buttons in dialog boxes and at the graphical interface works inconsistently. Launch these help files from the Help menu in each of these tools.

Integrated Login Timeout

If you restart a PC-DCE server or client system that uses Integrated Login, and the system is unable to contact a Master or Replica Security Server, the Windows login is halted. In this case, PC-DCE displays a message box that lets you choose to:

■ Wait 20 seconds before Integrated Login tries again to contact the Security Server.

■ Attempt to contact the Security Server immediately.

■ Skip Integrated Login this time and continue with the Windows login.

Routing File Syntax

DCE service routing is a specification of where DCE serviceability messages are logged. The *dce_install_directory* **/opt/dcelocal/var/svc/routing** file specifies the default routing(s) for serviceability messages from any DCE

application server - including **dced**, **cdsadv**, **dtsd**, etc. For example, the routing **FATAL:FILE:/tmp/service.log** specifies that fatal messages are to be logged in the file **/tmp/service.log**.

DCE service library uses a colon (**:**) as the separator in a routing specification. Because of this, pathnames in the routing specification must use a percent sign (**%**) as a separator after the drive, if one is specified. For example, specify **FATAL:FILE:C%/tmp/service.log** rather than **FATAL:FILE:C:/ tmp/service.log**. This limitation will be removed in a future release.

See section 9.4.2 of *OSF DCE Administration Guide - Core Concepts* for more information on DCE serviceability routing.

Cell Aliases

Cell renaming does not work reliably. The **dcecp cellalias set** command has been disabled in the Warranty Patch. A defect for The Open Group (OT 12864) has been opened for this problem. If you want to create an alternate cell name, use the **cellalias create** command. This will create a cell alias name without changing the primary cell name.

Cell alias names are not automatically propagated across cell boundaries. Use of cell aliases across cell boundaries is not supported.

Cell alias creation will fail if a cell includes DCE 1.0.*x*-based clients. The **dcecp cellalias** script attempts to update every cell-member host by contacting its DCE host daemon (**dced**). Once the script detects an error (such as failing on a 1.0.*x*-based client), it will proceed to undo the alias creation operation for the entire cell.

Transitive Trust

Transitive trust validation is performed using the pathname of the target principal. Transitive trust will succeed for a cell alias name only if there is a trust path expressed for that alias.

Ticket requests to alias names for the local privilege server are treated as foreign cell requests. At DCE 1.2.1, the privilege server removes ERAs from credentials requested by foreign cells. Therefore, credentials returned by ticket requests to alias names will not include ERAs.

The following scenario illustrates this limitation:

1 Create **old_cell**.

2 Add **new_cell** as an alias for **old_cell**.

3 dce_login as **/.../old_cell**/*user.*

4 Request credentials to application service **/.../new_cell/**/*service.*

The credentials returned for **/.../new_cell**/*service* will not include ERAs. The privilege server treats the request to **/.../new_cell** as an intercell request from **/.../old_cell** to **/.../new_cell**, and removes any ERAs that may be attached to the principal.

Exception Mapping

Exception mapping from native to DCE exceptions is not supported in the OMF-compliant link library.

No DCED Support for the Auto Start Option

It is a limitation of The Open Group DCE 1.2.1 and consequently of the PC-DCE Version 5.0 implementation that **dced** cannot start up configured services on demand when the first RPC is made.

DCED and Endpoint Services

The **PC-DCE Service Panel** may currently show that **dced** is running in a light-weight configuration even if the **Endpoint Service Only** checkbox is selected in the **Options** tab of the PC-DCE Configuration Panel. In reality, only the Microsoft Endpoint Mapper will be running.

DCECP Limitations

The DCE control program (**dcecp**) may not be compatible with any existing TCL environment setup outside of the PC-DCE installation. In addition, you cannot execute commands by specifying the full path in **dcecp**.

Required DTS Servers in a Cell

DCE requires there to be three DTS servers configured in a cell to insure stable time management. Though this is the best case scenario, we acknowledge that there may be some situations where this may not be feasible.

To reset the number of required servers:

Use the dcecp command: **dts modify-minservers #**

or

Use the **dtscp** command: **set servers required #**

Where # is the minimum number of DTS servers you wish to require in your cell. This will improve efficiency in cells with fewer than three DTS servers, and eliminate extra warning messages from being logged.

Security Server Mappings Invalid from Non PC-DCE Client

Due to a base DCE bug, clients contacting PC-DCE servers that use the Microsoft Endpoint Mapper will fail due to unrecognized protocol towers. Please check with your DCE vendor to see if they have addressed this problem, and reference The Open Group OT 13669.

1.5 Corrections to Documentation

1.6 Previous Releases — New Features

1.6.1 New in v5.0

The following list describes new major features for this release.

■ PC-DCE 5.0 is supported on Windows XP as well as on previously supported Windows 98/NT/2000.

■ Defining the environment variable RPC_ENABLE_LOCAL_HOST enables the use of the loopback IP address (127.0.0.1). This is particularly useful for demonstrations where one might want to configure a cell on a host that is not connected to a network.

■ You can now buy and install an RPC-only version of PC-DCE. This version will install no DCE services. It provides only RPCs to applications.

■ During installation, you can choose to install the documentation locally.

■ To upgrade from an evaluation to a full license, you need to install only the new license. You do not need to re-install the DCE software.

1.7 Previous Releases — Problems Fixed

1.7.1 Problems Fixed v5.0.1

Installing New Licenses via DCE Service Panel

There was a problem with installing a new license via the service panel. When an evaluation license expired, the service panel would no longer run. Now the service panel will run, but only the License button is available. As always, you can still access the license tool directly from the Windows Start button. Choose Start -> Programs -> Entegrity PC-DCE -> Tools -> License Installer.

Uninstalling PC-DCE If Installed with an Evaluation License

The uninstaller now runs even if the evaluation license has expired.

Integrated Login on Windows 2000 and Windows XP

Integrated login failed to work on Windows 2000 and XP. When installing the PC-DCE runtime, the installer failed to create all the registry entries needed to run integrated login. This has been fixed.

Local Administrator Script (preconfig.tcl) Simplified

Unnecessary groups and ACL assignments have been removed from the NetCrusader/Web portion of the split configuration script **preconfig.tcl**. Specifically, the wcsecad-admin group, which is not used, is no longer created. Also the Security Adapter's principal is no longer added to the cds-admin and dced-admin groups and the local administrator is no longer added to the ACL on /.:/subsys/www/wc-servers.

New Slave Now Receives Updates from New Master

Have fixed the problem described in Entegrity Tech Note 411GR, Slave Does Not Receive Updates from New Master.

When configuring a master Security server, the host machine's self principal is now added to the ACLs for the /.:/sec/replist object and the /.:/subsys/dce/sec directory. Without these ACLs, if the master Security server becomes a slave then it would not be able to receive updates from the new master.

This change was made to dce_config.exe.

DCE Director Does Not Work After Master Security Server Made Replica

Have fixed a problem related to the one described in Entegrity Tech Note 411GR, Slave Does Not Receive Updates from New Master.

DCE Director would not work once the master Security server was made a replica. The Director used to depend on the value of the window registry entry HKEY_LOCAL_MACHINE\Software\Gradient\DCE\Configuration\Securit

yServerName, which becomes out-of-date when the master Security server becomes a slave. Now the Director retrieves the name of the master Security server from the CDS namespace.

Canceling Integrated Login Delayed Windows Login

Fixed a problem where cancelling integrated login too quickly would delay Windows login. A cancel button is displayed during the integrated login process. If the user clicked the cancel button as soon as it was displayed, the integrated login process would not be completely cancelled and the Windows login process would be delayed until some timeouts occurred or the user typed Ctrl-Alt-Del. This has now been fixed.

Waiting Pthread Not Always Canceled

Fixed a problem where one thread calling pthread_cancel() to cancel another thread that was waiting for pthread_join() to complete did not always result in the waiting thread being cancelled.

Memory Associated with a Login Context Not Always Released

Fixed a problem where sec_login_release_context did not always release all of the memory associated with a login context.

CHAPTER 2

Before You Begin

2

This chapter provides DCE administrators with system requirements and prerequisite information before installing PC-DCE and contains the following sections:

2.1 System Requirements

This version of PC-DCE requires a software and hardware environment consisting of the following components:

■   Software Requirements

PC-DCE requires TCP/IP and can operate on any of the following platforms:

■   Microsoft Windows 2000 with Service Pack 1 (or later)

■   Microsoft Windows 2000 Terminal Server with Service Pack 1 (or later)

NOTE: Note: Terminal Server functionality is available only when you purchase the version of PC-DCE designed specifically to work in a Terminal Services environment.

■   Microsoft Windows NT Version 4.0 with Service Pack 3 (or later)

■   Microsoft Windows NT Terminal Server Version 4.0 with Service Pack 4 (or later)

■   Microsoft Windows 98

■ Hardware Requirements

■ Windows 2000

An IBM-compatible PC equipped with an ix86™ processor and a minimum of 32 MB of memory. Multi-processor NT systems are also supported.

For Windows 2000 systems on which you intend to configure a Security or CDS server, Entegrity recommends 64 MB of memory.

You can install PC-DCE in FAT, HPFS, or NTFS partitions.

■ Windows 2000 Terminal Server

An IBM-compatible PC equipped with an ix86™ processor and a minimum of 64 MB of memory. Multi-processor NT systems are also supported.

For Windows 2000 systems on which you intend to configure a Security or CDS server, Entegrity recommends 64 MB of memory.

You can install PC-DCE in FAT, HPFS, or NTFS partitions.

■ Windows NT

An IBM-compatible PC equipped with an ix86™ processor and a minimum of 16 MB of memory. Multi-processor NT systems are also supported.

For Windows NT systems on which you intend to configure a Security or CDS server, Entegrity recommends 32 MB of memory.

You can install PC-DCE in FAT, HPFS, or NTFS partitions.

■ Windows NT Terminal Server

An IBM-compatible PC equipped with an ix86™ processor and a minimum of 32 MB of memory. Multi-processor NT systems are also supported.

For Windows NT systems on which you intend to configure a Security or CDS server, Entegrity recommends 32 MB of memory.

You can install PC-DCE in FAT, HPFS, or NTFS partitions.

■ Windows 98

An IBM-compatible PC equipped with an ix86™ processor and a minimum of 8 MB of memory.

You can install PC-DCE in FAT, FAT32, HPFS, or NTFS partitions.

2.2 Verifying Terminal Server Support

Terminal Server functionality is available only when you purchase PC-DCE specifically to work in a terminal server environment. To determine whether your version of PC-DCE supports Terminal Server:

1   In the Windows Control Panel, double-click the PC-DCE icon.

2   In the PC-DCE Service Panel, click the About button.

3   If you are running a version of PC-DCE that supports Terminal Server, file names listed include **TS**. The TS designation denotes Terminal Server support.

2.3 Pre-Installation Tasks

Before installing PC-DCE, verify that you have the required Windows Service Pack, and that no other applications are running.

2.3.1 Verifying Windows Service Pack

If you are installing PC-DCE on a system running Windows NT or Windows NT Terminal Server v4.0, first verify the system is running the minimum Service Pack required (See *Section 2.1 on page 23*). To check the Service Pack level, open the Control Panel and select About Windows NT from the Help menu. If the system is not running the proper Service Pack, you must apply the Service Pack before installing PC-DCE.

2.3.2 Shutting Down All Applications

Before you install PC-DCE, be sure to shut down all applications that are currently running on your system, including Windows system applications.

CHAPTER 3

Installation

3

This chapter providesDCE administrators with information about installing PC-DCE and contains the following sections:

NOTE: For information on configuring PC-DCE, see the PC-DCE Configuration Panel help.

3.1 Overview

This section summarizes the role of each kit.

3.1.1 Available PC-DCE Kits

The PC-DCE product CD includes:

■ Application Developer's Kit (ADK)

If you intend to create your own DCE applications, you should install the PC-DCE Application Developer's Kit which includes the libraries, utilities, and header files that you need to create DCE applications to run on the Windows platform.

■ Client Runtime Kit (RTK)

You should always install the PC-DCE Runtime Kit for running and testing your DCE applications. This kit includes the runtime libraries, message catalogs, the *Greet* and *Grade Server* sample programs, some basic administration tools such as **dcecp,** plus the facilities to configure any type of DCE Client.

■ Cell Directory Services (CDS) Server Kit (includes the RTK)

If you intend to configure your Windows NT system as a CDS Server, you must install the PC-DCE CDS Server Kit. Installing this server kit automatically installs the client runtime kit.

The CDS server can be installed on all supported Windows platforms except Windows 98. If you insert the PC-DCE CD into a Windows 98 system, the option to install this server will not be available.

■   Security Server Kit (includes the RTK)

If you intend to configure your Windows NT system as a Security Server, you must install the PC-DCE Security Server Kit. Installing this server kit automatically installs the client runtime kit.

The Security server can be installed on all supported Windows platforms except Windows 98. If you insert the PC-DCE CD into a Windows 98 system, the option to install this server will not be available.

NOTE: To maintain the highest level of protection from unauthorized access to the cell servers, avoid configuring security, cell directory, audit, and password strength servers; and the global directory agents on Terminal Server systems. See 3.2.5 Installing Server Kits on Terminal Server .

When installing more than one kit, the sequence in which you install them is not important.

3.2 Installation Notes

This section contains miscellaneous notes about installation situations.

3.2.1 Dual Boot Installations

If you have installed Windows 2000, Windows NT, and Windows 98 on your system, you can choose to reboot the system under any platform. If you intend to develop and test PC-DCE applications using all platforms on the same machine, you should install the PC-DCE kits for which you have purchased licenses in the following order:

1   Install each of your PC-DCE kits on the Windows 2000 platform first.

2   Install each of your PC-DCE kits on the Windows NT platform.

3   Install each of your PC-DCE kits on the Windows 98 platform.

3.2.2 Electronic Licensing

PC-DCE requires an electronic license. If the product was shipped to you, the license was either included on a diskette or emailed to you. If you downloaded the product from the web, the license was emailed to you.

When you install PC-DCE for the first time, the installation program asks you for the location of the license.

If you download an evaluation copy, you are emailed an evaluation license that expires in 30 days. When you purchase the product, you will be emailed a permanent license. On the PC-DCE configuration panel, there is a License button. Press this button to install a permanent license.

3.2.3 Dependent Services

If you try to install PC-DCE over an existing installation, and services dependent on PC-DCE are running, the installation program displays an alert listing the dependent services and then exits. The reason for this approach is that certain services, notably DFS, are difficult to stop programmatically.

3.2.4 Installing PC-DCE Over an Existing Application

When performing a re-installation of PC-DCE, Entegrity recommends that you re-install the software in the same directory as your original installation. If the Setup program detects an existing version of PC-DCE, it overwrites the installation but preserves your existing configuration.

3.2.5 Installing Server Kits on Terminal Server

NOTE: To maintain the highest level of protection from unauthorized access to the cell servers, avoid configuring security, cell directory, audit, and password strength servers; and the global directory agents on Terminal Server systems.

If you do want to install the Entegrity Terminal Server runtime; first install the Server kits on the Terminal Server machine, reboot, then install the runtime kit for Terminal Server. (3.5 Installing the Server Kits then 3.4 Installing the Client Runtime Kit) The PC-DCE for Terminal Server kit will overwrite the runtime that had been installed with the other servers.

3.3 Installing the Application Developer's Kit

To install the PC-DCE Application Developer's Kit:

1 Insert the product CD into your CD-ROM drive. The setup program runs automatically; or, you can run **setup**.

2 Follow the prompts to complete the installation, keeping the following points in mind:

■ PC-DCE must be installed on a local drive.

■ If the installation process detects an existing PC-DCE installation, the Setup program does not prompt for an installation directory, but rather overwrites all files while preserving any configuration information.

■ If this is a first-time installation or a repeat installation that has made modifications to any shared PC-DCE files, you will need to reboot your computer for the modifications to take effect. In this case, the Restart Windows dialog is automatically displayed.

3 When you reach the Select Components screen, ensure that the Application Developer's Kit option is selected.

3.4 Installing the Client Runtime Kit

To install the PC-DCE Client Runtime Kit:

1   Insert the CD into your CD-ROM drive.

For Windows 98, Windows NT and Windows 2000:

The setup program runs automatically; or, you can run **setup**.

For Windows NT Terminal Server and Windows 2000 Terminal Server:

a   A Terminal Server Install Failure popup window appears instructing you to run Add/Remove from the Windows Control Panel. In the popup window, click the Add/Remove Programs icon.

b   In the Add/Remove Programs window, click Add New Programs.

c   Under Add a Program from CD-ROM or Floppy Disk, click the CD or Floppy button.

d   In the Install Program from Floppy Disk or CD-ROM window, click Next.

e   The Browser section displays the **setup.exe** file located on your product CD. Click Next. The Entegrity PC-DCE **setup** program begins.

2   Follow the prompts to complete the installation, keeping the following points in mind:

■ PC-DCE must be installed on a local drive.

■ If the installation process detects an existing PC-DCE installation, the Setup program does not prompt for an installation directory, but rather overwrites all files while preserving any configuration information.

■ If this is a first-time installation or a repeat installation that has made modifications to any shared PC-DCE files, you will need to reboot your computer for the modifications to take effect. In this case, the Restart Windows dialog is automatically displayed.

3   When you reach the Select Components screen, ensure that the Client Runtime Kit option is selected.

3.5 Installing the Server Kits

To install the PC-DCE CDS and/or Security Server Kits (Windows 2000 and Windows NT only):

NOTE: To maintain the highest level of protection from unauthorized access to the cell servers, avoid configuring security, cell directory, audit, and password strength servers; and the global directory agents on Terminal Server systems. See 3.2.5 Installing Server Kits on Terminal Server

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1   Insert the CD into your Windows NT and Windows 2000 CD-ROM drive. The setup program runs automatically; or, you can run **setup**.

2   Follow the prompts to complete the installation, keeping the following points in mind:

■ PC-DCE must be installed on a local drive.

■ If the installation process detects an existing PC-DCE installation, the Setup program does not prompt for an installation directory, but rather overwrites all files while preserving any configuration information.

■ If this is a first-time installation or a repeat installation that has made modifications to any shared PC-DCE files, you will need to reboot your computer for the modifications to take effect. In this case, the Restart Windows dialog is automatically displayed.

■ If you are installing the Security Server and want to apply SecurID integration, you must also set up Security Dynamics user accounts. See "Setting up SecurID Integration" in the *PC-DCE Guide to CAS* (Co-Authentication Service*)* for instructions on how to perform this procedure.

3   When you reach the Select Components screen, select from the following options (each server component requires a separate license):

Client Runtime Kit	This is required to operate as part of a cell, or to run and test DCE applications. When you select either the CDS or Security Server Kits, this kit also is selected and will automatically install.
Cell Directory Server	If you intend to create new DCE cells or configure a replica of a cell's primary CDS server, you must install the CDS Server component.
Security Server	If you intend to create new DCE cells or configure a replica of a cell's primary Security server, you must install the DCE Security Server component.

3.6 Reinstalling or Removing PC-DCE

PC-DCE provides an installation maintenance program that you can use to reinstall PC-DCE or remove PC-DCE components (Application Development Kit, Client Runtime Kit, Cell Directory Server, or Security Server). After the initial PC-DCE install, the Installation Maintenance program displays automatically when you run the PC-DCE setup program again.

3.6.1 Reinstalling PC-DCE

To reinstall PC-DCE:

1   Insert the product CD into your CD-Rom drive.

   For Windows 98, Windows NT and Windows 2000:

   The Installation Maintenance program displays.

   For Windows NT Terminal Server and Windows 2000 Terminal Server:

   NOTE: To maintain the highest level of protection from unauthorized access to the cell servers, avoid configuring security, cell directory, audit, and password strength servers; and the global directory agents on Terminal Server systems.

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   a   A Terminal Server Install Failure popup window appears instructing you to run Add/Remove from the Windows Control Panel. In the popup window, click the Add/Remove Programs icon.

   b   Select Entegrity PC-DCE.

   c   Click the Change/Remove button.

2   The installation maintenance dialog box (called Entegrity PC-DCE Setup) has the following options:

   ■ **Add/Remove** — Displays a dialog box where you can select and deselect PC-DCE components:

   ■ Selecting a component installs it on the system.

   ■ Deselecting a component leaves the component uninstalled. And, if a component was previously installed, and you do not select it this time, the previously-installed component will be removed from the system.

   ■ **Reinstall** — Installs the same components that you selected during the previous PC-DCE installation. You are not prompted to select individual components.

   ■ **Remove All** — Removes all PC-DCE components from the system.

   ■ **Exit Setup** — Exits the installation maintenance program without installing or deinstalling any components.

3.6.2 Uninstalling PC-DCE Components Using Add/Remove Programs

You can also uninstall all PC-DCE components or individual PC-DCE components using the Add/Remove Programs utility in the Windows Control Panel. To do so:

1   Launch the Add/Remove Programs utility in the Windows Control Panel.

2   In the Add/Remove Programs Properties dialog box, select Entegrity PC-DCE v4.0 from the list of programs, and click Add/Remove.

3   When the Entegrity PC-DCE Setup dialog box appears, select either:

■ **Remove** — To uninstall individual PC-DCE components. The Select Components dialog box appears, which lists the components that are currently installed and allows you to select the ones you want to uninstall.

■ **Remove All** — To uninstall all PC-DCE components.

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