Deltek Time & Expense™ 10.0.0

Upgrade Installation Guide for Microsoft SQL Server®

December 11, 2017

Contents

Deployment Options

The Deltek Costpoint 7.1 Architecture allows for very flexible and scalable deployment options to meet the specific needs of your business. These options include, but are not limited to, multi-tenancy, optional components, authentication models, database options, load balancing and fail-over configurations, co-deployments with Budgeting & Planning and/or Time & Expense, access controls, and many other important features to consider.

Careful consideration of your deployment is an extremely important step in your planning process. Deltek has provided many resources to assist you in your deployment planning and implementation process and strongly recommends you leverage these resources in order to plan a smooth implementation of your Deltek deployment.

We strongly recommend starting with the document titled *DeltekCostpoint711DeploymentOptionsTechnicalOverview.pdf*, available in Deltek Software Management (DSM). The documents listed in the Related Documentation section include numerous important documents for you to consider as part of your planning and implementation process.

Time & Expense 10.0 **requires** you to carefully consider and choose a deployment option along with your Costpoint instance. You now have the following options:

- **Share Everything** — Robust model where Costpoint and Time & Expense are deployed as one system (one product, one menu), allowing you to leverage your hardware and operational investment

   > Deltek recommends you use this option, which is required for some current and future enhancements (for example, you must use this option if you plan to utilize Subcontractor Management capability).

- **Share Infrastructure** — Only share WebLogic deployment
- **Share Nothing** — Stand-alone deployment

Subcontractor (SubK) Management Users

If you choose to leverage the new Subcontractor Management add-on, you must deploy and configure the Share Everything deployment model, where Costpoint and Time & Expense are **co-deployed** as a single system.

Upgrade Installation Checklist

The following is a checklist of the overall steps needed to install Time And Expense 10.0.0. Details for each step are provided on subsequent pages.

Print this checklist and use it as you complete this installation, if desired.

Done?	Step	Notes
✔	*Step summary…*	*Any pertinent notes…*
Pre-Installation		
	1. Costpoint 7.1.1 must be installed and operational.	
	2. All Costpoint 7.1.1 Hot Fixes must be installed.	
	3. Check Time And Expense 9.0.1 Transaction Database Pre-Upgrade Status.	
	4. Back up Time And Expense 9.0.1 Schemas.	
Database Tier Installation		
	1. Upgrade Time And Expense 9.0.1 Database using Time And Expense 10.0.0 Database Tier Installer.	
	2. Enable JDBC Distributed Transactions.	
Application Tier Installation		
	1. Install Time And Expense 10.0.0 Application Tier Software.	
	2. Configure Time And Expense 10.0.0 Access.	
	3. Reinstall Time And Expense 10.0.0 Windows Service.	
	4. Reconfigure Time And Expense 10.0.0 Windows Service.	
Web Tier Installation (Microsoft IIS)		
	1. Install Time And Expense 10.0.0 Web Tier Software.	

Done?	Step	Notes
Using Time And Expense 10.0.0		
	1. Set Web Browser Internet Options.	
	2. Log in to Time And Expense 10.0.0.	
Collation Conversion		
	1. Convert Time And Expense 10.0.0 database(s)/schema(s) to Latin1_General_BIN collation.	
Post-Installation		
	1. Install latest Time And Expense 10.0.0 hot fixes.	

Related Documentation

The following table lists the additional documentation that downloads along with this release. Except where noted, all the user guides and quick reference guides listed in this table are also available for download from the Deltek Customer Care Connect site.

You will need Adobe Reader 8.0 or later to view the documents listed in this section.

Release Notes

Document Name	Description
Deltek Time And Expense 10.0 Database Changes	This document describes the database changes between the release of Time And Expense 9.0.1 and Time And Expense 10.0.0.
Deltek Time And Expense 10.0 Release Notes	**Major New Features** — Click this bookmark to view the major new features included in Time And Expense 10.0.0.

Enhancements — Click this bookmark to view the enhancements included in Time And Expense 10.0.0.

Known Issues — Click this bookmark to view the known issues that are part of the current release of Time And Expense 10.0.0. |

Entity Relationship Diagrams (ERDs)

Document Name	Description
DeltekTimeAndExpense1000TransactionSchemaERD.zip	This ZIP file contains the ERD for the Deltek Time And Expense 10.0.0 Transaction schema. Use **index.htm** to view the ERD.

Other Documents

Document Name	Description
Deltek Costpoint Interface Getting Started Guide	This document describes instructions for accessing Time And Expense's applications as well as descriptions of menus, toolbars, and other global features. You will also find information on logging on to Time And Expense, accessing the database, printing reports, reviewing online help, and contacting Deltek Customer Care and other client services.
Deltek Time And Expense 10.0.0 Menu Mapping 10.0.0 to 9.0.1	This document describes how the menu selections inside Time And Expense 10.0.0 map back to Time And Expense 9.0.1.
Deltek Time And Expense 10.0.0 Menu Mapping 9.0.1 to 10.0.0	This document describes how the menu selections inside Time And Expense 9.0.1 map to Time And Expense 10.0.0.
Deltek Costpoint Interface User Interface QRC	This document is a quick reference card which can be kept handy and used for reference as you navigate Time And Expense 10.0.0. It describes how to navigate through the application.
Deltek Costpoint Interface Shortcut Keys Toolbar Icons And Buttons QRC	This document is a quick reference card which can be kept handy and used for reference as you work in Time And Expense 10.0.0. It lists the shortcut keys available in Time And Expense, as well as the toolbar icons and buttons.
Deltek Costpoint Interface Views QRC	This document is a quick reference card which can be kept handy and used for reference as you work with the Time And Expense 10.0.0. It explains the differences between Table View and Form View.

Document Name	Description
Deltek Costpoint Interface Query and Lookup QRC	This document is a quick reference card which can be kept handy and used for reference as you work with the Time And Expense 10.0.0. It explains how to use the query and lookup functions in Time And Expense.
Deltek Costpoint Interface Setting Up Printers QRC	This document is a quick reference card which can be kept handy and used for reference as you work with the Time And Expense 10.0.0. It explains how to set up printers.

Upgrade Installation Overview

This document provides instructions for installing the Deltek Time And Expense 10.0.0 software. During the installation process, you will perform the following:

- Ensure that your system meets the installation prerequisites.

> Please refer to the Installation Prerequisites and System Requirements sections for additional information. Also please review the full list of Related Documentation prior to installing or upgrading to Time And Expense 10.0.0.

- Execute the Time And Expense 10.0.0 Database Tier installer to upgrade your Time And Expense 9.0.1 database.

- Install the Time And Expense 10.0.0 Application Tier software.

- Configure Time And Expense 10.0.0 access.

- Install the Time And Expense 10.0.0 Web Tier software to your Internet Information Server, if applicable.

> If you need help with this installation, please contact Time And Expense Technical Support at 877.HLP.PROJ (877-457-7765).

Installation Package Contents

The Time And Expense 10.0.0 installation package contains the following:

- Time And Expense 10.0.0 Database Tier installer

- Time And Expense 10.0.0 Application Tier installer

- Time And Expense 10.0.0 Web Tier installer

- Deltek Time And Expense 10.0.0 Upgrade Installation Guide for Microsoft SQL Server

Installation Prerequisites

The following prerequisites must be met before upgrading to Time And Expense 10.0.0:

- Your Time And Expense databases must be at version 9.0.1 (GA).

- DeltekTimeandExpense901HotFixBundle008.exe must be installed.

- Hot fixes up to and including TE901B8HF65.zip (Patch 276) must be installed.

> You can use the following query on you Time And Expense 9.0.1 database to see which database patches have been applied, **SELECT * FROM TC_000X.TC_TABLE_VERS**.

- You must have Administrative access to your Time and Expense 9.0.1 Transaction database.

Database Tier Installation Prerequisites

Before you start the Database Tier installation process, your database server must meet the following software prerequisites:

Prerequisite Component	Details
Software	All product compatibility information is maintained in the Deltek Product Support Compatibility Matrix available on the Customer Care Support Site here. Please note the database compatibility levels: SQL Server 2016 (130), SQL Server 2014 (120), and SQL Server 2012 (110).
Passwords	To run the installation, a password is required for Microsoft SQL Server SA user or any user with "sysadmin" privileges.
Firewall Settings	On your Database Server, the Microsoft SQL Server Instance Port (that is, **1433)** must be open for Inbound and Outbound traffic through your firewall. For a Named Microsoft SQL Server Instance, the following must be met: ▪ A dedicated port should be configured for the instance and such a port should be open for Inbound and Outbound traffic. ▪ SQL Browser Service must be enabled and running. ▪ SQL Browser UDP Port (that is, **1434**) should be open for Inbound and Outbound traffic. On your Database Server, make sure that **Network discovery** and **file sharing** options are switched on.
SQL Server	The Time And Expense 10.0.0 database user needs the following permissions granted: ▪ Create Function ▪ Create Procedure ▪ Create Table ▪ Create View

Close all software applications running on the desktop.

To avoid memory contention, check the memory allocated for SQL Server and make sure the server can allocate at least a minimum of 3 GB.

Application Tier Installation Prerequisites

Before you start the Application Tier installation process, the application server that will run your Time And Expense 10.0.0 software must meet the following prerequisites:

Prerequisite Component	Details
Software	All product compatibility information is maintained in the Deltek Product Support Compatibility Matrix available on the Customer Care Support Site here.

Prerequisite Component	Details
	Costpoint 7.1.1 must be installed and operational. All Costpoint 7.1.1 Hot Fixes must be applied.

Time And Expense 10.0.0 Server Startup Prerequisites

Before you start Time And Expense 10.0.0, the following must be met:

Prerequisite Component	Details
Server	Database firewall requirements should be configured. On your Application Server, the WebLogic Listener Port **7009** must be open for Inbound and Outbound traffic through your firewall. On your Application Server, make sure that the **Network Discovery and File Sharing** options are switched on.

Time And Expense 10.0.0 Initial Log In Configuration Prerequisites

Before you can login to Time And Expense 10.0.0 your Windows client computer must meet the following requirements:

Prerequisite Component	Details
Software	All product compatibility information is maintained in the Deltek Product Support Compatibility Matrix available on the Customer Care Support Site here. Adobe Reader 8.0 or later. This is only required for users who want to print Time And Expense 10.0.0 reports in PDF format. Make sure that you select the **Display PDF in browser** option under the Preference settings for Adobe Acrobat Reader to avoid pulling up a blank IE screen when printing in PDF format.

Web Tier Installation/Microsoft Internet Information Server (IIS) Configuration Prerequisites

The Web server that will host your Internet Information Server software must meet the following prerequisites:

Prerequisite Component	Details
Software	All product compatibility information is maintained in the Deltek Product Support Compatibility Matrix available on the Customer Care Support Site here. Microsoft Internet Information Server 7.0

Installation Process for Time And Expense 10.0.0

The Time And Expense 10.0.0 installation process incorporates the following steps:

Component	Change Details
Database Tier Installation	The Database Tier installer automatically upgrades the following schemas: • Transaction Schema (that is, TC_0001) The Database Tier installer automatically performs all the following actions: • Restarting the Distributed Transaction Coordinator(MSDTC) Service (if applicable) • Upgrading Time And Expense 9.0.1 Database • Upgrading Time And Expense SYSTEM Database (if applicable) • Provides the option to migrate your Time And Expense 9.0.1 Security settings to Time And Expense 10.0.0
Application Tier Installation	The Application Tier installer automatically performs all the following actions: • Applying Cleanup_CP_Apps Scripts (if applicable) • Applying Menu_data Scripts • Applying TC.const Scripts • Applying TC.msg Scripts • Applying TEESS_Modules Scripts • Applying TM.msg Scripts • Applying UDT_Templates_Data Scripts • Applying UDT_TERMS Scripts • Applying TE Metadata Scripts
Web Tier Installation	The Web Tier installer automatically performs all of following actions: • Extracting HelpFiles • Resetting Internet Information Server

Web Servers Supported In Time And Expense 10.0.0

The Time And Expense 10.0.0 system supports the following Web servers only:

- Microsoft Internet Information Server
- Oracle's WebLogic Web server

Naming Conventions

The naming conventions specified in this section are used in all installation instructions detailed in this upgrade installation guide.

Drive Letters

The table below lists the drive letters used in the installation instructions.

Drive	Description
C:	The drive where the Time And Expense 10.0.0 software is installed.

Directory Names

The table below lists the directory names used in the installation instructions.

Directory Name	Description
ORACLE/MIDDLEWARE12.1.3	The name of the directory where the Oracle WebLogic software is installed.
DELTEK	The name of the directory where the Costpoint 7.1.1 and Time And Expense 10.0.0 software is installed.

Database Names

The table below lists the database names used in the installation instructions. Clients are free to choose the database name.

Database Name	Description
DELTEKTE	The name of your Time And Expense 10.0.0 database. This database includes the Transaction schema and objects.

Internet Information

Software installations, installation instructions, technical guides, and release notes are available for download from the Deltek Software Manager (DSM). All future releases of Time And Expense 10.0.0 are also downloaded from DSM.

DSM is the sole download source for hotfix files. Deltek Knowledge Base articles provide an explanation of the fixes and contain links to DSM for retrieval of the actual files.

Deltek Software Manager Requirements

You can run DSM from any desktop. It does not need run from Deltek application servers.

In order to run DSM, you must meet the following requirements:

- Windows XP or later
- Microsoft .NET Framework 3.5 SP1 (3.5.1)

The following Deltek Knowledge Base article contains a download link to the framework. It also has examples of what you may see if you do not have the framework installed: https://deltek.custhelp.com/app/answers/detail/a_id/52469

> Refer to the DeltekSoftwareManager.pdf to learn more about DSM and how it works.

DSM Documentation and Troubleshooting

- To view the online help for Deltek Software Manager, click here.

- To view a tutorial on how to use Deltek Software Manager, click here.

- To view more information on troubleshooting Deltek Software Manager, click here.

> The above troubleshooting link will only work if you are logged into Deltek Customer Care Connect.

Knowledge Base Documentation

To view Knowledge Base articles, complete the following steps:

1. Go to http://www.deltek.com and click **Support Login**.

2. Enter your logon credentials in the following fields and click **Log In**:

Field Name	Description
Username	Your Support user name
Password	Your Support user password

If you have forgotten your username or password, click **Account Assistance**.

- If you have forgotten your username, enter your email address and click **Email My Username**.

- If you have forgotten your password, enter your username and click **Reset My Password**.

3. On the Deltek Support Home Screen, click the Knowledge Center tab, and complete the following fields:

Field Name	Description
Refine by Product	Select **Time And Expense** from the drop-down list.
Refine by Category/Version	Expand Service Pack / Hot Fix from the drop-down list and select **10.0.0**.
Search Type	Use the default value, Phrases, or select your preferred search type from the drop-down list.

Field Name	Description
Search by Keyword	Enter the specific text you are looking for or leave blank to return all records for this version.

4. Click **Search**.

5. On the search results screen, perform the following actions:

    a. In the **Summary** column, click the link for the desired correction.

    b. When the desired correction loads, click the links in the **Answers** section to download the files.

System Requirements

The Time And Expense 10.0.0 system uses the following components:

- **Database Tier** – SQL Server

- **Application Tier** – With integrated WebLogic Server

- **Browser Client** – Internet Explorer, Chrome, Firefox, Safari

- **Web Tier** – Microsoft Internet Information Server (optional)

- All product compatibility information is maintained in the Deltek Product Support Compatibility Matrix available on the Customer Care Support site here.

> For the Time And Expense system to function properly, the system clocks on your WebLogic application server and the database server that hosts your Time And Expense databases must be synchronized with each other. Failure to synchronize your system clocks may result in login and other system problems.

> A hardware recommendations document should have previously been distributed to you. For future releases of Time And Expense, hardware recommendations will be supplied via a Customer Care Knowledge Base article.

For the most current hardware and software requirements, please refer to the Knowledge Base article containing the Compatibility Matrix:

https://deltek.custhelp.com/app/answers/detail/a_id/38499

https://deltek.custhelp.com/ci/fattach/get/1072689/0/filename/DeltekProductSupportCompatibility Matrix.pdf

Time And Expense 10.0.0 Log File Information

The table below provides information on the log files used by the Time And Expense 10.0.0 system. All of these log files are located on the Application Server under the C:\Deltek\Costpoint\71\logs folder.

File Name	Description
DEServer.log	This log file is maintained by the WebLogic server instance. In a clustered environment, each server will write to a separate file and the file name matches the server name. The log records server-specific events such as the startup and shutdown of servers, the deployment of new applications, or the failure of one or more subsystems. The messages include information about the time and date of the event as well as the ID of the user who initiated the event.
CP_DBConn_DEServer.log	This file lists the activate connections used by the product at given time. To enable this logging, set <SYSTEMNAME>.logDBConnectionProfile = true in enterprise properties. In a clustered environment, each server will write to a separate log file and the name of the server will determine the name of the log file. CP_DBConn_<Server>.log
CP_DEServer.log	This log file contains application-specific information such as performance, security, and errors encountered while running a Costpoint application. Each server will write to a separate log file and the name of the server will determine the name of the log file. CP_<Server>.log.
CP_Security_DEServer.log	This file captures messages generated by the Costpoint Web security module. Messages such as invalid login attempt due to user id, password, insufficient parameters, and deactivated user account are captured here. In a clustered environment each server will write to a separate log file and name the server will determine the name of the log file. CP_Security_<Server>.log.
delteke.log	This log file contains information that pertains to the entire domain. It consolidates log records from all application logs and a subset of events recorded in all server logs. All the information gathered is written into a single file. Note: Not all log messages are written into domain. Only those messages that match the defined severity are consolidated.

File Name	Description
service.log	This log file contains messages generated by the Costpoint Web windows service. It helps in troubleshooting issues related to service startup, which usually occur during the initial configuration stages. In addition to service-related messages, it also contains most of the information that is captured in the DEServer.log. So, once the initial startup issues are sorted out, it is suggested to disable this log by editing the **InstallCPWebasService.cmd** (C:\Deltek\Costpoint\71\bin folder), removing the occurrence of "**-log:%CP_ROOT%\logs\service.log**". If you remove this after installing the service, you will need to uninstall and reinstall the service for the changes to take effect.

Pre-Installation Instructions

This section provides instructions to prepare your Time And Expense 9.0.1 system for upgrade to Time And Expense 10.0.0.

> Please ensure that you perform the steps in this section before performing any test upgrade and again before you upgrade your production environment. Changes made to your production environment after you have upgraded your test copy could provide different results for the pre-validation section.

During the pre-installation steps, you will perform the following actions:

- Install and configure Costpoint 7.1.1.

- Apply latest Costpoint 7.1.1 hot fixes.

- Create a backup of your Time and Expense 9.0.1 database(s).

- Shut down the Time and Expense 9.0.1 application service before starting database upgrade and close any outstanding database connections to the database.

> As part of upgrading Time and Expense, Deltek strongly recommends performing an update to the database collation for Time and Expense to binary collation. The Collation Conversion Tool will set the collation of your Microsoft SQL Server Time and Expense database(s) to "Latin1_General_BIN". This setting is binary case sensitive, and may have an impact on customer specific programs, reports, data imports, and other applications which interact with Time and Expense and/or the underlying Time and Expense database. These applications and programs may need to be modified and need to be re-tested as part of your Time and Expense 10.0.0 upgrade. **The conversion process is a separate process after completion of Time and Expense upgrade and it is required that all domains are upgraded before converting the database to binary collation.**
>
> For example:
>
> - If custom scripts or stored procedures exist where the table and field names are in lower or mixed case, the scripts and stored procedures will need to be modified so that they match the object case sensitivity, which is always upper case for Time and Expense tables.
>
> - If end user queries refer to account names in lower case, and the account names are actually in mixed case or uppercase, the queries will need to be adjusted so that they use the same case as the account names.
>
> - If reports or data import programs interact with Costpoint, they may need to be adjusted and re-tested as well.

MS SQL Server Clients upgrading from Time And Expense 9.0.1 with US-English Collation should run the collation analysis option as part of the pre-validation steps. Please read the Collation Conversion section for instructions on running the utility.

Install and Configure Costpoint 7.1.1

Time And Expense 10.0.0 runs on the Costpoint 7.1.1 framework. So before you can install Time And Expense 10.0.0, you must install Costpoint 7.1.1.

If you do not already have a functioning Costpoint 7.1.1 environment, follow the appropriate installation document to install Costpoint 7.1.1:

- DeltekCostpoint711NewInstallationForMicrosoftSQLServer.pdf
- DeltekCostpoint711UpgradeInstallationForMicrosoftSQLServer.pdf

Once you have a functioning Costpoint 7.1.1 environment, accomplish the next step below, *Apply Latest Costpoint 7.1.1 Hot Fixes*.

Apply Latest Costpoint 7.1.1 Hot Fixes

Time And Expense 10.0.0 requires all Costpoint 7.1.1 hot fixes to be applied prior to installing Time And Expense 10.0.0.

Once you have a functioning Costpoint 7.1.1 environment, follow the appropriate installation document to install the latest Costpoint 7.1.1 framework update and all downloaded hot fixes:

- DeltekCostpoint711FrameworkUpdateInstallation.pdf
- DeltekCostpoint711DeployingHotFixes.pdf

> Costpoint 7.1.1 Framework Update MUST be installed BEFORE installing Costpoint 7.1.1 Hot Fixes. Costpoint 7.1.1 Hot Fixes MUST be installed BEFORE installing Time And Expense 10.0.0.

Once you have the latest Costpoint 7.1.1 framework update installer loaded and have applied all Costpoint 7.1.1 hot fixes, return to the next step below, *Notify All Time and Expense Users*.

Notify All Time and Expense 9.0.1 Users

It is important that you coordinate the timing for the upgrade with all Time and Expense 9.0.1 users. Users must not access the Time And Expense 9.0.1 database during the upgrade.

Back Up Time and Expense 9.0.1 - Back Up Time and Expense 9.0.1 Schemas

Deltek strongly recommends you take a backup of your existing Time and Expense 9.0.1 database before you upgrade to Time And Expense 10.0.0.

Customers may use their own preferred way to create a backup of the Time and Expense 9.0.1 database.

> Deltek strongly recommends that you regularly test and verify your database backups.

Database Tier Installation

This section provides instructions and recommendations for upgrading your Time And Expense 9.0.1 database to Time And Expense 10.0.0.

During this installation process, you will install the Time And Expense 10.0.0 Database Tier software to upgrade your Time And Expense 9.0.1 database schema(s) to Time And Expense 10.0.0. The Time And Expense 10.0.0 database will be referred to as a Transaction database schema where transactional data will be stored.

> The Time And Expense Database Tier installer creates a SQL Server database user and corresponding schema with the same name.

Before You Start

Make sure that you meet all Database Tier Installation Prerequisites.

Install Database Tier Software

The steps to install the Time And Expense 10.0.0 Database Tier software as well as create the Transaction database are detailed in this section.

You must perform this step on your database server.

> For SQL Server cluster installations, the install directory must be a local drive as opposed to a shared drive.

You must have Internet access on the machine where the Time And Expense 10.0.0 installer is invoked in order to automatically download the latest DeltekTimeAndExpense1000DatabaseUpgradeFiles.exe and Deltek TimeAndExpense1000RequirementsINI.exe files automatically. The DeltekTimeAndExpense1000DatabaseUpgradeFiles.exe contains the latest database patch rollback scripts as well as the latest list of Time And Expense 9.0.1 database patches that have been worked into the upgrade. The TimeAndExpense1000RequirementsINI.exe contains the latest OS platforms and database versions supported. These files are automatically downloaded when you launch the Database Tier installation, assuming that your database server has Internet access.

> The Deltek product installers contain functionality which enables them to dynamically download configuration files and patch rollback scripts when the product installers are executed from the Deltek Software Manager server. To improve security, these connections have been modified to require communication over HTTPS.

If your database server does not have Internet access, you will need to perform the steps in the Latest Upgrade Files Download section of this document before you run the DeltekTimeAndExpense1000DatabaseTier.exe file.

To install the Database Tier software, complete the following steps:

1. Run the **DeltekTimeAndExpense1000DatabaseTier.exe** file to launch the Time And Expense 10.0.0 Database Tier installation program. The Welcome to the Time And Expense 10 Installer screen displays.

> Due to enhanced security in Microsoft Windows Server 2012, it is advised that you use the **Run as Administrator** option when launching installation files, even if you are logged in as a user with local administrative rights. To **Run as Administrator**, right-click the installer file in Windows Explorer and select **Run as Administrator**.

2. Click **Next >**.

3. On the License Agreement screen, review the license agreement, select the **I accept the terms of the license agreement** check box, and click **Next >**.

4. On the Choose Time And Expense Database Scripts Directory screen, click **Browse** to navigate to an installation location for the Time And Expense 10.0.0 Database Tier software. The default installation location is **C:\Program Files\Deltek\Time And Expense\10.0.0** (recommended). Click **Next >**.

5. On the Select Deltek Time And Expense Install Type screen, select **Upgrade from TE 9.0.1** and click **Next >**.

6. On the Select Database Platform screen, select **Microsoft SQL Server** and click **Next >**.

7. On the Deltek Time And Expense 10.0.0 Transaction SQL Server Database Information screen, complete the following:

> For the Time and Expense upgrade, the installer requires system administration information of the Time and Expense 9.0.1 admin schema (TC_0000) in order to list all Time And Expense 9.0.1 Company Domains that are candidates for upgrade. This initial screen will be presented for the user to enter system information about the admin schema (TC_0000).

Field Name	Action
IP Address or Hostname	Enter the IP address (for example, **10.2.2.154**) or hostname (for example, **dbsvr01**) of your Time And Expense 9.0.1 database server. The default value is your computer name. The values for the IP Address or Hostname cannot be **127.0.1.0.1** or **localhost**. For SQL Cluster installations, you must specify the SQL Cluster IP Address or SQL Cluster Hostname.
Port	Enter the SQL Server TCP port of the database server instance. The default port for SQL Server is **1433**. Currently, this installer will allow database installations to connect to a SQL Server DEFAULT instance over port 1433 only. Use of non-default ports will be addressed in a future release.
Database Name	Enter the name of your Time And Expense 9.0.1 database. The default value is **DELTEKTE**. In addition to standard alphanumeric characters, the following special characters are also supported: **# $ - _ .**
Instance Name	Enter the name of your database instance. The default value is **LOCAL**. In addition to standard alphanumeric characters, the following special characters are also supported:

Field Name	Action
	$ - _
SA User Name	Enter the name of your Microsoft SQL Server SA user. The default is **sa**. If a user with "sysadmin" privileges is available, that user can alternatively be used. In addition to standard alphanumeric characters, the following special characters are also supported: **$ - _**
SA User Password	Enter the password for your Microsoft SQL Server SA or "sysadmin" user account. In addition to standard alphanumeric characters, the following special characters are also supported: **' ~ # $ ^ & ( ) - _ + = , .**

8. Click **Test Connection**. If you entered the proper database connection information, a message similar to the following displays:

   ▪ "**Connection Successful. Click Next.**"

   If the message above does not display, correct the connection information and click **Test Connection** again.

9. After the "**Connection Successful. Click Next.**" message displays, click **Next >**.

10. On the Select Time And Expense System screen, select the Time And Expense 9.0.1 Company Domain that you want to upgrade to Time And Expense 10.0.0 and click **Next >**.

   > The Select Time And Expense System screen is presented with all Time And Expense 9.0.1 Company Domains that are yet to be upgraded to Time And Expense 10.0.0.
   >
   > **Please note, only current Time And Expense 9.0.1 domains are listed on this screen selection and only one domain can be upgraded at a given time. You will have to run this installer again for each Company Domain that you want to upgrade to Time And Expense 10.0.0.**

11. On the Deltek Time And Expense 10.0.0 Transaction SQL Server Database Information screen, complete the following:

Field Name	Action
User Name	The Time And Expense 9.0.1 Master Domain user name, that is, **TC_0000**, will display.
Password	Enter the password for your Time And Expense 9.0.1 Master Domain (TC_0000). In addition to standard alphanumeric characters, the following special characters are also supported: **' ~ # $ ^ & ( ) - _ + = , .**
User Name	Your selected Time And Expense 9.0.1 Company Domain user name, that is, **TC_0001**, will display.

| Field Name	Action
Password	Enter the password for your selected Time And Expense 9.0.1 Company Domain. In addition to standard alphanumeric characters, the following special characters are also supported: **' ~ # $ ^ & ( ) - _ + = , .**

12. Click **Test Connection**. If you entered the proper database connection information, a message similar to the following displays:

   ▪ "**TC_0001 schema will be upgraded. Click Next.**"

   If the message above does not display, correct the connection information and click **Test Connection** again.

13. After the "**TC_0001 schema will be upgraded. Click Next.**" message displays, click **Next >**.

14. The following message displays:
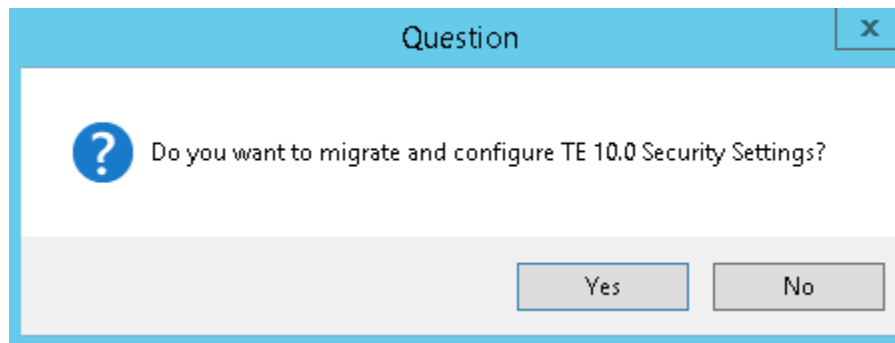
The Deltek Time And Expense 10.0.0 Database Tier installer has been enhanced to enable the ability to convert various settings when upgrading from Time & Expense 9.0.1. If you select Yes, you will be prompted if you would like to convert security settings after selecting the domain to be upgraded to Deltek Time And Expense 10.0.0.

> ⚠ Please note that you should only choose to do this against your primary TE 9.0.1 domain, unless, you choose a unique ADMIN schema for the additional domains.

When choosing to migrate security settings, the following items will be migrated over to your TE 10.0 configuration:

- **LDAP IP**. For clients who use LDAP as an authentication method, the employee LDAP ID will be converted to the Costpoint security model during this process.

- **Security Groups**. TE 9.0.1 security groups will be modified and converted to security groups in the Costpoint security model during this process.

- **UDT Labels**. TE 9.0.1 UDT Labels will be converted to the Time And Expense 10.0.0 configuration for all configured languages.

> 📋 Please review the Deltek Time And Expense 10.0.0 *Post Configuration Guide* for additional information regarding this conversion process.

15. If you do not wish to migrate and configure Deltek Time And Expense 10.0.0 security settings, select **No** and proceed to item# 19.

16. On the Deltek Time And Expense 10.0.0 Admin SQL Server Database Information screen, complete the following fields about your Costpoint 7.1.1 Admin schema.

Field Name	Action
IP Address or Hostname	Enter the IP address (for example, **10.2.2.154**) or hostname (for example, **dbsvr01**) of your Costpoint 7.1.1 Admin (CPADMIN) database server. The default value is your computer name. The value entered in the **IP Address** or **Hostname** field cannot be **127.0.1.0.1** or **localhost**. For RAC installations, you must specify the IP Address or Hostname of one of the instances. Do not use the Virtual IP Address.
Port	Enter the SQL Server TCP port the Costpoint database server. The default port for SQL Server is **1433**. Currently, this installer will allow database installations to connect to a SQL Server DEFAULT instance over port 1433 only. Use of non-default ports will be addressed in a future release.
Database Name	Enter the name of your Costpoint database. The default value is **CPADMIN**. Deltek recommends using the same database you used for your transaction database (i.e., **DELTEKCP**). Optionally, clients may use a new database name (i.e., **CPADMIN**).
Instance Name	Enter the name of your Costpoint database instance. The default value is **LOCAL**.
User Name	Enter the name of your Admin user account. The default is **CPADMIN**. The Costpoint Installer creates a SQL Server schema with the same name as the user name
Password	Enter the password for your Admin user account.
SA User Name	Enter the name of your Microsoft SQL Server SA user. The default is **sa**. If a user with "sysadmin" privileges is available, that user can alternatively be used.
SA User Password	Enter the password for your Microsoft SQL Server SA user.

17. Click **Test Connection**.

If you have entered the proper database connection information, a message similar to the following is displayed:

"Connection successful. Click Next."

If the message does not display, correct the connection information, and click **Test Connection** again.

18. After receiving the message, click **Next >**.

19. If the Pre-Upgrade Validation Information screen displays, you will NOT be able to continue with the upgrade until the validations have been cleared. You will need to note the validation issues, Cancel out of this installation, correct the issues, and restart the Database Tier Install.

   Here are the two types of validations you may see:

   ▪ **PATCHxxx is missing** – Apply the Time And Expense 9.0.1 hot fix that contains this patch. For Patch274 and 276, this would be HotFix Bundle 8.

   ▪ **Un-identified Patch PATCHxxx** – Contact Deltek Customer Care. This database patch has not yet been worked into the upgrade to Time And Expense 10.0.0.

20. On the Pre-Installation Summary screen, review the installation parameters you selected:

   ▪ If you want to change any settings, click **< Back** to go back and make the necessary changes.

   ▪ If you are satisfied with these settings, click **Install >** to begin the installation.

   Once initiated, the upgrade process to Time And Expense 10.0.0 will commence. Please do not interrupt the process. A Windows Command Prompt will appear on your screen that displays the scripts that are being executed.

   The installation will perform the scenarios detailed in the Installation Process for Time And Expense 10.0.0 section of this document. The installation process will stop if any errors are encountered. If any errors occur during the installation, please refer to the Troubleshooting Instructions section of this document.

21. On the InstallShield Wizard Complete screen, select the **Yes, I want to view the log file** check box to open the DeltekTimeAndExpense1000DatabaseTierInstallLog_<date>_<time>.txt file from the C:\Program Files\Deltek\Time And Expense\10.0.0\Logs directory. This check box is selected by default.

22. Click **Finish** to exit the installation.

23. When the DeltekTimeAndExpense1000DatabaseTierInstallLog_<date>_<time>.txt file opens, search for the following keywords:

   ▪ **"Error"** – Report any search results to Deltek Time And Expense Technical Support. You can ignore ""**DBCC execution completed. If DBCC printed error messages, contact your system administrator.**"

   ▪ "**Database Upgrade To Time And Expense 10.0.0 Completed Successfully**" and then the line "**$DBSUCCESS=TRUE**".

   Finding the last item listed above indicates that you have successfully upgraded your select Time And Expense 9.0.1 domain to Time And Expense 10.0.0.

   Make sure that your SQL Server Port, **1433**, is open for Inbound and Outbound traffic through your firewall. Also, make sure that Network Discovery and File Sharing options are switched on.

You MUST repeat this exact same process (all 18 items of this **Install Database Tier Software** step) for each of your Time And Expense 9.0.1 remaining domains. That means re-running the **DeltekTimeAndExpense1000DatabaseTier.exe** installer against each schema.

If your environment currently has three domains, you are required to run the installer three times to convert each of the domains separately. During each subsequent run, on the **Select Time And Expense System** screen, you will be presented only with the domains that are not yet upgraded.

Please note it is important to upgrade all your domains within a single database before running the SQL Server Collation tool for conversion of database to binary collation. If your business requirement requires that you upgrade only certain domain(s), please don't attempt to convert the database collation to binary until all domains are upgraded. **Failure to follow this instruction will prevent upgrade process to fail for any domains that are not upgraded**.

Enabling JDBC Distributed Transactions

Please follow the configuration and setup instructions based on your implementation:

- If the installer is executed on the database server, all required steps to enable distributed transactions were performed during Time And Expense Database Tier installation. This is the most common and simple implementation for most clients and can proceed to application tier installation.

- If the installer is executed from an alternative database server or from a client connectivity tools desktop with the actual databases residing remotely on a database server, please follow the steps documented under "Enable JDBC Distributed Transactions and XA for an Instance Using Time And Expense Installer".

- If Time And Expense is set up using SQL Cluster configuration, please follow the steps documented under "Enable JDBC Distributed Transaction and XA for SQL Cluster Configuration".

Enable JDBC Distributed Transactions and XA for an Instance Using Time And Expense Installer

1. Create a backup of your Microsoft SQL Server master database.

2. Copy the **DeltekTimeAndExpense1000DatabaseTier.exe** installation file to this database server where Time And Expense database is created.

3. Run the **DeltekTimeAndExpense1000DatabaseTier.exe /enableXA** command to launch the Time And Expense Database Tier enable XA program.

4. On the Microsoft SQL Server for Deltek Time And Expense 10.0.0 Database Information screen, complete the following fields:

Field Name	Action
IP Address or Hostname	Enter the IP address (for example, **10.2.2.154**) or hostname (for example, **dbsvr01**) of your Time And Expense 10.0.0 database server. The default value is your computer name. The value entered in the **IP Address** or **Hostname** field cannot be **127.0.1.0.1** or **localhost**. For SQL Cluster installations, you must specify the SQL Cluster Hostname.
Port	Enter the port that your Time And Expense 10.0.0 database server software uses to listen for requests. The default port for Microsoft SQL Server is **1433**.
Database Name	Accept the default of **master**.
Instance Name	Enter the name of your Time And Expense 10.0.0 database instance used during new install setup. The default value is **LOCAL**. In addition to standard alphanumeric characters, the following special characters are also supported: **$ - _**

Field Name	Action
SA User	Enter the name of your Microsoft SQL Server SA user. The default is **sa**. In addition to standard alphanumeric characters, the following special characters are also supported: **$ - _** Note: If a user with "sysadmin" privileges is available, that user can alternatively be used.
SA Password	Enter the password for your Microsoft SQL Server SA user. In addition to standard alphanumeric characters, the following special characters are also supported: **' ~ # $ ^ & ( ) - _ + = , .**

5. Click **Test Connection**. If you entered the proper database connection information, the following message displays: "**Connection Successful. Click Next.**"

   If this message does not display, correct the information entered and click **Test Connection** again.

6. After the confirmation message displays, click **Next >** to begin the installation process.

   The Restarting the Distributed Transaction Coordinator (MSDTC) Service window will display as part of the installation process.

   If any errors occur during this step, please call Deltek Technical Support.

7. Click **OK** when the following message displays: "**Successfully configured XA transactions.**"
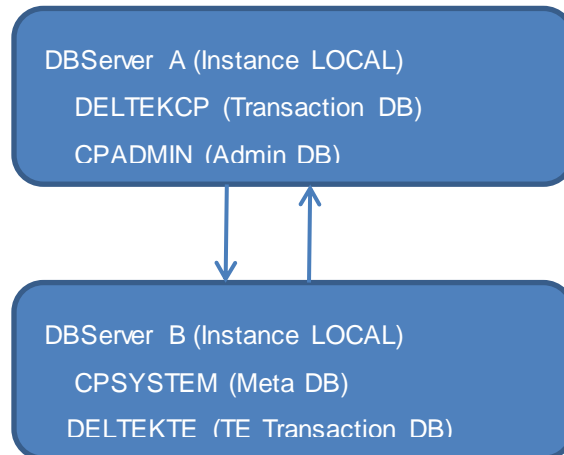
> If your Time and Expense 10.0.0 transaction databases reside on different servers, you must perform all of the actions in this step against each of the other servers.

Enable JDBC Distributed Transaction and XA for Remote Database Servers

If your Costpoint 7.1.1 and Time And Expense 10.0.0 databases reside on different database servers, you must perform this step in each of the servers.

An example for this configuration is shown below:

DBServer A (Instance LOCAL)

   DELTEKCP (Transaction DB)

   CPADMIN (Admin DB)

DBServer B (Instance LOCAL)

   CPSYSTEM (Meta DB)

   DELTEKTE (TE Transaction DB)

Based on the configuration above, all steps documented to enable distributed transaction should be done on both Server A and Server B.

To enable distributed transaction and XA for remote database servers, complete the following steps:

1. Perform this step for the database instance using the instructions on "Enable JDBC Distributed Transactions and XA for an Instance Using Time And Expense Installer".

2. The sequence of steps to open "Component Services" on your server might be different based on your version of Windows OS version.

3. On the left navigation tree, click **Component Services » Computers » My Computer » Distributed Transaction Coordinator**.

4. Select **Local DTC**, right-click, and select **Properties**.

5. On **Local DTC Properties**, select the Security tab.

   a. Select the **Network DTC Access** check box under **Security Settings**.

   b. Select the **Allow Remote Clients** check box under **Client and Administration**.

   c. Select the **Allow Inbound** and **Allow Outbound** check boxes under **Transaction Manager Communication**.

   d. Select the **No Authentication Required** option.

   e. Select the **XA Transactions** check box.

6. Click **Apply**. The following message displays: "The MSDTC Service will be stopped and restarted. All dependent services will be stopped. Applications using MSDTC may need to be restarted to use the new settings". Click **Yes** to proceed.

7. Click **Yes**. A message "The MSDTC service has been restarted" should display.

8. Click **OK**.

After completing the steps above, your screen selections should look similar to the figure shown below:
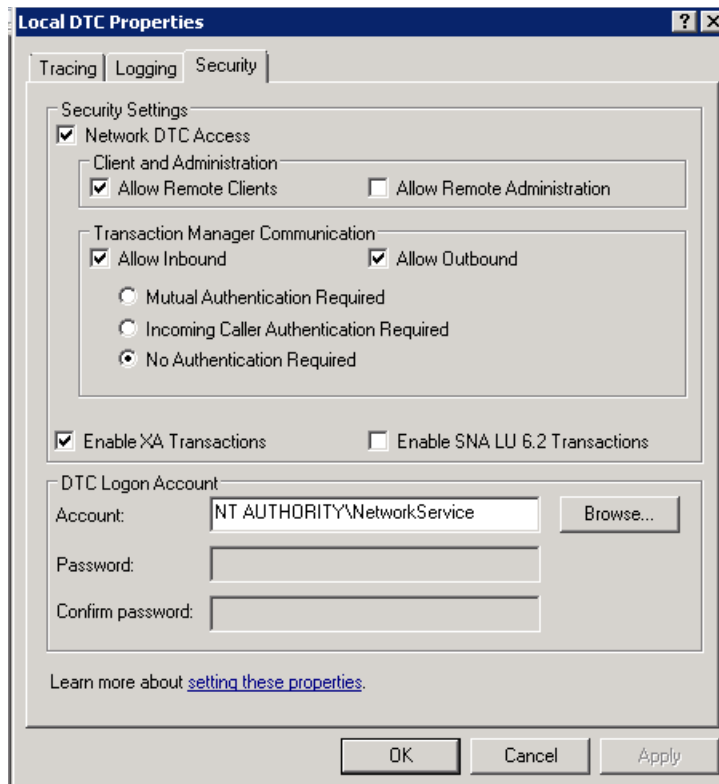
> For DTC to function correctly, each of the hosts participating should be resolvable by NetBIOS name and each remote host should be reachable by name. This function will not work if the host server is configured only by IP address (as in many VM test deployments). In such cases, either have your host added to the IP/hostname mappings in your "c:\Windows\System32\drivers\etc\hosts" file or if in a domain, add DNS aliases.

9. If you database server is configured for Windows Firewall, for DTC to function follow the necessary firewall settings for MSDTC program.

    a. To open Windows Firewall, click **Start » Control Panel**. In the search box, enter **firewall**, and click **Windows Firewall**.

    b. In the left pane, click **Allow a program or feature through Windows Firewall**.

    c. Click **Change settings**. If you're prompted for an administrator password or confirmation, enter the password or provide confirmation.

    d. Select the **Private** and **Public** check boxes next to **Distributed Transaction Coordinator**, and click **OK**.

A sample selection of firewall setting for DTC program is shown below:
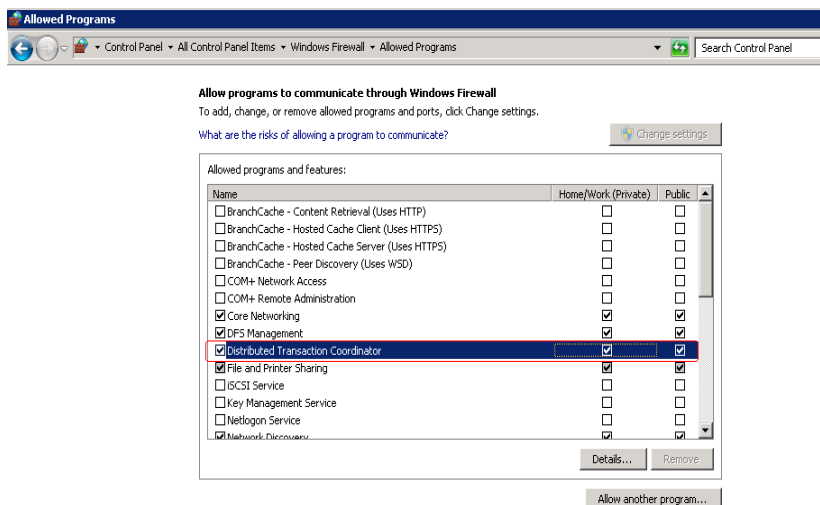
10. Reboot the server after completing all of the steps above.

11. Repeat steps 1 through 4 for each of the servers. In the sample configuration, these steps would be repeated for "DBServer A" and "DBServer B".

12. Proceed to the Application Tier Installation section.

Enable JDBC Distributed Transaction and XA for SQL Cluster Configuration

If your Time And Expense database resides on SQL Cluster configuration and you want to enable JDBC distributed transaction, complete the following steps:

1. Perform this step on the database cluster instance on each node using the instructions on "Enable JDBC Distributed Transactions and XA for an Instance Using Time And Expense Installer".

2. The sequence of steps to open "Component Services" on your server might be different based on your version of Windows OS version.

3. On the left navigation tree, click **Component Services » Computers » My Computer » Distributed Transaction Coordinator » Clustered DTCs**.

> If you do not see the "Clustered DTCs" section, you may need to move the DTC Service to this node to make this visible. Please reopen "Component Services" after moving the DTC service to this node. While the product may be functional by setting these properties on the active node during initial installation, it is important that all these steps are done in all nodes so that when the SQL Cluster services failover to alternate available nodes, the DTC function performs distributed transactions for proper application behavior.

4. Select your configured Distributed Transaction Coordinator Service Name Ex. **DELTEKDTC**, right-click, and select **Properties**.

5. Select the **Security** tab.

6. Select the **XA Transactions** check box.

7. Click **Apply**. The following message displays: "The MSDTC Service will be stopped and restarted. All dependent services will be stopped. Applications using MSDTC may need to be restarted to use the new settings". Click **Yes** to proceed.

8. Click **Yes**. A message "The MSDTC service has been restarted" should display.

9. Reboot the server after performing above steps.

10. Repeat for each node participating in the cluster.

11. Proceed to the Application Tier Installation section.

Application Tier Installation

The Time And Expense 10.0.0 system uses Oracle's WebLogic Server 12.1.3 and Costpoint 7.1.1 for its application server tier. During the Application Tier installation process, you will install the Time And Expense 10.0.0 software.

As previously mentioned in the Pre-Installation Instructions section, the Time And Expense 10.0.0 WebLogic application server must already contain WebLogic Server 12.1.3 and Costpoint 7.1.1.

Before You Start

Make sure that you meet all Application Tier Installation Prerequisites.

Install Application Tier Software

This step provides instructions for installing the Deltek Time And Expense 10.0.0 software.

You must perform this step on the machine that will serve as your Time And Expense 10.0.0 **application** server.

You must have Internet access on the machine where the Time And Expense 10.0.0 installer is invoked in order to download the latest DeltekTimeAndExpense1000RequirementsINI.exe file automatically. The file contains the latest OS platforms and database versions supported. The file is automatically downloaded when you launch the Application Tier installation, assuming that your application server has Internet access.

> The Deltek product installers contain functionality which enables them to dynamically download configuration files and patch rollback scripts when the product installers are executed from the Deltek Software Manager server. To improve security, these connections have been modified to require communication over HTTPS.

If your application server does not have internet access, you will need to perform the steps in the Latest Upgrade Files Download section of this document before you run the Deltek TimeAndExpense1000ApplicationTier.exe file.

To install the Application Tier software, complete the following steps:

1. Run the **DeltekTimeAndExpense1000ApplicationTier.exe** file to launch the Time And Expense 10.0.0 Application Tier installation program. The Welcome to the Time And Expense 10 Installer screen displays.

    > Due to enhanced security in Microsoft Windows Server 2012, it is advised that you use the **Run as Administrator** option when launching installation files, even if you are logged in as a user with local administrative rights. To **Run as Administrator**, right-click the DeltekTimeAndExpense1000ApplicationTier.exe file in Windows Explorer and select **Run as Administrator**.

2. Click **Next >**.

3. On the License Agreement screen, review the license agreement, select the **I accept the terms of the license agreement** check box, and click **Next >**.

4. On the Select Deltek Costpoint 7.1.1 Installation Directory screen, navigate to the location where your Costpoint 7.1.1 software is installed. The default directory is **C:\Deltek** (recommended).

5. Click **Next >**.

6. On the Select Deltek Costpoint System Name screen, select the Costpoint System you will be using to connect to Time And Expense 10.0.0. Click **Next >**.

7. On the Select Database Platform screen, select **Microsoft SQL Server**. Click **Next >**.

8. On the Deltek Costpoint 7.1.1 System SQL Server Database Information screen, complete the following fields:

Field Name	Action
IP Address or Hostname	Enter the IP address (for example, **10.2.2.154**) or hostname (for example, **dbsvr01**) of your Costpoint 7.1.1 SYSTEM (CPSYSTEM) database server. The default value is your computer name. The IP Address or Hostname cannot be **127.0.1.0.1** or **localhost**. For RAC installations, you must specify the IP Address or Hostname of one of the instances. Do not use the Virtual IP Address.
Port	Enter the port that your Costpoint 7.1.1 SYSTEM database server software uses to listen for requests. The default port for SQL Server is **1433**.
Database Name	Enter the name of Costpoint 7.1.1 SYSTEM database. The default value is **CPSYSTEM**. In addition to standard alphanumeric characters, the following special characters are also supported: **$ - _**
Instance Name	Enter the name of your Costpoint 7.1.1 SYSTEM (CPSYSTEM) database instance. The default value is **local**. In addition to standard alphanumeric characters, the following special characters are also supported: **$ - _**
User Name	Enter the name your CPSYSTEM user. The default user is **CPSYSTEM**. In addition to standard alphanumeric characters, the following special characters are also supported: **$ - _**
Password	Enter the password for your CPSYSTEM user. In addition to standard alphanumeric characters, the following special characters are also supported: **' ~ # $ ^ & ( ) - _ + = , .**
SA User Name	Enter the name of your Microsoft SQL Server SA user. The default is **sa**. In addition to standard alphanumeric characters, the following special characters are also supported: **$ - _**

Field Name	Action
SA User Password	Enter the password for your Microsoft SQL Server SA user. In addition to standard alphanumeric characters, the following special characters are also supported: **' ~ # $ ^ & ( ) - _ + = , .**

9. Click **Test Connection**. If you entered the proper database connection information, then the following message displays: "**Connection Successful. Click Next.**"

   If it this message does not display, correct the information entered and click **Test Connection** again.

   After the "Connection Successful. Click Next." message displays, click **Next >**.

10. On the Choose Deltek Time And Expense License File screen, click **Browse** to navigate to the Deltek supplied Time And Expense 10.0.0 **LICENSE.ZIP** file. Click **Next >**.

11. On the Pre-Installation Summary screen, review the installation parameters you selected:

    ▪ If you want to change any settings, click **< Back** to go back and make the necessary changes.

    ▪ If you are satisfied with these settings, click **Install >** to begin the installation.

    Once initiated, the installation process can take a long time to complete. Please do not interrupt the process. A Windows Command Prompt will also appear on your screen that displays the scripts that are being executed.

    The installation will perform the scenarios detailed in the Installation Process Changes for Time And Expense 10.0.0 section of this document. The installation process will stop if any errors are encountered. If any errors occur during the installation, please refer to the Troubleshooting Instructions section of this document.

12. If there were any errors, the log file **DeltekTimeAndExpense1000ApplicationTierInstallLog_<date>_<time>.txt** (from the C:\Program Files\Deltek\Time And Expense\10.0.0\Logs directory) will open.

13. The following message displays:
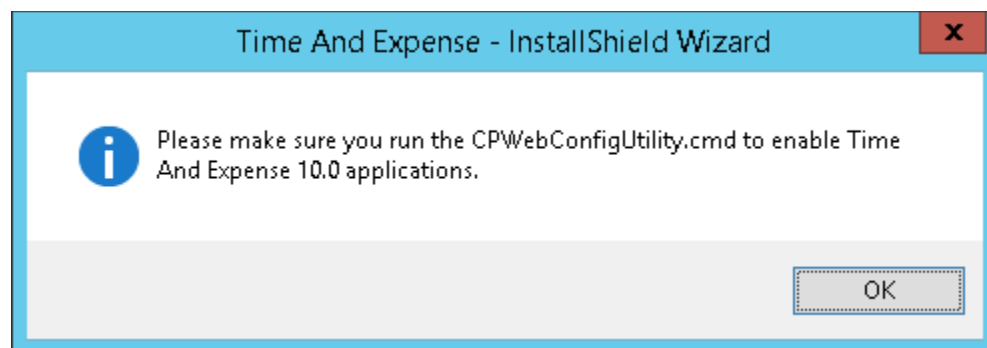
    This is just a reminder that there are other steps in this installation document that still need to be performed. Click **OK**.

14. When the installation has completed, the InstallShield Wizard Complete screen displays, indicating it "… **successfully installed Time And Expense 10.0**….".
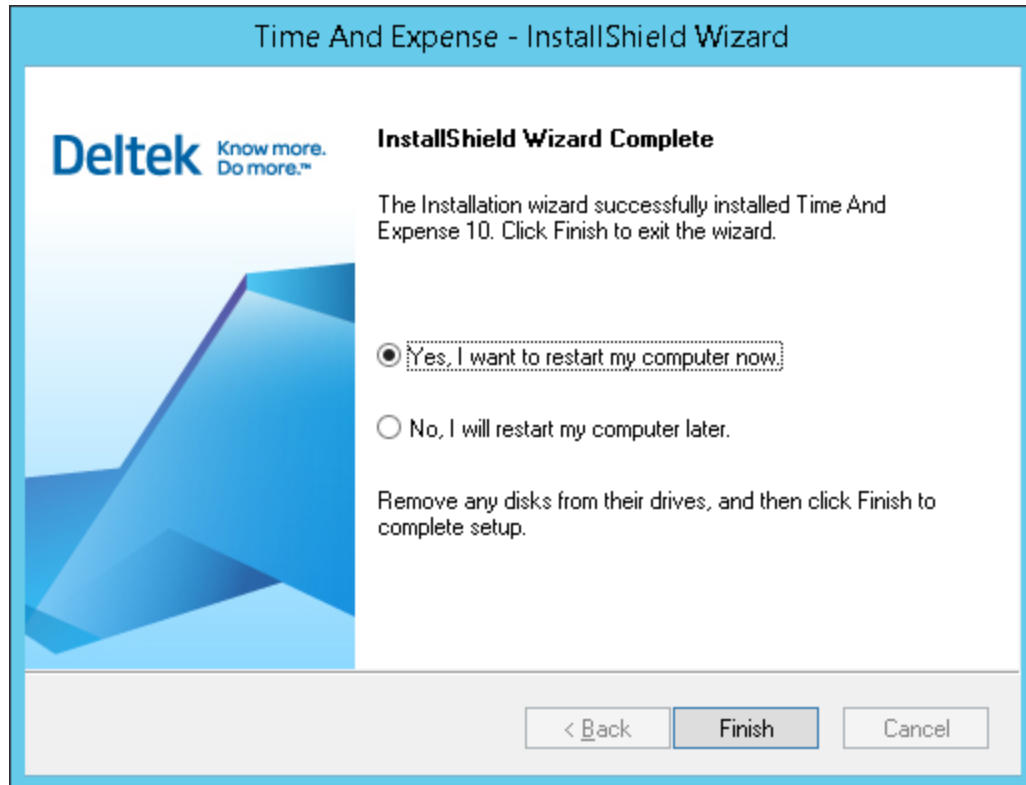
Perform the following:

- **Yes, I want to restart my computer now** – Select this option to reboot your Application Server. This option is selected by default.

- Click **Finish** to exit the installation and reboot your Application Server.

15. Once your Application Server has rebooted, open the **DeltekTimeAndExpense1000ApplicationTierInstallLog_<date>_<time>.txt** file from the C:\Program Files\Deltek\Time And Expense\10.0.0\Logs directory.

16. When the **DeltekTimeAndExpense1000ApplicationTierInstallLog**_<date>_<time>.txt file opens, search for the following keyword:

- **"Error"** – Report any search results to Deltek Costpoint Technical Support. The following error messages can be ignored:

    - OnInstallingFile - Installing: C:\Deltek\Costpoint\71\applications\enterprise\APP-INF\classes\com\deltek\enterprise\application\te\ad\commonad\importengine\ImportErrorStatusCodes.class

    - OnInstallingFile - Installing: C:\Deltek\Costpoint\71\applications\enterprise\APP-INF\classes\com\deltek\enterprise\application\te\commontc\utils\ErrorCodes.class

Configure Time And Expense 10.0.0 Access

The steps to configure your Costpoint 7.1.1 system to recognize Time And Expense 10.0.0 are detailed in this section.

You must perform this step on your Costpoint 7.1.1 WebLogic application server.
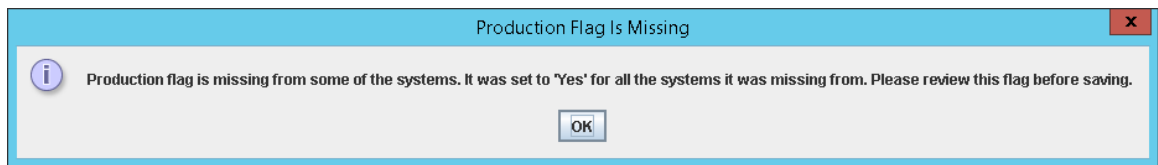

To configure your Costpoint System for Time And Expense 10.0.0, complete the following steps:

1. With your Costpoint 7.1.1 service running, click **Start » All Programs » Costpoint 7.1.1 » Start Costpoint 7.1.1 Config Utility**. For Windows Server 2012, right-click **Start** and select **Search**. Under **Costpoint 7.1.1**, right-click **Start Costpoint 7.1.1 Config Utility**, and click **Run as administrator**.

> Due to the enhanced security in Windows Server 2012, it is advised that you use the **Run as Administrator** option when launching this command even if the logged in user has local administrative rights.

2. On the Select Your Configuration Options screen, make sure the **Product Application Configuration** check box is selected, and click **Next**.

3. The following message displays:

Production Flag Is Missing	x
ⓘ Production flag is missing from some of the systems. It was set to 'Yes' for all the systems it was missing from. Please review this flag before saving.	
OK	

   This will be cleared once the changes about to be made are saved. Click **OK**.

4. On the Product Configuration Utility screen, perform the following:

   a. Click the **Product** tab.

   b. On the **Displaying System** field, select the Costpoint System that you are configuring for Time And Expense 10.0.0 (that is, **DELTEKCP**) from the drop-down list.

   c. Click the **System** tab.

   d. In the Products Installed group box, select the **TEESS** check box.

   e. In the Settings group box, make sure the **Production Mode** check box is selected.
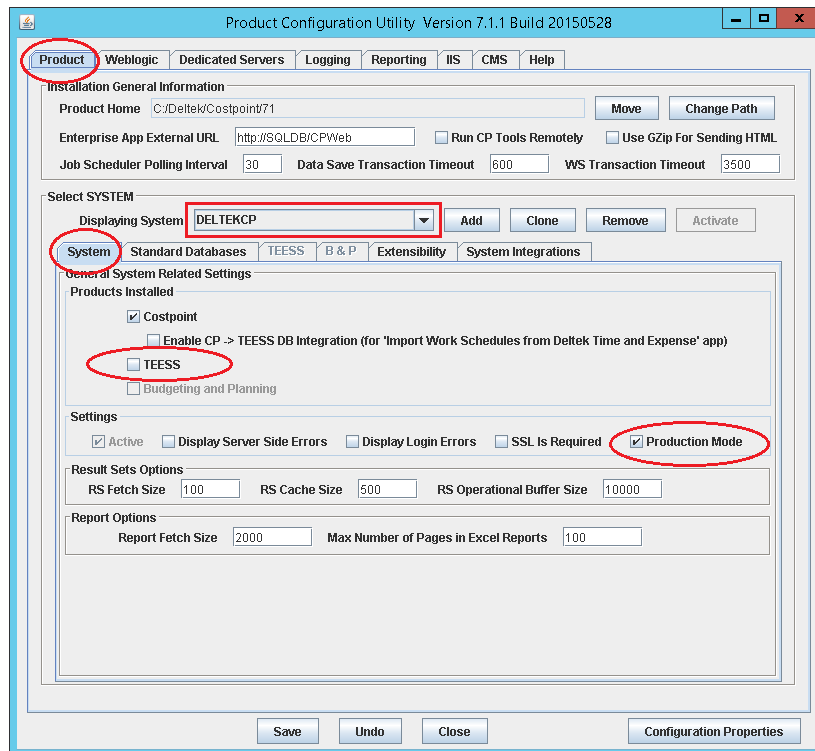
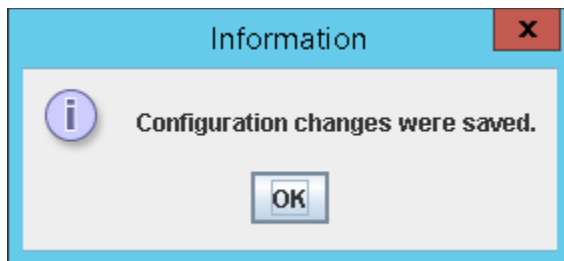5. On the Costpoint Configuration Utility screen, select the **TEESS** tab and perform the following:

Field Name	Action
Database Vendor	Select **MS SQL Server**.
Host	Enter the IP address (for example, **10.2.2.154**) or hostname (for example, **dbsvr01**) of your Time And Expense 10.0.0 TRANSACTION (DELTEKTE) database server. The default value is your computer name. The IP Address or Hostname cannot be **127.0.1.0.1** or **localhost**. For SQL Server Named Instances you need to enter the Host\Named Instance, that is, **10.2.2.154\INSTANCE1**. For RAC installations, you must specify the IP Address or Hostname of one of the instances. Do not use the Virtual IP Address.
Port	Enter the port that your Time And Expense 10.0.0 TRANSACTION database server software uses to listen for requests. The default port for SQL Server is **1433**. For Named Instance entered with Host above this field will be disabled.
DB Name	Enter the name of Time And Expense 10.0.0 TRANSACTION database. The default value is **DELTEKTE**.

Field Name	Action
User	Enter the name of your Time And Expense 10.0.0 TRANSACTION user. The default user is **TC_0001**.
Password	Enter the password for your **TC_0001** user.
Confirm Password	Reenter the password for your **TC_0001** user.
URL	Accept the default.

6. Click **Test**. The following message displays:
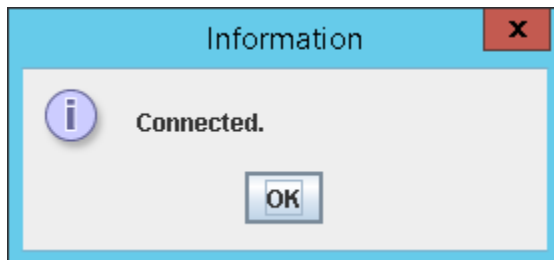
7. Click **OK**. If you were unable to connect, review the information entered and try again.

8. On the Costpoint Config Utility screen, click **Save**. The following message displays:

9. If you have additional Time And Expense 9.0.1 Company Domains that you re-ran the **DeltekTimeAndExpense1000DatabaseTier.exe** installer against in the Database Tier section, perform the following:

    a. On the Product Configuration Utility screen, perform the following:

        ▪ Click the **Product** tab.

        ▪ Under Select SYSTEM, click **Add** or **Clone** to create a new Costpoint System.
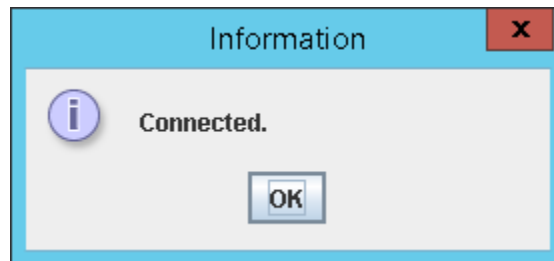
        > Use **Clone** if your additional System will be using the same Costpoint TRANSACTION, ADMIN, and SYSTEM databases. That way, you do not have to reenter all of the database connection information.

        ▪ **Enter New System Name** – Enter the name for your additional Time And Expense 10.0.0 System (that is, **TC_0003**).

        ▪ Click **OK**.

        ▪ Click the **System** tab.

        ▪ Make sure **Production Mode** is selected.

- Click the **Standard Database** tab.
- Enter the following information for your **Costpoint Meta Segment**:

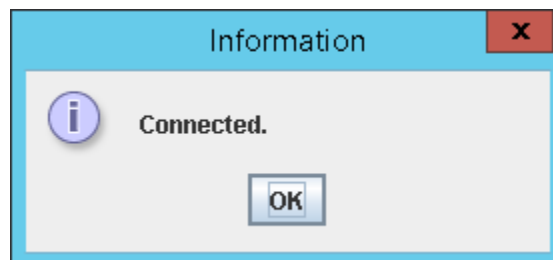| Field Name	Action
Database Vendor	Select **MS SQL Server**.
Host	Enter the IP address (for example, **10.2.2.154**) or hostname (for example, **dbsvr01**) of your Costpoint 7.1.1 SYSTEM (CPSYSTEM) database server. The default value is your computer name. The IP Address or Hostname cannot be **127.0.1.0.1** or **localhost**. For SQL Server Named Instances you need to enter the Host\Named Instance, that is, **10.2.2.154\INSTANCE1**. For RAC installations, you must specify the IP Address or Hostname of one of the instances. Do not use the Virtual IP Address.
Port	Enter the port that your Costpoint 7.1.1 SYSTEM database server software uses to listen for requests. The default port for SQL Server is **1433**. For Named Instance entered with Host above this field will be disabled.
DB Name	Enter the name of Costpoint 7.1.1 SYSTEM database. The default value is **DELTEKCP**.
User	Enter the name of your Costpoint 7.1.1 SYSTEM user. The default user is **CPSYSTEM**.
Password	Enter the password for your **CPSYSTEM** user.
Confirm Password	Reenter the password for your **CPSYSTEM** user.
URL	Accept the default.

- Click **Test**. The following message displays:

- Click **OK**. If you were unable to connect, review the information entered and try again.
- Enter the following information for your **Costpoint Admin Segment**:

Field Name	Action
Database Vendor	Select **MS SQL Server**.
Host	Enter the IP address (for example, **10.2.2.154**) or hostname (for example, **dbsvr01**) of your Costpoint 7.1.1 ADMIN (CPADMIN) database server. The default value is your computer name. The IP Address or Hostname cannot be **127.0.1.0.1** or **localhost**. For SQL Server Named Instances you need to enter the Host\Named Instance, that is, **10.2.2.154\INSTANCE1**. For RAC installations, you must specify the IP Address or Hostname of one of the instances. Do not use the Virtual IP Address.
Port	Enter the port that your Costpoint 7.1.1 ADMIN database server software uses to listen for requests. The default port for SQL Server is **1433**. For Named Instance entered with Host above this field will be disabled.
DB Name	Enter the name of Costpoint 7.1.1 ADMIN database. The default value is **DELTEKCP**.
User	Enter the name of your Costpoint 7.1.1 ADMIN user. The default user is **CPADMIN**.
Password	Enter the password for your **CPADMIN** user.
Confirm Password	Reenter the password for your **CPADMIN** user.
URL	Accept the default.

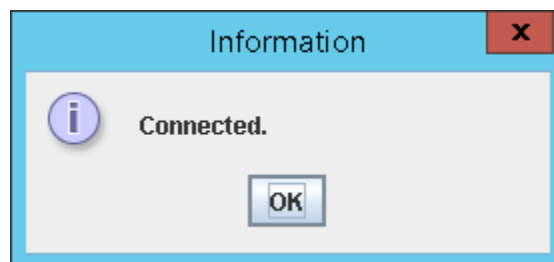- Click **Test**. The following message displays:

- Click **OK**. If you were unable to connect, review the information entered and try again.
- Enter the following information for your **Costpoint Data Segment**:

Field Name	Action
Database Vendor	Select **MS SQL Server**.

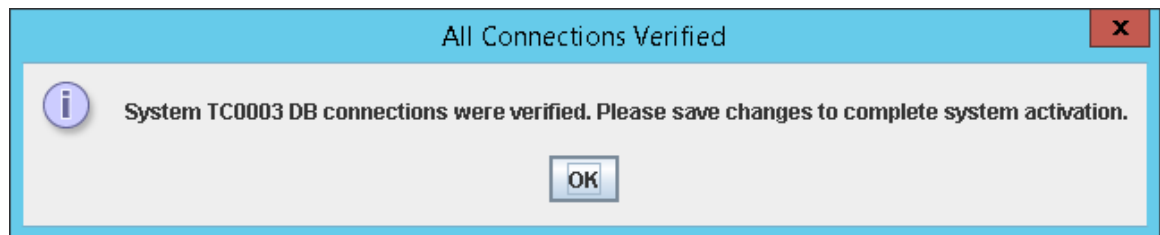| Field Name	Action
Host	Enter the IP address (for example, **10.2.2.154**) or hostname (for example, **dbsvr01**) of your Costpoint 7.1.1 TRANSACTION (DELTEKCP) database server. The default value is your computer name. The IP Address or Hostname cannot be **127.0.1.0.1** or **localhost**. For SQL Server Named Instances, you need to enter the Host\Named Instance, that is, **10.2.2.154\INSTANCE1**. For RAC installations, you must specify the IP Address or Hostname of one of the instances. Do not use the Virtual IP Address.
Port	Enter the port that your Costpoint 7.1.1 TRANSACTION database server software uses to listen for requests. The default port for SQL Server is **1433**. For Named Instance entered with Host above this field will be disabled.
DB Name	Enter the name of Costpoint 7.1.1 TRANSACTION database. The default value is **DELTEKCP**.
User	Enter the name of your Costpoint 7.1.1 TRANSACTION user. The default user is **DELTEK**.
Password	Enter the password for your **DELTEK** user.
Confirm Password	Reenter the password for your **DELTEK** user.
URL	Accept the default.

▪ Click **Test**. The following message displays:

▪ Click **OK**. If you were unable to connect, review the information entered and try again.

▪ Enter the following information for your **DB Links Information**:
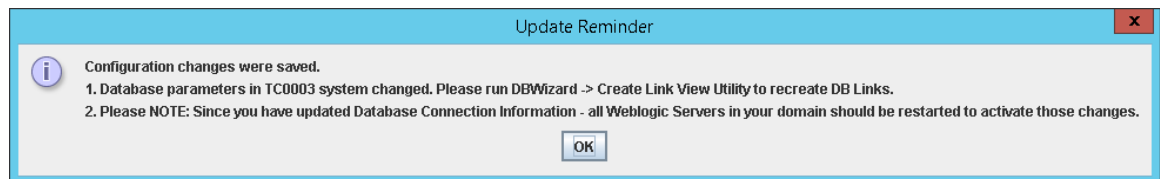
Field Name	Action
Link User	Enter a name for your link user for this new system. You should create a different link user for each system. The default will be your System Name_LNK_USER (that is, *TC_000x*_**LNK_USER**).

Field Name	Action
Link User Password	Enter the password for your new *TC_000x_LNK_USER* user.
Confirm Password	Reenter the password for your *TC_000x_LNK_USER* user.
Data to Admin Link	Accept the default of *TC_000x_DATA_TO_ADMIN_LINK*.
Data to Meta Link	Accept the default of *TC_000x_DATA_TO_SYS_LINK*.
Admin to Meta Link	Accept the default of *TC_000x_ADMIN_TO_SYS_LINK*.

- ▪ Click **Activate** (middle of screen near Add/Clone). The following message displays:

- ▪ Click **OK**.
- ▪ Click **Save**. The following message displays:

- ▪ Click **OK**.
- ▪ Click the **System** tab.
- ▪ Products Installed – Select the **TEESS** check box.
- ▪ On the Product Configuration Utility screen, select the **TEESS** tab and perform the following:

Field Name	Action
Database Vendor	Select **MS SQL Server**.
Host	Enter the IP address (for example, **10.2.2.154**) or hostname (for example, **dbsvr01**) of your Time And Expense 10.0.0 TRANSACTION (DELTEKTE) database server. The default value is your computer name. The IP Address or Hostname cannot be **127.0.1.0.1** or **localhost**.

| Field Name	Action
	For SQL Server Named Instances you need to enter the Host\Named Instance, that is, **10.2.2.154\INSTANCE1**. For RAC installations, you must specify the IP Address or Hostname of one of the instances. Do not use the Virtual IP Address.
Port	Enter the port that your Time And Expense 10.0.0 TRANSACTION database server software uses to listen for requests. The default port for SQL Server is **1433**. For Named Instance entered with Host above this field will be disabled.
DB Name	Enter the name of Time And Expense 10.0.0 TRANSACTION database. The default value is **DELTEKTE**.
User	Enter the name of your Time And Expense 10.0.0 TRANSACTION user. The default user is **TC_000x**.
Password	Enter the password for your **TC_000x** user.
Confirm Password	Reenter the password for your **TC_000x** user.
URL	Accept the default.

- Click **Test**. The following message displays:
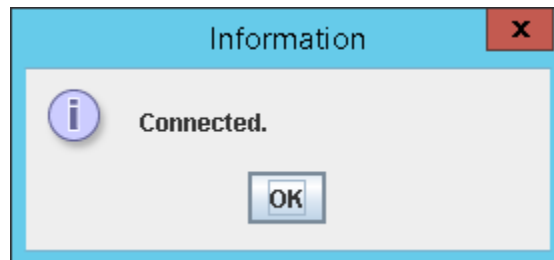
- Click **OK**. If you were unable to connect, review the information entered and try again.

- Click **Save**. The following message displays:
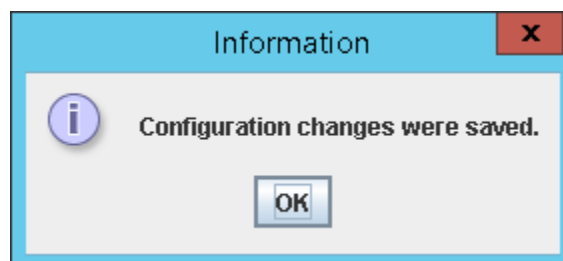
- Click **OK**.

> ⚠️ **You must repeat item 9 of this step for each additional Time And Expense Company Domain.** You will need to add a new Costpoint System for each of your Time And Expense 9.0.1 remaining domains. That means for every schema you re-ran the DeltekTimeAndExpense1000DatabaseTier.exe installer against, you will now need to set up a Costpoint System.

10. Once all Time And Expense 10.0.0 Systems have been added, click **Close**.

Run Link-Views

This step provides instructions for running the Link-Views. Link-Views grant your Costpoint database schemas (DELTEK/CPSYSTEM/CPADMIN) the ability to view specific database objects owned by the each of the other Costpoint database schemas. You must perform this step on your Costpoint 7.1.1 WebLogic application server.

To run link views, complete the following steps:

1. On the Costpoint DB Wizard screen, select **Link-View**, and click **Next**.

2. On the System screen, select your product system name, **TC0003**, from the drop-down list.

3. Click **Next**.

4. On the Enter Passwords screen, complete the following:

Field Name	Action
DBA User	Accept the default value, **SA**.
Password	Enter your SA/system user password.

5. Click **Next**.

6. On the Create Link-View screen, perform one of the following options:

   - Locate the **Log file** field, and accept the default value (**C:\Costpoint\Deltek\71\logs\linkView.log**).
   - Click the ellipsis button, and complete the following:

Field Name	Action
File Name	Enter a log file name.
Files of Type	Accept the default of Select LOG file or folder (*.log).

7. Click **Select**, and click **Run**.

8. Click **Yes** if the following message displays: "Link User "TC_000x_LNK_USER" does not exist on <Server_Name>. Do you want the Database Wizard to create "TC_000xLNK_USER" now?"

9. If the Creation Link User screen displays, complete the following:

Field Name	Action
User Name	Accept the default value, **TC_000x_LNK_USER**.

Field Name	Action
TEMPDB	Accept the default value of your Admin schema, **CPADMIN**.
Enforce SQL Server Password Complexity	Clear this check box.

10. Click **OK**. After the process is complete, the following message displays: "Process completed without errors."

11. Click **OK**, and click **Cancel**. The Costpoint DBWizard screen displays.

> You must repeat this step for each additional Time And Expense Company Domain.

Reinstall Costpoint 7.1.1 Windows Service

This step provides instructions for reinstalling the Costpoint 7.1.1 Windows service.

This step must be performed on your Costpoint 7.1.1 WebLogic **application** server.

To reinstall Costpoint 7.1.1 to run as a Windows service, complete the following steps:

1. Click **Start » Administrative Tools » Services**.

2. On the Services window, scroll down the **Services** list, right-click the **Costpoint 7.1.1** service, and click **Stop**.

3. Use Windows Explorer to navigate to the directory where the Costpoint 7.1.1 software was installed (**C:\Deltek\Costpoint\71\bin**).

4. Right-click **InstallCPWebasService.cmd**, and select **Run as administrator**.

Reconfigure and Start Costpoint 7.1.1 Windows Service

This step provides instructions for reconfiguring and starting the Costpoint 7.1.1 Windows service.

> Reinstalling the Costpoint 7.1.1 Windows service above means you need to reset or reconfigure all settings you initially configured with your Costpoint 7.1.1 Windows service.

This step must be performed on your Costpoint 7.1.1 WebLogic **application** server.

To reconfigure Costpoint 7.1.1 Windows service, complete the following steps:

1. Click **Start » Administrative Tools » Services**.

2. On the Services window, scroll down the **Services** list, right-click the **Costpoint 7.1.1** service, and click **Properties** on the shortcut menu.

> If you do not find the Costpoint 7.1.1 service, it must not have installed properly in the previous step. Please go back and try that step again.

3. On the Costpoint 7.1.1 Properties screen, click the Recovery tab, and perform the following:

Option	Description
First failure	Change the drop-down selection from **Take No Action** to **Restart the Service**.
Second failure	Accept the default value, **Take No Action**.
Subsequent failures	Accept the default value, **Take No Action**.
Reset fail count after	Change from **0** to **1** days.
Restart service after	Accept the default of **1** minute.

4. Click **Apply**.

5. On the Costpoint 7.1.1 Properties screen, click the Log On tab and complete the following:

Field Name	Action
Account	Enter the domain Account (for example, domain\useraccountname). If using a domain service login account instead of using the "Local System Account", select **This Account**.
Password	Enter the password for the domain Account.
Confirm Password	Reenter your password for the domain Account.

6. Click **Apply**. Make sure that the login account for the Costpoint Service is in the local Administrators group on the Application Tier server.

Also, keep in mind that this login account must be given full access permissions for any Alternate File locations setup (network shared directories). Alternate file locations are used for Costpoint users for uploading and downloading files from within Costpoint.

7. On the Costpoint 7.1.1 Properties screen, click the General tab, and click **Start** to start the Costpoint 7.1.1 service.

> The service will immediately indicate that it has started. However, please note that it takes several minutes for the Costpoint 7.1.1 service to fully initialize.
>
> After you have started the service, wait several minutes before attempting to connect to the software.
>
> If you encounter problems with the Costpoint 7.1.1 service, check the **C:\Deltek\Costpoint\7.1.1\logs\DEServer.log** file and report any errors to Deltek Costpoint 7.1.1 Technical Support.

8. Click **OK** to close the Costpoint 7.1.1 Properties screen.

9. Close the Services window.

Web Tier Installation

The steps to integrate your Time And Expense 10.0.0 software with the Microsoft Internet Information Server (IIS) is detailed in this section.

The Microsoft Internet Information Server component is **optional**. The WebLogic Server software includes an integrated Web server component that you can use with the Time And Expense 10.0.0 software.

Though the use of the IIS component is optional, Deltek strongly recommends that you install it in your production environment. In addition to acting as the proxy, the IIS server is also used to load balance the cluster nodes.

Before You Start

Make sure that you meet all Web Tier Installation (Microsoft IIS) Prerequisites.

Install Web Tier Software

The steps to integrate the Time And Expense 10.0.0 system with Microsoft IIS are detailed in this section.

You must perform this step on a Web server that is using Microsoft Internet Information Server.

You must have Internet access on the machine where the Time And Expense 10.0.0 installer is invoked in order to download the latest DeltekTimeAndExpense1000RequirementsINI.exe file automatically. The file contains the latest OS platforms and database versions supported. The file is automatically downloaded when you launch the Web Tier installation, assuming that your application server has Internet access.

> The Deltek product installers contain functionality which enables them to dynamically download configuration files and patch rollback scripts when the product installers are executed from the Deltek Software Manager server. To improve security, these connections have been modified to require communication over HTTPS.

If your application server does not have internet access, you will need to perform the steps in the Latest Upgrade Files Download section of this document before you run the Deltek TimeAndExpense1000WebTier.exe file.

To install Time And Expense 10.0.0 on your Microsoft IIS Web server, complete the following steps:

1. Run the **DeltekTimeAndExpense1000WebTier.exe** file to launch the Time And Expense 10.0.0 Web Tier installation program. The Welcome to the Time And Expense 10 Installer screen displays.

   > Due to enhanced security in Microsoft Windows Server 2012, it is advised that you use the **Run as Administrator** option when launching installation files, even if you are logged in as a user with local administrative rights. To **Run as Administrator**, right-click the DeltekTimeAndExpense1000WebTier.exe file in Windows Explorer and select **Run as Administrator**.

2. Click **Next >**.

3. On the License Agreement screen, review the license agreement, select **I accept the terms of the license agreement**, and click **Next >**.

4. On the Select Deltek Costpoint 7.1.1 Web Server Directory screen, click **Browse** to navigate to an installation location for the Deltek Costpoint 7.1.1 IIS software.

   The default is **C:\Deltek**.

5. Click **Next >**.

6. On the Pre-Installation Summary screen, review the installation parameters you selected:

   ▪ If you want to change any settings, click **< Back** to go back and make the necessary changes.

   ▪ If you are satisfied with these settings, click **Install >** to begin the installation.

   Once initiated, the installation process can take a long time to complete. Please do not interrupt the process.

   The installation will perform the scenarios detailed in the [Installation Process Changes for Time And Expense 10.0.0](#) section of this document.

   The installation process creates the **CPWeb** Virtual Directory under the Default Website, using the Default App Pool. The process also creates a share of your Time And Expense 10.0.0 Costpoint directory, C:\Deltek\Costpoint\71\applications. In order for the Application Server (WebLogic) to deploy hot fixes and updates, this directory must be shared with Co-Owner (Full Control) rights.

7. On the InstallShield Wizard Complete screen, select the **Yes, I want to view the log file** check box to open the DeltekTimeAndExpense1000WebTierInstallLog_<date>_<time>.txt file from the C:\Program Files\Deltek\Time And Expense\10.0.0\Logs directory. This check box is selected by default.

8. Click **Finish** to exit the installation.

9. When the DeltekTimeAndExpense1000WebTierInstallLog_<date>_<time>.txt file opens, search for the following keywords:

   ▪ **"Error"** – Report any search results to Deltek Time And Expense Technical Support.

Time And Expense 10.0.0 Initial Log In Configuration

The steps to configure your browser and verify your Time And Expense 10.0.0 Application Tier and Web Tier installations are detailed in this section. To confirm that these servers are functioning properly, you will log in to Time And Expense 10.0.0 and preview a report.

Before You Start

Make sure that you meet all Time And Expense 10.0.0 Initial Log In Configuration Prerequisites.

Time And Expense 10.0.0 Printer Configuration

This step is optional. It provides configuration instructions for your Application Tier WebLogic Server to allow you to print Time And Expense 10.0.0 reports. This is useful for asynchronous printing from the server, especially for tasks such as printing reports through the Job Server in the middle of the night.

> Users can print to local printers from the workstations without configuring anything in this step.

You must perform this step on your Time And Expense 10.0.0 application server.

To create Windows printer objects on your application server, complete the following steps:

1. Click **Start » Printers and Faxes**. For Windows Server 2012, right-click **Start** and select **Control Panel**. Under Hardware, select **View devices and printers**.
2. On the Printers and Faxes screen, double-click **Add Printer**.
3. Use the Add Printer Wizard to create a Windows printer object that will connect and print to a printer on your network.

On your application server, you can create as many Windows printer objects as needed for your organization. After the printer objects are created, your Time And Expense 10.0.0 WebLogic application server will make the printer objects available to your users.

Set Web Browser Internet Options

The steps to configure the Internet Explorer (IE) browser settings to access the Time And Expense 10.0.0 system are detailed in this section.

This step must be performed on all Windows client workstations that will access your Time And Expense 10.0.0 WebLogic application server.

To configure the browser settings for accessing the Time And Expense 10.0.0 system, complete the following steps:

1. Open your Web browser. From the menu bar, click **Tools » Internet Options**.

2. On the Internet Options screen, click the General tab, and click **Settings** under the **Browsing history** section.

3. On the Temporary Internet Files and History Settings screen, complete the following:

Field Name	Action
Check for newer versions of stored pages	Select **Automatically**.
Disk space to use	Enter at least 100 Megabytes (MB).

4. Click **OK** to close the Settings screen.

5. On the Internet Options screen, click the Security tab, and click **Trusted sites » Sites**.

   Depending on your environment, you may need to add your Time And Expense 10.0.0 URL under **Local Internet** instead of **Trusted sites**.

6. On the **Add this website to the zone**, enter **http://<IPAddress or ComputerName>**, where **<IPAddress or ComputerName>** identifies your Time And Expense 10.0.0 WebLogic application server or IIS Web server, depending on which server you will be using to access Time And Expense 10.0.0 (for example, http://10.2.2.154).

7. Clear the **Require server verification (https:) for all sites in this zone** check box.

8. Select the check box, and click **Add**. And then, click **Close**.

9. On the Internet Options screen, click the Advanced tab, scroll down under the Browsing section, and clear the **Reuse windows for launching shortcuts** check box.

10. Click **OK** to close the Internet Options screen.

11. From the menu bar, click **Tools » Pop-up Blocker » Turn Off Pop-up Block**.

    Disable any pop-up blockers or explicitly allow pop-ups for the Time And Expense 10.0.0 URL, such as **http://<IPAddress or ComputerName>**, where **<IPAddress or ComputerName>** identifies your Time And Expense 10.0.0 WebLogic application server or IIS Web server (for example, **http://10.2.2.154**).

12. Close your Web browser.

Log In To Time And Expense 10.0.0

The steps to log in to Time And Expense 10.0.0 are detailed in this section.

You can perform this step from any Windows client workstation that has TCP/IP access to your Time And Expense 10.0.0 WebLogic application server.

To log in to Time And Expense 10.0.0, complete the following steps:

1. Open your Web browser, and enter one of the following URLs:

   - http://<AppServerIPAddress or ComputerName>:<Port>

   - http://<WebServerIPAddress or ComputerName>/cpweb

   Where <AppServerIPAddress or ComputerName> identifies your Time And Expense 10.0.0 WebLogic application server and <Port> identifies the unique port number that your Time And Expense 10.0.0 WebLogic application server uses to listen for connections. You specified this port value during the Time And Expense 10.0.0 software installation. The default is 7009 (for example, **http://10.2.2.154:7009**).

   Or where <WebServerIPAddress or ComputerName> identifies your Time And Expense 10.0.0 IIS Web server (for example, **http://10.2.2.156/cpweb**).

2. When the Deltek Costpoint 7 Welcome screen displays, complete the following:

| Field Name	Action
Username	Enter **CPSUPERUSER**.
Password	Enter **password**. The password is case-sensitive and must be entered in lowercase. Passwords that you create for other user IDs may be uppercase, lowercase, or mixed.
System	Enter **<Your_System_Name>**, where **<Your_System_Name>** identifies the system name you assigned to your Time And Expense 10.0.0 system during the Application Server Installation. Typically, customers use a system name that is identical to their Time And Expense 10.0.0 Database name, **DELTEKCP**.
SHOW ADDITIONAL CRITERIA	Click **+** to display these additional fields: ▪ **Application** — Accept the blank default value, or enter a specific Time And Expense 10.0.0 application (for example, **COSTPOINT MENU**). ▪ **Company** — Enter your company ID (for example, **1**). ▪ **Validation Frequency** — Accept the default drop-down value, **Field**. After you successfully logged in to Time And Expense 10.0.0, review the online help for a detailed explanation of the value you can select for this field.
Remember log in information	Select this check box to have the system remember your login information. This check box is not selected by default.

3. Click **Log In**.

4. Contact Custom Solutions at Deltek if the following message displays: "Warning: The custom programs and the database version are not compatible. The custom programs may not work properly. Please contact Custom Solutions at Deltek. Do you want to continue with the login?"

5. Click **OK** and a screen similar to the sample shown below displays:
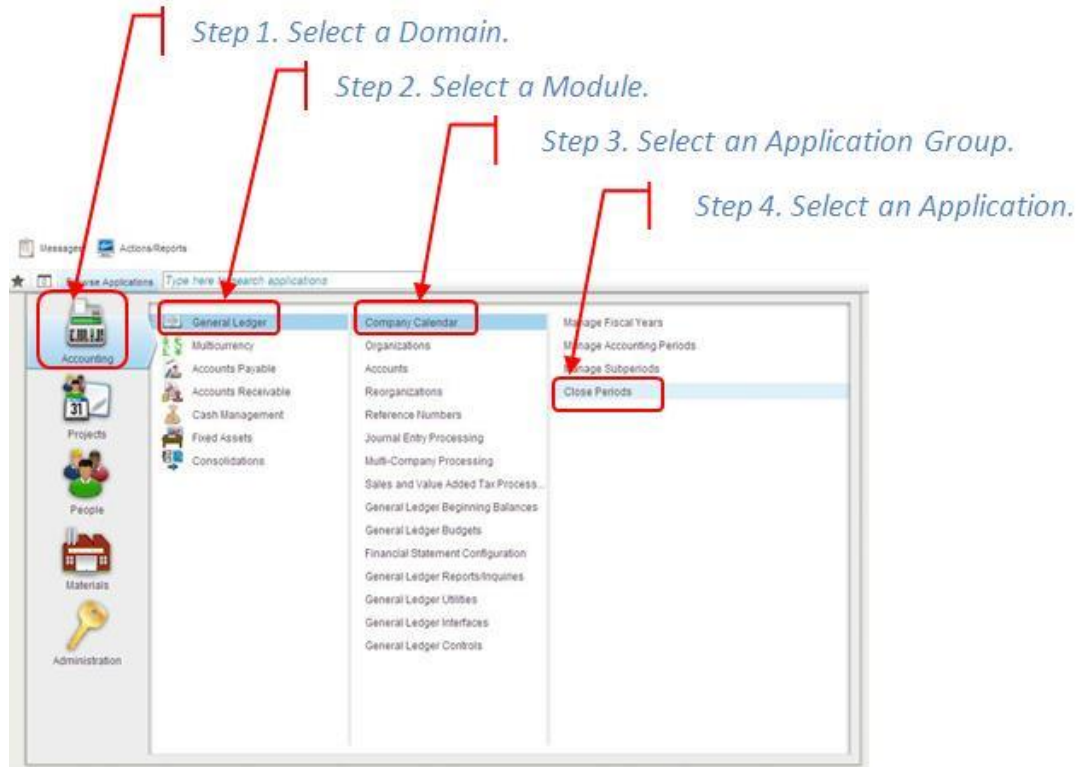
6. From the main menu screen, click **Administration » System Administration » System Administration Utilities » Rebuild Global Settings**.
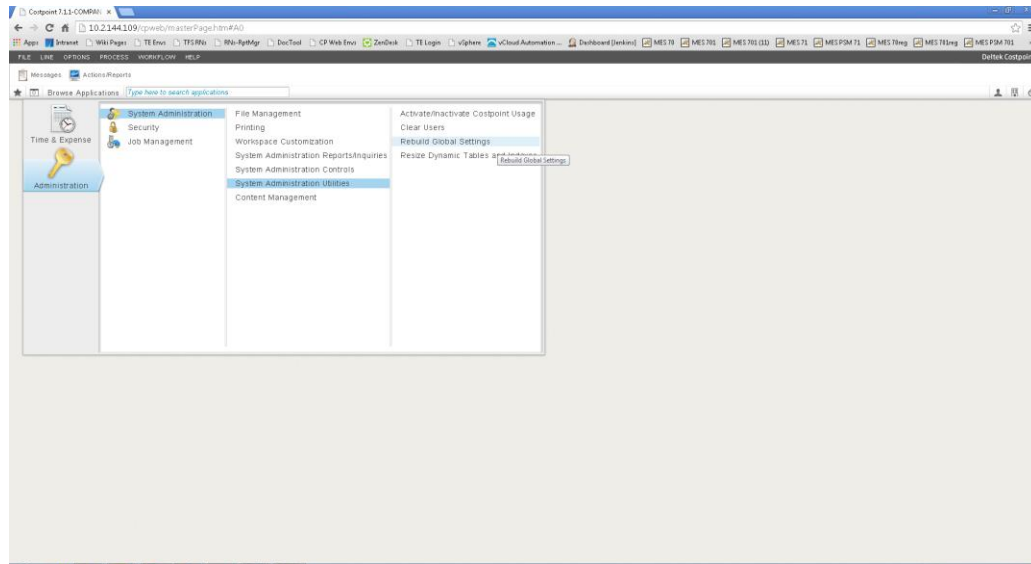

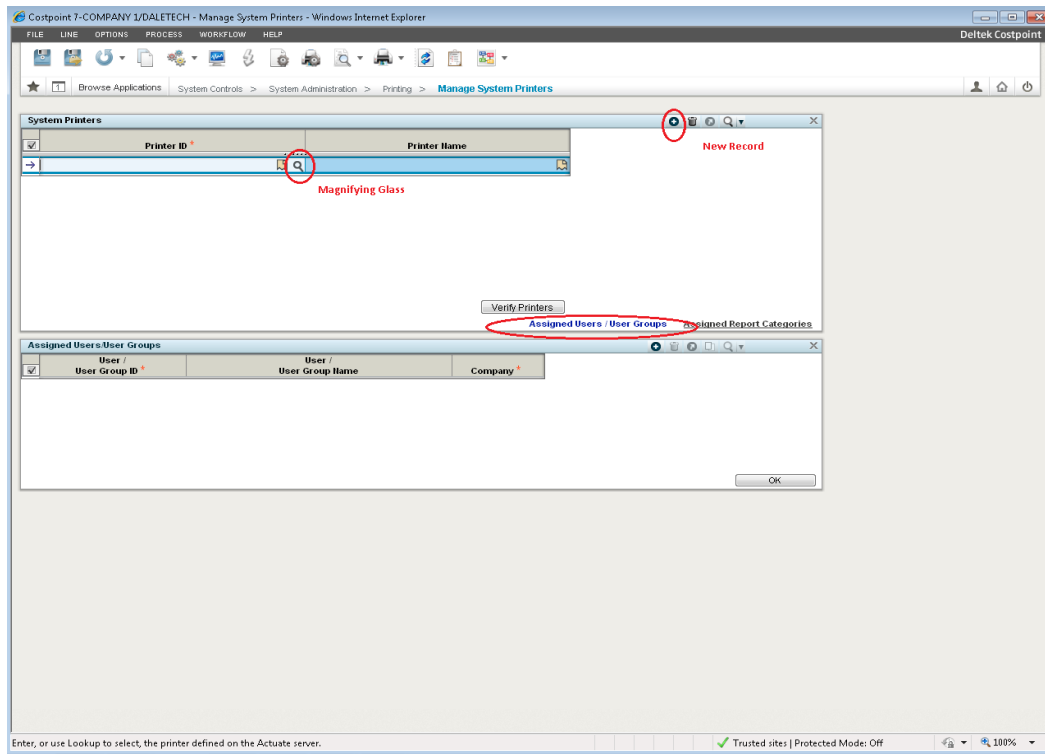7. On the Rebuild Global Settings screen, click **Default Action**.
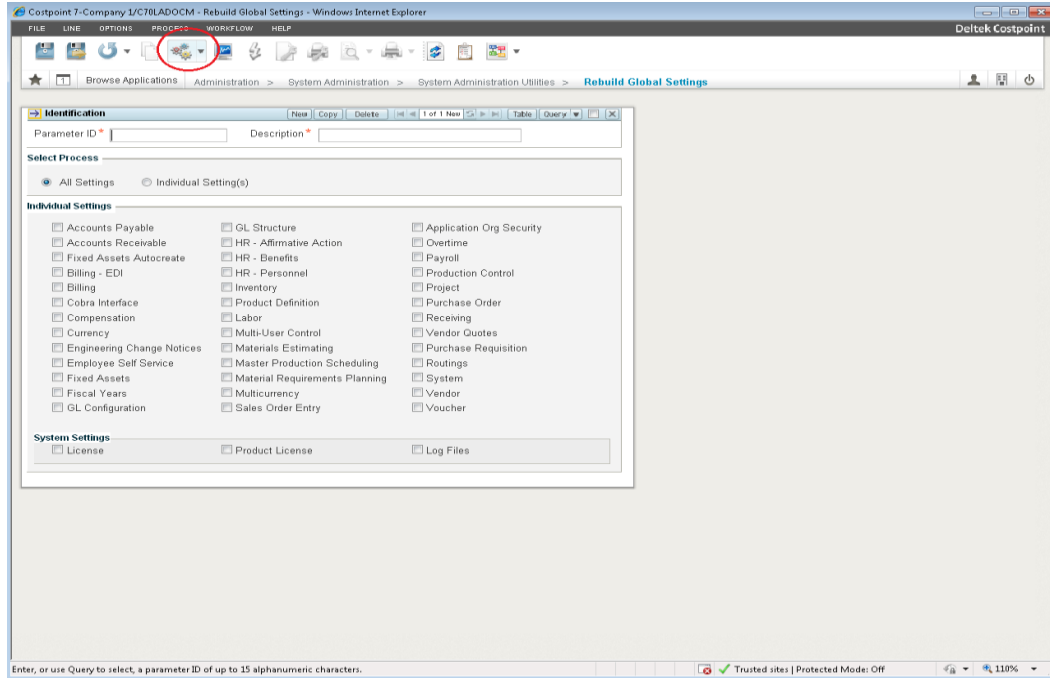
> If you click the right side (down arrow) of the **Default Action** button, you must also select **Reload Settings**.

8.   On the Processing Complete screen, click **OK**.

9.   Select **File » Close Application** to close the Rebuild Global Settings screen. Click **OK** on the unsaved changes message.

10. From the main menu screen, click **Administration » System Administration » Printing » Manage System Printers**.
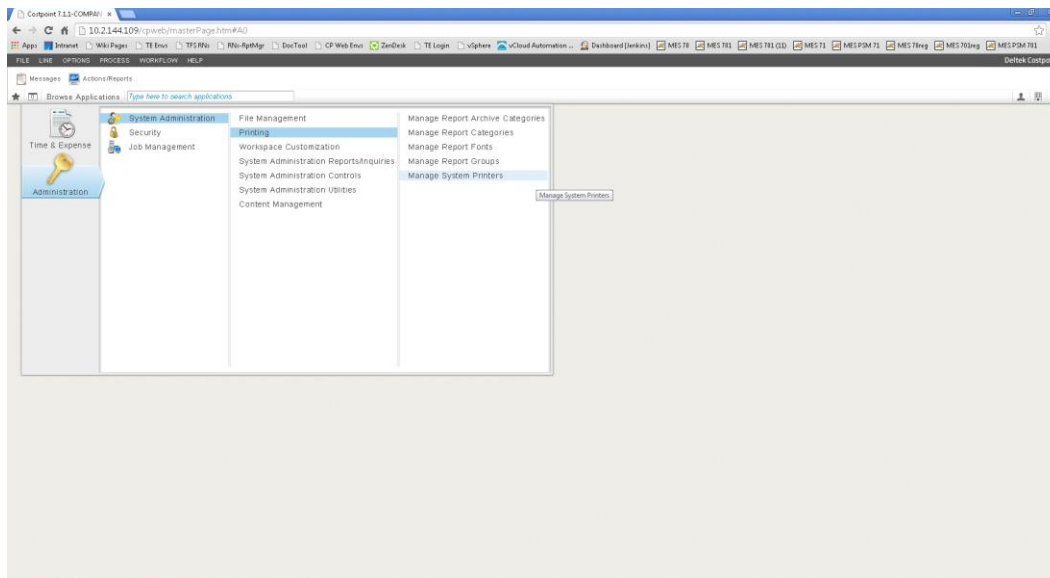
11. On the Manage System Printers screen, click **New Record** (**+**).

12. Complete the following fields:

Field Name	Action
Printer ID	Click 🔍 to display all printer objects that are available on your Application Server. To select the appropriate printer object, click the check box to the left of the printer object name and click **SELECT**.
Printer Name	Enter a descriptive name for the printer object.

13. Select the **Assigned Users/User Groups** link located in the lower right corner of the System Printers section.

14. When the focus switches to the Assigned Users/User Groups section at the bottom half of your browser window, click **New Record** (**+**), and complete the following fields:

Field Name	Action
User/User Group ID or User/User Group Name	Click 🔍 for one of these fields. Select a User/User Group that should have access to the printer object you specified above.
Company	Click 🔍 and select a Company for this User/User Group.

15. Click **SELECT**. You must repeat step 14 for each User/User Group that you want to assign the printer object that you specified in Step 12.

16. Click **Save.** Click **OK** when the following message displays: "Record modifications completed without error."

    You must repeat items 12–16 for any printer objects on your Application server that you want to make available to your Time And Expense 10.0.0 system users.

17. Click **File » Log-out** to exit Time And Expense 10.0.0.

18. Close your Web browser.

Verify Time And Expense 10.0.0 Printer Configuration

The steps to verify your Time And Expense 10.0.0 printers are detailed in this section.

This step can be performed from any Windows client workstation that has TCP/IP access to your Time And Expense 10.0.0 WebLogic application server.

To verify your Time And Expense 10.0.0 printers, complete the following steps:

1. Open your Web browser, and enter one of the following URLs:

    ▪ http://<AppServerIPAddress or ComputerName>:<Port>

    ▪ http://<WebServerIPAddress or ComputerName>/cpweb

    Where <AppServerIPAddress or ComputerName> identifies your Time And Expense 10.0.0 WebLogic application server and <Port> identifies the unique port number that your Time And Expense 10.0.0 WebLogic application server uses to listen for connections. You specified this port value during the Time And Expense 10.0.0 software installation. The default is 7009 (for example, **http://10.2.2.154:7009**).

    Or where <WebServerIPAddress or ComputerName> identifies your Time And Expense 10.0.0 IIS Web server (for example, **http://10.2.2.156/cpweb**).

2. On the Deltek Costpoint 7 Welcome screen, complete the following fields:

Field Name	Action
Username	Enter **CPSUPERUSER**.
Password	Enter the CPSUPERUSER user password. The default is **password**.
System	Enter **<Your_System_Name>**, where **<Your_System_Name>** identifies the system name you assigned to your Time And Expense 10.0.0 system during the Application Server Installation process. Typically, customers use a system name that is identical to their Time And Expense 10.0.0 Database name, DELTEKCP.
SHOW ADDITIONAL CRITERIA	Click **+** to display these additional fields: ▪ **Application** — Accept the blank default value, or enter a specific Time And Expense 10.0.0 application (for example, **COSTPOINT MENU**). ▪ **Company** — Enter your company ID (for example, **1**). ▪ **Validation Frequency** — Accept the default drop-down value, **Field**. After you successfully logged in to Time And

Field Name	Action
	Expense 10.0.0, review the online help for a detailed explanation of the value you can select for this field.
Remember log in information	Select this check box to have the system remember your login information. This option is not selected by default.

3. Click **Log In**.

4. Click **OK** if the following message displays: "Warning: The custom programs and the database version are not compatible. The custom programs may not work properly. Please contact Custom Solutions at Deltek. Do you want to continue with the login?"

5. From the main menu screen, click **Administration » Security » Security Reports/Inquiries » Print User Group Rights Report**.
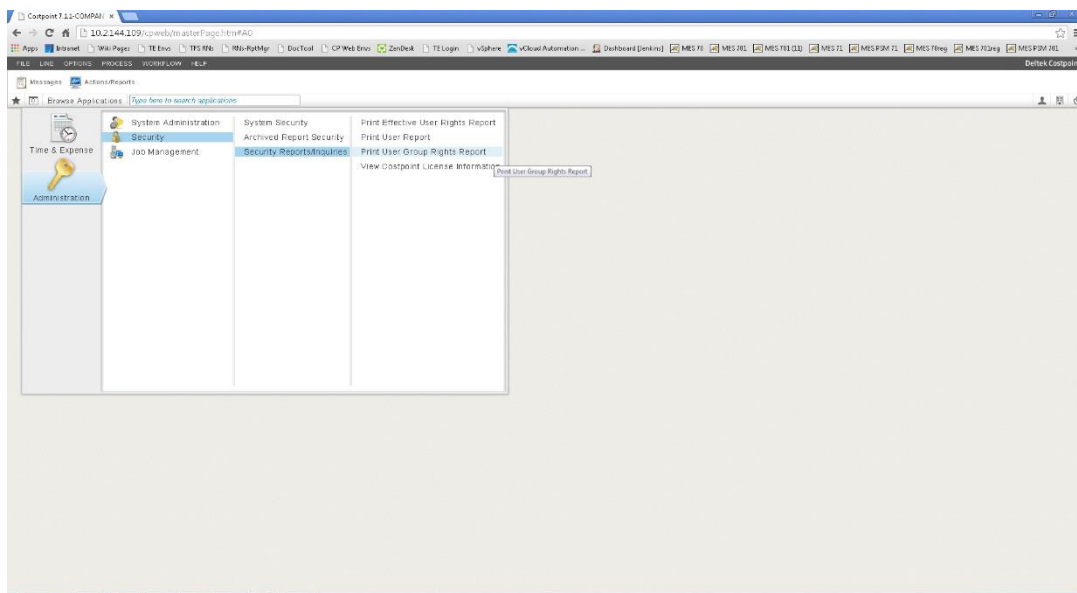
6. On the Print User Group Rights Report screen, click **Print Options**.
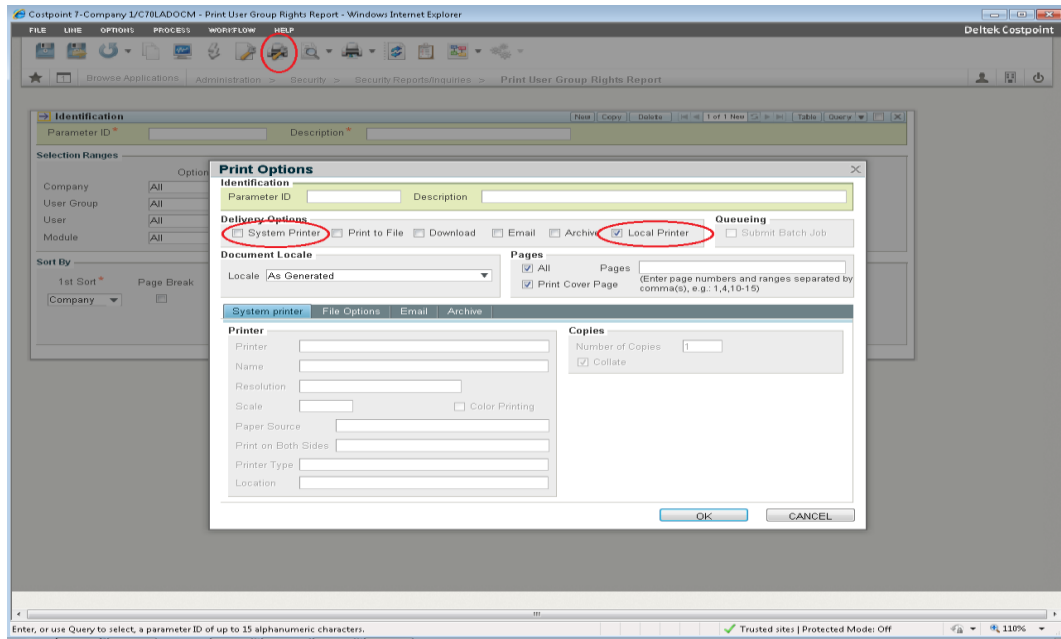
7. On the Print Options screen, select the **System Printer** or the **Local Printer** Delivery Option, depending on how you set up your Application Server printer. Then, click **OK**.

8. On the Print User Group Rights Report screen, click **Print Default Report**.
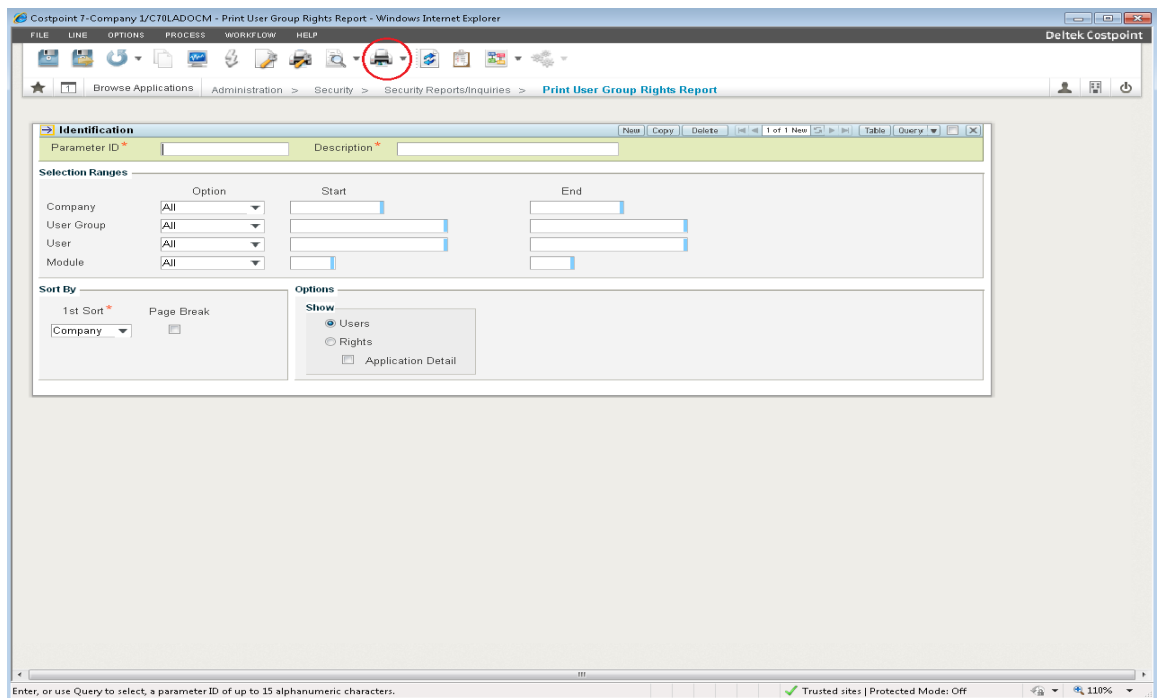
If the User Group Rights Report prints correctly, then your Time And Expense 10.0.0 Application Server printer setup is working properly. If the report does not print correctly, please contact Deltek Time And Expense 10.0.0 Technical Support.

9. Click **File » Close Application** to close the Print User Group Rights Report screen.

10. Click **OK** when the following message displays: "You have unsaved changes. Select Cancel to go back and save changes or select OK to discard changes and close the application"

11. You can now begin to configure and use the Time And Expense 10.0.0 system. Please refer to the Related Documentation section for a list of all documentation included with the Time And Expense 10.0.0 release.

Collation Conversion

> If you plan to support European language character set specifically with Euro symbol as part of any description or text and your current collation is not **Latin1_General_BIN**, you are required to run the conversion tool to support those special characters/symbols.
>
> Before converting your Time and Expense database to binary collation, it is required that all domain(s)/schema(s) within the database are upgraded to 10.0.0 prior to converting to binary collation.

This section provides instructions for converting your Time and Expense 10.0.0 databases/schema(s) from your current collation (for example, SQL_Latin1_General_CP1_CI_AS) to **Latin1_General_BIN**. Deltek now **strongly recommends** converting to the **Latin1_General_BIN** collation for proper application functionality.

Starting with Time and Expense 10.0.0, if you use SQL Server RDBMS, you are recommended to change the default collation on your Time and Expense database to **Latin1_General_BIN**. Deltek provides the collation utility, which is downloadable from DSM.

If you are converting your database collation, you must perform the steps in this section for all schema(s) of your Time and Expense 10.0.0 databases or schemas on your Time and Expense **database** server(s) or from a Windows client machine with connectivity to the database server. Deltek highly recommends that you convert other schemas contained within the Time and Expense databases for compatibility reasons as well. If you are a Costpoint client and have performed this conversion on your Costpoint database(s), it is required that your Time and Expense database also be converted to binary collation. The only schema that is **not** required to be converted to binary collation is the admin schema, TC_0000, which is no longer used in Time and Expense 10.0.0

> Please note that the default SQL Server collation setting of **SQL_Latin1_General_CP1_CI_AS** should not be modified at the SQL Server **instance level**. Time and Expense requires a non-binary collation at the **instance level** for SQL Server installations.

Background

Starting with Time and Expense 10.0.0, Deltek strongly encourages clients using a Microsoft SQL Server database to validate the database collation currently used. If it does not match the recommended collation, run the provided collation conversion tool to switch to the recommended collation.

> New customers installing Time and Expense 10.0.0 are not affected by this conversion as newly installed databases already have the proper collation.

The text below is intended to provide background and rationale for this change as well as what impact the decision to convert or stay with the current collation will have on your enterprise.

Time and Expense utilizes data filtering and sorting in performing many financial calculations and reporting. Depending on the situation, the filtering and sorting may be performed at any tier in the product—database, application server, or client browser/application. It is important that all tiers within the product perform data filtering and sorting the same way to have a guaranteed and predictable result. Upon evaluating various third-party products and technologies, which comprise the Time and Expense technology stack, we found that all products (with the exception of Microsoft SQL Server) by default perform data comparison and sorting operations in the same way, treating data as case-sensitive. Microsoft SQL Server is the only third-party product which

by default treats data as case-insensitive. At the same time, SQL Server allows the database administrator to choose comparison and sorting rules by selecting the appropriate collation.

The Microsoft SQL Server collation supported with Time and Expense is "Latin1_General_BIN", which makes the SQL Server database compare and sort data in the same way that Java, JavaScript, and Oracle database do. As part of the upgrade to Time and Expense 10.0.0, Deltek is providing a Collation Conversion Tool for customers that use Microsoft SQL Server. For existing Time and Expense upgrades, the Collation Conversion tool will need to be run after the upgrade has been successfully completed for all domains to bring the Time and Expense database to the above supported collation. This is only for databases that are not currently using our recommended collation.

The Collation Conversion Tool will set the collation of your Microsoft SQL Server Time and Expense database to "Latin1_General_BIN". This setting is binary case sensitive, and may have an impact on customer specific programs, reports, data imports, and other applications which interact with Time and Expense and/or the underlying Time and Expense database. These applications and programs may need to be modified and need to be re-tested as part of your Time and Expense 10.0.0 upgrade.

For example:

- If custom scripts or stored procedures exist where the table and field names are in lower or mixed case, the scripts and stored procedures will need to be modified so that they match the object case-sensitivity which is always uppercase for Time and Expense tables.

- If end -ser queries refer to account names in lower case, and the account names are actually in mixed case or uppercase, the queries will need to be adjusted so that they use the same case as the account names.

- If reports or data import programs interact with Costpoint, they may need to be adjusted and re-tested as well.

We recognize that this can be a significant change for some customers during the Time and Expense upgrade. For additional assistance in evaluating this collation change, and its impact on your existing applications and programs, please contact Deltek Services. For a more detailed explanation of collation, please refer to the Microsoft online help.

If evaluation of the collation impact is not feasible in the timeframe defined for your Time and Expense 10.0.0 transition, it's possible to run the collation conversion tool after the upgrade is already done at a later point

Deltek will continue to provide support for clients who use a different collation, unless Deltek has reason to believe that the reported issue is caused by the unsupported collation. Customers should weigh the level of effort associated with modifying and testing of internally developed programs interfacing with Time and Expense against the risk associated with staying on their existing collation settings.

Deltek provides a Collation Conversion tool to help you make the switch to the new collation setting. The tool can be used to change the collation on any schema within a database. This tool converts the collation setting on the database as well as for objects owned by one schema. In order to convert more than one schema within the same database, re-run this tool multiple times against each schema that is an active domain of the Time and Expense system.

The Collation Conversion tool uses the SQL DMO objects for which the SQL Server 2005 Backward Compatibility Feature Pack must be installed before starting the conversion

The entire collation conversion is split into multiple stages, and restart capability is provided from the point of failure. You must correct the problem before re-executing the Collation Conversion tool from the point of failure.

If you are converting your database collation, you <u>must</u> repeat the steps in this section for <u>each</u> of your Time and Expense 10.0.0 databases and/or schemas.

Prerequisites

Before you begin, the following prerequisites should be met:

- Database Server(s) must have SQL Server 2005 Backward Compatibility Feature Pack installed even if you current instance of SQL Server version is at the latest release of SQL 2012 or SQL 2014.

    - **SQLServer2005_BC_x64.msi** — For 64-bit installations

    - **SQLServer2005_BC.msi** — For 32-bit installations

        > You can download this feature pack from Microsoft using the following link: http://www.microsoft.com/en-us/download/details.aspx?id=15748.

- Microsoft .NET Framework 3.5 or 3.5 SP1 (3.5.1) and 1 GB free space to run the install.

- Make a full backup of the database(s) containing all your Time and Expense domain(s) (schema(s)).

- Make sure your Transaction schema name is in all uppercase. If not, please confirm with your internal DBA to convert schema and user names to uppercase before starting the collation conversion.

- Make sure all Time and Expense services and open database connections are closed before starting the collation conversion process.

- Stop the Time and Expense 10.0.0 WebLogic Server.

- If using full recovery option on the database level, please set your transaction log backup to every 15 minutes to maximize log file usage during the conversion process period. Even if simple recovery option is selected, the log file can grow larger based on the table size and the number of records within a table. Please make sure enough disk space is available in the drive where the database log file is located to prevent unexpected behavior.

Collation Conversion

Purpose

This section provides instructions on how to perform the actual Collation Conversion on your Time and Expense 10.0.0 Microsoft SQL Server database.

To convert your Time and Expense database, complete the following steps:

1. From your Time and Expense 10.0.0 Application server, stop the Time and Expense 10.0.0 WebLogic Server if it is running.

    > Please refer to "Appendix G: Starting/Stopping Time and Expense 10.0.0 WebLogic Server" for instructions on stopping the Time and Expense 10.0.0 WebLogic Server.

2. Make a full backup of the database(s) containing the Time and Expense schemas before converting.

> You must have a good backup of all Time and Expense databases and schemas before proceeding with the conversion.

3. Install the SQL Server 2005 Backward Compatibility Feature Pack as instructed in the prerequisites above.

> The backward compatibility feature **must** be installed on the database server where the collation conversion is desired.

4. Make sure all Time and Expense services and open database connections are closed before starting the collation conversion process.

5. Locate and run **DeltekCostpoint711Collation.exe** to launch the Collation conversion program. The Welcome to the Deltek Costpoint Collation Conversion Wizard screen displays.

> Due to enhanced security in Windows Server 2012, it is advised to use the option to **Run as Administrator** when launching the installation executables even when the logged in user has local administrative rights. This option is accessed by right-clicking the installation executable file name in Windows Explorer, and selecting **Run as Administrator** to launch the program.

6. Click **Next >**. The License Agreement screen displays.

7. Review the license agreement, and select the **I accept the terms of the license agreement** option.

8. Click **Next >**. The Choose Database Collation Scripts Directory screen displays.

9. Click **Browse** to navigate to an installation location for the Time and Expense Collation script files. The default is **C:\Program Files\Deltek\Costpoint**. You will need to install to a different location for each of your schema conversions. Deltek recommends appending the name of each of your schemas to the default location, for example:

   ▪ C:\Program Files\Deltek\Costpoint\TC_0005

   ▪ C:\Program Files\Deltek\Costpoint\TC_0009

10. Click **Next >**. The Microsoft SQL Server Database Information screen displays.

11. Perform the following:

   ▪ **IP Address or Hostname** — Enter the IP address (for example, **10.2.2.154**) or hostname (for example, **dbsvr01**) of your Time and Expense 10.0.0 database server. The default is your computer name.

   > The IP Address or Hostname cannot be 127.0.0.1 or localhost.

   ▪ **Port** — Enter the port that your Time and Expense 10.0.0 Transaction database server software uses to listen for requests. The default port for Microsoft SQL Server is **1433**.

   ▪ **Database Name** — Enter the name of your Time and Expense 10.0.0 Transaction (**Ex. DELTEKTE**) database.

   ▪ **Instance Name** — Enter the name of your corresponding Time and Expense 10.0.0 database instance. The default is **LOCAL**.

- **User Name** — Enter the user (for example, **TC_0005**) for your corresponding Time and Expense 10.0.0 database.

- **Password** — Enter the password for your corresponding Time and Expense 10.0.0 database user.

- **Schema Name** — Enter the schema name (**TC_0005**) for your corresponding Time and Expense 10.0.0 database.

> The schema name is case-sensitive.

- **SA User Name** — Enter the name of your Microsoft SQL Server SA user. The default is **sa**.

- **SA User Password** — Enter the password for your Microsoft SQL Server SA user.

12. Click **Test Connection**. If you entered the proper link user connection information, the **"Connection Successful. Click Next."** message displays. If this does not display, correct the information entered and click **Test Connection** again. After the message displays, click **Next >**. The Pre-Installation Summary screen displays.

13. Review the installation parameters you selected.

- If you want to change any settings, click **< Back** to go back and make the necessary changes.

- If you are satisfied with these settings, click **Install >**.

- When the "You are about to perform a collation conversion on your <Schema_Name> database schema, please select "Yes" to confirm or "No" to cancel." message displays, click **Yes** to begin the conversion.

> **Based on your schema data size, this conversion can take a long time to complete. Please do not interrupt it.** A Windows Command Prompt will also open, showing the scripts being executed.
>
> It will perform the following (stopping if any errors are encountered):
>
> - Run Collation Conversion

It is normal for Stage 4 and Stage 6 to run for a longer period of time (in hours based on database size). During this time, please don't kill the process from task manager or reboot your server.

14. When the conversion has completed, the InstallShield Wizard Complete screen displays, indicating it "… **has successfully installed the Deltek Time and Expense Collation software and converted your database**…."
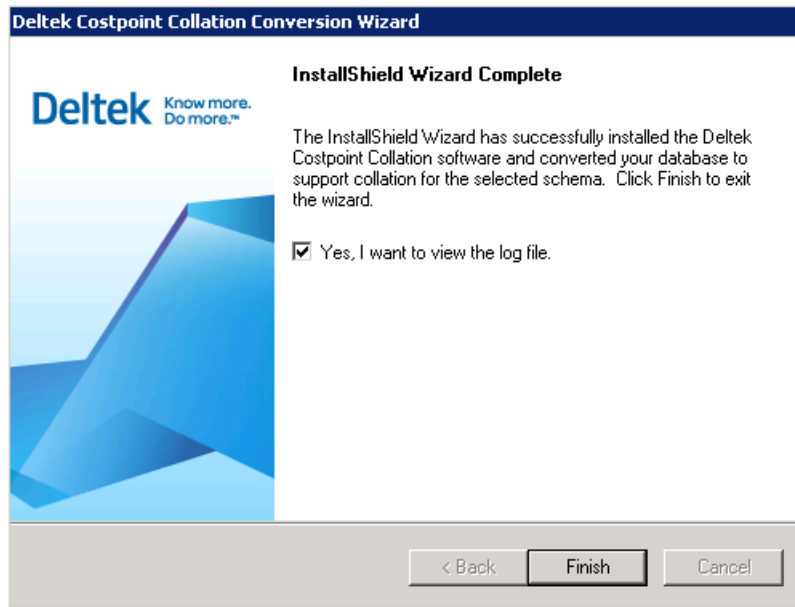
Perform the following:

- **Yes, I want to view the log file** — Select this check box to open the **DeltekCostpointCollationInstallLog_<date>_<time>.txt** file (from the **<COLLATION_INSTALL_DIR>\Database\Scripts\Collation** directory). It is selected by default.

- Click **Finish** to exit the installation.

15. When the DeltekCostpointCollationInstallLog_<date>_<time>.txt file opens, perform the following:

- Search for "**COLLATION CONVERSION COMPLETED**" then the line "**$DBSUCCESS=TRUE**".

- Above those lines you will also see the following (one DATABASE_NAME per run):

```
7-10-2015 16:12:34 (IS)   AppendFileToLogFile  - DATABASE_NAME                    COLLATION_NAME

7-10-2015 16:12:34 (IS)   AppendFileToLogFile  - ----------------------------------------------------  --------------------------------
----------------

7-10-2015 16:12:34 (IS)   AppendFileToLogFile  - TE10STQC12                       Latin1_General_BIN

7-10-2015 16:12:34 (IS)   AppendFileToLogFile  -

7-10-2015 16:12:34 (IS)   AppendFileToLogFile  - TABLE_NAME
COLUMN_NAME

7-10-2015 16:12:34 (IS)   AppendFileToLogFile  - ----------------------------------------------------------------------------------
--------------------------------  ------------------------------------------------------------------------------------------

7-10-2015 16:12:34 (IS)   AppendFileToLogFile  -

7-10-2015 16:12:34 (IS)   AppendFileToLogFile  - Fri Jul 10 16:12:27 2015 -- COLLATION CONVERSION COMPLETED

7-10-2015 16:12:34 (IS)   AppendFileToLogFile  - $DBSUCCESS=TRUE
```

Finding the above proves that you successfully converted your database schema.

You must repeat this Conversion section for each of your Time and Expense 10.0.0 database schema(s) or domain(s).

Troubleshooting

This section provides guidance for troubleshooting issues encountered with the Collation Conversion tool.

Failure after Stage 0 — DMO Test

If you encounter a failure during the Change Collation conversion process, you may see the following message in the log file.

"Stage 0 - DMOTest Failed"

In order to fix, install the SQL Server 2005 Backward Compatibility Components Feature Pack that is included with the distribution. The files can be found in your **<COLLATION_INSTALL_DIR>\Database\Scripts\Collation** folder.

The file names are:

- **SQLServer2005_BC_x64.msi** — Use for 64 bit installations
- **SQLServer2005_BC_x86.msi** — Use for 32 bit installations

Stage 7 — Creation Of Foreign Keys

During the change collation process to **Latin1_General_BIN**, when recreating foreign keys on the Time and Expense tables, it is possible to run into failures in Stage 7. This can happen even though the same foreign key constraint existed on the referencing table before the change in collation. Failure in any foreign keys will result in a failed status of the conversion program.

The error message is visible in the log file found in **<COLLATION_INSTALL_DIR>\Database\Scripts\Collation\Log** and the SQL script that failed is named **<DB_NAME>_<SCHEMA NAME>_CreateScript.sql** and can be found in **<COLLATION_INSTALL_DIR>\Database\Scripts\Collation\DBCollationScripts**. The information and location is only provided for informational message and the actual commands needed to recreate is contained within the log file.

One common reason for this failure is the case-sensitivity of the data after the collation change to Latin1_General_BIN. If the data in the referencing table is not in the same case as the corresponding data in the referenced table, it will result in failure during the creation of foreign keys.

The solution is to update the data in the referencing table to match the case of the corresponding data in the referenced table and then restart the Collation Conversion tool. Alternately, you can update the Primary Key in the referenced table if more than one child table references this Primary Key.

Towards the verification section in Stage 9, if there are any foreign key failures, all missing foreign key will be listed similar to the following along with the commands needed to recreate.

7-10-2015 16:12:34 (IS)   AppendFileToLogFile - The following foreign keys are missing, please correct the necessary data and rebuild the keys for proper application functionality:

7-10-2015 16:12:34 (IS)   AppendFileToLogFile -

7-10-2015 16:12:34 (IS)   AppendFileToLogFile - Missing Foreign Key: F21766

7-10-2015 16:12:34 (IS)   AppendFileToLogFile - ALTER TABLE [TC_0005].[EVENT] ADD CONSTRAINT [F00104] FOREIGN KEY 7-10-2015 16:12:34 (IS)   AppendFileToLogFile -   (

7-10-2015 16:12:34 (IS)   AppendFileToLogFile -   [FUNCTIONAL_ROLE_CD]

7-10-2015 16:12:34 (IS)   AppendFileToLogFile -   ) REFERENCES [FUNCTIONAL_ROLE] (

7-10-2015 16:12:34 (IS)   AppendFileToLogFile -   [FUNCTIONAL_ROLE_CD]

7-10-2015 16:12:34 (IS)   AppendFileToLogFile -   ) ON DELETE CASCADE

7-10-2015 16:12:34 (IS)   AppendFileToLogFile - GO

For example, in the following scenario, the creation of foreign key constraints F00104 failed during the collation conversion process. In order to rectify this issue, find the rows in the referencing table (EVENT) that do not match rows in the referenced table (FUNCTIONAL_ROLE) and re-run the statement to create the foreign keys. If the issue is due to the case-sensitivity of the data, the corresponding rows in the referenced table are updated.

> SELECT FUNCTIONAL_ROLE_CDFROM EVENTA WHERE NOT EXISTS (SELECT * FROM FUNCTIONAL_ROLEB WHERE B. FUNCTIONAL_ROLE_CD= A. FUNCTIONAL_ROLE_CD)
>
> GO
>
> UPDATE FUNCTIONAL_ROLESET FUNCTIONAL_ROLE_CD= 'PADMIN' WHERE FUNCTIONAL_ROLE_CD_ID = 'PAdmin'
>
> GO
>
> ALTER TABLE [TC_0001].[EVENT] ADD CONSTRAINT [F00104] FOREIGN KEY
>
>   (
>
>   [FUNCTIONAL_ROLE_CD]
>
>   ) REFERENCES [FUNCTIONAL_ROLE] (
>
>   [FUNCTIONAL_ROLE_CD]
>
>   ) ON DELETE CASCADE
>
> GO

After successfully creating all the listed failed foreign keys, re-run the conversion tool to confirm the final step is completed with a successful message.

> Re-running the installer will only verify that all required foreign keys are re-created and no further action is necessary.

If the failure happens due to a composite primary key, please modify the above query to include all columns of the composite key so the resulting data set represents the correct results.

For example, during creation of constraints, if the create script fails midway through the execution, re-executing the script may result in other types of errors because some of the constraints were created previously.

> If you run into errors during collation conversion and are unable to troubleshoot the issue, please contact Deltek Technical Support.

Unable to Connect to Time and Expense 10.0.0 after Collation Conversion

If you are unable to connect to Time and Expense 10.0.0 after converting the collation on all your database schemas, you may need to check the following:

- **Start Costpoint 7.1.1 Config Utility** — On the **Time and Expense** tab, under the **Database Information** tab, you may need to update the **User** under your **Meta Segment** and **Admin Segment** sections. **The user name case will need to match the <u>case</u> of your schema name for all segments.**

- **Costpoint 7.1.1 Windows Service** — **Stop** and **Restart** your **Costpoint 7.1.1** Windows service.

Post-Installation Configuration

Apply Latest Time And Expense 10.0.0 Hot Fixes

Updates to Time And Expense 10.0.0 will be released in a Cumulative Update installer.

Once you have a functioning Time And Expense 10.0.0 environment, follow the **DeltekTimeAndExpense1000DeployingHotFixes.pdf** installation document to install the latest Time And Expense 10.0.0 hot fixes.

Troubleshooting Instructions

Troubleshooting instructions for problems with the Database Tier installation are detailed in this section.

How to Remedy a Database Tier Installation That Failed

The steps to repair a Time And Expense 10.0.0 Database Tier installation that has failed are detailed in this section.

If you encounter a failure during the Database Tier installation process, complete the following steps:

1. Click **OK** if, during the Database Tier Installation, you receive the following error message: "Failed to create Time And Expense TRANSACTION Database"
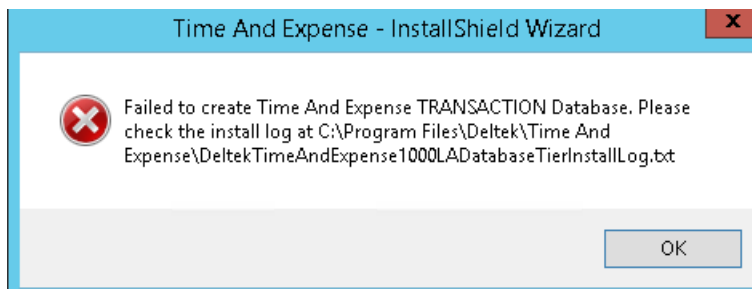
2. After the installation has stopped and a failed installation error message displays on the InstallShield Wizard Complete screen, select the **Yes, I want to view the log file** check box. This opens the DeltekTimeAndExpense1000DatabaseTierInstallLog_<date>_<time>.txt file from the C:\Program Files\Deltek\Time And Expense\10.0.0\logs directory).

3. Click **Finish** to exit the installation.

4. When the DeltekTimeAndExpense1000DatabaseTierInstallLog_<date>_<time>.txt file opens, run a search for the "**error**" search string. Report all errors found to Deltek Time And Expense Technical Support.

   Under error conditions on new installs, the installer does not provide an option to restart. One of several actions might be required.

5. After performing the required actions from Technical Support, perform the following:

   ▪ Proceed to the Database Tier Installation section at the beginning of this document and restart this installation at the **Install Database Tier Software** step.

- You have the option of continuing to upgrade the failed domain by providing the same set of parameters or skip the failed domain and upgrade other domains that are yet to be upgraded.

Latest Upgrade Files Download Instructions

The Time And Expense Database Tier installer provides certain command-line options that can be invoked in special circumstances. To display the currently supported switches:

- Open Command Prompt in Administrator Mode

- Navigate to the directory where the installer is located

- Type **DeltekTimeAndExpense1000DatabaseTier.exe /?**

The instructions to download the latest Time And Expense 10.0.0 Database upgrade and DeltekTimeAndExpense1000RequirementsINI files are detailed in this section. Each installer will automatically download the applicable files if your servers have internet access. If your servers do not, you will need to run this step for each installer.

You must perform this step on any machine that has Internet access.

**To download the required upgrade files, complete the following steps:**

1. Run the applicable command to retrieve the files from DSM:

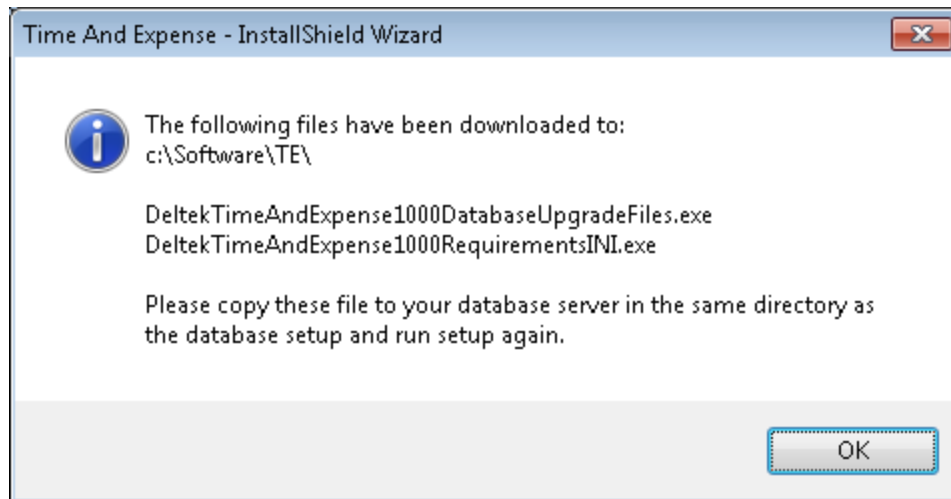   **DeltekTimeAndExpense1000DatabaseTier.exe /filedynamicdownload**

   DeltekTimeAndExpense1000ApplicationTier.exe /filedynamicdownload

   DeltekTimeAndExpense1000WebTier.exe /filedynamicdownload

   You will see the following screen.
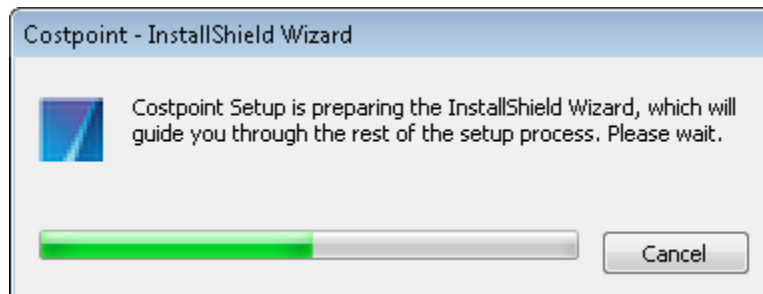
2. After the file downloads a message similar to the following displays, click **OK**.

3. Copy the downloaded **DeltekTimeAndExpense1000DatabaseUpgradeFiles.exe**/ **DeltekTimeAndExpense1000RequirementsINI.exe** file(s) to your server, in the same folder as your '.exe' installer file.

Deltek is the leading global provider of enterprise software and information solutions for professional services firms, government contractors, and government agencies. For decades, we have delivered actionable insight that empowers our customers to unlock their business potential. Over 14,000 organizations and 1.8 million users in approximately 80 countries around the world rely on Deltek to research and identify opportunities, win new business, optimize resource, streamline operations, and deliver more profitable projects. Deltek – Know more. Do more.®

deltek.com

Deltek Know more. Do more.™