Telelogic Change Installation Guide for UNIX Release 5.1

Before using this information, be sure to read the general information under Appendix B, "Notices" on page 65.

This edition applies to **VERSION 5.1, Telelogic Change Installation Guide (product number 5724V87**) and to all subsequent releases and modifications until otherwise indicated in new editions.

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Introduction

Telelogic[®] Change[™] is a generic change request management system that is webbased and integrated with Telelogic[®] Synergy[™]. This chapter provides basic information needed to install Telelogic Change:

- "Readme" on page 1
- "Contacting IBM Rational Software Support" on page 3
- "Conventions" on page 2

To make your installation easier, a "Worksheet" on page 19 is included in this document. Print a copy of the worksheet, and fill in as much information as possible before installing the product.

Readme

The *Readme* file contains vital information about your Telelogic Change software, including information about new features in this release, and a list of the supported hardware and operating systems. Review this information before installing your software. The *Readme* is available the <u>Telelogic Change Support</u>. Web site (at https://support.telelogic.com/change) and on the Documentation section of the DVD that was shipped with Telelogic Change.

When necessary, the *Readme* is revised and reissued to provide the most current information. To ensure you have the latest version, download an electronic copy from the support page for Telelogic Change products.

Conventions

The following describes the conventions used in this document.

Typefaces and symbols

The table below describes the typeface and symbol conventions used in this guide.

Typeface	Description
Italic	Used for book titles and terminology. Also designates names of roles (<i>User</i>), states (<i>working</i>), and users (<i>laura</i>).
Bold	Used for items that you can select and menu paths, also used for emphasis.
Courier	Used for commands, filenames, and directory paths. Represents command syntax to be entered verbatim. Signifies computer output that displays on-screen. Also used for the names of attributes (modify_time), functions (remote_type), and types (csrc).
Courier Italic	Represents values in a command string that you supply. For example, (/home/username).

This document also uses the following conventions:

Note Contains information that should not be overlooked.

Caution Contains critical information that must be observed or damage to the database or system could result.

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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 <u>Telelogic Change Support Web site</u>.

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 Telelogiclicensed products prior to November 1, 2008, please visit the <u>IBM Rational</u> <u>Software Support site.</u>

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 <u>IBM</u> <u>Rational Software Web site</u>. Chapter 1: Introduction

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Terms and Concepts

To perform the operations described in this guide, you should first understand the following Telelogic Change terms and concepts:

central CR database	A <i>central CR database</i> contains change requests (CRs) only. These CRs might be associated to tasks in multiple development databases. The central CR database is connected directly to the central server. There is only one central server and one central CR database in a cluster.
central server	A <i>central server</i> stores CRs in the central CR database. Remote development databases and the central server can be linked via remote servers. There should be only one central server. See "Server Modes and Types" on page 13.
change request	A <i>change request</i> is a database object used to track problem or enhancement requests.
development database	A <i>development database</i> contains tasks and objects (as opposed to CRs). It may be connected directly to a central server or indirectly through a remote server. If it is connected to a remote server, it is known as a remote development database.
local admin user	The <i>local admin user</i> , which replaces the <i>ChangeAdmin</i> user from previous releases, is a special Telelogic Change user account that is defined during installation. Unlike regular user accounts, the <i>local</i> <i>admin</i> user is authenticated by Telelogic Change directly, rather than by the Telelogic® Directory Server TM (TDS), and is used to perform certain background activities. See "Install Telelogic Change" on page 25.

remote server	A <i>remote server</i> is a proxy between the central server and remote development databases. Multiple remote servers may be associated with the central server. See "Server Modes and Types" on page 13.	
stand-alone server	A <i>stand-alone server</i> is a "traditional" server that stores CRs in development databases. See "Server Modes and Types" on page 13.	
task	A <i>task</i> represents a unit of work that needs to be done, for example, in your software application. You can associate one or more tasks with a change request. A task includes a description of the unit of work and the user name of the person responsible for completing it. When a change needs to be made, someone in your organization creates a task. If you are responsible for making the change, the task is assigned to you within Telelogic Synergy. After you select an assigned task, objects you check out are associated with that task.	
Telelogic Synergy back-end session	A <i>Telelogic Synergy back-end session</i> is used by Telelogic Change to carry out database operations for each user logged in to Telelogic Change. Telelogic Synergy sessions can be run on the Telelogic Change server machine or any compatible machine on which Telelogic Synergy is operational.	
Telelogic Synergy database	The <i>Telelogic Synergy database</i> is a repository of change requests for an installation of Telelogic Change.	
Telelogic Change Login page	The <i>Telelogic Change Login page</i> is where you start a Telelogic Change session.	

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Telelogic Change server	The <i>Telelogic Change server</i> is the machine on which Telelogic Change is installed. The Telelogic Change server is also used to represent the Telelogic Change Web server.
Telelogic Directory Server	The <i>Telelogic Directory Server</i> (TDS) performs authentication and stores Telelogic Change user data.

Chapter 2: Terms and Concepts

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Product Requirements

This chapter lists the requirements for the Telelogic Change server host and the Telelogic Synergy server:

- "Telelogic Change server machine" on page 10
- "Telelogic Synergy session machine" on page 11
- "Telelogic Change client host machine" on page 12

For the latest hardware requirements and for the latest supported versions of the software requirements, see the <u>*Telelogic Change Readme</u>*.</u>

Telelogic Change server machine

The following requirements are for the host that will run the Telelogic Change server.

Hardware requirements

The hardware requirements for each host running a Telelogic Change server are described in the *Telelogic Change Readme*.

Software requirements

The software requirements for each host running a Telelogic Change server are as follows:

- One of the supported operating systems must be installed and operational on the server. For information about supported platforms, see the <u>Telelogic</u> <u>Change Readme</u>.
- Telelogic Synergy must be installed and operational. For detailed information about installing Telelogic Synergy, see the *Telelogic Synergy Installation Guide for UNIX*®, located on the <u>Telelogic Change Support Web site</u>.
- The Telelogic® License ServerTM must be installed and operational. For information about the license server, including when and how to install it, see the <u>Telelogic Lifecycle Solutions - Licensing Guide</u>.
- TDS 4.3 must be installed and operational. See the <u>*Telelogic Directory Server</u></u> <u><i>Product Manual*</u>, or the Help for information about TDS, including when and how to install it.</u>

For information about upgrading from older versions of TDS, see the "Data Migration" chapter in the *Telelogic Directory Server Product Manual* or see the Help.

• The person installing Telelogic Change must be able to set user to ccm_root.

Telelogic Synergy session machine

The following requirements are for a Telelogic Synergy session host, which runs Telelogic Synergy sessions for Telelogic Change. You can run Telelogic Synergy and Telelogic Change on the same machine.

Note For maximum performance, run Telelogic Synergy sessions on the database server.

You can run Telelogic Change and Telelogic Synergy on the same host.

Hardware requirements

The hardware requirements for each host running a Telelogic Synergy session are described in the *Telelogic Change Readme*.

If you expect a large number of users for your Telelogic Change installation, you can increase capacity by dedicating additional Telelogic Synergy session hosts. You can do so later by logging on to a Telelogic Change session using the *Admin* interface and changing the host settings on the **Administration** action's **Server** tab.

Software requirements

The software requirements for each host running a session are as follows:

- One of the supported operating systems must be installed and operational on the server. For information about supported platforms, see the <u>Telelogic</u> <u>Change Readme</u>.
- Telelogic Synergy must be installed and operational. For detailed information about installing Telelogic Synergy, see the *Telelogic Synergy Installation Guide for UNIX*, located on the <u>Telelogic Change Support Web</u> site.
- The person installing Telelogic Change must be able to set user to *ccm_root*.
- All session hosts must be able to respond to remote execution requests using the rsh protocol on Change UNIX servers, or rexec for Windows servers to UNIX databases.

If using rsh protocol, their rshd daemons must be enabled.

An alternative solution, ESD, is available if rsh is not supported.

To configure ESD:

- 1. Be sure ESD (ccm_esd) is running on any host that will run Telelogic Synergy sessions. See the <u>Telelogic Synergy Administration Guide for UNIX</u> for details.
- Set the ENGINE_DAEMON option to true in the pt.cfg file: [CCM_SYSTEM] [ENGINE_DAEMON] true[/ENGINE_DAEMON] [/CCM_SYSTEM]
- 3. Restart Telelogic Change.

Telelogic Change client host machine

A Web browser must be installed and functioning properly on the client host. For the most current information about supported operating systems and browsers for Telelogic Change, see the <u>Telelogic Change Readme</u>.

Server Modes and Types

This chapter discusses the Telelogic Change server modes and types. Because the server type cannot be changed once it has been installed, read this section before installing the product.

This chapter discusses the following topics:

- "Modes of operation" on page 13
- "Central mode server types" on page 16
- "Choose a server type" on page 17

Modes of operation

Telelogic Change supports two modes of operation:

- Stand-alone
- Central

Stand-alone mode

In stand-alone mode, CRs are stored in development databases connected to the server. To access a CR, a user must log on to the database where the CR is stored. To establish a CR-task relationship, both items must be in the same database. The available databases are limited to the ones available to a particular Telelogic Synergy server on which Telelogic Change depends. This is the way it worked prior to the 5.0 or earlier release.

The following diagram shows the stand-alone Change server setup.



Central mode

In central mode, all CRs are stored in the central CR database, which is a repository exclusively for CRs. Because Telelogic Change is always implicitly connected to the central CR database, a user may log on to any database within the central server cluster and still have access to all CRs. CR-task relationships are not restricted by the location of either item. In addition, the databases in the central server cluster may span the Telelogic Synergy servers and may be in geographically disparate regions.

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As there is no upgrade path from a stand-alone server to a central server configuration, the central server mode is only supported for new deployments.

Central mode server types

There are two complementary server types in the central mode: central and remote. Within a central server cluster, there is always a single central server and zero or more remote servers. Each server, regardless of its type, may host multiple databases. The central server hosts the central CR database and, optionally, other databases. It is the only server end-users interact with.

A remote server acts as a proxy between the central server and remote development databases. A remote server is needed when you want databases that are hosted by different Telelogic Synergy servers to be part of the central server cluster.



Consider this example, using the figure above. A company has its headquarters in San Francisco (Central Change Server) and offices in Madrid and Berlin (Geographic Regions 1 and 2, above). This company has Telelogic Synergy databases in each geographic region, each hosted by a Telelogic Synergy server per city. The central server and the central CR database are located in San Francisco and are able to communicate with the databases in Madrid and Berlin through a remote server located in each city. In this deployment situation, there is a central server and two remote servers. All users access Telelogic Change through the central server (not a remote server) and have access to all CRs, regardless of the database they are logged into for task work.

Choose a server type

The server type (stand-alone, central, or remote) is designated at the time of installation and cannot be changed thereafter. See "Install Telelogic Change" on page 21.

Stand-alone servers work independent of each other, whereas a central server and its corresponding remote servers work together to form the central CR cluster. The order in which you install the central and remote servers is not a concern as they are linked together as a post-installation step. See "Connect the central and remote servers" on page 40.

Worksheet

To make your installation easier, print a copy of the worksheet and document information for all possible items before starting. You will document other items during the installation. Save the worksheet after completing the installation. You might need it for upgrades.

1. Telelogic Synergy installation directory (ccm_home)

This is the path to the Telelogic Synergy installation to use for Telelogic Synergy back-end sessions. This path must be visible to all hosts used for Telelogic Synergy back-end sessions.

Use Default: the value of the CCM_HOME environment variable Use Value: _____

2. Telelogic Synergy Session User (cm_session_user)

This is the OS user with which to run back-end sessions. This user must be defined in the operating system and be a user in the database. See "Create a Telelogic Synergy session user in the OS" on page 23 and "Define the Telelogic Synergy session user in the database" on page 24. Use Default: *csuser* Use Value: ______

3. License server (port@host)

This is the server that validated this licenses of your products. Use Default: Telelogic Synergy License Server.

Use Value: ____

4. Telelogic Change installation directory (cweb_home)

This is the directory into which Telelogic Change is installed. This directory must be writable by *ccm_root*. Use Default: /usr/local/tc51 Use Value: _____

5. Server port number (port)

This is the port number for the Telelogic Change server. If you have an existing Telelogic Change installation, please select a different port number for this installation. Use Default: 8600 Use Value: _____ 6. Server name (server_name)

This is the name of the host running the Telelogic Change server. Use Default: Name of local host Use Value: ______

7. Database path (database_path)

This is a path to the Telelogic Synergy database. This database must be at the same release level as the Telelogic Synergy installation at ccm_home. Use Default: None Use Value: ______

8. Local admin user (admin)

This is the user account that is authenticated by Telelogic Change and is used to perform certain background activities. Use Default: *admin* Use Value:

9. Configuration files directory (config_dir)

This is the subdirectory to which Web application files are copied. Use Default: cweb_home/cs_app/webapps/synergy/WEB-INF/wsconfig Use Value: _____

10. Mail server host (*mailserver_host*)

This is the host that runs the mail server. Use Default: None Use Value: _____

11. URL for Telelogic Directory Server (TDS_URL)

This is the URL for a TDS installation. Use Default: ldap://localhost:1389 Use Value:

Install Telelogic Change

To install Telelogic Change, do the following:

- 1. "Unpack a database and prepare it for use" on page 22
- 2. "Create a Telelogic Synergy session user in the OS" on page 23
- 3. "Define the Telelogic Synergy session user in the database" on page 24
- 4. "Install Telelogic Change" on page 25
- 5. "Prepare Telelogic Change for use" on page 41
- 6. "Update Telelogic Synergy mail triggers" on page 42

To make your installation easier, use the "Worksheet" on page 19. Print out and fill in the worksheet before starting the installation.

Unpack a database and prepare it for use

A database is required when installing Telelogic Change. Use the following information to determine whether an existing database can be used during installation:

- Stand-alone—unpack a new database or use an existing one.
- Central—unpack a new database to be used as the central CR database.
- Remote—unpack a new database or use an existing development database (that is, a database that does not have any change requests).

If you are using an existing database, proceed to "Define the Telelogic Synergy session user in the database" on page 24. If not, unpack a Telelogic Synergy database (that is, unpack base.cpk from the Telelogic Synergy installation directory's packfiles directory).

1. On the database server machine, set user to *ccm_root*.

```
$ su ccm_root
Password:*****
```

2. Set the path (if not already set) to include the Telelogic Synergy installation path, *ccm_home* (item 1 on your worksheet).

```
$ CCM_HOME=ccm_home; export CCM_HOME
$ PATH=$CCM_HOME/bin:$PATH; export PATH
```

3. Unpack a Telelogic Synergy 7.0 database to *database_path* (item 7 on your worksheet).

```
$ ccmdb unpack $CCM_HOME/packfiles/base.cpk -t database_path
```

Create a Telelogic Synergy session user in the OS

You must define the Telelogic Synergy session user in the OS. Telelogic Change uses the Telelogic Synergy session user name to run back-end Telelogic Synergy sessions. Use *csuser*, which is predefined in the Telelogic Synergy 7.0 database.

- **Note** For security and logging reasons, do not use *ccm_root* as the Telelogic Synergy session user. However, if you are having trouble creating an OS user account, you can use *ccm_root* temporarily. Later, you can use the *Admin* interface to change the Telelogic Synergy session user and other server values.
- **1.** Contact your system administrator to add a new OS user. This user must be able to send email.
- 2. Add the entry for the Telelogic Synergy Session User (<u>item 2</u> on your worksheet).

Define the Telelogic Synergy session user in the database

If *csuser* is defined as the Telelogic Synergy Session User, proceed to "Install Telelogic Change" on page 25. If not, define the Telelogic Synergy session user for each database.

Note The user *csuser* is predefined in the Telelogic Synergy database. If you choose to not use this user name, the entry should be removed from the list of valid database users.

1. On the database server machine, set user to *ccm_root*.

\$ su ccm_root
Password:****

2. Set the path (if not already set) to include the Telelogic Synergy installation path, *ccm_home* (item 1 on your worksheet).

\$ CCM_HOME=ccm_home; export CCM_HOME
\$ PATH=\$CCM_HOME/bin:\$PATH; export PATH

3. Start a Telelogic Synergy session from the command line.

\$ ccm start -d database_path -r ccm_admin

4. Open the users file.

\$ ccm users

5. In the users file, add the entry for the Telelogic Synergy Session User (<u>item 2</u> on your worksheet).

user username = no_privs;

- 6. Save and close the file.
- 7. Exit the Telelogic Synergy session.

\$ ccm stop

Install Telelogic Change

To install Telelogic Change, follow the steps below in the order listed.

- **Note** For information about updating a Telelogic Synergy installation directory on a machine that will host only Telelogic Synergy sessions, see "Update the Telelogic Synergy Installation Directory" on page 43.
- 1. "Set environment variables" on page 25
- 2. "Install the software" on page 26
- 3. "Start the Telelogic Change server" on page 59
- 4. "Verify correct installation" on page 39.

Set environment variables

Before installing, set the Telelogic Change environment variables.

To set environment variables:

1. Set user to *ccm_root*.

\$ su - ccm_root Password: *****

2. Set the CCM_HOME variable.

\$ CCM_HOME=ccm_home; export CCM_HOME

- 3. Add CCM_HOME/bin and CCM_HOME/jre/bin to the beginning of the path.
 - \$ PATH=\$CCM_HOME/bin:\$CCM_HOME/jre/bin:\$PATH; export PATH
- 4. Set the DISPLAY variable, unless you are installing in command-line mode.

\$ DISPLAY=display_setting; export DISPLAY

Note You must have write access to the DISPLAY (display_setting). For the correct DISPLAY setting, contact your system administrator.

Install the software

To install the Telelogic Change software:

- Change the directory to the DVD installation directory.
 \$ cd dvd02/change/unix
- 2. Run the Telelogic Change Server installation script.

To run the installation script in command-line mode instead of GUI mode, append -nogui to the command. When the script prompts you for values, type the values shown for the GUI steps.

\$./csinst.sh

- **Note** If a warning appears, your system might not meet the system requirements. For more information, see "Product Requirements" on page 9. Other reasons for a warning to appear might be that the installation program did not find the JRE or there was not enough disk space, or the DISPLAY might not be valid or writable. For additional information, please contact support. The Support Home page for Telelogic Change products is located at https://support.telelogic.com/change.
- 3. In the License Agreement dialog box, which follows the Welcome dialog box, read the license agreement information, click Yes, and then click Next.

4. In the Install Set dialog box, select Install Telelogic Change, and then click Next.

For information about using the **Update Telelogic Synergy installation directory only** option, see "Update the Telelogic Synergy Installation Directory" on page 43.



5. In the **Telelogic Synergy Path** dialog box, accept the default or type a path to the Telelogic Synergy installation (*ccm_home*, <u>item 1</u> on your worksheet), and then click **Next**.

If you change the path to the Telelogic Synergy installation, be sure to update <u>item 1</u> on your worksheet.

🧕 Telelogic Change 5.1		
Telelogic Synergy Path	1	IBN.
Type a path to a Telelogic Synergy installation	on:	
/usr/local/ccm70		
		Browse
	< Back Nex	t > Cancel

6. If you receive a warning message, follow the instructions in this step. If not, proceed to the next step.

If a warning appears about the installation path, the existing *ccm_home* installation might not be the required release of Telelogic Synergy. Click **No** to specify a different path to *ccm_home*, or **Yes** to proceed with the installation using the path you already specified.

- 7. In the **Session User** dialog box, type the name of the session user and password (<u>item 2</u> on your worksheet), and then click **Next**.
 - **Note** The user name must be defined in the operating system and be a user in the database.

S Telelogic Change 5.1	
Session User	IBM.
Type the Telelogic Synergy session user ID:	
csuser	
Type the password for the session user: Confirm password:	
•••••	
	< Back Next > Cancel

8. In the License Information dialog box, select the applicable option, and then click Next.

If you select the "I will supply license information later" option, you will be reminded to edit the license data in the license_data.txt file. This file is stored in the *cweb_home/cs_app/webapps/synergy/WEB-INF/wsconfig* directory.

🤨 Telelogic Change 5.1	
License Information	IIV.
I will supply license information later.	
A Telelogic license server. Enter the location of the license server.	ver.
1234@Server	•
\bigcirc A local license file. Enter the path to the local license file.	
	-
	Browse
< Back Nex	<t> Cancel</t>
9. In the Server Type dialog box, select the applicable server type, and then click Next.

Click **Lean More** to view details about the server types or see "Server Modes and Types" on page 13 for more information.

👨 Telelogic Change 5.1		
Server Type	IBN.	
There are 3 types of Telelogic Change servers. All servers can communicate with multiple databases, but the way change requests (CRs) are stored differs.		
Stand-alone Server		
A stand-alone server stores CRs in development databases. Development databases contain tasks and objects.		
Central Server		
A central server stores CRs in the central CR database. The central CR database contains CRs only, but they can be associated to tasks in multiple development databases. Remote development databases and the central CR database can be linked via remote servers. There should be only one central server.		
🔾 Remote Server		
A remote server is a proxy between the central server and remote development databases. Multiple remote servers may be associated with the central server.		
Learn More		
< Back Nex	t > Cancel	

10. In the **Install Directory** dialog box, accept the default path, or type the appropriate path, and then click **Next**.

This directory must be writable by *ccm_root*.

If you change the installation directory, be sure to update <u>item 4</u> on your worksheet for future reference.

For assistance choosing a path, click **Browse**.

🤨 Telelogic Change 5.1	
Install Directory	IBM.
Where would you like to install:	
/usr/local/tc51	
	Browse
	< Back Next > Cancel

11. In the **Port Number** dialog box, accept the default or type the port number for the Telelogic Change server, and then click **Next**.

If you change the port number, be sure to update $\underline{item 5}$ on your worksheet.

To specify a port number less than 1024, you must start the Telelogic Change server as *root*.

👨 Telelogic Change 5.1	
Port Number	IDV.
Type a unique port number for this Telelogic Change installation: 8600	
< Back Nex	ct > Cancel

12. In the **Hostname** dialog box, accept the default or type the name of the machine to run Telelogic Synergy sessions (this must be a UNIX machine), and then click **Next**.

For a description of this host, see "Telelogic Synergy back-end session" on page 6.

If you change the host name, be sure to update item 6 on your worksheet.

You can add more session hosts later.

5.1 Telelogic Change 5.1	
Hostname	IBN.
Type the hostname on which to run Telelogic Synergy sessions: hawk	
< Back Nex	t > Cancel

13. In the **Max Users** dialog box, type the maximum number of simultaneous users, and then click **Next**.

The maximum number of simultaneous users value determines how many users can be active on this Telelogic Change installation. Telelogic Change uses this number to compute the maximum number of sessions permitted.

You can tune the server values later using the **Server** page in the *Admin* interface.

4 Telelogic Change 5.1	
Max Users	IBN.
Type the maximum number of simultaneous users for Telelogic Cl 10	hange:
< Back Nex	ct > Cancel

- **14.** In the **Telelogic Synergy Database** dialog box, type the path to the database (as indicated below), and then click **Next**.
 - Stand-alone server—type a path to a Telelogic Synergy database.
 - Central server—type a path to a DCM-initialized Telelogic Synergy central CR database.
 - Remote server—type a path to a DCM-initialized Telelogic Synergy development database.

If you change the database path, be sure to update item 7 on your worksheet.

Note You can add more databases later.

🤷 Telelogic Change 5.1		
Telelogic Synergy Database		
Type a path to a Telelogic Synergy database		
/vol/hawk/ccmdb/database1		
	< Back Next >	Cancel

15. If a warning appears, the existing database might not be for the required release, or the path you specified might not be correct or visible. Click **No** to specify a different path to *database_path*, or click **Yes** to proceed with the installation using the path you already specified.

16. In the **Local Admin User** dialog box, type the user name and password (<u>item 2</u> on your worksheet), and then click **Next**.

The *local admin* user replaces the *ChangeAdmin* user from previous releases. For more information about the *local admin user* ID, see "local admin user" on page 5.

Telelogic Change 5.1		
Local Admin User		IBM.
Type a user ID for the local admin user:		
admin		
Confirm password:]
eeeee		
1		
	< Back Ne	xt > Cancel

17. In the Start Copying Files dialog box, click Install.

The Telelogic Change files are copied to the installation directory. A status screen shows the progress of the installation.

🧏 Telelogic Change 5.1	
Start Copying Files	IBN.
Setup has enough information to start copying the program files. or change any settings, click Back. If you are satisfied with the setti begin copying files. Current Settings:	if you want to review ings, click Install to
Telelogic Synergy Path: /usr/local/ccm70 Session User: csuser	
License information: 1234@cserver Server Type: stand-alone Install Directory: /vol/hawk/ccmdb/database1	
Dort Number 2600	•
< Back Ins	tall Cancel

18. In the **Install Wizard Complete** dialog box, click **Finished** to exit the installation process.

On the **License Information** dialog box, if you choose to specify license information later, you will be reminded to edit the license_data.txt file in the *cweb_home/cs_app/webapps/synergy/WEB-INF/wsconfig* directory. You must specify that information before you can log on to Telelogic Change.

19. Start the Telelogic Change server.

See "Start the Telelogic Change server" on page 59.

Verify correct installation

Verify that Telelogic Change is installed correctly by using your browser to go to the **Telelogic Change Login** page on the Telelogic Change server. The URL will be similar to the following (using <u>item 6</u> and <u>item 5</u> on your worksheet):

http://server_name:port/admin

- If you have configured Telelogic Change to use TDS, you will see the **Telelogic Change Login** page.
- If you have not yet configured Telelogic Change to use TDS, you will see the **Configure Telelogic Change to Use TDS** page. See "Configure Telelogic Change to use TDS" on page 39.
- **Note** The Telelogic Change server might take a few minutes to start. If the log on page does not appear in a few minutes, try again.

Configure Telelogic Change to use TDS

The first time you log on to Telelogic Change, you are prompted to configure Telelogic Change to use TDS. You can use the same TDS for remote and central servers.

- **1.** In the **Configure Telelogic Change to Use TDS** page, in **URL**, type the correct URL.
- 2. In **TDS Admin**, type the name of the *TDS admin* user.
- **3.** In **Password**, type the password, and then click **Connect** to connect Telelogic Change to TDS.

If the connection attempt should fail, an error message appears with the reason the connection failed.

Connect the central and remote servers

Remote servers must be connected to the central server to participate in the central server cluster. It is possible to have a central server without any remote servers. This just means your cluster does not have any remote development databases (although it likely has, or will have, local development databases connected directly to the central server).

To connect remote servers from the central server, see "Add a Remote Server" in the <u>Telelogic Change Admin Help</u>.

To connect to the central server from a remote server, see "Add a Central Server" in the *Telelogic Change Admin Help*.

Prepare Telelogic Change for use

After installation, a single user, *local admin*, is available in Telelogic Change so that you can use the *Admin* interface. You must log on to Telelogic Change and install a process package before other roles can be used. You must also define users' database privileges in the central server.

Perform the following steps to prepare Telelogic Change for use. For more information, click the **Welcome Pages** link.

1. If you are upgrading Telelogic Change, initialize TDS before proceeding.

For more information, see "Populate the Telelogic Directory Server" on page 51.

2. Log on to Telelogic Change *Admin* interface as user *local admin*. TDS is predefined with a *local admin* user and *password*.

The following steps do not apply to the remote server.

a. Install a process package.

For example, you could use the supplied dev_process package.

For more information about installing a package, see the <u>*Telelogic Change</u></u> <u><i>Admin Help*</u>.</u>

b. Set up users.

For more information about setting up users, see the *Telelogic Change Admin Help*.

c. Set up email for triggers and the subscription feature by setting the "SMTP Server" and "From E-Mail Address" in the "Sending E-Mail" section of **Administration > General**.

For information about using Telelogic Change, for terms and concepts, for dialog box descriptions, and for step procedures, see the Telelogic Change Help.

For the most recent updates to Telelogic Change, see the **Telelogic Change Readme**.

Update Telelogic Synergy mail triggers

Telelogic Synergy mail triggers send email to a predefined list of users when a task is assigned. You must update mail triggers after installing Telelogic Change.

To update mail triggers for the Telelogic Change installation, run the webdb_patch script using the path *ccm_home*, <u>item 1</u>, *database_path*, <u>item 7</u>, and *mailserver_host*, <u>item 10</u>, on your worksheet.

1. Set user to *ccm_root*.

\$ su ccm_root
Password:****

2. Run the mail trigger update script for each database.

\$ ccm_home/bin/webdb_patch database_path mailserver_host

7

Update the Telelogic Synergy Installation Directory

Use the **Update the Telelogic Synergy installation directory only** option to update the Telelogic Synergy installation directory. If your Telelogic Synergy sessions run on a host that is different than the Telelogic Change server, use this option to prepare a host to run the Telelogic Synergy sessions for Telelogic Change.

Note This procedure is *not* required if you have a network installation where the Telelogic Synergy installation directory is shared by all hosts.

You would do this, for example, if you want to host the Telelogic Change server and the Telelogic Synergy sessions on different UNIX operating systems that do not have the same Telelogic Synergy installation directory.

For information about installing Telelogic Synergy, see the *Telelogic Synergy Installation Guide for UNIX*, located on the <u>Telelogic Change Support Web site</u>.

For information about setting up a back-end installation, see the following sections of this document:

- "Product Requirements" on page 9
- "Run the update" on page 44

A worksheet is included to help you prepare for the installation. Before you begin, fill out the "Worksheet" on page 19.

Run the update

Perform the following steps to update the Telelogic Synergy installation directory:

- "Set environment variables" (if you exited from the previous installation)
- "Run the installation"

Set environment variables

Before updating the installation directory, set environment variables for Telelogic Change.

To set environment variables:

1. Set user to *ccm_root*.

```
$ su ccm_root
Password: *****
```

2. Set the CCM_HOME variable.

\$ CCM_HOME=ccm_home; export CCM_HOME

- 3. Add CCM_HOME/bin and CCM_HOME/jre/bin to the beginning of the path.
 - \$ PATH=\$CCM_HOME/bin:\$CCM_HOME/jre/bin:\$PATH; export PATH
- 4. Set the DISPLAY variable, unless you are installing in command-line mode.

\$ DISPLAY=display_setting; export DISPLAY

Note You must have write access to the DISPLAY (display_setting). For the correct DISPLAY setting, contact your system administrator.

Run the installation

Run the Telelogic Change installation using the **Update Telelogic Synergy** installation directory only option.

1. Change directory to the DVD installation directory.

\$ cd dvd02/change/unix

2. Run the Telelogic Change installation script.

To run the installation script in command-line mode instead of GUI mode, append -nogui to the command. When the script prompts you for values, type the values shown for the GUI steps.

\$./csinst.sh

- 3. In the License Agreement dialog box, which follows the Welcome dialog box, read the license agreement information, click Yes, and then click Next.
- 4. In the Install Set dialog box, click Update Telelogic Synergy installation directory only, and then click Next.



5. In the **Telelogic Synergy Path** dialog box, accept the default or type a path to your Telelogic Synergy installation (*ccm_home*, <u>item 1</u> on your worksheet), and then click **Next**.



6. If you receive a warning message, follow the instructions in this step. If you do not receive a warning message, proceed to step 8.

If a warning appears about the installation directory, the existing *ccm_home* installation might not be the required release of Telelogic Synergy. Click **No** to specify a different path to *ccm_home*, or click **Yes** to proceed with the installation using the path you already specified.

7. In the Start Copying Files dialog box, click Install.



8. In the **Install wizard complete** dialog box, click **Finished** to exit from the update process.

Upgrade Telelogic Change

There are no automatic upgrade option for previous versions of Telelogic Change. Instead, you must install Telelogic Change into a new directory, and then apply any previous customizations to the new installation.

For information about upgrading Telelogic Change installation, see the following sections:

- "Upgrade guidelines" on page 50
- "Populate the Telelogic Directory Server" on page 51

Upgrade guidelines

To prepare for an upgrade, read the following guidelines before installing Telelogic Change.

- Ensure that you have installed TDS 4.3. For information about installing the TDS, see the <u>Telelogic Directory Server Install Guide</u>.
- If you are using Telelogic[®] Change Distributed[™], see the <u>Telelogic Synergy</u> <u>Upgrade Instructions</u> for information about Telelogic[®] Synergy Distributed[™] compatibility.
- You can upgrade customizations performed using the Lifecycle Editor by copying your XML file to the new Telelogic Change 5.1 cr_process directory, loading the XML file, and following the instructions in the popup dialog box. In most cases, all that is required is saving the XML file, creating the package, and then installing the package.
- You can also upgrade a customization that was made manually. However, depending on the extent of the customization, additional work may be required to make it compatible with Telelogic Change 5.1.

Save your manual customizations in a package template. If you have done so, you can copy your package template into the Telelogic Change 5.1 package_templates directory and use the package template to re-create your package.

- You must apply customizations that were made in the ptcli.cfg file and notify trigger files to the same files in the new Telelogic Synergy installation directory. The Telelogic Change 5.1 installation program preserves existing customizations in the ptcli.cfg file by renaming it ptcli.bak_pre51 before installing the updated 5.1 version.
- Pre- and post-transition TRELATIONs are no longer supported. Their functionality can be duplicated with bean scripting framework (BSF) trigger scripts, found in the wsconfig/triggers directory. Although the built-in TRELATIONs are automatically mapped to the replacement BSF scripts when the CR process is upgraded, other TRELATIONs may require manual replacement.

• To increase performance, attribute controls (e.g., base.CCM_LISTBOX) have been significantly updated for Telelogic Change 5.0. Most of the JavaScriptTM that previously existed in the controls has been extracted into the file ctrlUtils.js, which is included on base templates. While an effort was made to preserve backward compatibility, certain types of customizations, such as interdependent controls, must be manually upgraded.

Populate the Telelogic Directory Server

Telelogic Change stores user profile information in the Telelogic Directory Server.

For information about migrating from older versions of TDS, see the <u>Telelogic</u> <u>Directory Server Product Manual</u> or the Telelogic Change Help.

Uninstall Telelogic Change

To uninstall Telelogic Change, run the Uninstall Telelogic Change program.

Use the following procedure to uninstall Telelogic Change.

1. Set user to *ccm_root*.

\$ su - ccm_root Password: *****

2. Stop the Telelogic Change server.

For steps, see "Stop the Telelogic Change server" on page 59.

3. Change the directory to the Telelogic Change installation directory (<u>item 4</u> on your worksheet).

\$ cd cweb_home

4. Change the directory to the UninstallerData directory.

\$ cd UninstallerData

5. Set the DISPLAY variable, unless you are uninstalling in command-line mode.

\$ DISPLAY=host_name:0.0; export DISPLAY

Note You must have write access to the DISPLAY (display_setting). For the correct DISPLAY setting, contact your system administrator.

6. Add CCM_HOME/bin and CCM_HOME/jre/bin to the beginning of the path.

\$ PATH=\$CCM_HOME/bin:\$CCM_HOME/jre/bin:\$PATH; export PATH

7. Uninstall Telelogic Change.

Add "-nogui" to the command to uninstall in command-line mode.

\$./Uninstall_TelelogicChange.sh

Depending on the type of server, you will be provided with information about the effects of uninstalling the server.

Chapter 9: Uninstall Telelogic Change

Appendix A: Reference Information

This section provides log file locations and explains how to resolve port conflicts or change port assignments, and provides information about installation options, including:

- "Log files" on page 56
- "Resolve port conflicts" on page 57
- "Stop the Telelogic Change server" on page 59
- "Start the Telelogic Change server" on page 59
- "Install multiple Telelogic Change servers for a database" on page 59
- "Configure Change to use HTTPS" on page 62
- "Update the TDS configuration file" on page 63

Log files

Check for status, error messages, and general information in the following log files:

- Telelogic Change
- The Telelogic Synergy session
- Jetty Web server
- Installation log files

For information about the variables in the log file paths shown in the table, see the "Worksheet" on page 19.

Log file name and location	Comments	
<pre>cweb_home/cs_app/webapps/synergy/logs/event.log</pre>	Telelogic Change application log.	
<pre>cweb_home/cs_app/webapps/synergy/logs/search.log</pre>	Telelogic Change search index log.	
<pre>cweb_home/cs_app/webapps/synergy/logs/audit_log.xml</pre>	Telelogic Change admin audit log records the following admin operations:	
	Changes to users	
	Package install/uninstall	
	Group changes	
	ACL changes	
	• Central/remote server registration	
\$HOME/ccm_ui.log	Telelogic Synergy session logs. cm_session_user is item 2 on your worksheet.	
\$HOME/ccm_eng.log		
<pre>cweb_home/cs_app/logs/yyyy_mm_dd.jetty.log</pre>	Jetty Web server log.	

Log file name and location	Comments
<pre>cweb_home/install.log</pre>	Installation log file created in the Telelogic Change installation directory. The log file will be in the user's home directory within a temporary timestamp (13 digit) directory if the installation program terminates abnormally.
<pre>cweb_home/cs_app/logs/stdout.log</pre>	Telelogic Change server startup log.

Resolve port conflicts

Port conflicts can occur if Telelogic Change installations are using the same port that are in use by another application. Look in the synergy.xml file to obtain the port number used by Telelogic Change. Port conflicts can cause related errors, as well, including undefined users and port access failures. These problems might not appear immediately.

Resolve any port conflicts by assigning a different port number to one of the conflicting port users. Then, restart the Telelogic Change server.

If the Jetty Web server log reports that there are port conflicts or that subsequent use of Telelogic Change causes errors, check the log files for warnings about port conflicts and related errors. For more information, see "Log files" on page 56.

To resolve port conflicts, see "Resolve Telelogic Change port conflicts" on page 58.

Resolve Telelogic Change port conflicts

If Telelogic Change port conflicts occur, change the Telelogic Change port number to an unused number by editing the synergy.xml and web.xml files.

1. Stop the server. See "Stop the Telelogic Change server" on page 59. On the Telelogic Change server machine, set the user to *ccm_root*.

```
$ su ccm_root
Password:*****
```

- 2. Change the directory to *cweb_home/cs_app/etc.* (*cweb_home* is <u>item 4</u> on your worksheet.)
- 3. Make a backup copy of the synergy.xml file.
- 4. Open the synergy.xml file.
- 5. Change the Telelogic Change port entry.
 - a. Find the entry for the Telelogic Change port, for example:

```
<Call...>
<Arg...>
<Set name="Port">XXXX</Set>
...
</Arg>
</Call>
```

b. Change the port setting to an unused port number, for example:

```
<Call...>
<Arg...>
<Set name="Port">8888</Set>
...
</Arg>
</Call>
```

- 6. Save and close the synergy.xml file.
- 7. Repeat steps 4 6 for the web.xml file in the *cweb_home/cs_app/webapps/* synergy/WEB-INF directory. (*cweb_home* is <u>item 4</u> on your worksheet.)

The entry in the web.xml file is slightly different, for example:

8. Start the server.

See "Start the Telelogic Change server" on page 59.

Stop the Telelogic Change server

Stop the Telelogic Change server by running the control script.

1. On the Telelogic Change server machine, set the user to *ccm_root*.

\$ su ccm_root
Password:****

2. Change the directory to the Telelogic Change installation directory.

\$ cd cweb_home/cs_app

3. Stop the Telelogic Change server.

\$./csctl.sh stop

Start the Telelogic Change server

Start the Telelogic Change server by running the control script.

1. On the Telelogic Change server machine, set the user to *ccm_root*.

```
$ su ccm_root
Password:****
```

You must set user to *root* if the Telelogic Change port number is less than 1024.

2. Change the directory to the Telelogic Change installation directory.

\$ cd cweb_home/cs_app

3. Start the Telelogic Change server.

\$./csctl.sh start

Install multiple Telelogic Change servers for a database

Telelogic Change provides no explicit support for server load balancing, but it is possible to achieve a similar effect by installing duplicate Telelogic Change installations onto multiple servers. Ideally, each server should access a different set of databases, but you can have multiple servers share access to a common set of databases—provided you are willing to manually keep the settings of all the installations in sync. Different groups in your organization can then access the common databases through different servers, spreading the load among them.

Stand-alone server installation and planning

If you are using a stand-alone server, install Telelogic Change as usual on each of the servers that you want to access the common databases. Each installation must:

- Be the same release of Telelogic Change.
- Use the same authentication mechanism.
- Point to the TDS server.
- Point to the same Telelogic Synergy release.

Additionally, when a common database is added—either during installation or later through the Admin Server tab—its path must match exactly, including capitalization, across all installations.

At this time you should mentally designate a single one of your installations as the primary server for the common databases. All other installations will be secondary servers. Telelogic Change does not distinguish primary and secondary servers, but changes to the CR process, listbox values, and other settings should always be made and controlled on the primary server, and then manually propagated to the secondary servers.

Settings requiring manual synchronization

CR Process

You should control and edit your CR process XML file only on the main server. The process package you generate from this file must be copied from the main server to all secondary servers. Your generated process package can be found under *cweb_home/cs_app/webapps/synergy/WEB-INF/* packages on your primary server and must be copied to the same directory on every secondary server. For each server, install the process package with the Package Installer as normal.

Listboxes

You should control and edit your listbox entries only on the main server. Listbox values are saved in *cweb_home/cs_app/webapps/synergy/WEB-*INF/wsconfig/pt_listbox.cfg. When modified, this file must be copied to the same location on every secondary server. For each secondary server, load the new listbox values by selecting **Load** on **Admin > General**.

• ACLs

You should control and edit your access control lists (ACLs) only on the main server. ACL definitions are saved in several files under *cweb_home/* cs_app/webapps/synergy/WEB-INF/wsconfig/acl. When modified, all of these files must be copied to the same location on every secondary server. For each secondary server, load the new ACL definitions by selecting **Admin > General > Load**. Next, go to **Admin > ACL**, and enable the same ACLs as on your primary server.

• Other Packages

As with your CR process package, any packages installed onto the primary server must be copied to and installed on all secondary servers.

• Admin > General Tab

If you modify any settings on **Admin** > **General** of the primary server, you must apply the same changes on every secondary server.

• Manual pt.cfg Settings

If you manually modify any pt.cfg settings on your primary server, you must make the same changes on every secondary server. For each secondary server, load the new pt.cfg settings values by selecting **Admin > General > Load**.

Limitations

Telelogic Synergy has a number of features that interact with Telelogic Change. These features will continue to work, but they will only know about a single one of your Telelogic Change installations: the last installation on which you installed your process package. If your users primarily access Telelogic Change via Telelogic Synergy, then this solution will not provide any benefit. All users will end up connected to the same Telelogic Change server.

By default, each server maintains its own search index. Since the indices will not necessarily be updated at the same time, different servers will sometimes show different results. This only applies to search results. Queries and reports always reflect what is currently in your databases.

It is possible to have multiple Telelogic Change servers configured against the same databases to share a search index. This is done by setting the pt.cfg configuration entry [CCM_SYSTEM] [SEARCH_INDEX_DIRECTORY]full path to search directory [/SEARCH_INDEX_DIRECTORY][/CCM_SYSTEM] to have the same path on all servers. The default value for the search index is the wsconfig/system directory.

Do not point to another server's wsconfig/system/index directory as that will create another index. Point to its wsconfig/system directory or point all servers to another directory outside of the Telelogic Change directory hierarchy.

Licensing

Using multiple servers will not affect your licenses. The same number of licenses are available whether you use one or more Telelogic Change installations.

Configure Change to use HTTPS

For information about configuring Telelogic Change to use HTTPS, contact support to obtain the technical note. The Support Home page for Telelogic Change products is located at <u>https://support.telelogic.com/change</u>.

Update the TDS configuration file

TDS is normally configured as a post-installation step, and the TDS connection information is stored in the tds_config.xml file. The administrator needs to edit tds_config.xml file only when the following occurs:

• The TDS URL changes (when you want to use a different TDS server or when it is moved to another server).

See "Edit the TDS URL" on page 63.

• The TDS admin user name or password was changed.

See "Edit the TDS admin user name and password" on page 64.

The tds_config.xml file is located in the CS_HOME/cs_app/webapps/ synergy/WEB-INF/wsconfig directory.

All changes made to this file are applied when the configuration data is reloaded or when the server is restarted.

Edit the TDS URL

To edit the TDS URL:

1. In the tds_config.xml file, edit the <url> line.

```
<tds-config>
<url>ldap://local host:xxxx/</url>
<user-id>tdsadmin</user-id>
<password>xxxxxxxxx/xxxxxxxx==</password>
</tds-config>
```

2. Save the file.

Edit the TDS admin user name and password

To edit the user name and password:

1. In the tds_config.xml file, edit the <user-id> line.

```
<tds-config>
<url>ldap://local host:xxxx/</url>
<user-id>tdsadmin</user-id>
<password>xxxxxxxxx/xxxxxxx==</password>
</tds-config>
```

- **2.** Type the new user name.
- **3.** Replace the cpassword> line with the following:

<password-unencrypted>my_new_password</password-unencrypted>

4. Save the file.

The user name is changed, but the original password> is replaced by
<password-unencrypted>, whose content is a clear-text password. When
the server reloads, the password will be encrypted.

Appendix B: Notices

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