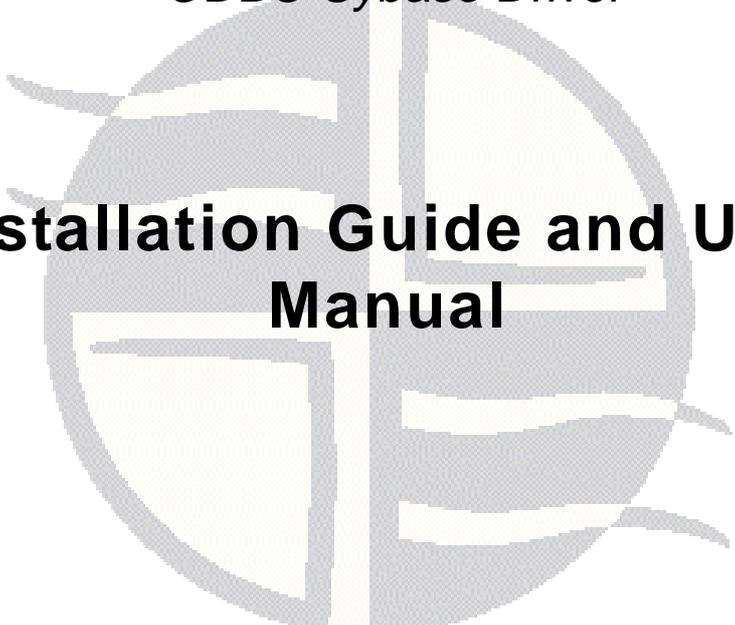


Easysoft Data Access

ODBC-Sybase Driver

Installation Guide and User Manual



Version 14.

This manual documents version 1.0.n of the Easysoft ODBC-Sybase Driver.

Publisher: Easysoft Limited

Thorp Arch Grange

Thorp Arch

Wetherby

LS23 7BA

United Kingdom

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CONTENTS

List of Figures	5
Preface	7
	Intended Audience	8
	Displaying the Manual	8
	Notational Conventions	9
	Typographical Conventions	10
	Contents	11
	Trademarks	12
Chapter 1	Introduction	13
	Product Status	14
	Deployment	15
Chapter 2	Installation	17
	Obtaining the Easysoft ODBC-Sybase Driver	18
	What to install	19
	Installing the Easysoft ODBC-Sybase Driver	21
	Uninstalling the Easysoft ODBC-Sybase Driver	30
Chapter 3	Configuration	35
	Configuring the client	36
	DSN setup	37
Appendix A	Technical Reference	43



Restrictions.	44
Supported API Calls.	44
Threading.	44
Tracing.	44

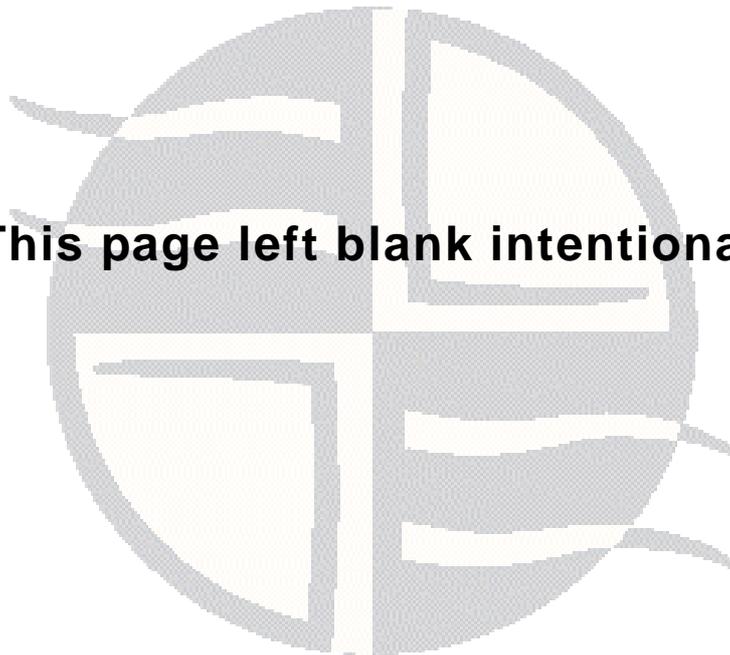
Appendix B	Glossary	47
-------------------	---------------------------	-----------

Index	53
--------------	------------------	-----------

LIST OF FIGURES

Figure 1: Local access to a Sybase database	15
Figure 2: Remote access to a Sybase database.....	16

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PREFACE



About this manual

This manual is intended for use by anyone who wants to install the Easysoft ODBC-Sybase Driver, configure it, and then access Sybase data sources from an ODBC-compliant application.

Chapter Guide

- **Intended Audience**
- **Displaying the Manual**
- **Notational Conventions**
- **Typographical Conventions**
- **Contents**
- **Trademarks**

PREFACE

About this manual

Intended Audience

Sections written for the Microsoft Windows platforms require some familiarity with the use of buttons, menus, icons and text boxes, but should present no difficulties if you have any experience of Apple Macintosh computers, Microsoft Windows or the X Window System.

The Unix-based sections require experience of using Unix shell commands and performing basic functions like editing a file. More complex activities are detailed more clearly and do not require any knowledge of specialist Unix shells.

Displaying the Manual

This manual is available in the following formats:

- Portable Document Format (PDF), which can be displayed and printed using the Acrobat Reader, available free from Adobe at <http://www.adobe.com>.
- HTML (the format Easysoft recommend for viewing onscreen).

Notational Conventions

Across the range of Easysoft manuals you will encounter passages that are emphasized with a box and a label.

A *note box* provides additional information that may further your understanding of a particular procedure or piece of information relating to a particular section of this manual:

NB Note boxes often highlight information that you may need to be aware of when using a particular feature.

A *reference box* refers to resources external to the manual, such as a useful website or suggested reading:

REF For more manuals that use this convention, see the rest of the Easysoft documentation.

A *platform note* provides platform-specific information for a particular procedure step:

Linux

In Linux you must log on as the `root` user in order to make many important changes.

A *caution box* is used to provide important information that you should check and understand, prior to starting a particular procedure or reading a particular section of this manual:

Caution!

Be sure to pay attention to these paragraphs because Caution boxes are important!

Information has also been grouped within some chapters into two broad classes of operating system, Windows and Unix, for which side tabs are used to help you turn to the section relevant to you.

Typographical Conventions

To avoid ambiguity, typographic effects have been applied to certain types of reference:

- User interface components such as icon names, menu names, buttons and selections are presented in bold, for example:

Click **Next** to continue.

Where there is a chain of submenus, the following convention is used:

Choose **Start > Programs > Command Prompt**.

- Commands to be typed are presented using a monotype font, for example:

At the command prompt type `admin`.

- Keyboard Commands

It is assumed that all typed commands will be committed by pressing the *<Enter>* key, and as such this will not normally be indicated in this manual. Other key presses are italicized and enclosed by angle brackets, for example:

Press *<F1>* for help.

- File listings and system names (such as file names, directories and database fields) are presented using the monotype plain text style.

Contents

- **Introduction**
Introduces the Easysoft ODBC-Sybase Driver
- **Installation**
Explains how to install the Easysoft ODBC-Sybase Driver
- **Configuration**
Explains how to configure the Easysoft ODBC-Sybase Driver
- Appendices
Comprising a Technical Reference and a Glossary.

PREFACE

About this manual

Trademarks

Throughout this manual, *Windows* refers generically to Microsoft Windows 95, 98, 2000, NT, XP, ME or 2003 Server, which are trademarks of the Microsoft Corporation. The X Window system is specifically excluded from this and is referred to as *The X Window System* or just *X*.

Note also that although the name UNIX is a registered trademark of The Open Group, the term has come to encompass a whole range of UNIX-like operating systems, including the free, public Linux and even the proprietary Solaris. Easysoft use Unix (note the case) as a general term covering the wide range of Open and proprietary operating systems commonly understood to be Unix ‘flavors’.

Easysoft and Easysoft Data Access are trademarks of Easysoft Limited.

INTRODUCTION

Introducing the Easysoft ODBC-Sybase Driver

Easysoft Data Access is a suite of programs that add significant value to your investment in ODBC. With Easysoft software you can connect applications on more platforms to more database systems than ever.

Although ODBC access from Windows client devices is common, this driver extends the same functionality to applications hosted on Unix systems, and may be extended to other platforms in the future.

The Easysoft ODBC-Sybase Driver provides ODBC 3.5 access to Sybase ASE 12.5 databases from other computers across the network running any supported Unix variant.

Chapter Guide

- **Product Status**
- **Deployment**

INTRODUCTION

Introducing the Easysoft ODBC-Sybase Driver

Product Status

The Easysoft ODBC-Sybase Driver software is currently available on the following platforms:

- Linux Intel
- Solaris Sparc

Software problems can be reported to support@easysoft.com by users who have either purchased support or registered via the website at <http://www.easysoft.com> and are evaluating products with a view to subsequent purchase.

Deployment

Several deployment options are available, depending upon the server platforms used and connectivity requirements.

The Easysoft ODBC-Sybase Driver can be located either remotely or on the same machine as a Sybase database.

The Easysoft JDBC-ODBC Bridge may also be added to enable JDBC access from remote devices.

SCENARIO 1: LOCAL ACCESS TO A SYBASE DATABASE

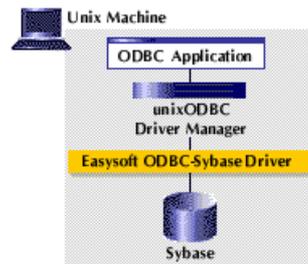


Figure 1: Local access to a Sybase database

INTRODUCTION

Introducing the Easysoft ODBC-Sybase Driver

SCENARIO 2: REMOTE ACCESS TO A SYBASE DATABASE

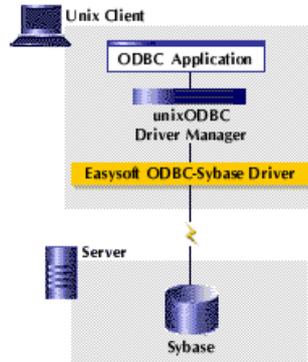


Figure 2: Remote access to a Sybase database

INSTALLATION

2

Installing the Easysoft ODBC-Sybase Driver

This section explains how to install, license and remove the Easysoft ODBC-Sybase Driver on supported Unix platforms.

The installation assumes you are, or have available for consultation, a system administrator.

Chapter Guide

- **Obtaining the Easysoft ODBC-Sybase Driver**
- **What to install**
- **Installing the Easysoft ODBC-Sybase Driver**
- **Uninstalling the Easysoft ODBC-Sybase Driver**

Obtaining the Easysoft ODBC-Sybase Driver

There are three ways to obtain the Easysoft ODBC-Sybase Driver:

- The Easysoft web site is available 24 hours a day at <http://www.easysoft.com> for downloads of definitive releases and documentation.

Select **Download** from the Easysoft ODBC-Sybase Driver section of the website and then choose the platform release that you require.

First time visitors must complete the new user form and click **Register**. Note that your personal Internet options may require you to login and click **Continue** if you have previously registered.

- The Easysoft FTP server is available 24 hours a day at <ftp://ftp.easysoft.com>, containing free patches, upgrades, documentation and beta releases of Easysoft products, as well as definitive releases.

Change to the `pub/sybase` directory and then choose the platform release that you require.

- You can order Easysoft software on CD by email, telephone or post (see [Contact Details](#)).

What to install

The name of the Easysoft ODBC-Sybase Driver install file varies from platform to platform, but is of the form:

- `odbc-sybase-x.y.z-platform.tar.gz` (Unix)

where "x" is the major version number, "y" is the minor version number and "z" is the build index, which is incremented when minor changes are made.

"platform" will vary depending on the operating system distribution you require and you may come across files of the form:

- `odbc-sybase-x.y.z-platform-variation.tar`

within specific Unix platforms, where "platform-variation" refers to alternative versions available for a single platform.

NB

Select the highest release available for your platform within your licensed major version number (installing software of a different major version number requires a new Easysoft license).

Unix filenames may also be suffixed with `.gz` for a "gzipped" archive, `.bz2` for a "bzip2ed" archive, or `.Z` for a "compressed" archive.

NB

If you download a Unix file using Windows, the browser may corrupt the filename. For example, if you download a `.gz` file and Windows corrupts the filename, it may not be obvious that the file is "gzipped". Use "file filename" to find out the file type of the downloaded file.

INSTALLATION

Installing the Easysoft ODBC-Sybase Driver

You can now download a file and begin the installation process.

As long as you stop all running software either from Easysoft or using Easysoft drivers, it is safe to reinstall or upgrade the Easysoft ODBC-Sybase Driver without uninstalling.

Caution!

If you do uninstall, you should first back up any configuration data that you still need, as uninstalling some Easysoft products will result in this information being deleted (license details remain in place).

Installing the Easysoft ODBC-Sybase Driver

Although this section covers a range of platforms and the precise output may vary from system to system, the installation process is essentially the same.

INSTALLATION REQUIREMENTS

The Unix installation routine has the following requirements:

- The Bourne shell (or BASH) must either be named (or linked to) `/bin/sh` or the first line of the `install` file updated to the correct location.
- Various common Unix commands such as `grep`, `awk`, `cut`, `ps`, `sed`, `cat`, `wc`, `uname`, `tr` and `find`.

If any of these commands are missing they can be obtained from the Free Software Foundation (<http://www.fsf.org>).

- Depending on the platform, you will need up to 10Mb of free disk space for the installed programs and up to 10Mb temporary space for the installation files themselves.

PREPARATION

1. Log on to your Unix machine as the `root` user.
2. Download the Easysoft ODBC-Sybase Driver (see "**Obtaining the Easysoft ODBC-Sybase Driver**" on page 18).
3. Place the distribution file in a temporary directory on your Unix machine.

INSTALLATION

Installing the Easysoft ODBC-Sybase Driver

EXTRACTING THE INSTALLATION FILES

4. Change to the directory in which the distribution file resides.
5. Extract the installation files from the distribution file:

If the distribution file has been `gzipped` (i.e. the filename ends in `.gz`), then use:

```
gunzip odbc-sybase-x.y.z-platform.tar.gz
```

– OR –

If the distribution file has been `bzip2ed` (i.e. the filename ends in `.bz2`), then use:

```
bunzip2 odbc-sybase-x.y.z-platform.tar.bz2
```

– OR –

If the distribution file has been `compressed` (i.e. the filename ends in `.Z`), then use:

```
uncompress odbc-sybase-x.y.z-platform.tar.Z
```

6. If the distribution file has not been compacted at all (i.e. the filename ends in `.tar`), then it is ready for extraction:

```
tar -xvf odbc-sybase-x.y.z-platform.tar
```

The `tar` program creates a directory with the same name as the `tar` file (without the final `.tar`) containing further archives, checksum files, a script called `install` and a text file called `INSTALL`.

It also contains a versioned directory to ensure that any shared components already installed by other Easysoft products are only overwritten if those included in this distribution are newer.

NB If you do not wish to keep the original downloaded distribution file you can now delete it safely.

7. Change into the newly-created `odbc-sybase-x.y.z-platform` directory.

Caution!

Check through the `INSTALL` file before continuing. It gives full installation instructions for the Unix-literate, and if you are confident in the use and administration of your system, you can follow the instructions in the `INSTALL` file instead of working through the remainder of this section.

BEGINNING THE INSTALLATION

8. Type:

```
./install
```

NB During the installation, you are asked to answer some questions. The default response is displayed in square brackets [], which you can press `<Enter>` to accept or you can choose any of the alternative responses shown in round brackets () by typing the required response and then pressing `<Enter>`.

Occasionally, the install program pauses to give you time to read the information displayed on screen. Press `<Enter>` to continue when you have read the current screen of information.

INSTALLATION

Installing the Easysoft ODBC-Sybase Driver

9. If you have read and agree to the [Easysoft License Agreement](#), type `yes` and then press `<Enter>` to continue.

NB You must type `yes`, not `y`, to continue.

10. The script pauses to allow you to read its output so far. Up to this point it has checked the following:
 - that you have the minimum set of Unix programs it requires
 - the platform you are running
 - any platform-specific components, such as the version of the C runtime library
11. Press `<Enter>` to continue.

The script checks the archive package.
12. Press `<Enter>` to continue.
13. Specify the directory into which the Easysoft ODBC-Sybase Driver is to be installed.

If you accept the default base directory, the files are installed into a subdirectory called `easysoft` within the specified path.

For example, if you accept the default path of `/usr/local`, the files are installed into `/usr/local/easysoft`.

If you specify an alternative directory, the files are installed into that directory but a symbolic link is created from `/usr/local/easysoft` pointing to the install directory. This link is necessary for licensing to work.
14. If an existing version of the Easysoft ODBC-Sybase Driver has already been installed on this machine then Easysoft recommend that this be removed and you will be prompted to do so at this point.

15. Press **y** to continue or **n** to stop the installation.

INSTALLING UNIXODBC

The Easysoft ODBC-Sybase Driver requires unixODBC to be installed and if unixODBC is not already present, the script offers to install the copy of the unixODBC driver manager contained in the Easysoft ODBC-Sybase Driver distribution.

NB The entire unixODBC source distribution may also be downloaded from <ftp://ftp.easysoft.com/pub/unixODBC> and installed independently.

The unixODBC driver manager enables an ODBC application to load whichever driver is required to access the data source at runtime.

NB unixODBC is an open source project sponsored by Easysoft and other industry members. It is rapidly becoming the standard driver manager across the Unix data access community. Comprehensive documentation can be found at <http://www.unixodbc.org>.

If unixODBC is already installed, the installation script can use your existing unixODBC, but you should bare in mind the following possible complications of doing this:

- If there are multiple copies of unixODBC on your system already you will have to choose one of them. If you pick the wrong one (i.e. not the one your applications are linked with, or not the one your run-time linker uses) the Easysoft ODBC-Sybase Driver will not be visible to your applications until this is corrected.
- If you have built unixODBC yourself from sources you must make sure it has been configured correctly for use with your applications.

INSTALLATION

Installing the Easysoft ODBC-Sybase Driver

Easysoft ODBC-Sybase Driver distributions contain matched builds of unixODBC and the Easysoft ODBC-Sybase Driver, so installing the incorporated unixODBC build is often the safest policy.

16. Press *<Enter>* to continue and then choose whether to install unixODBC.
17. If you do not wish to install the version of unixODBC included with this distribution, enter *y*.

– OR –

If you wish to install unixODBC, enter *n* at the prompt.

18. The script pauses at this point. Press *<Enter>* to continue.

The script extracts the unixODBC files.

NB

Depending on your platform this installation of the unixODBC driver manager may not contain the GUI components of unixODBC.

19. The Easysoft product database now needs resetting.

All Easysoft products that are currently running should be closed down or they may terminate unexpectedly and any applications using them will need to be restarted.

L I C E N S I N G T H E E A S Y S O F T O D B C - S Y B A S E D R I V E R

20. You are now asked if you want to obtain a license. Accept the default *[y]* to start the licensing procedure.

A menu of options is displayed.

21. Choose the option to license the Easysoft ODBC-Sybase Driver.

You will then be asked to provide some contact information.

22. Enter your **Name**.

23. Enter your **Company Name**.
24. Enter at least one of **Email**, **Phone** and **Fax** (preferably all three).
25. At the **Ref** prompt, do either of the following:
 - If you want a trial license, leave it blank and press `<Enter>`.
 - If you want to install a purchased license, enter your authorization code and press `<Enter>`.
26. The License Manager displays a menu of licensing options.

If you have an internet connection you should select `1`, `Automatic` (this is the quickest and easiest method unless your firewall or other network obstacles prevent the message from getting through).

– OR –

If you do not have an internet connection, or the `Automatic` option fails, select option `2` to write the required information to a text file in the current working directory called `license_request.txt`, which you will then need to view to obtain a license.

27. The License Manager displays the menu again. Select `0` to exit.

<p>NB The View Existing Licenses option will not display any license you obtained during this License Manager session. You must quit the License Manager and allow the install script to finish applying the license.</p>
--

If you chose the automatic licensing method and licenses are retrieved, the licensing script outputs them to a file called `licenses.out`.

If the install script detects possible new licenses in the file `licenses.out` it asks whether you want to add them to the license database.

INSTALLATION

Installing the Easysoft ODBC-Sybase Driver

28. If you obtained licenses and you want to add them now, enter *y*.

– OR –

If you did not obtain licenses, enter *n*.

– OR –

If you do not see this message, then read on. You will need to complete the offline licensing procedure as explained in **"Completing the offline licensing procedure" on page 28**.

A message informs you that the Easysoft ODBC-Sybase Driver has been installed and you are asked to enter the details needed to create a data source for the Easysoft ODBC-Sybase Driver.

29. Enter a Sybase database name.

30. Enter a user name and password.

31. Enter the server name into the **SERVER_HOST** field.

32. Enter the server port number into the **SERVER_PORT** field.

The Easysoft ODBC-Sybase Driver installation is complete.

COMPLETING THE OFFLINE LICENSING PROCEDURE

If at **step 26 on page 27** you chose to write the licensing information to a file, you still need to complete the licensing procedure before the Easysoft ODBC-Sybase Driver can be used.

The licensing information is written to the `license_request.txt` file, which contains information including a site number (a number unique to your machine) that Easysoft require before you can be issued with a license key.

1. Do any one of the following:
 - Display the `license_request.txt` file (e.g. using `cat license_request.txt`) and note the site number. Now run a web browser and go to <http://www.easysoft.com/sales/autolicense.phtml>. Log in to Easysoft's web site. On the License Generator screen, choose the type of license you want, then enter your site number and click **Continue**. You can now close the web browser. You will shortly receive your license key(s) via email.
 - Email the file `license_request.txt` to autolicense@easysoft.com. Your license key(s) will be emailed to you automatically.
 - Email the file `license_request.txt` to license@easysoft.com. A member of the Licensing Department will email the license keys(s) to you.
2. When you receive your license key(s), append them to the file `/usr/local/easysoft/license/licenses`, removing any `LIC:` prefixes.

NB

The Easysoft license responder puts an attachment in its outgoing emails that allows Windows users to activate their licenses with a double-click. If you read your email in Windows, this attachment will be visible but it will not work for licensing Unix versions of the software.

The Easysoft ODBC-Sybase Driver is now licensed and you can begin using it.

If you need further information about licensing, please refer to the [Licensing Guide](#).

Uninstalling the Easysoft ODBC-Sybase Driver

To uninstall the Easysoft ODBC-Sybase Driver under Unix:

- If unixODBC is installed, the Easysoft ODBC-Sybase Driver driver must be removed from its database.
- If the system has a dynamic linker (such as `ld.so` on Linux), the Easysoft ODBC-Sybase Driver directories must be removed from the dynamic linker search path (this may require `root` access, depending on the mechanism used by the platform).
- The Easysoft ODBC-Sybase Driver install directory tree must be removed (this requires the same privileges as the user who performed the installation, which is normally `root`).

A step-by-step guide follows:

1. Log in as `root`.

REMOVING FROM UNIXODBC

2. Check whether the Easysoft ODBC-Sybase Driver is configured under unixODBC by typing:

```
odbcinst -q -d
```

3. If "SYBASE" is returned in the output then remove the Easysoft ODBC-Sybase Driver entry by typing:

```
odbcinst -u -d -n SYBASE
```

If a message is displayed about a reduced usage count, repeat this step until `odbcinst` states that the Easysoft ODBC-Sybase Driver has been removed.

NB If unixODBC is no longer required then the <code>odbcinst.ini</code> and <code>odbc.ini</code> files can be removed.
--

REMOVING FROM THE DYNAMIC LINKER

Notify the dynamic linker that the shared objects are no longer available.

NB

This information only applies to systems with the `ld.so` dynamic linker (normally only Linux).

4. If the file `/etc/ld.so.conf` file exists, make a backup copy and open it.
5. Remove the path to the Easysoft ODBC-Sybase Driver shared objects:
`<InstallDir>/easysoft/sybase`
6. If no other Easysoft software is in use then remove the path to the common Easysoft shared objects:
`<InstallDir>/easysoft/lib`
7. If unixODBC is no longer required then remove the reference:
`<InstallDir>/easysoft/unixODBC`
8. Run `/sbin/ldconfig` so that the dynamic linker re-reads the file and will no longer search the removed paths.

DELETING THE SOFTWARE

Finally, remove the software from the system hard drive.

9. Change directory to:

```
<InstallDir>/easysoft/
```

```
pwd
```

The system displays the current directory.

Double-check that this is the directory under which you installed the Easysoft ODBC-Sybase Driver.

Caution!

Be very careful issuing the `rm -r` command as `root`. Normally `rmdir` will not remove directories that contain files, but `rm -r` will remove all subdirectories along with their contents. It is possible to effectively destroy your system and/or lose all user files by removing the wrong directory.

10. Remove the Easysoft ODBC-Sybase Driver installation directory:

```
ls
```

Check that you are in the right directory.

```
rm -r sybase
```

The system may ask you to confirm deletion for some files. You can confirm these as long as you are sure you are in the correct directory.

```
ls
```

11. If you have no other Easysoft products on your system and you are not using any copy of unixODBC that may be in this directory, then you can delete the `easysoft` directory too.

```
cd ..  
rm -r easysoft
```

If there are other files in the directory tree (i.e. you have other Easysoft products installed) then you must not remove the `easysoft` directory, because it will contain your license keys and other important files.

12. If you left the Easysoft ODBC-Sybase Driver distribution file on your system then you may wish to remove it at this point.

The uninstall process is complete.

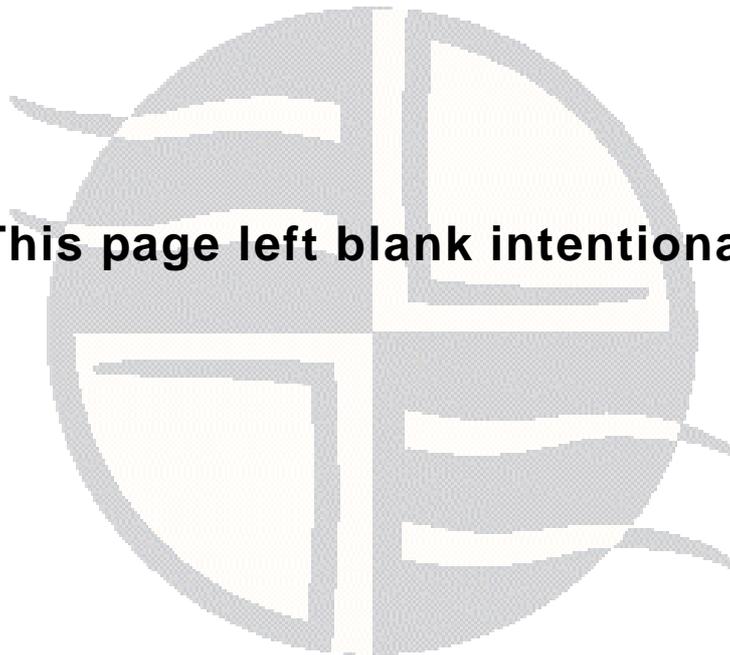
Any licenses you obtain for the Easysoft ODBC-Sybase Driver and other Easysoft products are stored in the

`<InstallDir>/easysoft/license/licenses` file.

After uninstalling the Easysoft ODBC-Sybase Driver, unless you have deleted this file, you will not need to relicense the product when you reinstall or upgrade.

However, for security purposes you may want to make a copy of `<InstallDir>/easysoft/license/licenses` before uninstalling.

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CONFIGURATION

Configuring the Easysoft ODBC-Sybase Driver

In terms of the Easysoft ODBC-Sybase Driver, the client is the machine running the ODBC application with which you want to access the data on your Sybase database.

To allow an ODBC application on the client machine to access data on the remote server, you need to create a data source on the client.

This data source uses the Easysoft ODBC-Sybase Driver driver and specifies the attributes required to connect to the data source on the remote server.

Before setting up a data source on your client machine, you must have successfully installed the Easysoft ODBC-Sybase Driver on this machine.

Instructions for installing the Easysoft ODBC-Sybase Driver on Unix platforms are provided in ["Installation" on page 17](#).

Chapter Guide

- [Configuring the client](#)
- [DSN setup](#)

Configuring the client

This section outlines how to configure the Easysoft ODBC-Sybase Driver to connect to an Sybase database by using a data source and assumes you are, or have available for consultation, an Sybase Database Administrator.

DSN-LESS CONNECTIONS

In addition to using a data source, you can also connect to a database by using a DSN-less connection string of the form:

```
SQLDriverConnect (... "SERVER_HOST=server;  
                    SERVER_PORT=nnnn;Driver=sybase;" ...)
```

where `server` is the name of the host server machine, `nnnn` is the port number with which to connect to the server machine and `sybase` is the driver name.

Further Easysoft ODBC-Sybase Driver attribute settings, as described in "[DSN setup](#)" on page 37, can also be added to the connection string using the same "PARAMETER=value;" format, such as:

```
SQLDriverConnect (... "DB=pubs;UID=demo;PWD=easysoft;" ...)
```

where `pubs` is the database name, `demo` is the user name with which to connect to the database and `easysoft` is the password for the demo user.

DSN setup

There are two options when setting up a data source to your Sybase data:

- Create a system data source (which is available to anyone who logs onto this Unix machine)

– OR –

- Create a user data source (which is only available to the user who is currently logged into this Unix machine)

With unixODBC, a default DSN named [SYBASE] is created and added to the system `odbc.ini` file on the client machine when the Easysoft ODBC-Sybase Driver is installed.

However, if you have built unixODBC yourself, then it will be whatever path you specified in the `sysconfdir=directory` configure option (if `sysconfdir` has not been specified then the path will default to `/usr/local/etc`).

If you accepted the default Easysoft ODBC-Sybase Driver installation then user data sources must be created and edited in `$HOME/.odbc.ini`.

NB

By default, you must be logged in as `root` to edit a system data source defined in `/etc/odbc.ini`, but user data sources created in an `.odbc.ini` file in a home directory are visible to an individual user only.

You may either change some of the initial configuration parameter values for the sample data source or add extra data sources.

CONFIGURATION

Configuring the Easysoft ODBC-Sybase Driver

Each section of the `odbc.ini` file starts with a data source name in square brackets [] followed by a number of *attribute=value* pairs.

NB Attribute names in `odbc.ini` are not case sensitive.

For the addition of a data source, all the settings in the following example must be appended to the relevant `odbc.ini` file.

NB More details of configuring data sources with unixODBC can be found at www.unixodbc.org.

To configure a Sybase DSN in your `odbc.ini` file, you need to edit:

- the physical database name (`Database`)
- the Sybase target database user name (`User`)
- the Sybase target database password (`Password`)
- the host name or IP address of the machine on which the Sybase server is running (`SERVER_HOST`)
- the port on which the Sybase server is listening, which is 4100 by default (`SERVER_PORT`)

e.g.

```
[SYBASE]
Driver = SYBASE
Description =
Database = test
User = sa
Password =
SERVER_HOST = server_name
SERVER_PORT = 4100
```

Other optional attribute values may be set in the `odbc.ini` file, as follows:

- **Description**

A description of this data source entry.

- **METADATA_ID**

When ON (i.e. set to 1), the default value of the Connection Attribute `SQL_ATTR_METADATA_ID` is set to `SQL_TRUE`.

Note that `METADATA_ID` is added to `odbc.ini` automatically with a default setting of 0.

- **METADATA_DONT_CHANGE_CASE**

When ON (i.e. set to 1), the case of the parameter values passed to metadata calls will not change.

- **TEXTSIZE**

This attribute sets the maximum size, in bytes, of text/image data returned from the server. The default size is 32000. If data is larger than this value the data will be truncated, with out any indication that it has been truncated.

- **QUOTED_IDENTIFIERS**

This attribute switches the sybase database 'quoted_identifier' setting to 'on'. This enables support for quoted identifiers and also changes the appropriate `SQLGetInfo` values returned

CONFIGURATION

Configuring the Easysoft ODBC-Sybase Driver

ENVIRONMENT

The Easysoft ODBC-Sybase Driver must be able to find the following shared objects (which are installed as part of the Easysoft ODBC-Sybase Driver install routine):

- `libodbcinst.so`

By default this will always be located in

```
/usr/local/easysoft/unixODBC/lib/libodbcinst.so:
```

- `libeslicshr.so`

By default this will always be located in

```
/usr/local/easysoft/lib/libeslicshr.so
```

- `libessupp.so`

By default this will always be located in

```
/usr/local/easysoft/lib/libessupp.so
```

You may need to set up and export `LD_LIBRARY_PATH`, `SHLIB_PATH` or `LIBPATH` (depending on your operating system and run-time linker) to include the directories where `libodbcinst.so`, `libeslicshr.so` and `libessupp.so` are located.

NB

The shared object file extension (`.so`) may vary depending on the operating system.

ESTABLISHING A TEST CONNECTION

You can prove that the Easysoft ODBC-Sybase Driver is working by executing the following Unix commands to run the `isql` query tool:

1. Change directory into

```
/usr/local/easysoft/unixODBC/bin
```

2. Type `./isql -v DSN`

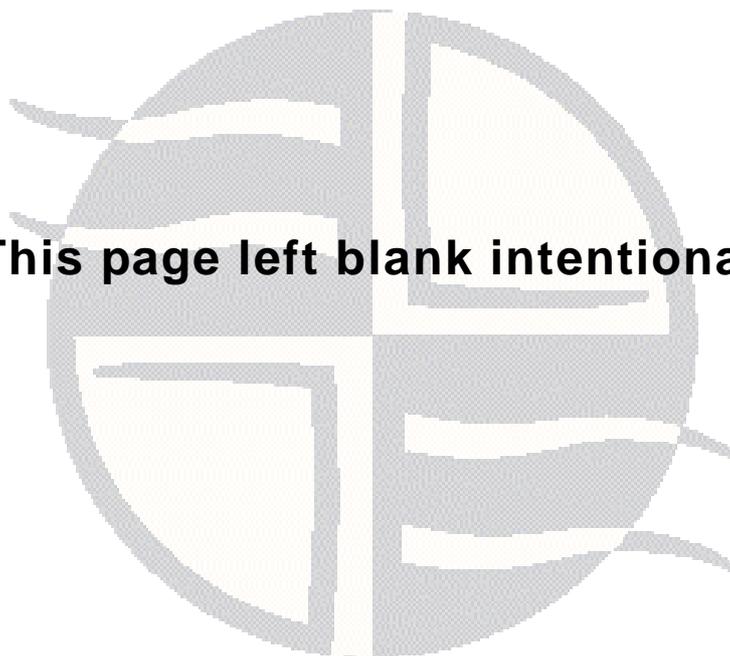
where [DSN] is the name of the target data source

3. At the prompt you will be able to enter SQL commands to query your database, such as:

```
SQL> select * from systypes;
```

to return sample data.

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TECHNICAL REFERENCE



Technical Reference for the Easysoft ODBC-Sybase Driver

This section contains extra information relating to the deployment of the Easysoft ODBC-Sybase Driver.

Appendix Guide

- [Restrictions](#)
- [Supported API Calls](#)
- [Threading](#)
- [Tracing](#)

Restrictions

The Easysoft ODBC-Sybase Driver will allow you to access Sybase ASE databases versions 12.5. and 12.5.1.

Supported API Calls

All the ODBC 3.5 calls are support except for the following:

- SQLBulkOperations
- SQLDescribeParam
- SQLCopyDesc
- SQLBrowseConnect

Threading

The Easysoft ODBC-Sybase Driver is thread safe in accordance with the ODBC 3.5 specification and can be used behind threaded applications with confidence.

Tracing

The ODBC calls an application makes can be traced:

- within the driver manager by an application
- from within the driver manager
- from within the Easysoft ODBC-Sybase Driver

WITHIN THE DRIVER MANAGER BY AN APPLICATION

An application can turn tracing on in the driver manager via the ODBC API `SQLSetConnectAttr (... ,SQL_ATTR_TRACE,...)`.

The trace filename may also be specified with the `SQLSetConnectAttr` attribute `SQL_ATTR_TRACEFILE`.

FROM WITHIN THE DRIVER MANAGER

For the unixODBC driver manager, add two attributes to the [ODBC] section (create one if none exists) in `odbcinst.ini`.

```
Trace = Yes
```

```
TraceFile = /path/filename
```

e.g.

```
[ODBC]
```

```
Trace = Yes
```

```
TraceFile = /tmp/sql.log
```

Ensure that the user who is running the application to be traced has write permission to `TraceFile` (and to the directory containing it), or no tracing information will be produced.

FROM WITHIN THE EASYSOFT ODBC-SYBASE DRIVER

Add a `LOG` attribute to the DSN section of the `odbc.ini` file.

e.g.

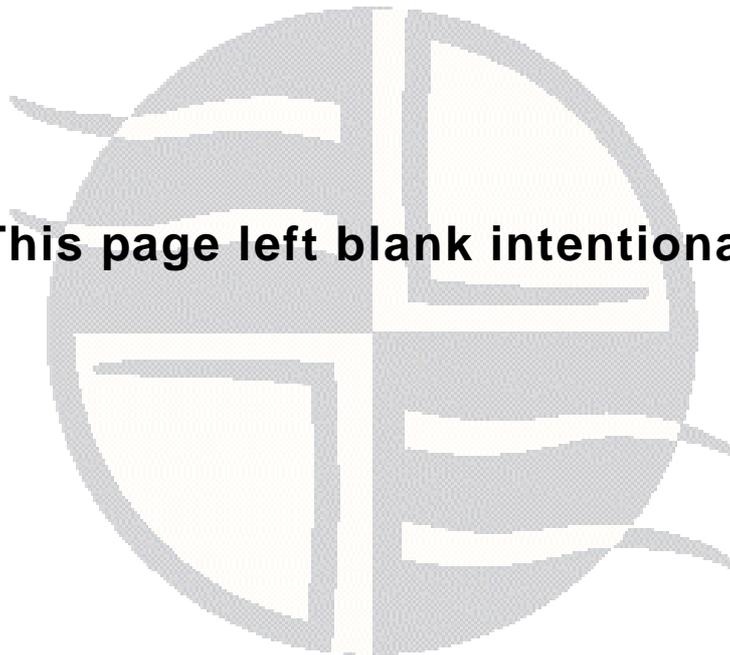
```
[SYBASE]
```

```
....
```

```
LOG = /tmp/sybase.log
```

The `LOG` value is the path and file name of the log file (e.g. `/tmp/sybase.log`).

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GLOSSARY

B

Terms and definitions

API (Application Programmer Interface)

A published set of function calls and constants allowing different programmers to utilize a ready-written library of subroutines.

Application

A program that applies the computer to solving some real-world problem. In ODBC terms, it is the program connecting to the data source.

Authorization code

You must have an authorization code for the Easysoft product you wish to license in order to obtain a purchased license. When you purchase a product your authorization code is emailed to you. You do not need an authorization code to obtain a trial license.

Client

A process performing tasks local to the current user, for example, formatting and displaying a report from data retrieved from the server.

Client/Server

The architecture whereby one process (the server) keeps track of global data, and another task (the client) is responsible for formatting and presenting the data. The client connects to the server and requests queries or actions be performed on its behalf. Often these processes run on different hosts across a local-area network.

Column

The vertical dimension of a table. Columns are named and have a domain (or type).

Data source

In ODBC terms, a data source is a database or other data repository coupled with an ODBC Driver, which has been given a Data Source Name (see **“DSN” on page 49**) to identify it to the ODBC Driver Manager.

Data type

The specification of permitted values. A data type limits the values which are allowed to be used.

DBMS

Database Management System - software that handles access to a database.

Download

To retrieve data from a remote machine (or the Internet) to your local machine. Mechanisms for achieving this include FTP and the World Wide Web.

Driver

See **“ODBC driver” on page 50**.

Driver Manager

Software whose main function is to load ODBC drivers. ODBC applications connect to the Driver Manager and request a data source name (DSN). The Driver Manager loads the driver specified in the DSN's configuration file. In Windows, the ODBC Data Source Administrator is used to set up the Driver Manager.

DSN

Data Source Name. A name associated with an ODBC data source. Driver Managers, such as unixODBC or the Microsoft Windows Driver Manager, use the Data Source Name to cross-reference configuration information and load the required driver.

Field

A placeholder for a single datum in a record, for example you can have a Surname field in a Contact Details record. Fields are sometimes referred to as cells.

FTP

File Transfer Protocol. A standard method of transferring files between different machines.

Host

A computer visible on the network.

HTTP

HyperText Transfer Protocol. The means of transferring web pages.

Middleware

Software that is placed between the client and the server to improve or expand functionality.

License key

A string which is provided by Easysoft for use in the licensing process.

ODBC

Open Data Base Connectivity - a programming interface that enables applications to access data in database management systems that use Structured Query Language (SQL) as a data access standard.

ODBC driver

Software that accesses a proprietary data source, providing a standardized view of the data to ODBC.

Row

The horizontal dimension of a table. At its most basic, a row equates to a record within a file.

Server

A computer, or host, on the network, designed for power and robustness rather than user-friendliness and convenience. Servers typically run around-the-clock and carry central corporate data.

OR

A process performing the centralized component of some task, for example, extracting information from a corporate database.

SQL

Structured Query Language - an international standard text language for querying and manipulating databases.

Table

A data set in a relational database, composed of rows and columns.

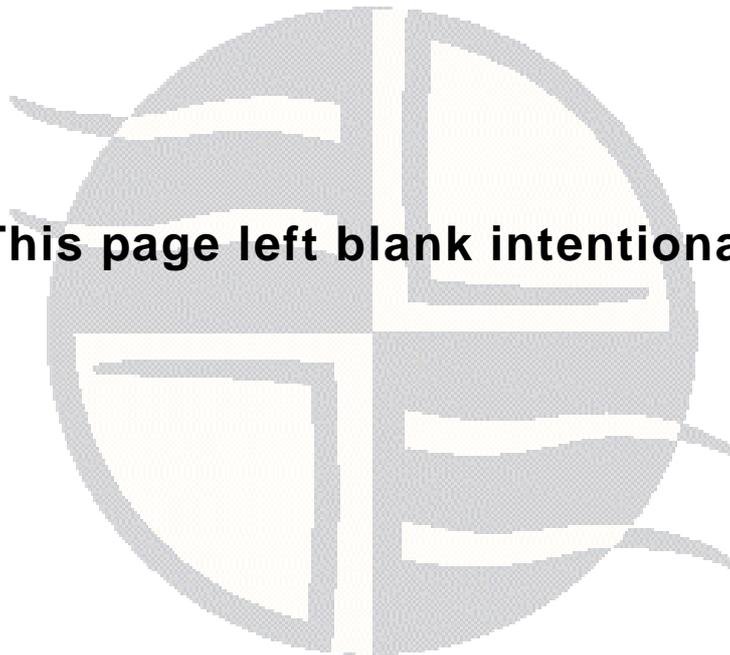
TCP/IP

Transmission Control Protocol/Internet Protocol - a standard method of accessing data on different machines.

TDS

Tabular Data Stream - a protocol used by Sybase which insulates clients and server machines from underlying native protocol stacks by creating a common interface between higher-layer SQL applications and lower-layer, connection-oriented transport protocols (such as TCP/IP).

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INDEX

A

API	47
attributes	
for OOB Client DSNs on Unix	38

B

beta releases	18
bunzip	22
bzip2	19

C

C runtime library	
version of	24
Caution box	9
CD	18
client	
setup	35
compress	19

D

Database	38
Description	39
documentation	18
DSN-less Connections	36

F

files	
odbcinst.ini	45
FTP	18

INDEX

G

glibc	
see C runtime library	
gunzip	22
gzip	19

I

installation	
base directory	24
file name	19
licensing	26
requirements	21
requirements for Unix	21
unixODBC	25
installing	21

L

LD_LIBRARY_PATH	40
libc6	
see C runtime library	
LIBPATH	40
licensing during installation	26

M

METADATA_DONT_CHANGE_CASE	39
METADATA_ID	39

N

Note box	9
----------------	---

O

odbc.ini	37-39
----------------	-------

P

Password	38
patches	18
Platform note	9

R

Reference box	9
---------------------	---

S

SERVER_HOST	38
SERVER_PORT	38
SHLIB_PATH	40

T

tar	22
threading	44
tracing	44

U

uncompress	22
uninstalling	30
unixODBC	38
installation	25
upgrades	18
User	38

W

web site	18
----------------	----