Telelogic Directory Server

Installation Guide

Release 4.3

Before using this information, be sure to read the general information under Appendix, "Notices"on page 49.

This edition applies to **VERSION 4.3, Telelogic Directory Server** and to all subsequent releases and modifications until otherwise indicated in new editions.

Table of contents

1 About this manual

This manual guides you through the Telelogic® Directory Server™ (TDS) installation and uninstallation. It contains the following sections:

TDS documentation

This section provides the information on the related documents available for TDS. The following TDS documents are available on the Product Support Web site, https://support.telelogic.com

Document name	Description
Telelogic Directory Server Installation Guide	Provides information about how installing TDS.
Telelogic Directory Server Product Manual	Provides detailed information about TDS features supported in this release.
Telelogic Directory Server Administration Manual	Provides information about TDS administration.

Contacting IBM Rational Software Support

Support and information for Telelogic products is currently being transitioned from the Telelogic Support site to the IBM Rational Software Support site. During this transition phase, your product support location depends on your customer history.

Product support

- If you are a heritage customer, meaning you were a Telelogic customer prior to November 1, 2008, please visit the http://support.telelogic.com

  Telelogic customers will be redirected automatically to the IBM Rational Software Support site after the product information has been migrated.
- If you are a new Rational customer, meaning you did not have Telelogic-licensed products prior to November 1, 2008, please visit the IBM Rational Software Support site.

Before you contact Support, gather the background information that you will need to describe your problem. When describing a problem to an IBM software support specialist, be as specific as possible and include all relevant background information so that the specialist can help you solve the problem efficiently. To save time, know the answers to these questions:

- What software versions were you running when the problem occurred?
- Do you have logs, traces, or messages that are related to the problem?
- Can you reproduce the problem? If so, what steps do you take to reproduce it?
- Is there a workaround for the problem? If so, be prepared to describe the workaround.

Other information

For Rational software product news, events, and other information, visit the IBM Rational Software Web site.

Conventions used in this guide

Typeface	Description
Italic	Used for book titles and terminology.
Bold	Used for items that you can select and menu paths, also used for emphasis.
`Courier`	Used for commands, file names, and directory paths. Represents command syntax to be entered verbatim. Signifies computer output that displays on-screen.
`Courier Italic`	Represents values in a command string that you supply. For example, `(drive:\username\commands)`.

2 Introduction

TDS is a single enterprise directory solution designed for user authentication and administration for Telelogic® Lifecycle Solution™ (TLS) tools. The TDS allows the TLS users to log on using the same credentials across TLS tools for which they have authorized access.

TDS 4.3 is designed to support a wide range of platforms. For more information on the platform support see Operating system requirements (page 9).

The TDS comes with the Graphical User Interface (GUI) based client application Telelogic® Directory Administration™ (TDA), that can be installed separately. For information on installation instruction and procedure, refer to Installing the TDA (page 31).

Obtaining the TDS software

You can download the TDS from the support site or from the zip distribution. After downloading the TDS, make sure you verify the MD5 checksum available under the support site, https://support.telelogic.com matches the downloaded installer. This will ensure that the downloaded installer is not corrupted.

Installation sequence

It is recommended that you install TDS before installing other products, as it will ensure that the TDS has access to the required network port prior to the other product installations.

Remote installation of TDS

TDS requires graphical X environment for installation. In case of remote installation by X environment, ensure that DISPLAY environment variable should be set appropriately as, `$ export DISPLAY=localhost:0`. For more information, see the platform manual for details.

Types of TDS installations

There are two types of TDS installations:

Installation type	Description
Server Installation	Installs TDS on a local machine. The TDS provides user authentication and administration across TLS tools using the same credentials. The server installation also provides the option to install TDA and Web TDA client. However, you can choose to install that separately.
Client Installation	Installs the client (TDA) on a local machine. The client can access the server on the local machine or on a network.

Modes of installations

The TDS supports the following modes of installations:

Installation mode	Description
Stand-Alone	Enables you to administer and perform searches for the users and groups that exist locally.
Corporate LDAP Backbone Support	Enables you to configure the TDS to integrate with the external corporate LDAP repositories. You can use this option to enable your corporate backbone to serve as the user/group read-only repository for TLS tools.
OS Authentication	Enables you to configure TDS to allow login using OS logon name. TDS authenticate users against the OS hosting the TDS and enable access to the TLS tools after successful authentication. TDS uses Pluggable Authentication Modules (PAM) for authentication. Refer to *Telelogic Directory Server Administration Guide* for PAM configuration.

Preparing installation information

Preparing installation information in advance can help you to complete the installation process quickly. Before starting the installation, consider creating a worksheet to record the basic installation information, as described for a typical installation in the following table..

Description	Example
Host name	ExampleServer
Directory server port number	Default LDAP port: `1389`. This can be changed to any available free port.
Secure port number	Default LDAP port: `1636`. This can be changed to any available free port.
Directory administrator password	Password must contain the following: • Password must be of minimum 8 characters in length. • Password must contain 1 uppercase character and 3 special characters.
Directory administrator ID	tdsadmin (set by default)
Installation directory	• `/var/TDS_4.3` or any other specified path • Tivoli directory server binary is always installed under `/opt/IBM/ldap/V6.1`

3 Server Installation

This chapter contains the installation instructions for installing TDS on Solaris, and Linux platforms.

This chapter contains the following sections:

System requirements

The following section describes the system requirements for the TDS.

Industry standards

The TDS is developed based on the following industry standards.

- LDAP v3 operations
- LDAP search filters
- LDAP v3 intelligent referral

Operating system requirements

TDS and TDA are supported on the following platforms:

- Sun Solaris 9, 10 operating system 64 bit (/ SPARC Platform)
- Red Hat Enterprise Linux Server 4, 5 operating system 32 and 64 bit

The following table details the list of additional software that must be available in the system.

Operating system	Supported OS versions	Additional required software
Solaris operating system	Solaris 10 operating system for SPARC®	• The Korn shell is required. • `pkgadd` system utility should exist. • 64- bit kernel. • If raw devices are used, patch 125100-07.
	Solaris 9 operating system for SPARC	• The Korn shell is required. • `pkgadd` system utility should exist. • 64- bit kernel Patches: • 11711-12, 111712-12 and 111711-08 • If raw devices are used, patch 122300-11 • 64-bit Fujitsu PRIMEPOWER and Solaris 9 Kernel Update Patch 112233-01 or later to get the fix for patch 912041-01
Red Hat Linux	Red Hat Enterprise Server 4, 5 for x86 (32 and 64 bit OS)	The following packages needs to be installed before installing the Telelogic Directory Server: 1. glibc-devel 2. glibc-headers The rpm names of these packages are: **32 bit Redhat5:** • glibc-2.5-18.i686.rpm • glibc-common-2.5-18.i686.rpm • glibc-common-devel-2.5-18.i686.rpm • glibc-headers-2.5-18.i686.rpm • nscd-2.5-18.i686.rpm The rpm name could end with "i386" based on the hardware details (/ confirm with command "uname -m"). The above rpm's on Redhat4 will be of version 2.3.4 or higher(E.g. glibc-2.3.4-2.36.i686.rpm). **64 bit Redhat5:** • glibc-2.5-18.ia64.rpm • glibc-common-2.5-18.ia64.rpm • glibc-common-devel-2.5-18.ia64.rpm • glibc-headers-2.5-18.ia64.rpm • nscd-2.5-18.ia64.rpm The above rpm's on Redhat4 will be of version 2.3.4 or higher(E.g. glibc-2.3.4-2.36.ia64.rpm). You might need to upgrade to the latest patch level of these packages. For more information on the patches, see the Red Hat support site at http://rhn.redhat.com.

Note For more information on operating system requirements see, http://publib.boulder.ibm.com/infocenter/tivihelp/v2r1/topic/com.ibm.IBMDS.doc/sysreq10.htm#sysreq

Disk space and memory requirements

Minimum system requirements for TDS

Ensure that sufficient disk space is available before installing the TDS. The following table shows the sample disk space requirement for TDS.

# of Entries	Minimum disk space required	Minimum memory required
10,000 - 250,000	5 GB	1-2 GB
250,000 - 1,000,000	6 GB	4 GB
Over 1,000,000	8 GB	4 GB

Note The TDS is not supported on the NFS mounted systems.

The TDS does not support logs and databases installed on NFS-mounted file systems. Sufficient space should be provided for the database on a local file system.

Requirement for TDA

Make sure that sufficient disk space is available before installing the TDA. The following table shows the minimum disk space and memory requirements for TDA.

Minimum disk space required	Minimum memory required
300 MB	512 MB

Before installing TDS

Before you install the TDS, ensure that the system is equipped with the set of configurations recommended in this manual to avoid any installation errors. You need atleast **5 GB** of free disk space and at least **1.5 GB** free space in `/tmp` folder.

This section also describes the following settings that must be in place.

- Shell requirements
- Kernel settings on Solaris
- Root settings
- Libraries and utilities
- What is not supported

Shell requirements

The following settings are recommended for Solaris and Linux installation.

- On Solaris 9,10 - Korn shell (KSH) must be installed on the OS.
- Red Hat 4 - Korn shell is available by default.
- Red Hat 5 - Korn shell is not available by default. Install the `ksh` on the OS or create a soft link from the `zsh` to `ksh`.

Kernel settings on Solaris

The Kernel or IPC settings on Solaris platform may need to increase depending on your environment, especially if you are running multiple applications on your system. If the installation fails with errors due to kernel settings, use the `db2osconf` utility to get the required settings. For more information see, Check for kernel settings on Solaris (page 26).

Root settings

Both Linux, and Solaris requires *root* user login to perform the installation and instance creation. You also must have *root* access to start the TDS.

You can also start the server without the *root* user login. For more information on starting the server without *root* user login see, Starting the server without root privilege (page 14).

Libraries and utilities

You must install the recommended libraries and utilities. For more information on the required libraries and utilities see, Operating system requirements (page 9).

What is not supported

This section describes the modes or systems that are not supported by TDS. You must not use the modes or systems referred in this section to avoid any installation errors.

This section contains the following components:

- Console mode installation
- NFS mounted system

Console mode installation

The TDS does not support non-graphical or console mode installation. Hence, the options such as `-console` is not supported by the TDS installer.

NFS mounted system

The TDS installation is not supported on NFS mounted systems. The `/usr/local/bin, /opt` and the installation location should not be NFS mounted.

More information on TDS installation

This section describes certain in built settings and behavior post TDS installations.

This section contains the following components:

- Installation path
- JRE installation
- Local user/group creation
- Tivoli installation

Installation path

The IBM® Tivoli Directory Server® binaries are always installed under the following path.

- On Solaris systems: `/opt/IBM/ldap/V6.1`
- On Linux systems: `/opt/ibm/ldap/V6.1`

The database itself is created under the user specified or default install path: `/var/TDS_4.3/`

Note The path `/opt` should be present in the system.

JRE installation

The TDS installs the Java Runtime Environment 1.5 (JRE) as part of the server installation. The installer itself embeds the JRE and does not require any platform JRE for install execution.

Local user/group creation

The TDS installer by default, creates the local user *tdsinst* and *idsldap* and the group *idsldap* on the Operating System (OS). The *root* user is added to the *idsldap* group.

Note The password of *tdsinst* and *idsldap* users are internally set by the installer and the password cannot expired.

Starting the server without root privilege

Any user who is added to the *idsldap* group (that is created as part of the TDS installation) can start the server. However, this holds true only for **Stand-Alone** and **Corporate** mode.

On **OS authentication mode**, the server needs to be started with the *root* user login.

Tivoli installation

TDS Installer internally installs the following:

- IBM Tivoli Directory Server 6.1
- IBM DB2 9.1

Installing the TDS

Install the server as a *root* user.

To Install TDS, do the following:

1. Unzip the TDS installer in a folder (use unzip or gunzip utilities).
2. Go to the **install** directory and set the execute permission to **TDS.bin**

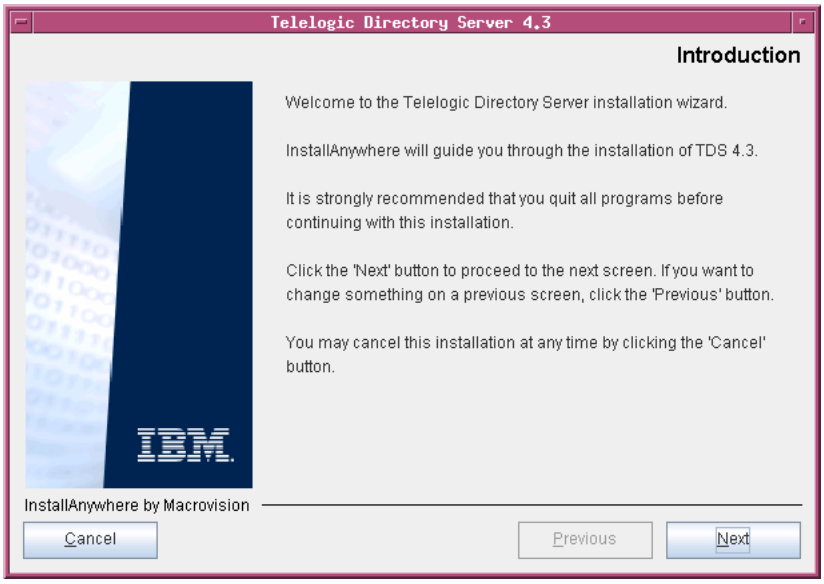
   ```
   chmod +x TDS.bin
   ```

   Skip this step for CD and DVD installation.
3. The *root* user should have write permission to the below directories:

   ```
   $ /usr/local/bin
   $ /opt
   ```

   The directories should not be NFS enabled.
4. Path settings:
   - Ensure that the utilities: `unzip, gunzip, dos2unix, userdel` and `groupdel` are in the system path.
5. The `DISPLAY` environment variable should be appropriately set for the remote installation.

6. In the **install** directory, type `./TDS.bin` and press **Enter.** The **Introduction** dialog box appears.

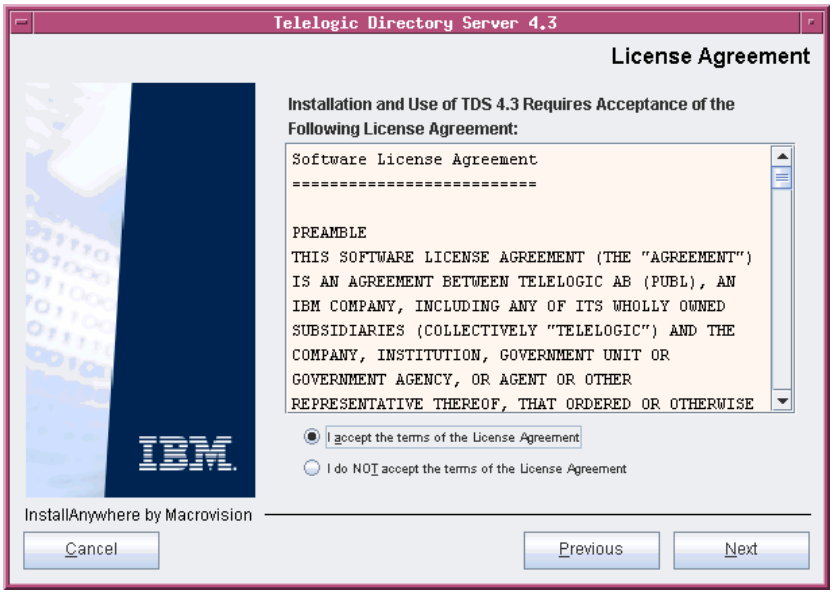


7. Click **Next**. The **License Agreement** dialog box appears.
8. You can save the licence details in a document.

   To copy the license information:

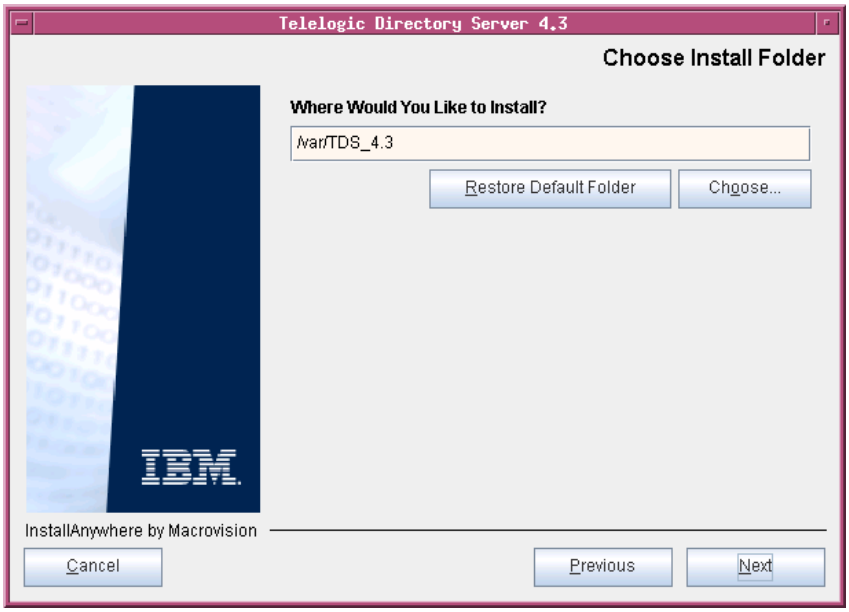
   - Right-click the license window and click **Select All,** and then click **Copy**.
   - Open any file, paste the license information and save the file.

9. Review and click **I accept the terms of the license agreement**.



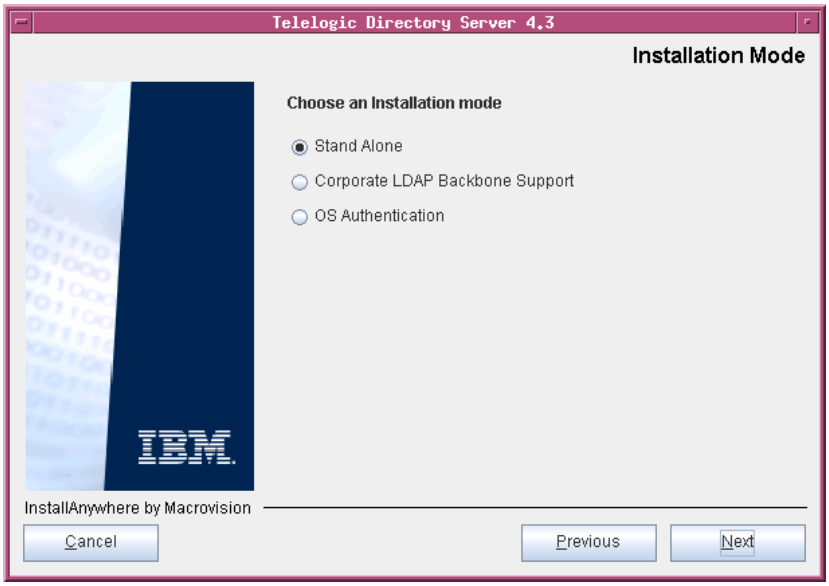
10. Click **Next.** The **Choose Install Folder** dialog box appears.

    You can use the default location provided by the installer or click **Choose** to specify a different location. You can also edit the path manually by clicking anywhere in the text box. To use the default location, click the **Restore Default Folder.** This restores the default location provided by the installer.



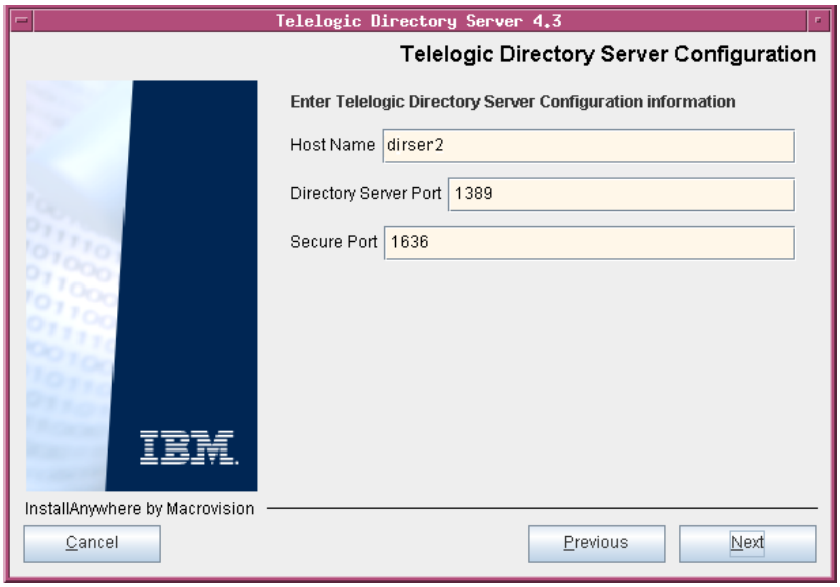
Note The IBM Tivoli Directory Server folder like `/opt/IBM` etc. are created outside the installation path.

11. Click **Next.** The **Installation Mode** dialog box appears.



12. TDS provides the following modes of installations:
    - Stand-Alone
    - Corporate LDAP Backbone Support
    - OS Authentication
13. Select the install mode. By default, the **Stand Alone** mode is selected by the installer. For more information on these modes, refer to Modes of installations (page 6).
14. Click **Next.** The **Telelogic Directory Server Configuration** dialog box appears. This defines the configuration settings for the TDS.

15. Type the directory server configuration properties.

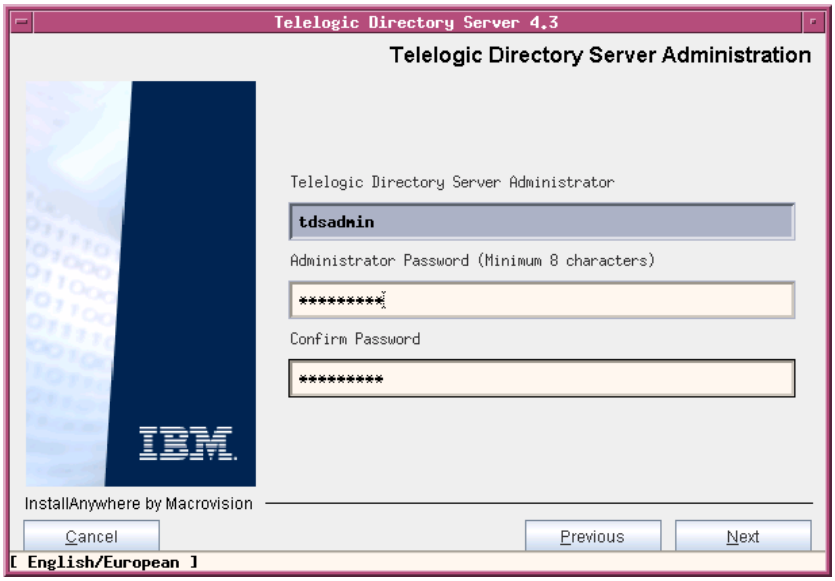


The field descriptions and the values to be entered in each field are explained in the following table.

Field name	Description	Values
Host Name	The host name of the computer.	By default, the installer uses the valid computer name. Use the default value provided by the installer or enter the valid computer name in this field.
Directory Server Port	The port number of the directory server.	By default, the installer uses the LDAP server port number. Use the default value provided by the installer or enter the valid port number for the computer in this field.

Field name	Description	Values
Secure Port	The LDAP Secure Socket Layer (SSL) port number. The SSL is enabled by default by the installer using the secure port number provided during the installation.	By default, the installer uses the secure LDAP port number to enable the SSL. Use the default value provided by the installer or enter the valid secure port number in this field.

16. Click **Next.** Type the **Directory Administrator User** password.

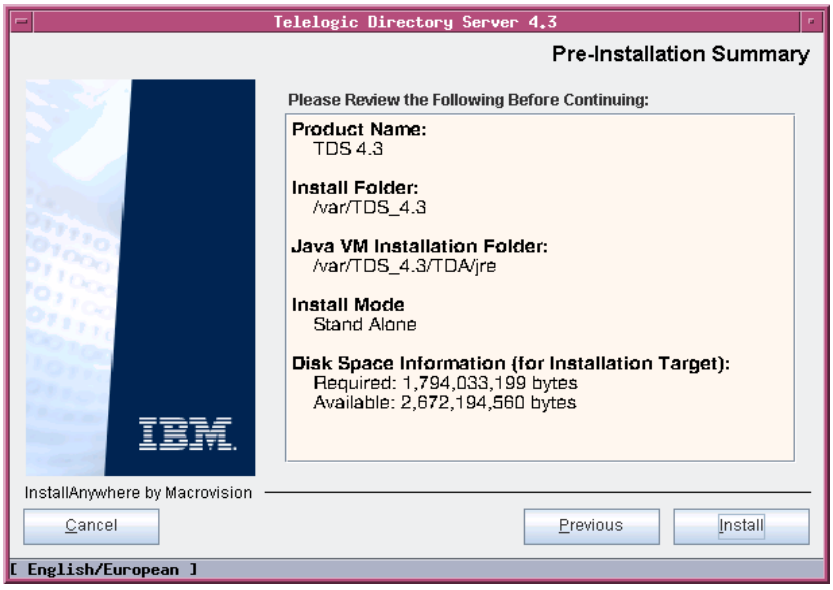


The field description and the value to be entered in each field is explained in the following table.

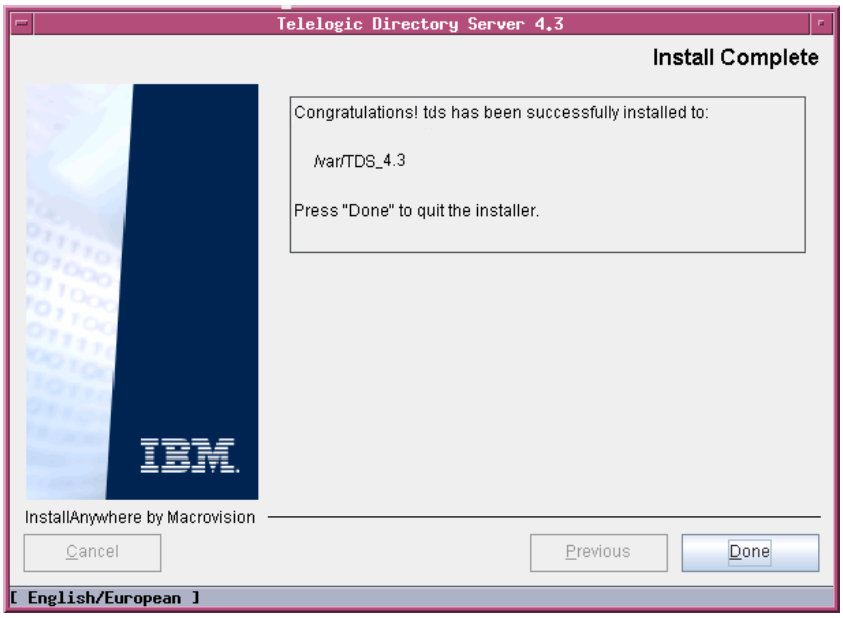
Field name	Description	Values
TDS Administrator User ID	The user id for TDS administrator.	The TDS administrator ID is set by default. The administrator ID cannot be modified.

Field name	Description	Values
TDS Administrator User Password	The password for the TDS administrator user.	Password must contain the following: • Password must be of minimum 8 characters in length. • Password must contain 1 uppercase character and 3 special characters.
Confirm Password	The password authentication for TDS administrator user.	Re-enter the password in the Confirm Password field. Both passwords should match for the installation to continue.

17. Click **Next**. The **Pre-Installation Summary** dialog box appears. This dialog box shows the installation summary.
18. Review the information, and then click **Install.** The **Install Complete** dialog box appears if the installation is successful.



19. Click **Done** to exit the installer.



Note Ignore the error messages similar to the one given below, that appear on console post installation:

```
Error redirecting stderr. Output will be placed
into 'err.txt' instead.
## ZGGfxUtil.loadImage: image loading failed for:
    com/zerog/ia/installer/images/introImage.png
java.lang.Throwable
 at java.lang.Thread.dumpStack(Thread.java:454)
 at ZeroGah.a(DashoA8113)
 at com.zerog.ia.installer.AAMgr.b(DashoA8113)
 at com.zerog.ia.installer.AAMgr.a(DashoA8113)
```

Post installation instructions

This section details the basic checks that you can perform to ensure that the installation has went through fine.

This section contains the following components:

- Server startup
- Review log files
- Check for kernel settings on Solaris
- Check for NFS related errors

Server startup

Ensure that the server is started after the installation. In case the **server is not started automatically**, start the server manually using the following commands:

On Solaris:

```
$> cd /opt/IBM/ldap/V6.1/sbin
$> ./start_tds_server.sh
```

On Linux:

```
$> cd /opt/ibm/ldap/V6.1/sbin
$> ./start_tds_server.sh
```

Note While starting the server manually, ignore the errors that appear similar to the one given below.

```
Error opening slapd.cat
GLPCTL113I Largest core file size creation limit for
the process (in bytes): '-1'(Soft limit) and '-
1'(Hard limit).
```

The server can be started without the *root* user login on **Stand-Alone** and **Corporate** mode. For more information on starting the server without the *root* privilege see, Starting the server without root privilege (page 14). However, on OS authenticate mode, you must start the server with the *root* user login.

Review log files

1. If the installation is corrupted and the server is not started, review the following log files carefully for any errors.
   - `/var/TDS_4.3/TDS_4.3_InstallLog.log`
   - `/var/TDS_4.3/logs/db2setup.log`
   - `/var/TDS_4.3/IBM/Instance/idsslapd-tdsinst/sqllib/db2dumps/`
   - `/var/TDS_4.3/IBM/Instance/idsslapd-tdsinst/sqllib/db2dumps/db2diag.log`
   - `/var/TDS_4.3/logs/tivoli_install.log`
   - `/var/TDS_4.3/IBM/Instance/idsslapd-tdsinst/logs/ibmslapd.log`
   - `/tmp/idsicrt*.log`
   - `/tmp/idcfgdb*.log`
2. If the log files specify the installation has failed with Tivoli or DB2 errors, look for the server startup errors in `ibmslapd.log`.

Note Ignore the following error messages that appear in `db2setup.log` file. These messages appear only during the re-installation of TDS.

```
Command to be run: "/bin/rpm -ivh '/tds/4.3/
tdsV6.1/db2/db2/linuxamd64/FILES/gsk7bas64-7.0-
3.18'.x86_64.rpm".

ERROR:Preparing...
##################################################

ERROR:package gsk7bas64-7.0-3.30 (which is newer
than gsk7bas64-7.0-3.18) is already installed
```

The above listed log files must be sent along with the other relevant information to the support specialist while reporting the errors. For more information on reporting the errors, see Contacting IBM Rational Software Support (page 2).

Check for kernel settings on Solaris

If you encounter the system configuration or kernel settings issues post installation, do the following:

1. Run the `db2osconf` utility located under:

   `/var/TDS_4.3/IBM/Instance/db2/bin`

2. Update the `/etc/system` file with the values recommended by the utility.
3. Restart the UNIX system for the kernel settings to take effect.

Note The server must be uninstalled and reinstalled properly in such scenario. Also, refer to Kernel settings on Solaris (page 12) section for details.

Check for NFS related errors

If you encounter the error such as `"create /usr/local/bin/db2ls: Permission denied"` in the `db2setup.log` file, it means that the `/usr/local/bin` is NFS mounted and the installation is not supported in such a scenario. For more information on NFS, see NFS mounted system (page 13).

Space issues

In case of space issues, you can delete the log files that are created under `/tmp` folder post installation to gain space. However, this is optional.

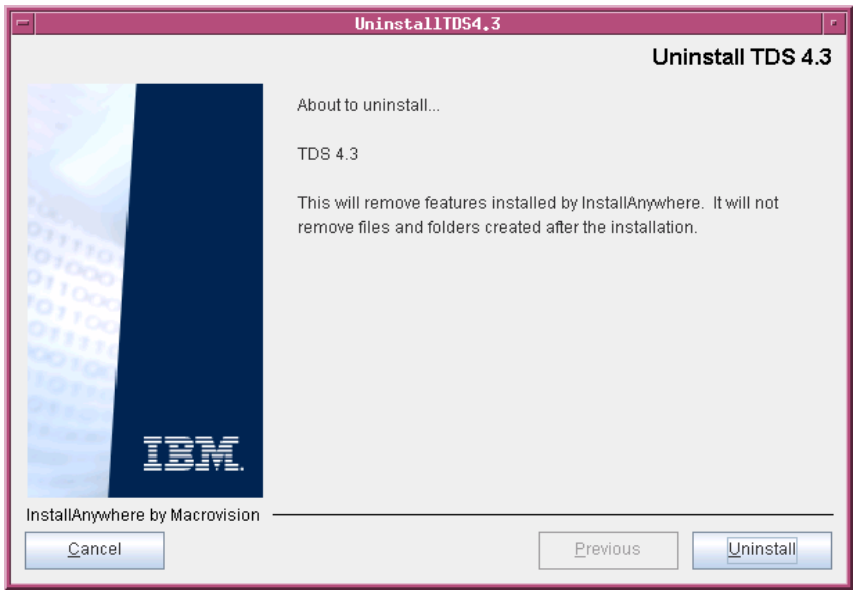
4 Server Removal

Removing the TDS

This chapter describes the steps to remove TDS on all platforms. Remove the server with the same user account that was used for installation.

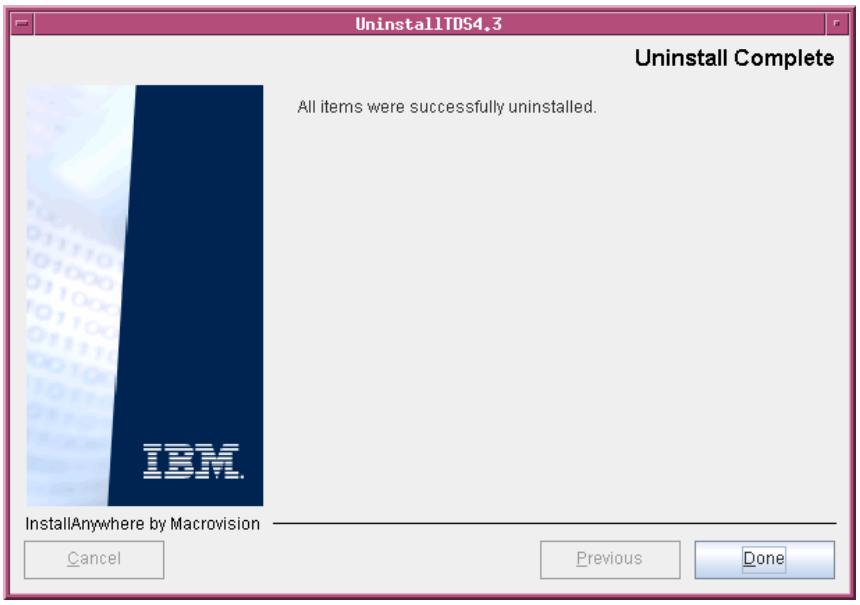
To remove TDS, do the following:

1. Go to the `<TDS_Install_Dir>/UninstallTDS4.3` folder.
2. Type `./UninstallTDS4.3` and press **Enter**. The **Uninstall TDS 4.3** dialog box appears.
3. Click **Uninstall** to remove the TDS.



4. The **Uninstaller** removes the components one by one.
5. After removing all the components successfully, the **Uninstall Complete** dialog box appears.

6. Click **Done** exit the installer.



Note Follow the same procedure for uninstalling the TDS on Linux platform.

Settings for automatic restart on system reboot

The following section describes the scripts you can use to start and stop the directory server process on Solaris platform. Run the scripts to automate the system startup process.

The automatic system startup procedures vary for each platform and operating system (different UNIX flavors). If you want to run these scripts on other systems, you must change the scripts and the startup files from which they are called.

Note The examples shown here apply to the Sun SPARC platform running on Solaris 9, 10.

To start the directory server automatically after a system reboot, create the following scripts in `/etc/init.d`

1. Script **startTDS**.

   ```
   cd "/opt/IBM/ldap/V6.1/sbin"
   ./ibmslapd -I tdsinst -n
   ```

   The above script starts the directory server.

2. Script **stopTDS**.

   ```
   cd "/opt/IBM/ldap/V6.1/sbin"
   ./ibmslapd -I tdsinst -k
   ```

   The above script stop the directory server.

Start process automatically

The following example shows how to set up an `/etc/rc2.d` script.

Set up a symbolic link in `/etc/rc2.d`:

```
/etc/rc2.d/S##startTDS --> /etc/init.d/startTDS
```

The file names in `rc2.d` directories are of the form `[SK]nn<init.d filename>` where `S` means start this job. `rc2.d` represents the run level of the operation. Level 2 startup is the standard. The pound signs (##) reflect the order in which operations are performed. This value should be high so that everything else (e.g., NFS) is started before the server is started. `S##` does not have to be different from `K##`.

Stop process automatically

The following example shows how to set up an `/etc/rc0.d` script.

Set up a symbolic link in `/etc/rc0.d`:

```
/etc/rc0.d/K##stopTDS--> /etc/init.d/stopTDS
```

The value `K` means kill this job. `rc0.d` represents the run level of the operation. Level 0 shutdown is the standard. The pound signs (##) reflect the order in which operations are performed. This value should be low. `K##` does not have to be different from `S##`.

5 Client Installation

Telelogic® Directory Administration™ (TDA) is a GUI based client application used to perform day-to-day administration tasks such as creating users, groups, roles, performing searches, migrating data, etc.

The TDA is available as desktop TDA and Web TDA. The Web TDA enables you to access the TDS using a browser.

Installing the TDA

This section describes the TDA installation on Solaris, and Linux platforms. To start the installation, follow the instructions given below.

To install TDA, do the following:

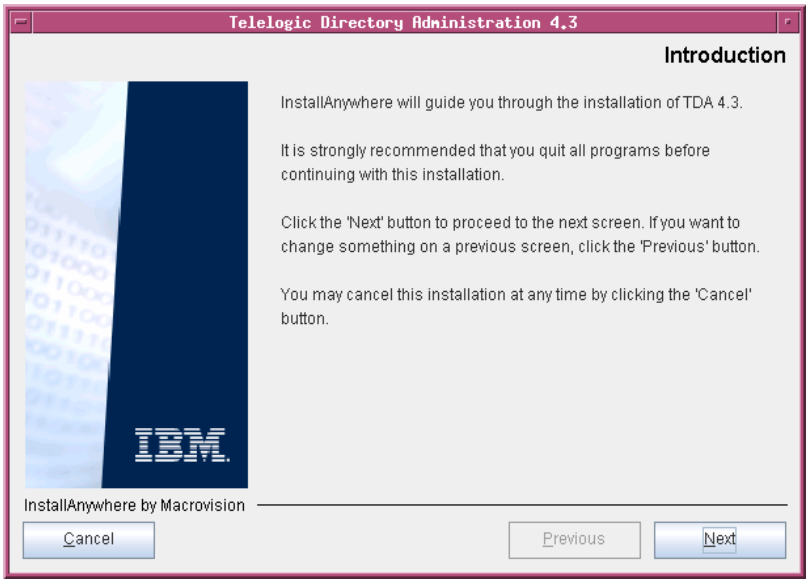
You first need to set the execute permission for **TDA.bin** inorder to start the installation.

1. Unzip the TDA installer in a folder (use unzip or gunzip utilities).
1. Go to the **install** directory and set the execute permission to **TDA.bin**.

   ```
   chmod +x TDA.bin
   ```

   Skip this step for CD and DVD installation.

2. In the **install** directory, type `./TDA.bin` and press **Enter** to start the installation. The **Introduction** dialog box appears.

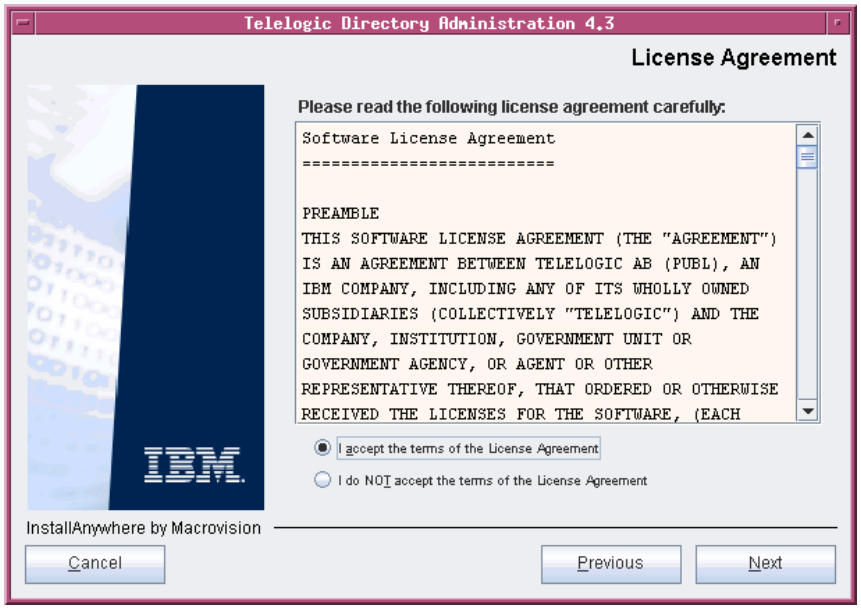


3. Click **Next**. The **License Agreement** dialog box appears.
4. You can also save the licence details in a document.

   To copy the license information:

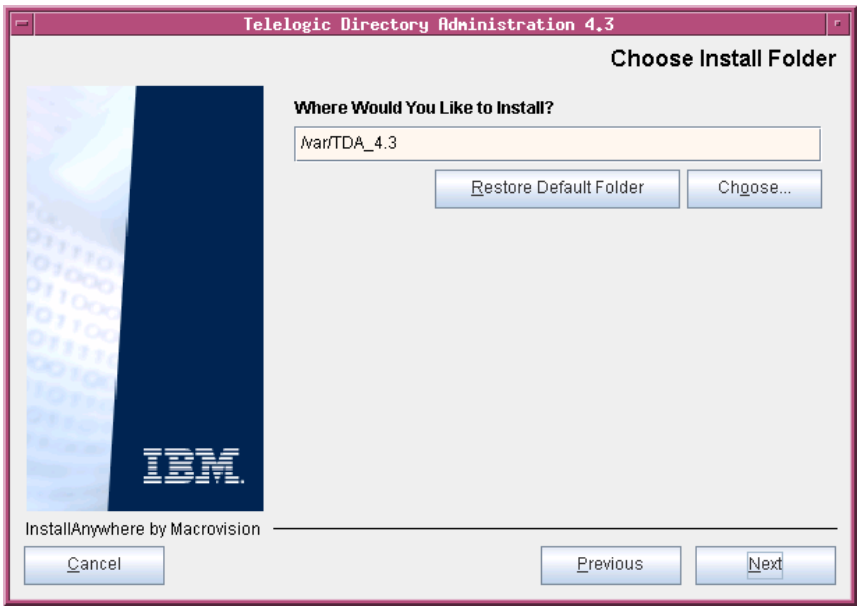
   - Right-click the license window and click **Select All,** and then click **Copy**.
   - Open any file, paste the license information and save the file.

5. Review and click **I accept the terms of the license agreement**.



6. Click **Next.** The **Choose Install Folder** dialog box appears.

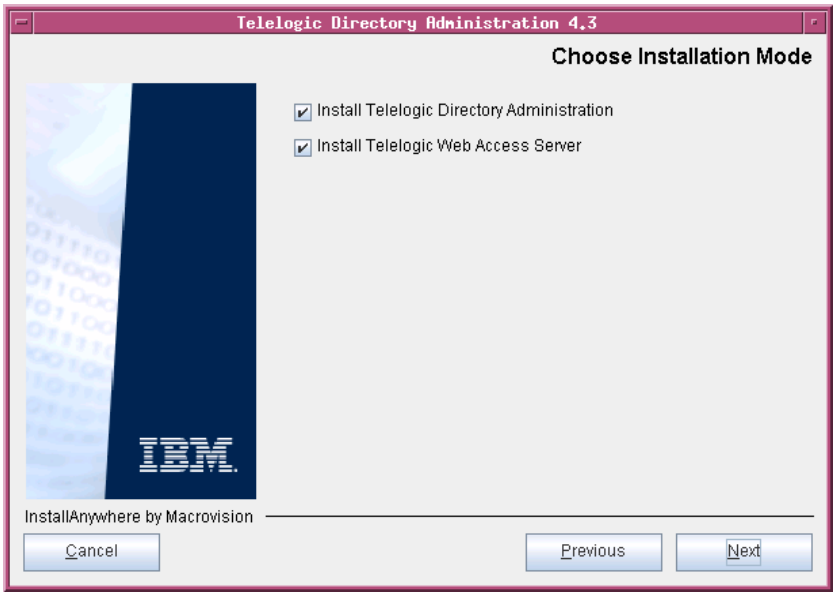
   You can use the default location provided by the installer or click **Choose** to specify a different location. You can also edit the path manually by clicking anywhere in the text box. To use the default location, click the **Restore Default Folder.** This restores the default location provided by the installer.



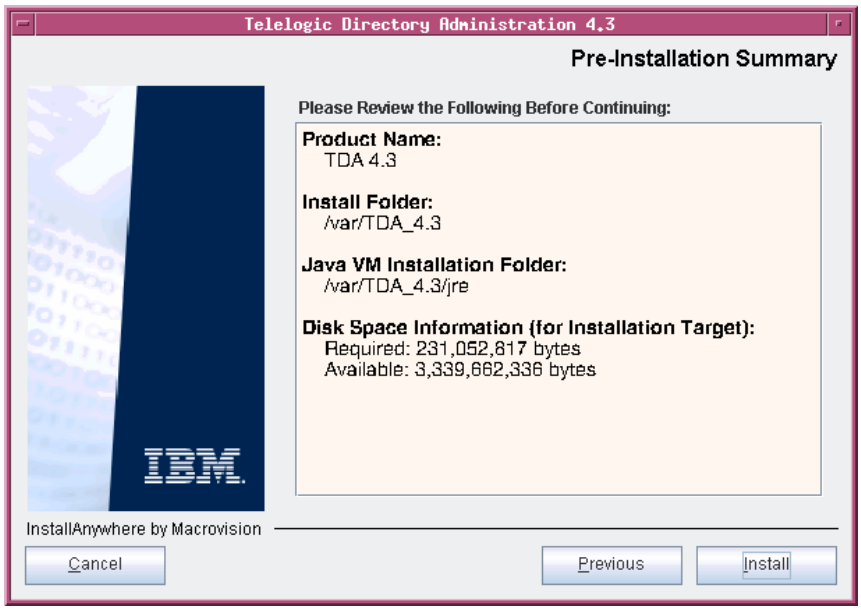
7. Click **Next**. The **Choose Installation Mode** dialog box appears. The following modes of installation are supported by TDS.

   - Install Telelogic Directory Administration
   - Install Telelogic Web Access Server

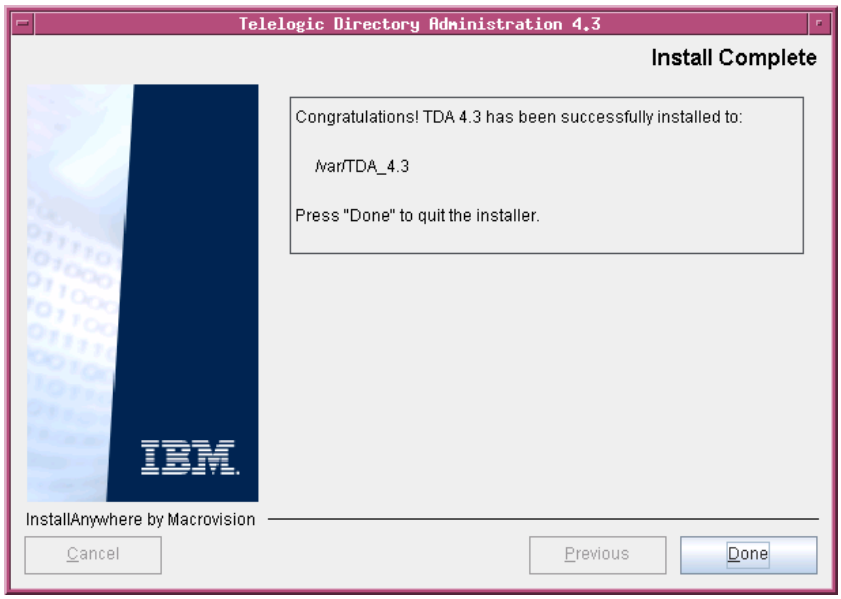
   By default, both the modes are selected by the installer. You can deselect the mode if you want by clicking the check box provided against the mode



8. Click **Next**. The **Pre-Installation Summary** dialog box appears. This dialog box shows the installation summary.
9. Review the information, and then click **Install.** The **Install Complete** dialog box appears if the installation is successful.



10. Click **Done** to exit the installer.



Note The Web Access Server is automatically started as a background process when the web access server is installed. After installation, verify the server is running using the following command:

```
ps -ef | grep tomcat
```

If the tomcat process is not running, see the Troubleshooting TDS (page 43) section for details on starting the server.

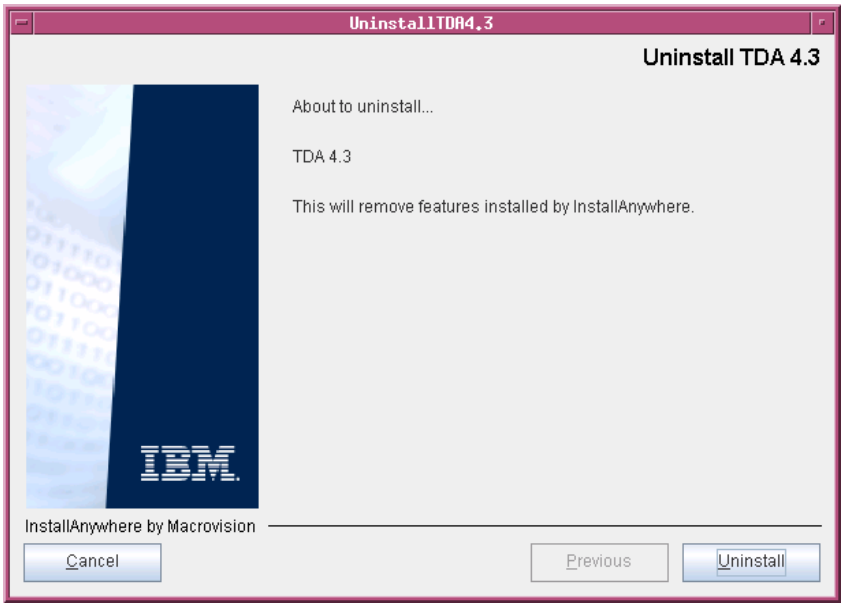
6 Client Removal

Removing the TDA

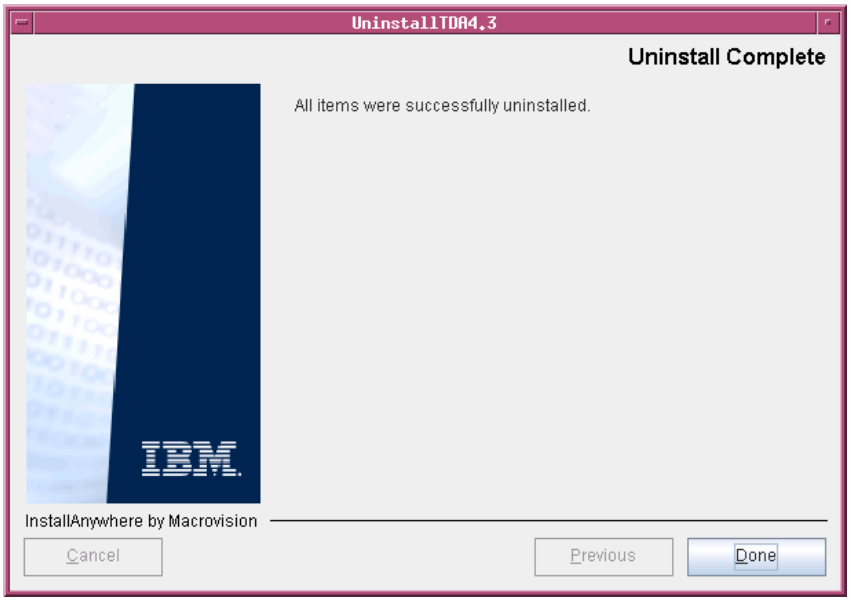
This chapter describes the steps required to remove TDA on all platforms.

To remove TDA, do the following:

1. Go to the `<TDA_Install_Dir>/UninstallTDA4.3` folder.
2. Type `./Uninstall_TDA_4.3` and press **Enter**. The **Uninstall TDA 4.3** dialog box appears.
3. Click **Uninstall.** The **Uninstaller** removes the components one by one. The **Uninstall Complete** dialog box appears if the uninstallation is successful.



4. Click **Done** to exit the installer.



7 Launching TDA

This chapter describes how to launch the TDA application.

You can launch the desktop TDA that is installed on a client machine or the Web TDA from any machine by providing the appropriate URL. The Web TDA is supported on Mozilla browser.

Note The TDA web server starts automatically during installation.

After installing TDS, you can start the TDA application by providing the following details.

To start the desktop TDA, do one of the following:

1. Go to the `<TDS_Home>/TDA` folder.

   Example: `/var/TDS_4.3/TDA`

2. Type **./TDA** and press **Enter**. The **TDS Login** dialog box appears.
3. On the **Login** dialog box, type the following details.

Field name	Description
URL	The LDAP URL should include a valid server name and a port number that was given at the time of TDS installation. For example: ldap://dirserv:1636. To open the TDS in secure mode, you can include the letter "s" in the ldap URL (where the "s" refers to the secure port), followed by a valid server name and a port number.
TDS Admin	The admin user name for TDS. The admin user *tdsadmin* is set by the TDS installer.
Password	The admin password set at the time of TDS installation.

4. Click **Login**.

To start the TDA on a Web browser, do the following:

1. If the TDA web server is not started, run the following command to **start** the web server.

   `<TDS_Home>/WebAccessServer/Start_TDAWebServer.sh`

   For example:

   `$> /var/TDS/TDS_4.3/WebAccessServer/Start_TDAWebServer.sh`

2. Open the browser and type the URL for the TDS: `http://<hostname>:8080/webtda/tda`.

   For example:

   `http://tdsserver:8080/webtda/tda`

   Note The `<hostname>` refers to the name of the server where the TDS is installed.

3. The **TDS Login** dialog box appears.
4. On the **Login** dialog box, type the details as mentioned under step 3 of desktop TDA.
5. Click **Login**.

8 Troubleshooting TDS

This chapter describes the possible problems and solutions for TDS users.

Problem	Solution
Client cannot locate the server	Use the host name, such as *tdsserver*. Make sure the server is listed in the name service you are using, such as DNS, and try the fully qualified domain name (for example, tdsserver.example.com). Use the IP address for the host (for example, 192.168.2.60).
The port is in use	Examine which ports are in use with an appropriate utility, such as the **netstat with the -a** option, to determine which ports are available.
Re-installation of TDS fails with the error message "Instance already present."	Do the following: Delete Users: `tdsinst` and `idsldap` Delete Group: `idsldap`

Server installation fails. Cannot find the error log.	The IBM Tivoli Directory Server log files can be found in the following location:
	`<Install Directory>/IBM/Instance/idssldap-tdsinst/logs`
	The TDS log file `TDS_4.3_InstallLog.log` can be found at the root level of the installation folder:
	`e.g. /var/TDS_4.3/TDS_4.3_InstallLog.log`
	Refer to additional log files under `/tmp` and installation folder.
	`e.g. /var/TDS_4.3/logs/`

Problem	Solution
The below errors are observed when starting the directory server manually: ./start_tds_server.sh: cd: /opt/ibm/ldap/V6.1/sbin: No such file or directory Error opening slapd.cat GLPSRV041I Server starting. Error opening toollibs.cat GLPCTL113I Largest core file size creation limit for the process (in bytes): '-3 '(Soft limit) and '-3'(Hard limit). GLPCTL119I Maximum Data Segment(Kbytes) soft ulimit for the process is -1 and the prescribed minimum is 262144. GLPCTL119I Maximum File Size(512 bytes block) soft ulimit for the process is -1 and the prescribed minimum is 2097152. GLPCTL122I Maximum Open Files soft ulimit for the process is 65536 and the prescribed minimum is 256. GLPCTL122I Maximum Stack Size(Kbytes) soft ulimit for the process is 8192 and the prescribed minimum is 8192. GLPCTL119I Maximum Virtual Memory(Kbytes) soft ulimit for the process is -1 and the prescribed minimum is 1048576.	Ignore these errors.

Web-TDA login page does not launch.	Do the following:
	1. Shutdown the Tomcat server by running the following command:
	`<TDS_Install_Dir>\WebAccessServer\apache-tomcat-6.0.16\bin\shutdown.bat`
	2. Delete the work folder from the following path:
	`<TDS_Install_Dir>\WebAccessServer\apache-tomcat-6.0.16\work`
	3. Start the server again by running the following command:
	`<TDS_Install_Dir>\WebAccessServer\Start_TDAWebServer.bat`
	4. Launch the Web-TDA using the web browser.

Problem	Solution
Not able to launch the online help	Help for TDA can be launched by setting Netscape 7.0 or Mozilla as the default browser. For more information on setting up the Netscape browser, see the "Setting the Netscape browser" section of the *Telelogic Directory Server Administration Guide.*

The error messages similar to the one given below, appear on console post installation.
`Error redirecting stderr. Output will be placed into 'err.txt' instead.`
`## ZGGfxUtil.loadImage: image loading failed for: com/zerog/ia/installer/images/introImage.png`
`java.lang.Throwable`
`at java.lang.Thread.dumpStack (Thread.java:454)`
`at ZeroGah.a(DashoA8113)`
`at ZeroGah.a(DashoA8113)`
`at ZeroGah.a(DashoA8113)`
`at com.zerog.ia.installer.AAMgr.b (DashoA8113)`
`at com.zerog.ia.installer.AAMgr.a (DashoA8113)`
	Ignore these errors.

Problem	Solution

A bind exception is thrown on the command prompt when starting the Web Access Server.	1. After installing the **TDS Web Access Server**, verify if the Web Access Server has started using the following command:
	`ps -ef | grep tomcat`
	2. If there is no `tomcat` running, execute the following command to **start** the server.
	`<TDS_Home>/WebAccessServer/Start_TDAWebServer.sh`
	3. If you get a bind exception error when starting the web access server, do the following:
	4. Open the `Server.xml` file from the following location:
	`<TDS_Install_Dir>/WebAccessServer/apache-tomcat-6.0.16/conf`
	5. Search for the following line:
	`<Connector executor="tomcatThreadPool" port="8080" protocol="HTTP/1.1" connectionTimeout="20000" redirectPort="8443" />`
	6. Change the `port="8080"` attribute to a port that is free.
	7. Search for the following line:
	`<Server port="8005" shutdown="SHUTDOWN">`
	8. Change the `port="8005"` to a free port that is available.
	9. Save the `Server.xml` file.
	10. Run the following command to **start** the web server.
	`<TDS_Home>/WebAccessServer/Start_TDAWebServer.sh`

A kernel parameter error found in DB2 log file.	The DB2 log files located at `/tmp` display error messages like "set the kernel parameter MSGMAX should be set to 65535". The log files at `/tmp` have names beginning with `db2(eg: db2.icrt.878.log)`. Refer to the following link http://publib.boulder.ibm.com/infocenter/db2luw/v9r5/index.jsp?topic=/com.ibm.db2.luw.qb.server.doc/doc/t0006476.html for details on using `db2osconf` utility for setting kernel parameter values.

Terms and Concepts

Term	Definition
LDAP	Lightweight Directory Access Protocol. directory service protocol designed to run over TCP/IP and across multiple platforms.
OS authentication	Operating system authentication is the process of proving the identity of the client user to the directory server based on the operating system log on name.
PAM	A pluggable authentication modules (PAM) is set of libraries and services used for authentication.
SSL	A Secure Sockets Layer. (SSL) is a software library that establishes a secure connection between a client and server.
TDS Client	A TDS client is a interface that requests services or information from a server.

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Index

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