

# User Manual

## Active Directory Change Tracker

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**Active Directory Change Tracker**  
Change Auditing, Tracking and Analysis for Active Directory

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# 1 Active Directory Change Tracker

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## 1.1 About ADChangeTracker

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### About Vyapin Active Directory Change Tracker (ADChangeTracker)

**Vyapin Active Directory Change Tracker (ADChangeTracker)** *audits, tracks and analyzes all changes made to your Active Directory configuration* The tool audits all changes made to your *Active Directory* by periodically collecting *only the changed data*, reporting what exactly changed, along with the new and old values, *when the change was made, where the change happened* in your *Active Directory* and the tool also determines *who made the change* by looking up the *Security Event logs* of your audit-enabled *Active Directory*.. *Active Directory Change tracker* records and maintains the *entire history all tracked changes* along with the relevant *Event log data in a SQL server database* for future reference and analysis. A *powerful search tool* helps you analyze all *past changes* on any predefined search criteria. Changes can be selectively tracked (such as only OUs) and a powerful email notification mechanism lets you configure different types of *changes (such as Created, Deleted, and Modified)* and get them notified to different end users based on the OUs/containers where the changes happened.

### 1.2 System Requirements

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#### For the computer running ADChangeTracker

<b><i>Processor</i></b>	Intel Pentium Processor
<b><i>Disk Space &amp; Memory</i></b>	512 MB RAM and minimum of 20 MB of free disk space
<b><i>Operating System</i></b>	Windows 7 / Windows Vista / Windows XP / Windows Server 2000 / Windows Server 2003 / Windows Server 2008 / Windows Server 2008 R2 with .NET Framework 4.0 or higher with the latest service packs.
<b><i>Database</i></b>	Microsoft SQL Server 2008 (Enterprise / Standard / Developer / Express edition) or Microsoft SQL Server 2005 (Enterprise / Standard / Developer / Express edition) running in local / remote computer with latest Service Pack.
<b><i>Software</i></b>	<u>MDAC v2.5/2.6/2.8</u>

#### For the computers reported by ADChangeTracker

Windows Server 2008 R2 / Windows Server 2008 / Windows Server 2003 (SP2) / Windows Server 2000 running Active Directory.

### 1.3 Who can Use ADChangeTracker?

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Organizations running Microsoft Active Directory can greatly benefit from ADChangeTracker. It is a *powerful Change auditing tool* for Active Directory Administrators. *System Administrators* can *monitor changes* to *Active Directory Servers* across the enterprise network in any location.

#### **Users that would benefit from ADChangeTracker:**

- Systems management personnel
- CIOs and CSOs
- Security and Systems Audit personnel
- System Administrators

#### **Organizations that would benefit from ADChangeTracker:**

- Companies having enterprise network based on Active Directory
- Any company having Windows 2008 R2 / 2008 / 2003 / 2000 Active Directory servers

### 1.4 How to Activate the Software?

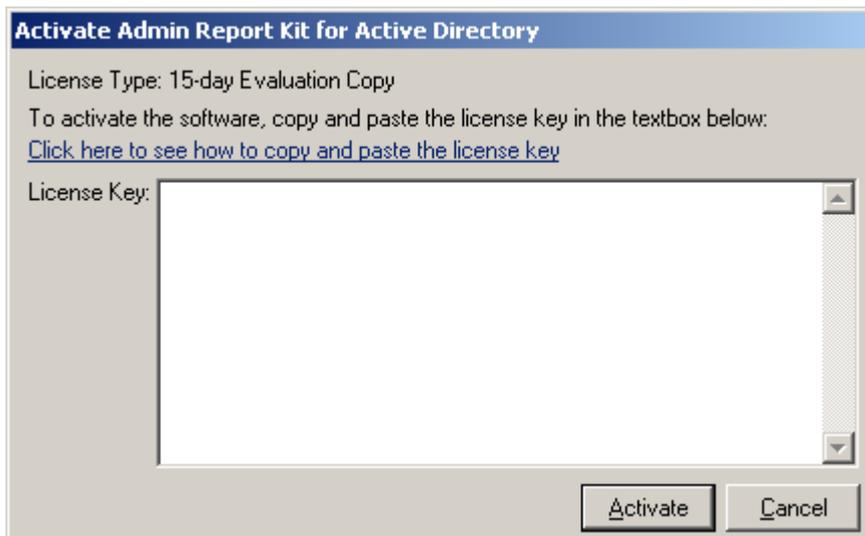
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Once you purchase the software online or through any one of our resellers, you will receive a sale notification through e-mail from our sales department. We will send you an e-mail with the necessary instructions to activate the software.

In case you do not receive an e-mail from our sales team after you purchase the software, please send the following information to our sales department at sales@vyapin.com with the sales order number:

- **Company Name:** End-user Company Name
- **Location:** City & Country for the Company Name given above

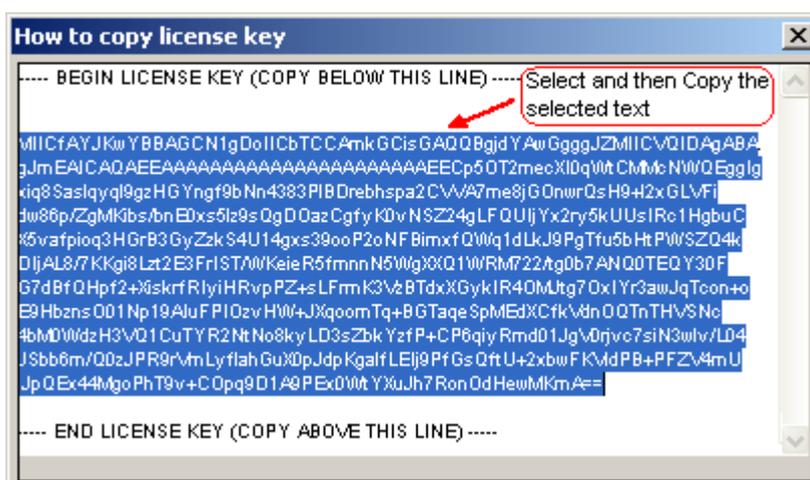
Please allow 12 to 24 hours from the time of purchase for our sales department to process your orders.



**Image 1 - Activate screen**

Perform the following steps to activate the software:

- 1) *Download evaluation/trial* copy of software from the respective product page available in our website at <http://www.vyapin.com/>
- 2) *Install* the software on the desired computer.
- 3) You will receive a *license key* through e-mail as soon as the purchase process is complete.
- 4) *Click 'Activate' in Help -> About -> Activate* menu to see the Activate dialog (as shown in Image 1).
- 5) *Copy the license key* sent to you through email and pastes it in the '*License Key*' *textbox*. For help on how to copy the license key, click '*Click here to see how to copy and paste the license key*' link in the Activate dialog (as shown in Image 2).



**Image 2 - How to copy license key screen**

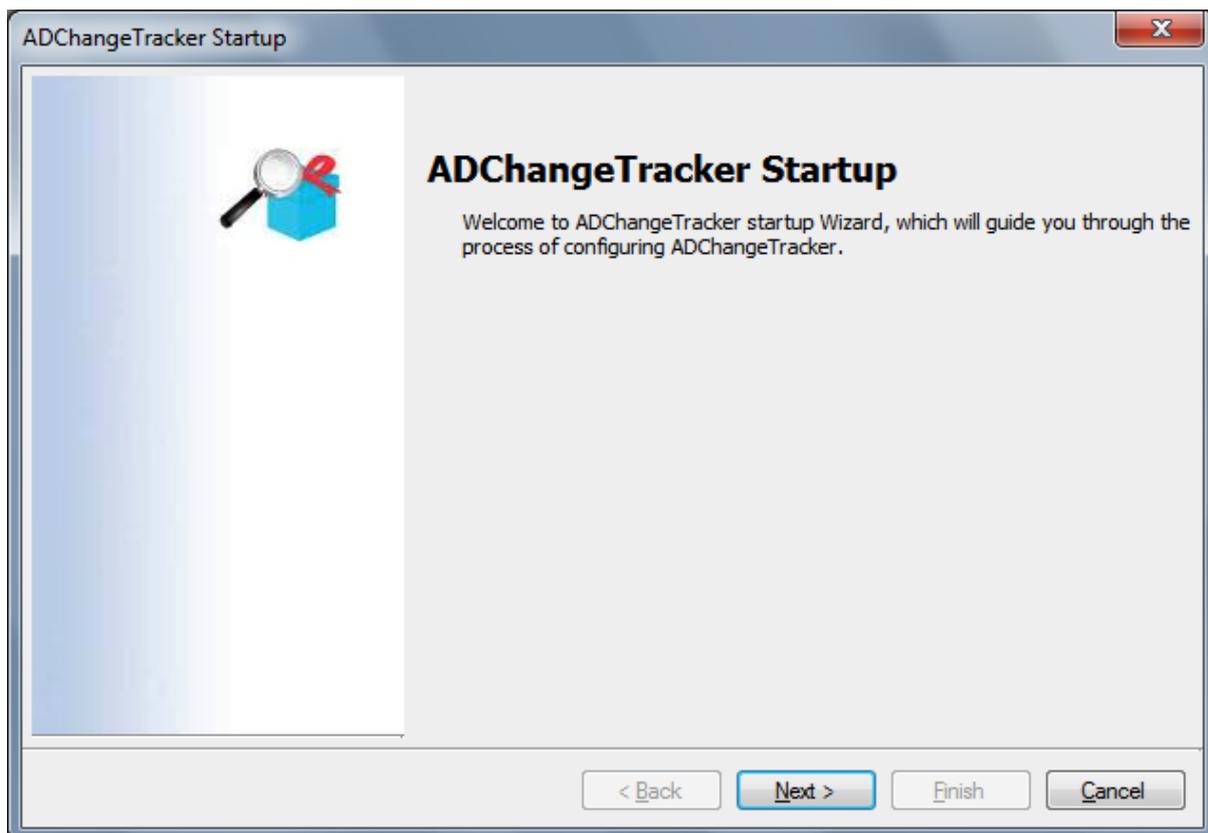
## 2 Getting Started

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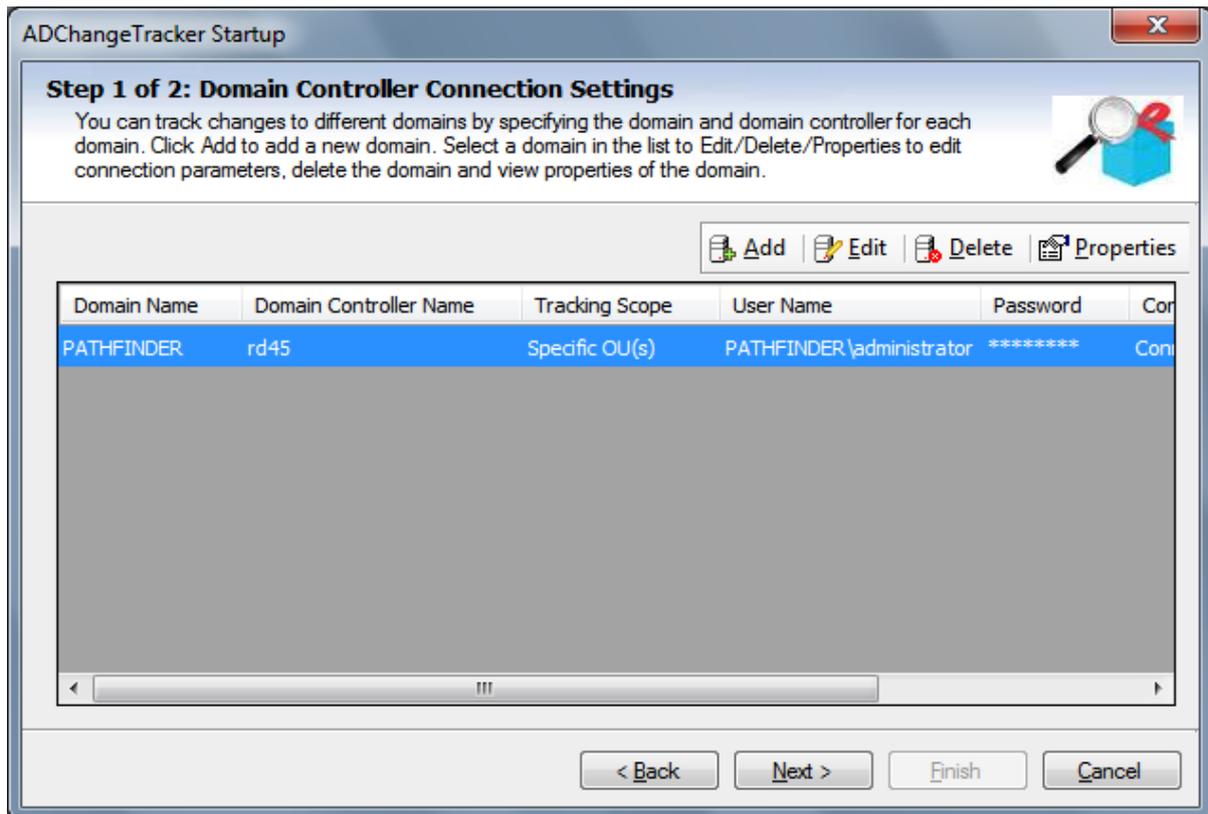
### 2.1 Configure ADChangeTracker

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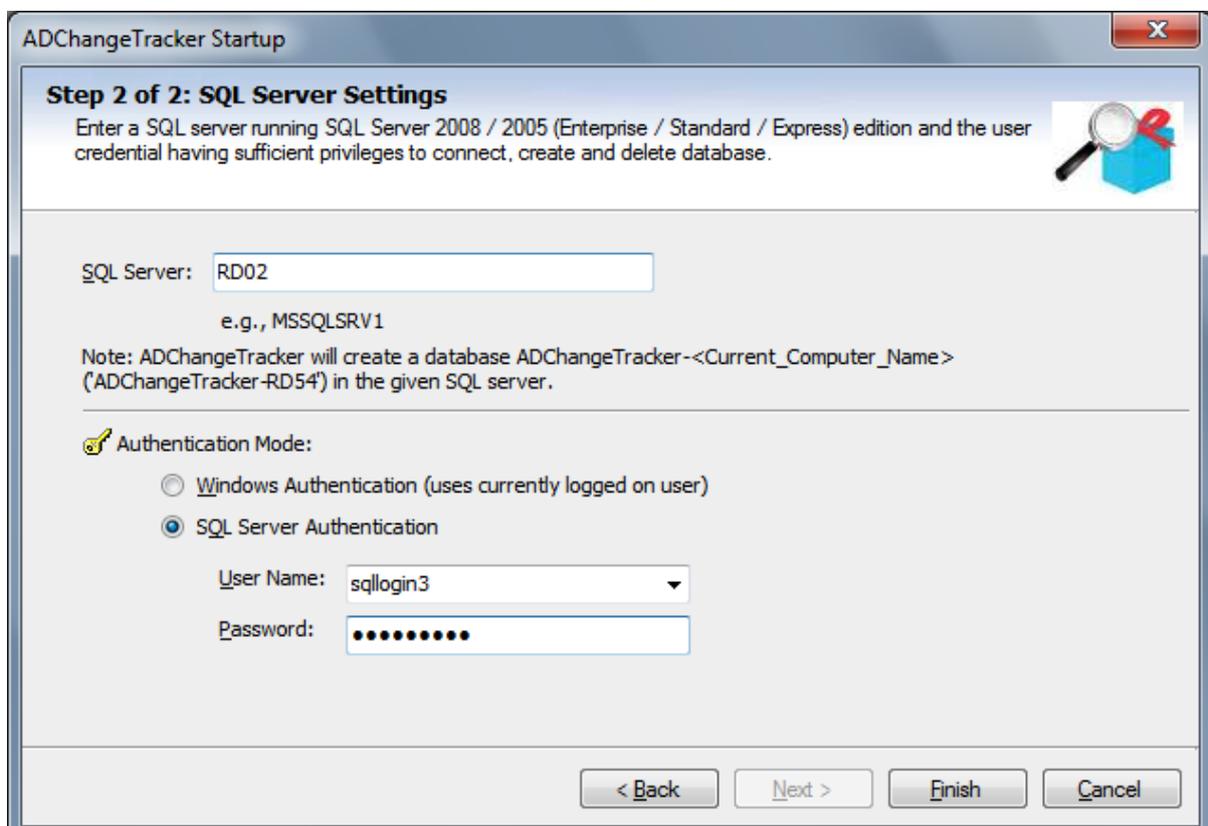
**ADChangeTracker Startup** wizard will help you configure the ADChangeTracker application to *track changes in Active Directory domain*. The following wizard will appear when you run the application for the very first time.



Click **Next** to Proceed.



You can add one or more domains in order to track changes by clicking on **'Add'** button. *Changes are tracked* for each domain separately. You may add as many domains as you would like to track changes on.



ADChangeTracker uses **SQL Server database** for its data storage to generate **auditing reports**. ADChangeTracker requires an SQL Server running SQL Server 2008 / 2005 (Enterprise / Standard / Express editions) to connect and create a database. ADChangeTracker will connect to the specified SQL Server based on the authentication mode and *user credentials* to create manage its own *application* databases. A new database will be created in your *SQL server* by the name *ADChangeTracker-<COMPUTER>*, where *COMPUTER* stands for the computer name that is running *ADChangeTracker application*. Thus, each installation of ADChangeTracker will deploy its own database based on the computer where ADChangeTracker is installed. For example, if you *install the software* on 3 different machines, 3 different databases will be created and each installed application will track changes separately independent of each other.

Specify the *SQL Server name, authentication mode, user name* and *password* in the above screen.

Click **Finish** to save *configuration settings*.

### 2.2 Configure Active Directory Auditing

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This section provides step-by-step procedures for enabling auditing of changes to objects in AD DS. This process consists of two primary steps:

- Step 1: Enable audit policy.
- Step 2: Set up auditing in object SACLs by using Active Directory Users and Computers console.

#### **Step 1: Enable audit policy.**

- 1) Click **Start**, point to **Administrative Tools**, and then **Group Policy Management**.
- 2) In the console tree, double-click the name of the forest, double-click **Domains**, double-click the name of your domain, double-click **Domain Controllers**, right-click **Default Domain Controllers Policy**, and then click **Edit**.
- 3) Under **Computer Configuration**, double-click **Policies**, double-click **Windows Settings**, double-click **Security Settings**, double-click **Local Policies**, and then click **Audit Policy**.
- 4) In the details pane, right-click **Audit directory service access**, and then click **Properties**.
- 5) Select the 'Define these policy settings' check box.
- 6) Under **Audit these attempts**, select the **Success**, check box, and then click **OK**.

#### **Step 2: Set up auditing in object SACLs.**

The following procedure presents an example of just one of many different types of SACLs that you can set in AD. You can configure additional SACLs based on the operations that you want to audit.

#### **To set up auditing in object SACLs**

- 1) Click **Start**, point to **Administrative Tools**, and then click **Active Directory Users and Computers**.
- 2) Right-click the organizational unit (OU) (or any object) for which you want to enable auditing, and then click **Properties**.
- 3) Click the **Security** tab, click **Advanced**, and then click the **Auditing** tab.
- 4) Click **Add**, and under **Enter the object name to select**, type Authenticated Users (or any other security principal), and then click **OK**.
- 5) In **Apply onto**, click **Descendant User objects** (or any other objects).

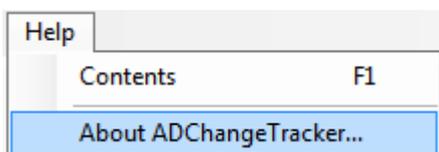
- 6) Under **Access**, select the **Successful** check box for **write all properties**. If you want to audit creation and deletion of objects, select the **Successful** check box for **Delete, Delete Sub Tree** and **Create All Child Objects** too.
- 7) Click **OK** until you exit the property sheet for the OU or other object.

### 2.3 Change Application Data folder location

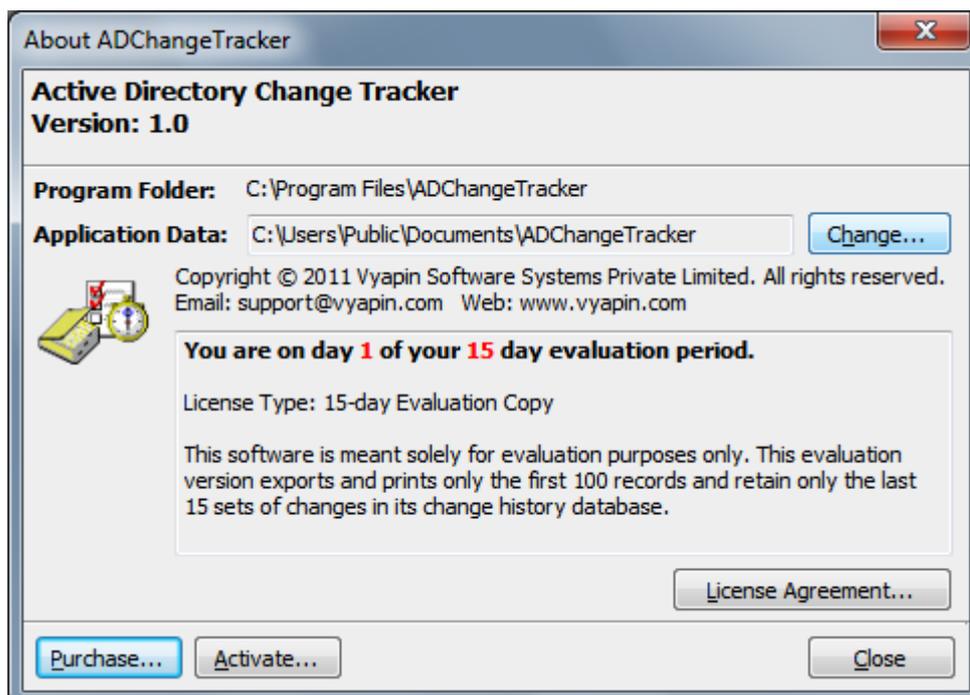
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ADChangeTracker enables you to change **Application Data** folder location, where its application settings and error log are stored, at any time after installing ADChangeTracker software. To change the Application Data folder location, perform the following steps given below:

- 1) Select **About ADChangeTracker** from **Help** menu



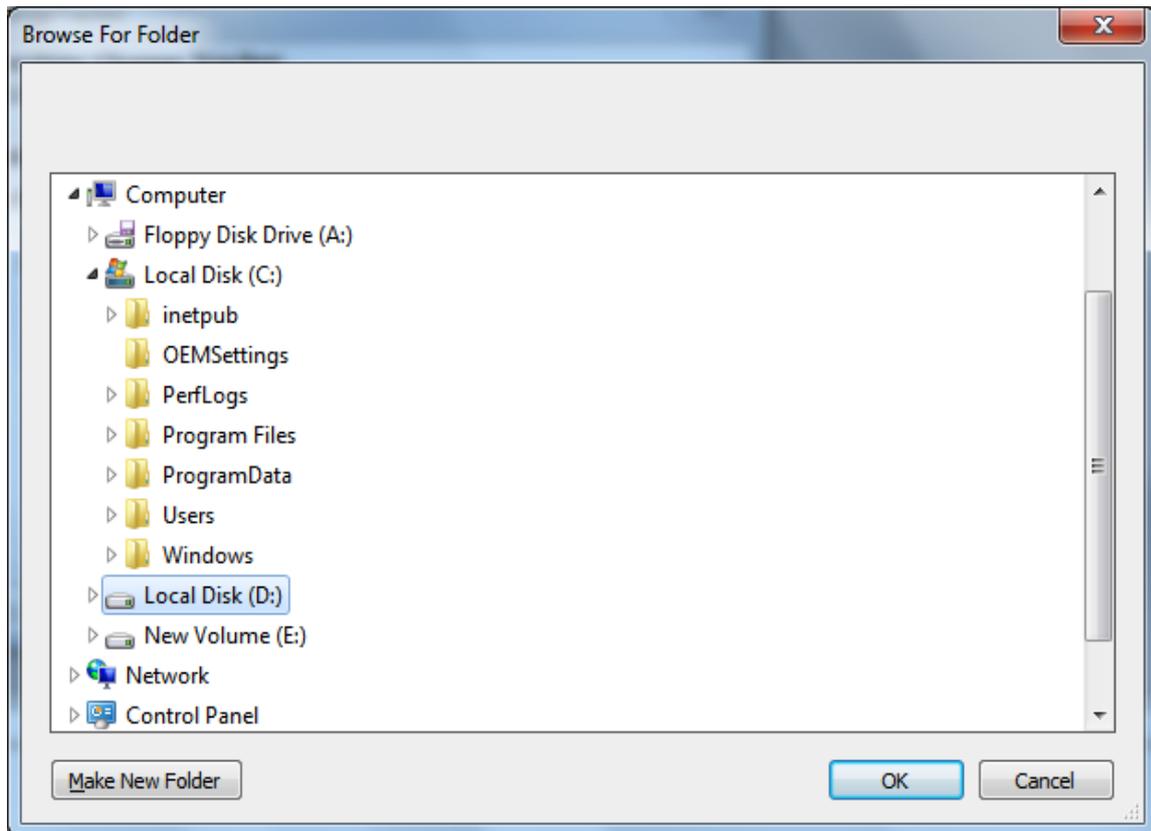
- 2) The **About ADChangeTracker** dialog appears as shown below:



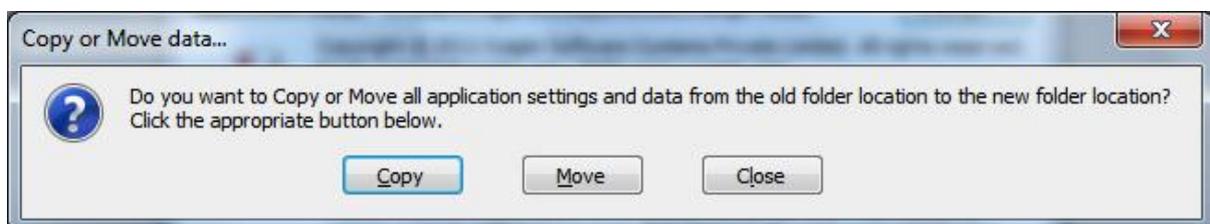
- 3) Click **Change...** button to change **Application Data** folder location of ADChangeTracker application.

## CHAPTER 2 – Getting Started

The Browse for Folder location dialog will appear as shown below:



- 4) Select a desired folder location and Click OK. The folder location can be local drives or mapped network drives.
- 5) ADChangeTracker provides an option to copy or move the existing ADChangeTracker application settings and error log to the new location once you change the Application Data Folder. Once you specify the new Application Data folder location, ADChangeTracker will prompt you to copy or move existing ADChangeTracker application settings to the new location as shown below:



- 6) Click the desired action (Copy / Move / Close) to proceed. ADChangeTracker will use the new Application Data folder location henceforth.

## 3 ADChange Tracker Features-Track Changes

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### 3.1 How to Track Changes?

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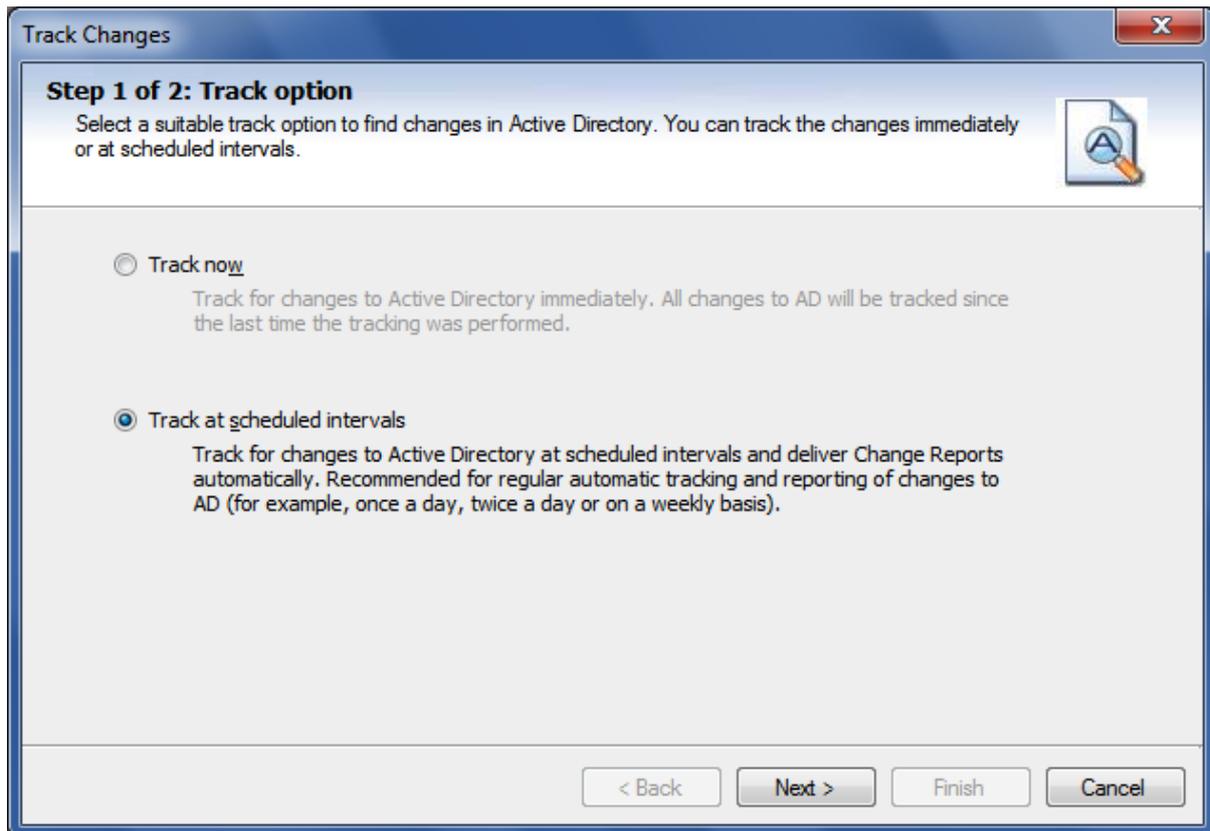
The **Track Changes** feature allows you to track the list of all the changes made in Active Directory. You can check for various changes in Active Directory like addition or deletion of objects, modification of properties.



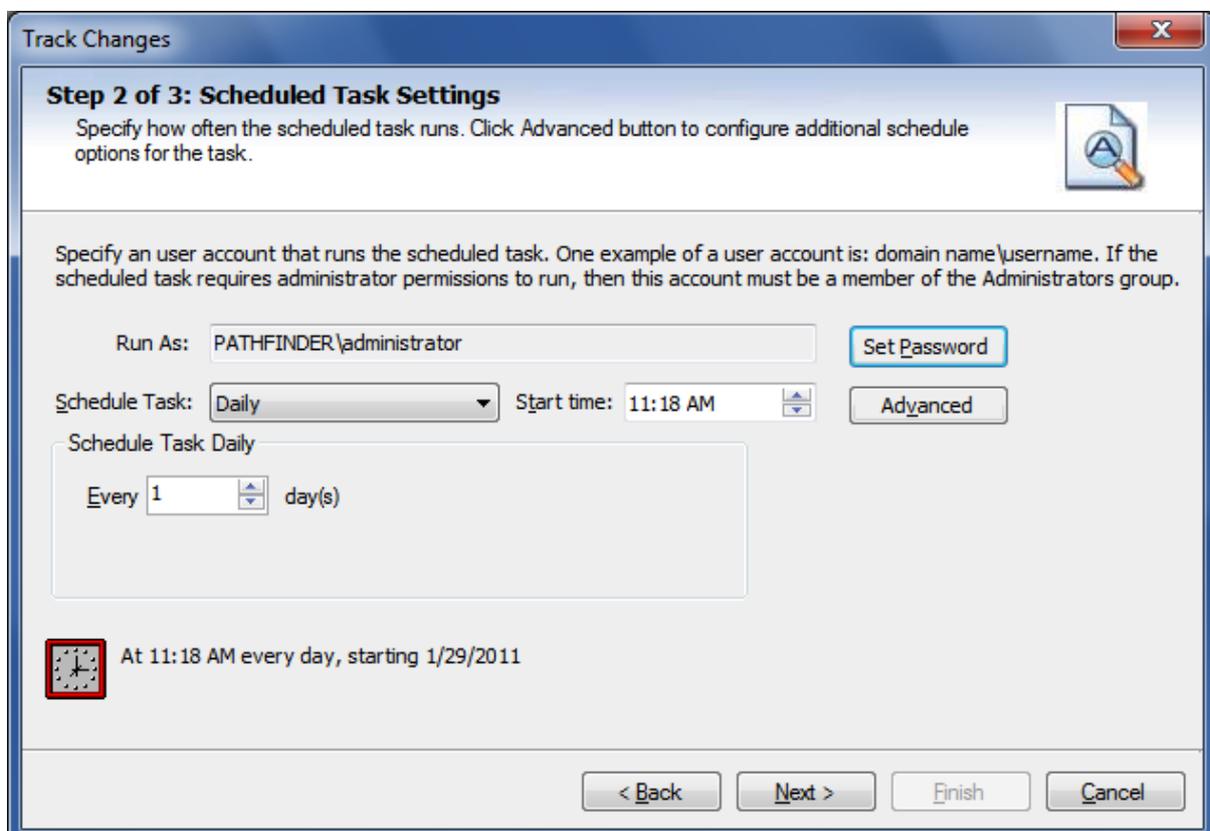
Select **Track Changes** button in the toolbar. The Check for Changes report window will be launched.

Select **Track now option** to track changes made to Active Directory domain immediately upon clicking the **Finish** button or select **Track at scheduled intervals** option to track changes made to Active Directory domain at scheduled intervals.

Changes will be tracked since the last time a tracking was performed. The tracking process will only collect the changed data and store it in the application's change history database. You will have to view the changes by clicking on the **Change Reports** button in the toolbar.



Change the *task schedule settings* as required and *set the password* for the specified **Run As user**.



## CHAPTER 3 – ADChange Tracker Features

Click **Next** to proceed to the next step.

**Track Changes**

**Step 3 of 3: Delivery Options (optional)**  
Select suitable delivery option(s) - Export / Print / E-mail change reports.

**Export** Page Setup for Print & Export

Export Path : C:\ProgramData\ADChange Tracker\Export ...

Export Format:  HTML  MDB  CSV  PDF  XLS  TIFF

Export to time-stamped sub-folder i

**Print**

Printer Name: Send To OneNote 2010

**E-mail**

SMTP Server : RD45

To Address: ADAdministrator@pathfinder.local ✉

File Format: HTML  Compress the attachment Message Settings

< Back    Next >    Finish    Cancel

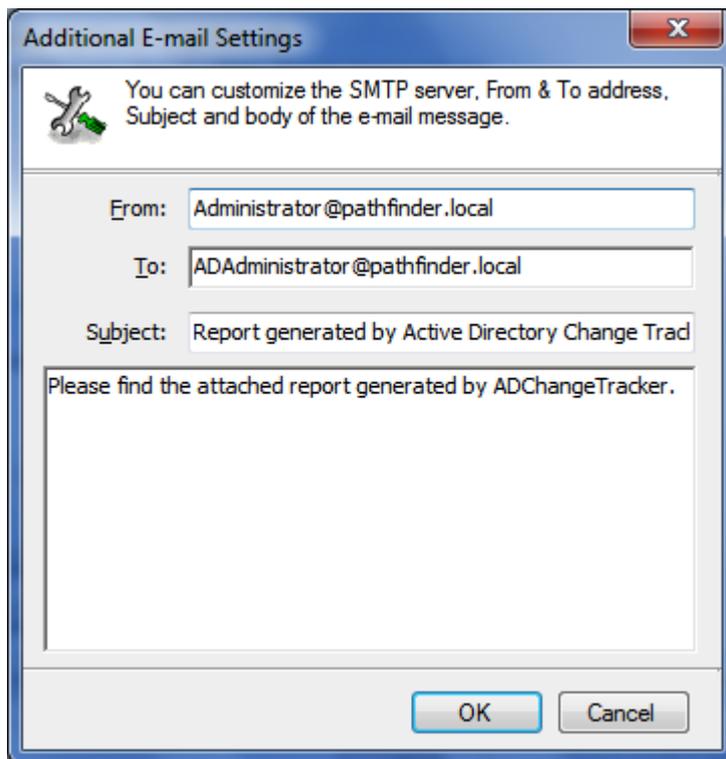
- Select **Export** or **Print** or **E-mail** options as necessary.
- Use **Browse button** to change the export path.
- The *export path* refers to the *destination folder* where the report output file generated should be stored. By default, for each task, a sub-folder with the task name will be created under the specified export path. All selected reports will be *exported to a time-stamped folder* in the format "yyyy-mm-dd hh.mm.ss", under the task name folder. If you want to export to the task name sub-folder in the specified folder (without time stamp folder) instead, clear "Export to time-stamped sub-folder" option

**NOTE:** Clearing the "Export to time-stamped sub-folder" option will not create time-stamp folder and overwrite existing files, if any, in the specified export path.

## CHAPTER 3 – ADChange Tracker Features

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Click **Message Settings** button to specify optional e-mail settings as shown below.

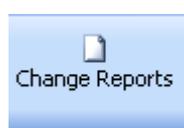


Click **Finish** to save the task details

Once data collection was completed you can view the changes made to your Active Directory domain with the help of **Change Reports** feature.

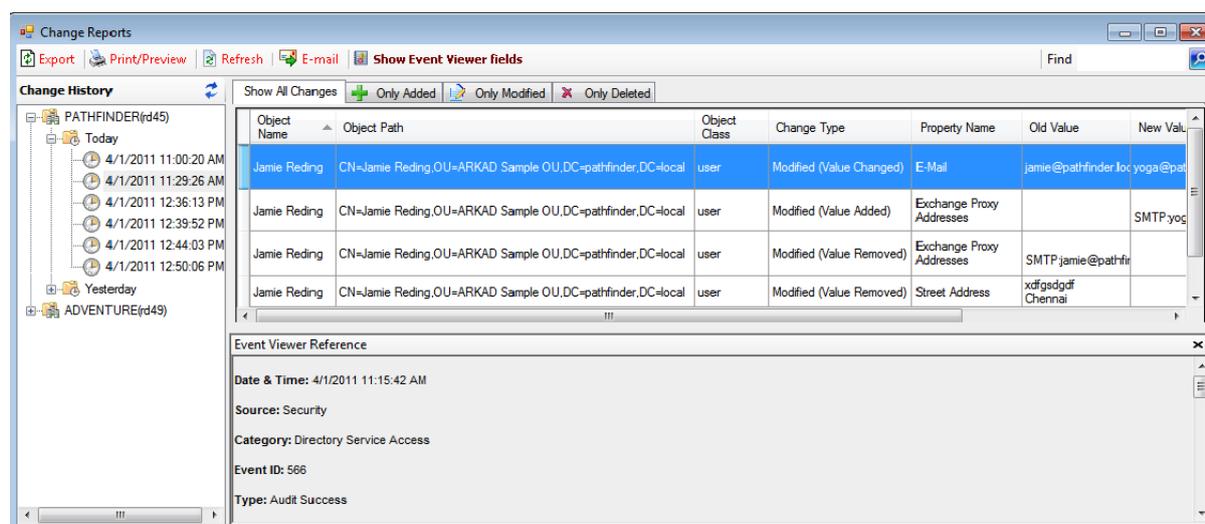
### 3.2 Change Reports-How to Generate Change Reports?

The **Change Reports** feature allows you to report all the *changes* made to your *Active Directory* since the last time a tracking was done by the application. Tracking is a process where all changes made to your Active Directory are detected and synchronized with the application database. ADChangeTracker will maintain all the timestamps corresponding to the changes detected during tracking. Based on the timestamps listed in the left treeview of Change History report window, you can view the changes for a specific date and time.



Select **Change Reports** button in the toolbar. The **Change Reports** window will be launched.

Select and expand the root node in the left pane of the newly launched report window.

A screenshot of the "Change Reports" application window. The window has a menu bar with "Export", "Print/Preview", "Refresh", "E-mail", and "Show Event Viewer fields". Below the menu bar is a toolbar with "Show All Changes", "Only Added", "Only Modified", and "Only Deleted" buttons. The main area is divided into two panes. The left pane shows a tree view of "Change History" with a root node "PATHFINDER(rd45)" expanded to show a list of changes for "Today" and "Yesterday". The right pane shows a table of changes with columns: Object Name, Object Path, Object Class, Change Type, Property Name, Old Value, and New Value. The table contains five rows of data. Below the table is an "Event Viewer Reference" pane showing details for a specific event: Date & Time: 4/1/2011 11:15:42 AM, Source: Security, Category: Directory Service Access, Event ID: 566, Type: Audit Success.

Select '**Show only AD changes**' option to view timestamps related to only Active Directory changes and select '**Show only GPO changes**' option to view only Group Policy changes. You can click Show All Changes, Only Added, Only Modified; Only Deleted tabs to view the list of all changes, added, edited and deleted changes.

### **3.3 Understanding the Change Reports**

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The **Change Reports** contains the following information:

<b>Field Names</b>	<b>Description</b>	<b>Example</b>
<b>Object Name</b>	Active Directory object name of Added / modified / deleted objects.	Administrator
<b>Object Path</b>	Fully Qualified Domain Name of AD objects.	CN=Administrator, CN=Users, DC=Domain, DC=Com
<b>Object Class</b>	AD Object Type	User/Group/Computer etc.,
<b>Change Type</b>	Type of modification made on AD object.	Added / Modified / Deleted
<b>Property Name</b>	Attribute / Property name of AD object.	E-mail, Description, Member Of
<b>Old Value</b>	Value defined for the property before change.	E-mail: alec@pathfinder.com
<b>New Value</b>	Value defined for the property after change.	E-mail: alecFrings@pathfinder.com
<b>Change made by</b>	The account, who made the change.	PATHFINDER\Trainee1
<b>Change made on</b>	The actual date and time of the change.	1/29/2011 3:46 PM

## Sample Reports

**Added**

Domain Name	Object Name	Object Path	Object Class	Change Type	Property Name	Old Value	New Value	Change made by	Change made on
		CN=Developers,							
CHANDRAYAAN	Developers	OU=ARKAD Sample OU,DC=	group	Added				CHANDRAYAAN administrator	1/29/2011 12:05:04 PM
		Chandrayaan,DC=local							

End of report

**Modified**

Object Name	Object Path	Object Class	Change Type	Property Name	Old Value	New Value	Change made by	Change made on
		CN=Paul T. Scholes,			Paul@	PaulT@		
Paul T. Scholes	OU=ARKAD Sample OU,DC=Chandrayaan,	user	Modified (Value Changed)	E-Mail	chandrayaan	chandrayaan	CHANDRAYAAN administrator	1/29/2011 12:04:37 PM
		DC=local			.local	.local		

End of report

**Deleted**

Object Name	Object Path	Object Class	Change Type	Property Name	Old Value	New Value	Change made by	Change made on
		CN=Alec E. Frings						
Alec E. Frings DEL:c07e4601-0dc0-4a3e- 4a3e-a753-b3d1510526c3	OU=DEL:c07e4601-0dc0-4a3e- a753-b3d1510526c3,	user	Deleted				CHANDRAYAAN administrator	1/29/2011 4:06:38 PM
		CN=Deleted Objects,						
		DC=Chandrayaan,DC=local						

End of report

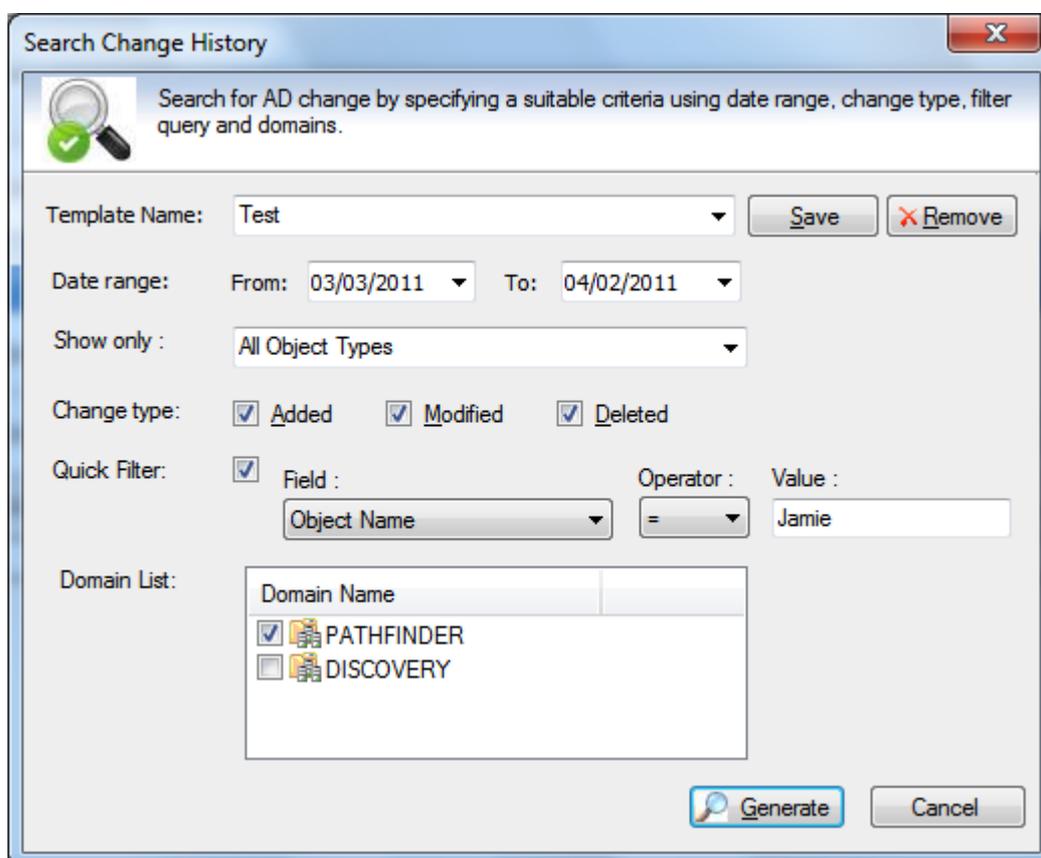
### 3.4 Search Reports-How to Search Change History?

The **Search Change History** is a powerful feature that allows you to locate specific changes from the past such as 'all newly created user accounts between a time period'. You can specify a search criteria based on the different search options available.



Select **Search Change History** button in the toolbar. The **Search Change History** window will be launched.

- Specify the **Date range, Object type, Change type** and a field based **Filter criteria** to find specific changes in the application's Change History database.
- Select the desired domains to perform your search on.
- Optionally, you can save this search by specifying a name for your search and clicking on the **Save** button. This will save the search for a future use. You can thus maintain a list of your saved searches for repeated use in the future.
- Click **Generate** button to begin search.



The image shows the "Search Change History" dialog box. It has a title bar with a close button (X). Below the title bar is a search icon and a green checkmark icon. The main text reads: "Search for AD change by specifying a suitable criteria using date range, change type, filter query and domains."

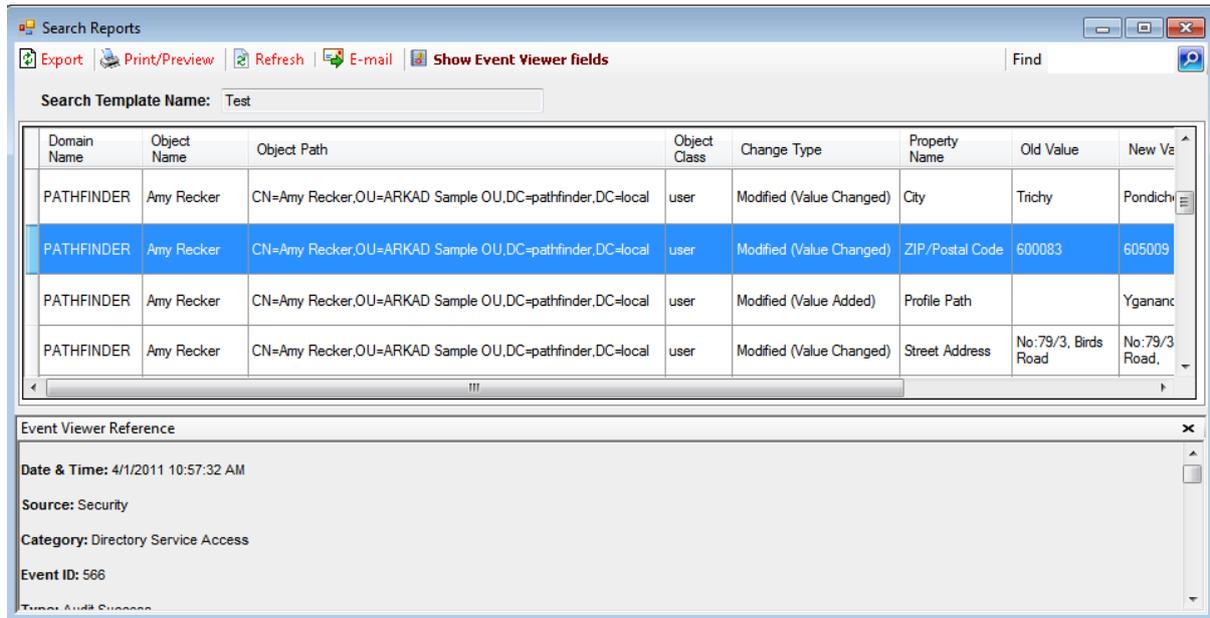
The dialog box contains the following fields and controls:

- Template Name:** A dropdown menu with "Test" selected. To the right are "Save" and "Remove" buttons.
- Date range:** "From:" followed by a date dropdown (03/03/2011) and "To:" followed by a date dropdown (04/02/2011).
- Show only:** A dropdown menu with "All Object Types" selected.
- Change type:** Three checkboxes: "Added" (checked), "Modified" (checked), and "Deleted" (checked).
- Quick Filter:** A checkbox (checked) followed by "Field:" (dropdown: "Object Name"), "Operator:" (dropdown: "="), and "Value:" (text box: "Jamie").
- Domain List:** A table with two columns: "Domain Name" and a checkbox column. The table contains two rows: "PATHFINDER" (checked) and "DISCOVERY" (unchecked).
- At the bottom right are "Generate" and "Cancel" buttons.

## CHAPTER 3 – ADChange Tracker Features

If you want to use or edit an already saved search, select the name of saved search from the drop down list. This will load the saved search's settings. You may also edit this and click on Save again to save the modified search. Once you load a saved search, you may click Generate to perform a search.

After the data collection process is complete, the report would be generated in a report window as shown below:



The screenshot displays the 'Search Reports' application window. At the top, there are navigation buttons: 'Export', 'Print/Preview', 'Refresh', 'E-mail', and 'Show Event Viewer fields'. A search bar contains the text 'Test'. Below this is a table with the following columns: Domain Name, Object Name, Object Path, Object Class, Change Type, Property Name, Old Value, and New Value. The table contains four rows of data, with the second row highlighted in blue. Below the table is an 'Event Viewer Reference' section with the following details:

Domain Name	Object Name	Object Path	Object Class	Change Type	Property Name	Old Value	New Value
PATHFINDER	Amy Recker	CN=Amy Recker,OU=ARKAD Sample OU,DC=pathfinder,DC=local	user	Modified (Value Changed)	City	Trichy	Pondichy
PATHFINDER	Amy Recker	CN=Amy Recker,OU=ARKAD Sample OU,DC=pathfinder,DC=local	user	Modified (Value Changed)	ZIP/Postal Code	600083	605009
PATHFINDER	Amy Recker	CN=Amy Recker,OU=ARKAD Sample OU,DC=pathfinder,DC=local	user	Modified (Value Added)	Profile Path		Ygananc
PATHFINDER	Amy Recker	CN=Amy Recker,OU=ARKAD Sample OU,DC=pathfinder,DC=local	user	Modified (Value Changed)	Street Address	No:79/3, Birds Road	No:79/3 Road.

Event Viewer Reference

Date & Time: 4/1/2011 10:57:32 AM

Source: Security

Category: Directory Service Access

Event ID: 566

Type: Audit Success

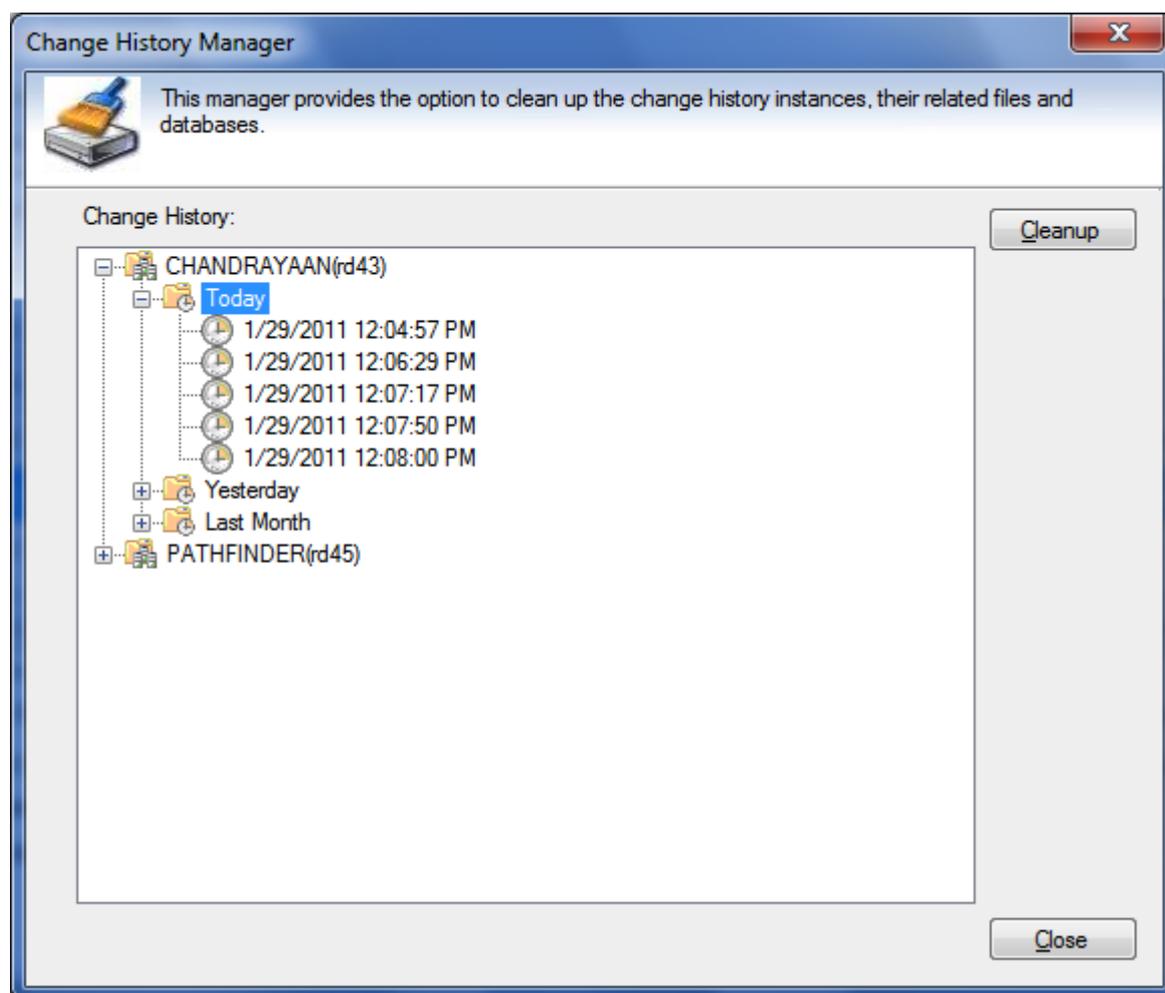
### 3.5 Change History Manager-How to cleanup Change History?

The **Change History Manager** allows you to *cleanup* any unwanted past changes and their related data from the Change History database. The Change History database contains all changes from the time you started using the application. Please be *careful* while you perform cleanups of changes as this will *permanently delete* the selected changes from your database. It is highly recommended that you maintain a full *backup* of the application's database at regular intervals to recover any accidental loss of change



data. **Select** button in the toolbar. The **Change History Manager** window will be launched.

Click on desired history instances and click on **Cleanup** button to delete all changes for the selected timestamps.



Select a parent node and click **Cleanup** in order to *delete* all of its child timestamp nodes.

### 3.6 How to Find Data in a Report?

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You can use the *find feature* in ADChangeTracker to search for specific data in a report.

To search for data in a report, just type the characters or words you want to find in the

find edit box available in the report window and click on . The image shows a rectangular box with the word 'Find' on the left, the text 'david' in the center, and a magnifying glass icon on the right.

- 1) ADChangeTracker performs a *case insensitive* search of the specified search criteria in the report.
- 2) The *search criteria* should not be enclosed within quotation marks.
- 3) You can use the "\*" wildcard character in the search criteria. The "\*" wildcard character act as a place holder for zero or more characters. However, note that you cannot use the "?" wildcard character in the search criteria.

For instance, if you want to search for 'Domain' in a report, Type Domain, without quotations, in the edit box, and then clicks on **Find Button**.

By default, ADChangeTracker adds an asterisk as a suffix to the specified search criteria, if no wildcard character is present in it. In this case, ADChangeTracker finds a match in the report for all fields that have the text Domain followed by zero or more characters, that is, Domain, Domain Controllers, Domain Admins, etc.

For all the matches found, ADChangeTracker highlights the corresponding columns in the grid, and scrolls the grid automatically to the first occurrence.

For all the matches found, ADChangeTracker highlights the corresponding columns in the grid, and scrolls the grid automatically to the first occurrence.

- 4) ADChangeTracker finds additional occurrences of the specified search criteria instantaneously. To locate other occurrences of the same search criteria in a report you need to scroll the report grid downwards.

## CHAPTER 3 – ADChange Tracker Features

Change Reports

Export | Print/Preview | Refresh | E-mail | Show Event Viewer fields | Find Exchange

Change History

Show All Changes | Only Added | Only Modified | Only Deleted

Object Name	Object Path	Object Class	Change Type	Property Name	Old Value	New Value
Jamie Reding	CN=Jamie Reding,OU=ARKAD Sample OU,DC=pathfinder,DC=local	user	Modified (Value Added)	Exchange Proxy Addresses		SMTP:yog
Jamie Reding	CN=Jamie Reding,OU=ARKAD Sample OU,DC=pathfinder,DC=local	user	Modified (Value Removed)	Exchange Proxy Addresses	SMTP:jamie@pathfir	
Jamie Reding	CN=Jamie Reding,OU=ARKAD Sample OU,DC=pathfinder,DC=local	user	Modified (Value Removed)	Street Address	xdfgsdgd Chennai	
Jamie Reding	CN=Jamie Reding,OU=ARKAD Sample OU,DC=pathfinder,DC=local	user	Modified (Value Removed)	Web Page	zxczxcz6	

Event Viewer Reference

Date & Time: 4/1/2011 11:15:42 AM

Source: Security

Category: Directory Service Access

Event ID: 566

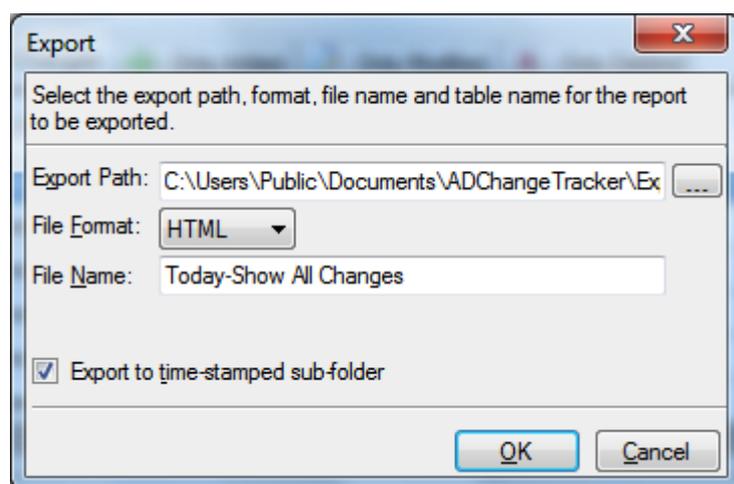
Type: Audit Success

### 3.7 How to Export Data?

---

The **Export** feature helps the user to export report data generated by ADChangeTracker to a file using various formats namely HTML/MDB/CSV/PDF/XLS/TIFF.

Click on  **Export** button in the report window or select **Export** option under **File** menu to export report data to a file in the desired format.



Specify a file name to export report data to or accept the default file name. Specify the export path and select a desired file format. The path refers to the destination location where the output file generated should be stored. It can be given using the Browse button.

By default, the report will be exported to a time-stamped sub-folder in the format 'YYYY-MM-DD HH.MM.SS' under the specified export path. This will be useful to avoid overwriting of existing files, if any, in the specified export path.

In MDB file format, the information is stored as tables in databases. For each report, a new database will be generated with a table for holding the report data for the domain. The database name and the table name will be the name of the report, by default or the given name, if specified.

In *CSV file format*, the information is stored as comma separated values. For each report, a CSV file will be generated. The name of the CSV file will be the name of the report.

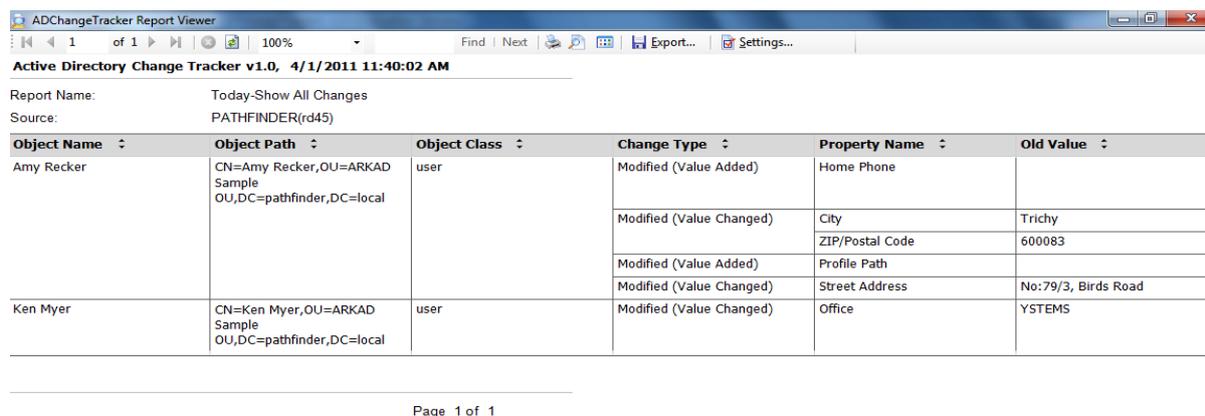
## CHAPTER 3 – ADChange Tracker Features

In *HTML, PDF, XLS and TIFF file formats*; the information is stored in *html, Pdf, xls and tiff files* respectively. For each report, a file corresponding to the selected file format will be generated. The name of the file will be the name of the report.

### 3.8 How to Print Data?

Preview the generated report output before printing the report.

Click on  button in the toolbar available in the report window or press CTRL + P to launch *Preview* window. The *report viewer* will be displayed as shown below:



ADChangeTracker Report Viewer

Active Directory Change Tracker v1.0, 4/1/2011 11:40:02 AM

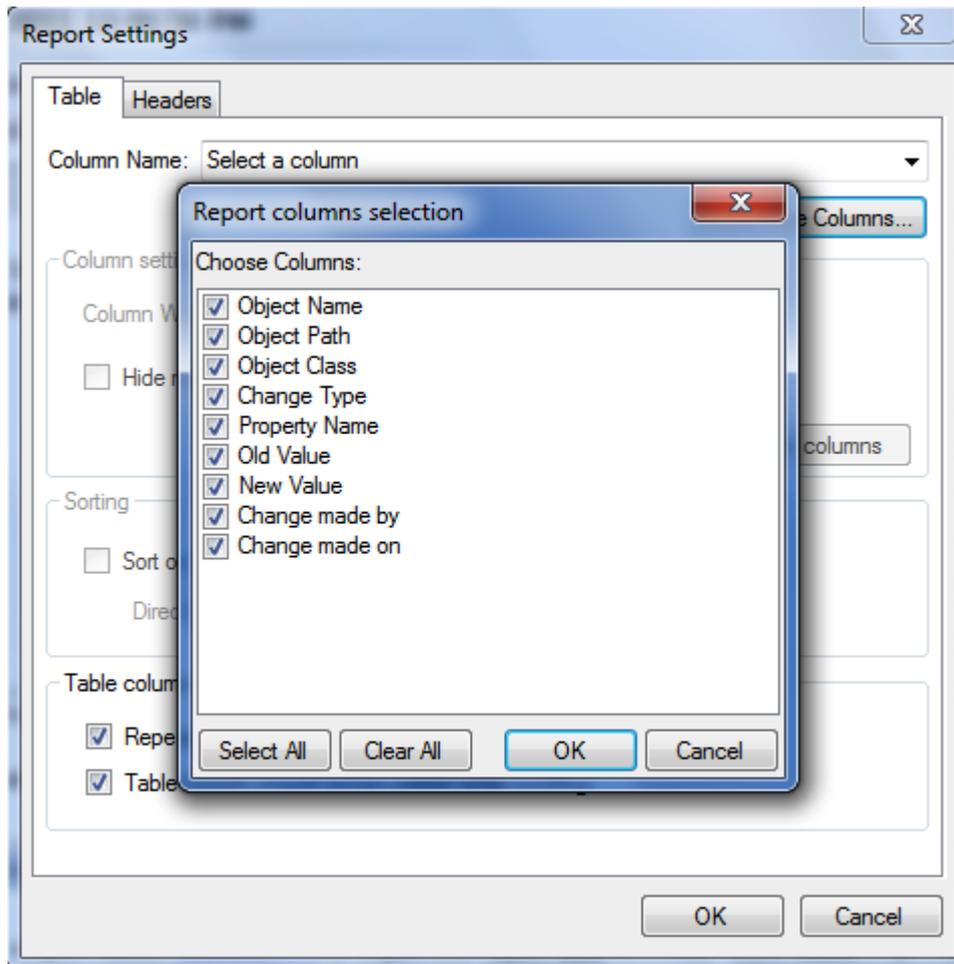
Report Name: Today-Show All Changes  
Source: PATHFINDER(rd45)

Object Name	Object Path	Object Class	Change Type	Property Name	Old Value
Amy Recker	CN=Amy Recker,OU=ARKAD Sample OU,DC=pathfinder,DC=local	user	Modified (Value Added)	Home Phone	
			Modified (Value Changed)	City	Trichy
			Modified (Value Added)	ZIP/Postal Code	600083
			Modified (Value Added)	Profile Path	
Modified (Value Changed)	Street Address	No:79/3, Birds Road			
Ken Myer	CN=Ken Myer,OU=ARKAD Sample OU,DC=pathfinder,DC=local	user	Modified (Value Changed)	Office	YSTEMS

Page 1 of 1

- 1) Click the **Navigation** buttons  to *navigate* through the report pages
- 2) Click the **Refresh** button  to *reprocess* the report and *reload* the data from the cache.
- 3) Click the **Print** button  to *print* the report.

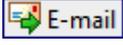
- 4) Click the **Settings** button  to Show/Hide columns. The **Report Settings** window will be displayed as shown below:

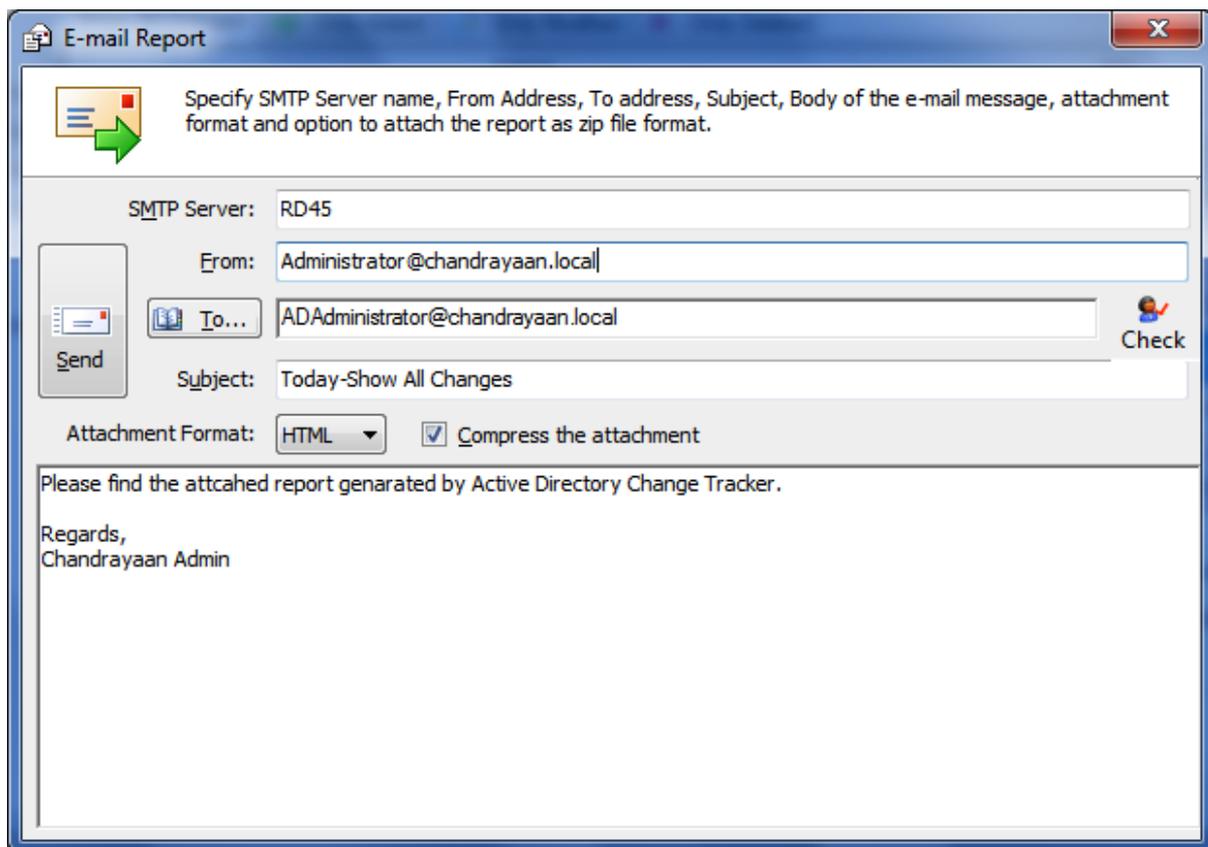


- 5) Click the **export** button  **Export...** to export the report data in HTML, CSV, MDB, PDF, XLS and TIFF file formats.
- 6) **Select** the **Zoom control**  to enlarge or shrink the view size of the report.
- 7) Click the **Find** button to find specific text within a report. The search is *case-insensitive* and begins at the page that is currently selected. Wildcards and Boolean search operators are not supported.
- 8) Click the **Next** button, to search for *subsequent* occurrences of the same search field value.

### 3.9 How to E-mail Data?

ADChangeTracker provides the option to *e-mail* a change report to different users. The change reports generated after tracking will be e-mailed to the specified recipients.

Click  button in the toolbar to e-mail the report to e-mail recipients. **E-mail Report** dialog will be displayed as shown below:



For e-mailing reports, ADChangeTracker requires the *SMTP Server* name, From E-mail Address, To E-mail Addresses (recipients separated by semicolon) and the report attachment format.

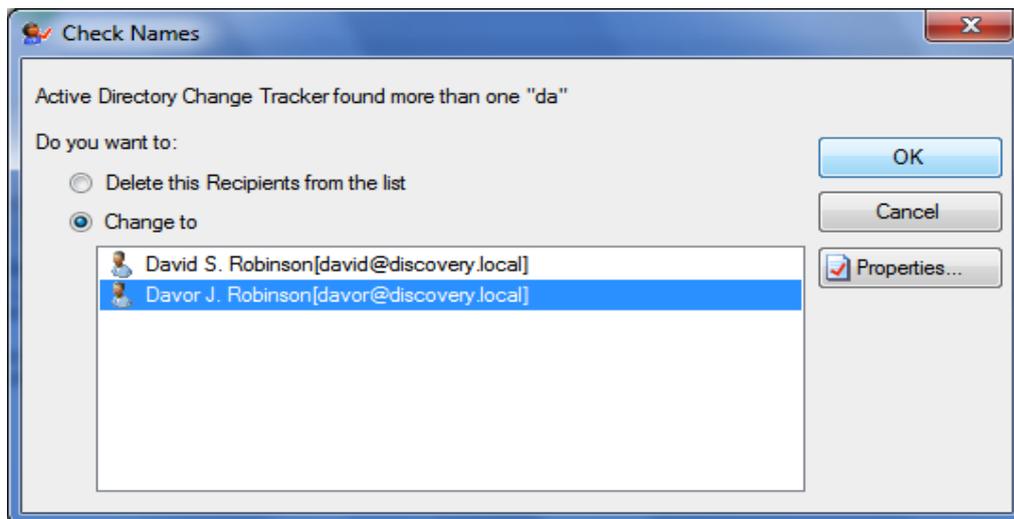
Specify *SMTP server name*, From Address, To Address, mail subject, mail content, attachment format, and option to compress the attachment.

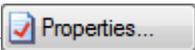


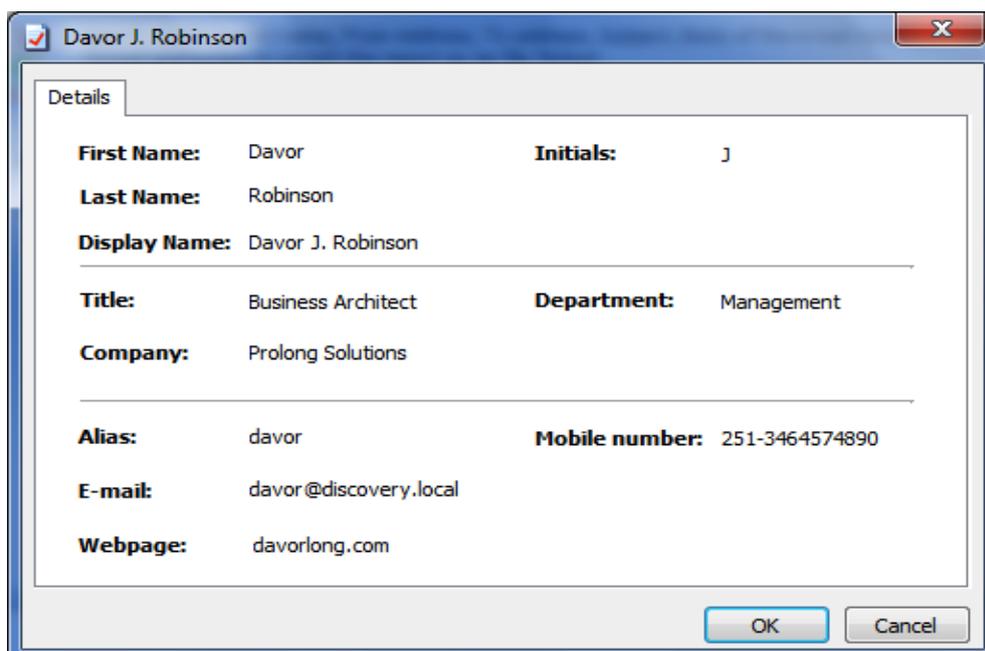
Click  button to **send** the report **by e-mail** to the selected recipients.

### Check Names

ADChangeTracker provides *check name feature* to check the existence of corresponding mail-enabled recipient object in Active Directory. To check name, click  button. If the entered name matches with a mail object in the Active directory / its trusted domain, name entered in From Address textbox will be replaced by the corresponding active directory recipient object. If there is more than one match, a dialog which contains matching Active Directory recipients will appear as shown below. You can select one or more recipients and click **OK**.



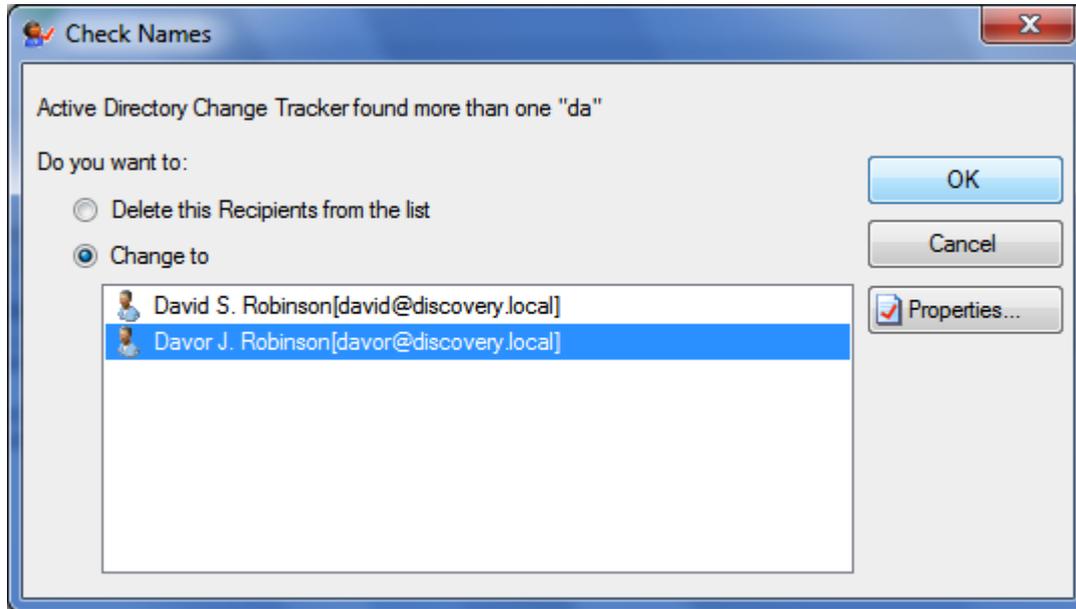
To get more information about the listed recipients under **Change to**, select the name and then click .



## CHAPTER 3 – ADChange Tracker Features

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If there is no match for the name entered by the user in Active Directory, a dialog will appear as shown below:



Select *Delete* option in the above dialog to *remove* the recipient name from the To Address text box. Click *Cancel* button to close this dialog and the unresolved recipient(s) will appear in **red** color.

### Address Book

ADChangeTracker provides *Address Book* feature to search for any mail enabled recipient object (say, person, distribution list, contact, public folder) you want to send a message to. Click  *button* and then use the **Find Names** dialog box to search for the recipient object you want to send a message to. (Note that you can't use the **Find Names** dialog box to search for distribution lists in your Contacts folder.) Select the object's name in the list and then click **Add recipient to...To.**

Find Names in: All Global Address List

Display Name: da

Last Name: \_\_\_\_\_ First name: \_\_\_\_\_

Title: \_\_\_\_\_ Alias: \_\_\_\_\_

Company: \_\_\_\_\_ Department: \_\_\_\_\_

Office: \_\_\_\_\_ City: \_\_\_\_\_

Find

Name	Phone	Alias	Office	Job Title	Company
Darren R. ...	580-45747	DarrenR.Hi...	Villent Tec...	Manager O...	Villent Tec...
David S. R...	804-22567	david	Olivic Tech...	Editor	Olivic Tech...
Davor J. R...	251-84211	davor	Prolong Sol...	Business A...	Prolong Sol...

Add recipient to... To Cc Bcc Properties... Close

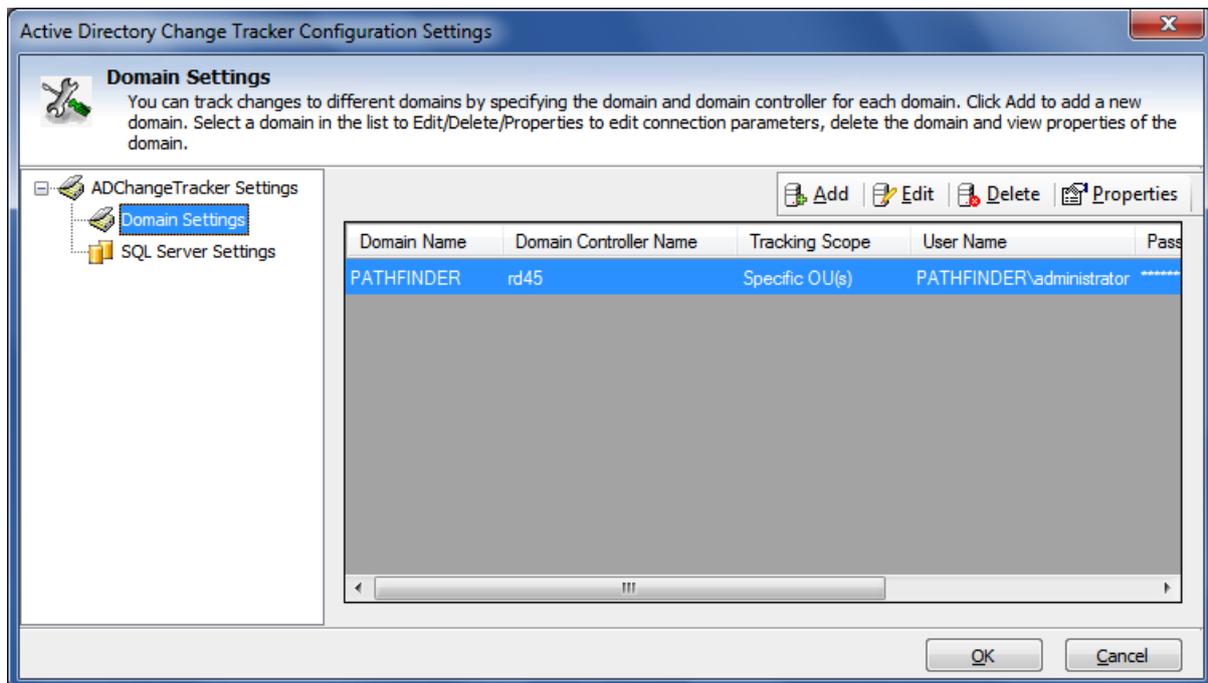
To get more information about one of the names in the list, such as department or phone number, select the name, and then click **Properties...**.



## 4 ADChange Tracker Settings-Configure Settings

### 4.1 Configure Domain Settings

You can launch *ADChangeTracker Domain Settings* by clicking **Tools -> Options** menu in the *ADChangeTracker main application* window, as shown below:



## CHAPTER 4 – Configure ADChange Tracker

---

The various operations that can be performed in the *Domain Settings* are given below:

<b>Operation</b>	<b>Description</b>
Add	To Add a Domain to the domain list.
Edit	To Edit the properties of the Domain in the domain list. Select a Domain and click Edit button.
Delete	To Delete a Domain from the domain list. Select a Domain and click Delete button.
View Properties	To view the properties of the Domain in the list. Select a Domain and click Properties button.

### 4.2 Add a Domain

---

You have to specify the domain information for adding a domain in ADChangeTracker.

#### Add a Domain to the List

- 1) Launch *Domain Settings* window.
- 2) In the Domain Settings window, click *Add* button to add a *domain to the list*.
- 3) The New Domain window will be displayed as shown below:

**Add domain**

Specify a domain controller or select an Active Directory domain from the drop-down list, and then select a domain controller. Check 'Connect As' option to specify alternate credentials to connect to the DC.

Specify Domain Controller  
DC Name:

Select Domain Controller  
Domain Name: -----SELECT A DOMAIN-----   
DC Name:

Note: This option requires NetBIOS over TCP/IP to be enabled.

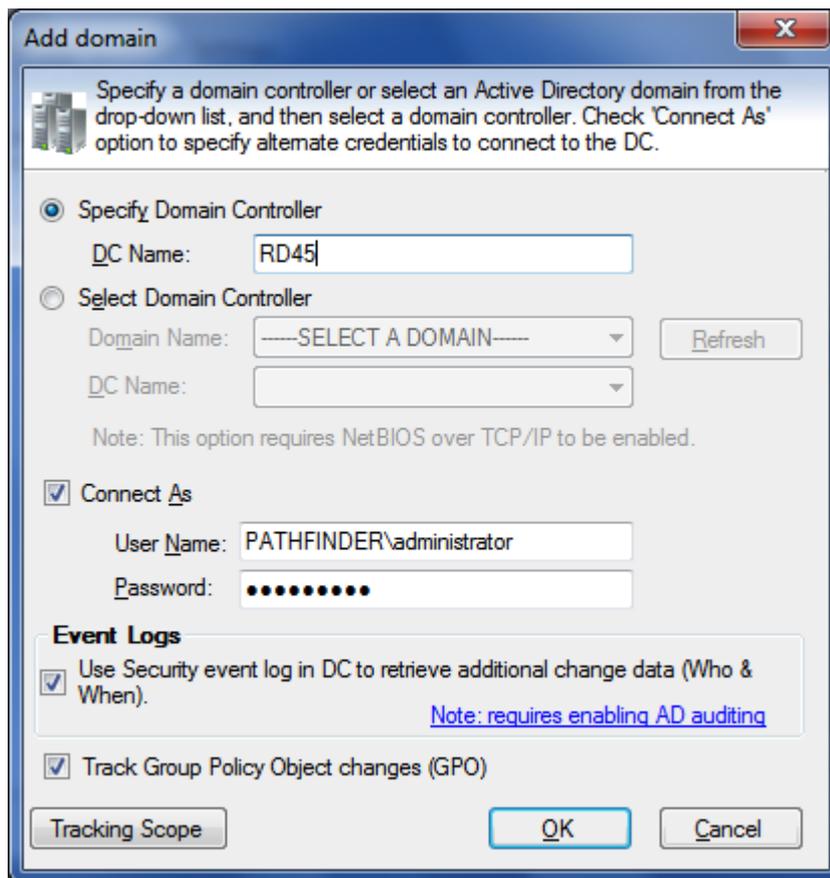
Connect As  
User Name:   
Password:

**Event Logs**

Use Security event log in DC to retrieve additional change data (Who & When). [Note: requires enabling AD auditing](#)

Track Group Policy Object changes (GPO)

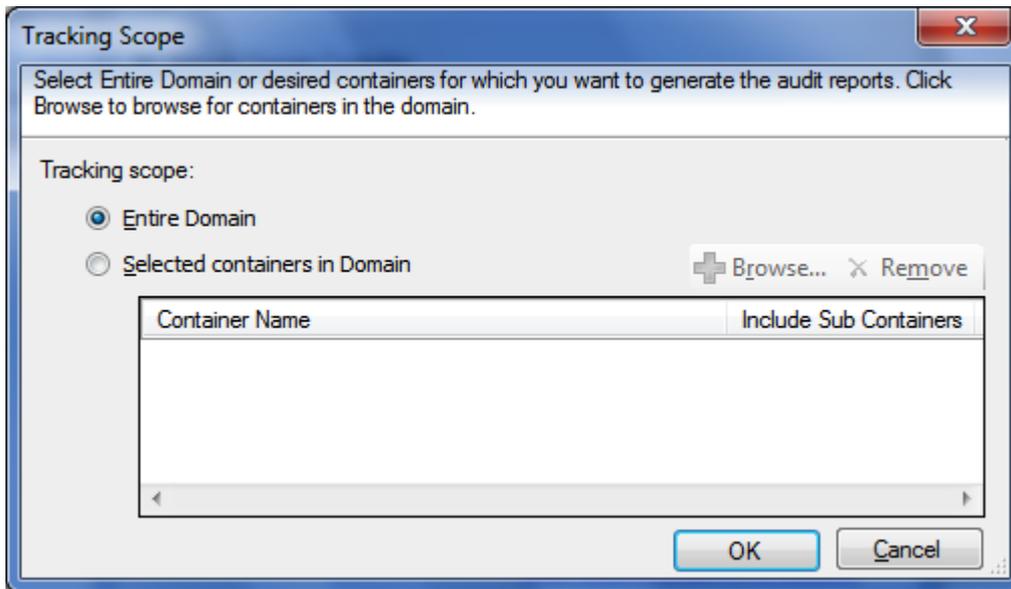
- a) The *list of domains* available in the network will be loaded in the *Domain Name* dropdown.
- b) *Select* a domain from the *Domain Name* dropdown.
- c) The list of domain controllers for the selected domain will be loaded in the *Domain Controller Name* dropdown.
- d) *Select* a domain controller from the *Domain Controller Name* dropdown.



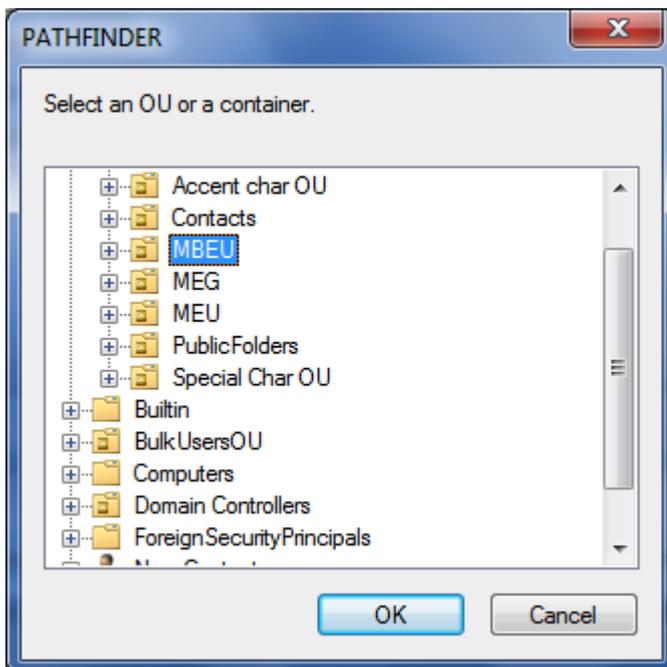
- 4) Specify *user name* and the corresponding *password* to connect to the specified server.
- 5) In order to find **Who**, and a more accurate time of **When**, a change happened, ADChangeTracker will have to read the applicable change events (logged through native AD auditing) in the Windows Security Event Logs from all the domain controllers in the domain.  

This is an optional setting that can be used if you need to find out *who made a change*. You can select '**Use Security event log in DC to retrieve additional change data (Who & When)**' option to collect information from Security logs (applicable only if Active Directory Auditing was enabled).
- 6) Also you can track the change made to your Group Policy Objects (GPOs) by checking '**Track Group Policy Object changes (GPO)**' option.
- 7) You may select specific containers in the domain to restrict the tracking scope and collect data for objects in selected containers. If no containers are selected, data will be collected by searching the entire domain structure.

In order to select specific containers, Click **Tracking Scope** button. *Tracking Scope dialog* will be displayed as shown below:

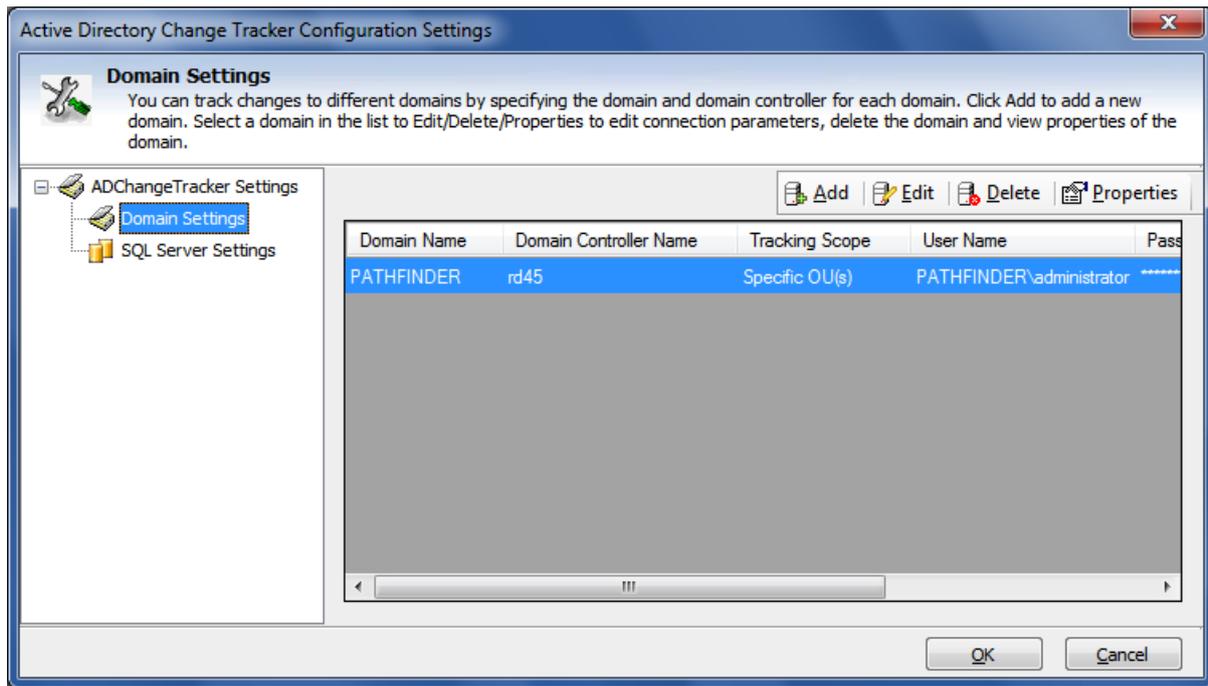


- 8) In order to *select specific containers*, select **selected containers in Domain** option, and then click **Browse** to select containers in the domain. The *container browser dialog* will be displayed as shown below:



- 9) *Select* the desired container and click **OK**. Note that only one container may be selected at a time.
- 10) Click **OK** to add the domain to the *Domain Settings*.
- 11) ADChangeTracker will connect to the domain with the newly provided connection parameters and add it to the list, upon successful connection to the domain.

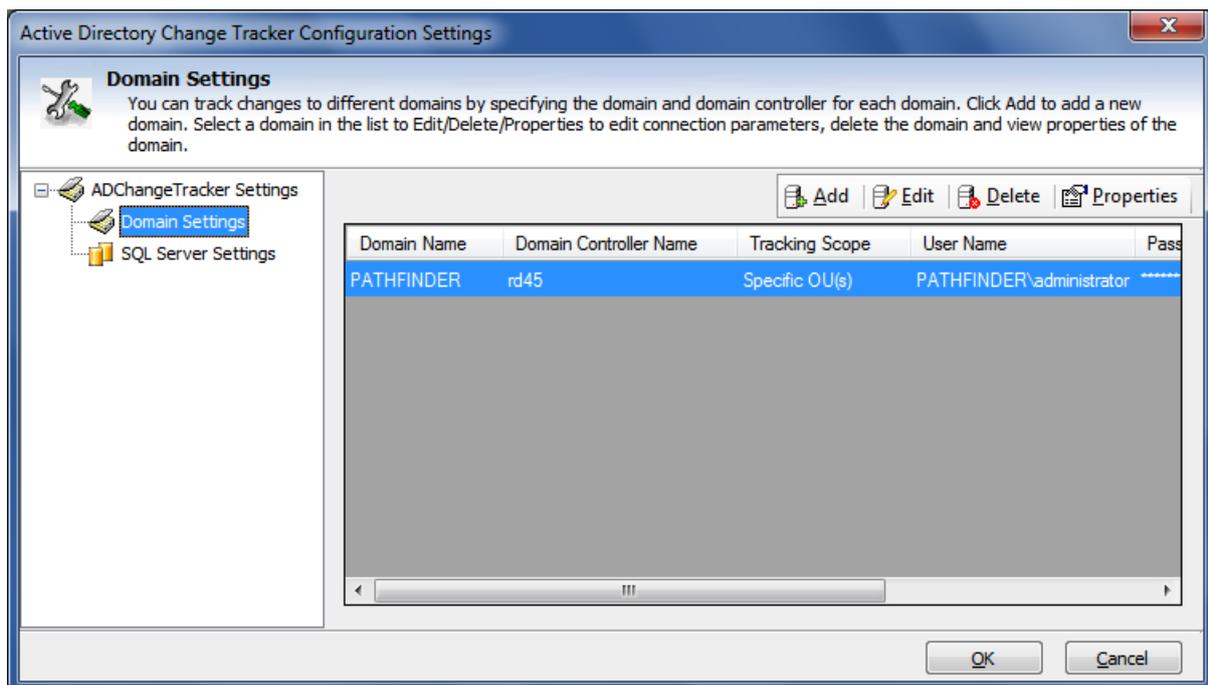
## CHAPTER 4 – Configure ADChange Tracker



### 4.3 Edit a Domain

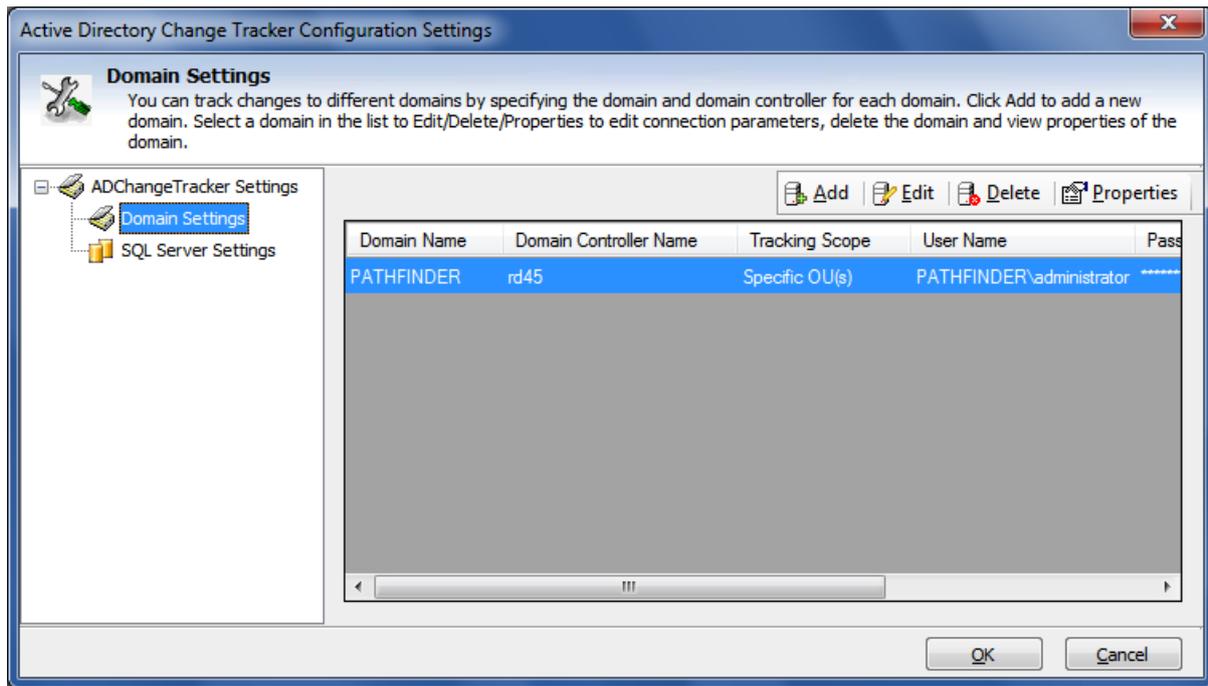
To **Edit** a domain in *Domain Settings*, follow the steps given below:

- 1) Launch **Domain Settings** window.
- 2) In the Domain Settings window, select any row (Domain), Click **Edit** button to Edit an existing Domain in the list, as shown below:



- 3) The *Domain Name* cannot be modified during the edit operation.
- 4) Specify *user name* and the corresponding *password* to connect to the specified domain.
- 5) You can *change* the *Event Log*, *GPO* settings and *Tracking Scope* settings.
- 6) Click **OK** to *save* and *connect* to the *domain* with the newly provided connection parameters and update the domain.
- 7) ADChangeTracker will connect to the domain with the newly provided connection parameters and modify it in the list, upon successful connection to the domain.

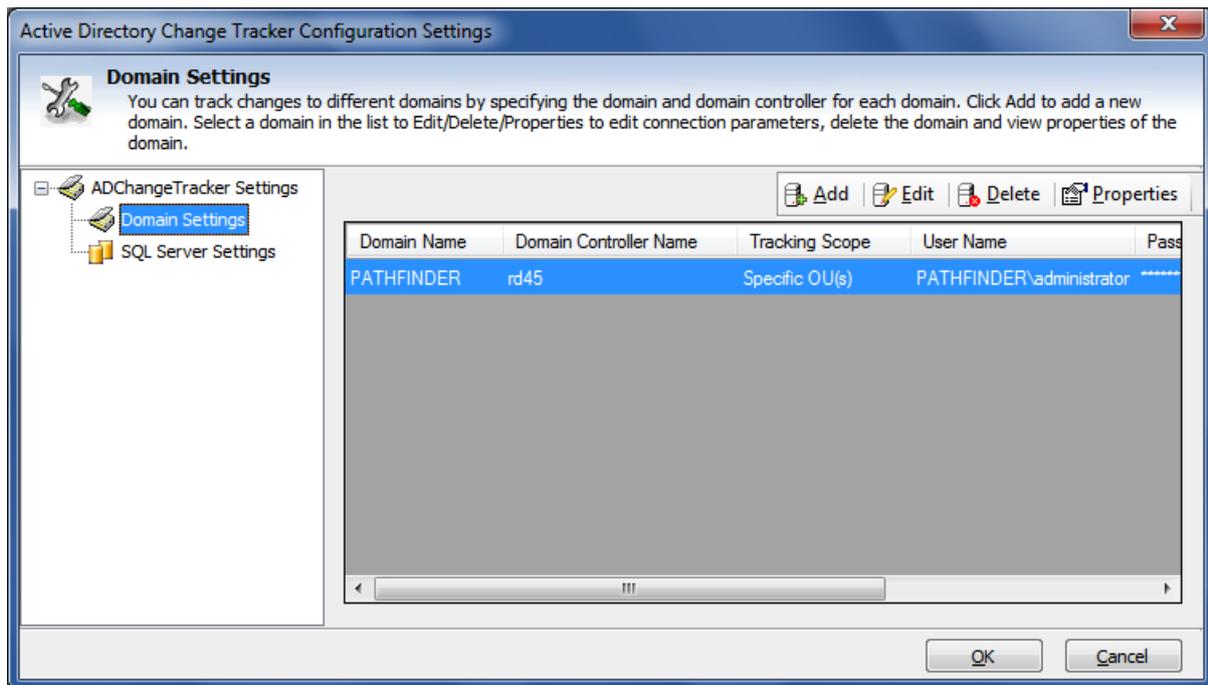
## CHAPTER 4 – Configure ADChange Tracker



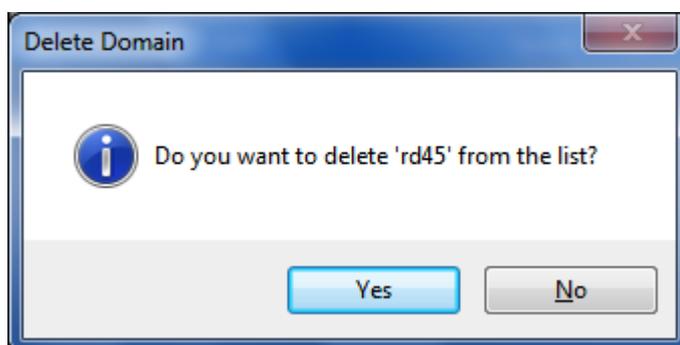
### 4.4 Delete a Domain

Perform the following steps to *delete a domain*:

- 1) Launch *Domain Settings* window.
- 2) In the Domain Settings window, *select any domain*, click *Delete* button to delete the domain from the *Domain Settings list*.



- 3) An **alert message** asking for **confirmation** to **delete** the **domain** will be displayed as shown below:

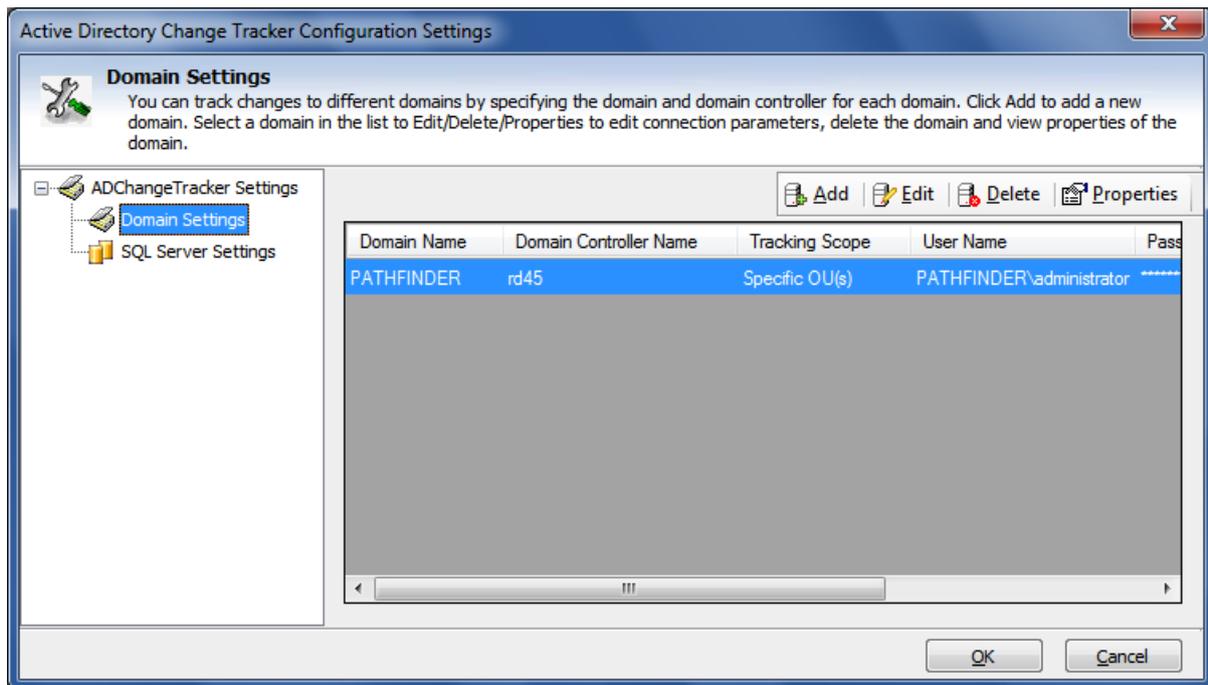


- 4) Click **Yes** to **delete** the **selected domain**.

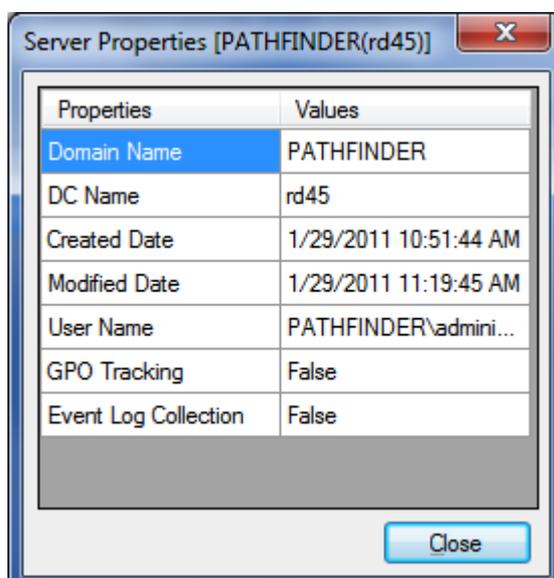
### 4.5 View Properties of Domain

Perform the following steps to *view properties of domain*:

- 1) Launch *Domain Settings* window.
- 2) In the *Domain Settings* window, select *any domain*, click *Properties* button to *view the properties of the selected domain*.



- 3) The *Properties window* with the selected *domain information* will be displayed as shown below:

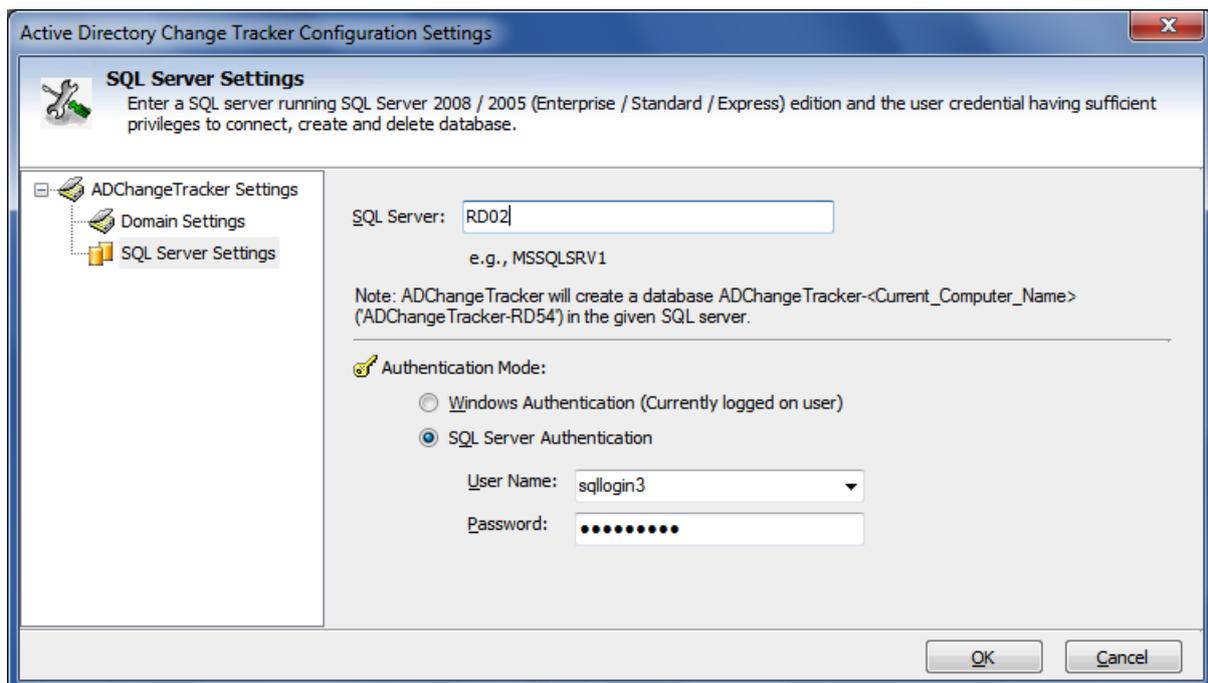


### 4.6 Configure SQL Server

ADChangeTracker uses *SQL Server database* for its internal data storage, including storage of *Change History*. ADChangeTracker requires an SQL Server running SQL Server 2005 / 2008 (Enterprise / Standard / Express editions) to connect and create a new application database. ADChangeTracker will connect to the specified SQL Server based on *authentication mode* and *user credentials* to manage its own application database.

You can launch *SQL Server settings* to use by clicking **Tools -> Options** menu in the ADChangeTracker *main application window*, as shown below

*ADChangeTracker wizard* will prompt for the SQL settings (Server name, authentication mode, user name and password) when the application is launched for the very first time. These settings can be accessed again from the **Tools -> Configuration Settings...** menu:



#### **User Authentication**

To connect to *SQL Server*, ADChangeTracker uses the relevant user accounts based on the *authentication mode* as listed below:

#### **A. Windows Authentication:**

In this method, ADChangeTracker uses the currently logged on user account while running tracking changes using 'Track Now' or the Run as account while using 'Track at scheduled intervals'.

### **B. SQL Authentication:**

In this method, ADChangeTracker uses the specified *SQL user account* and *password* while *tracking changes*. ADChangeTracker stores the SQL user name and password as a user profile in 'Stored User Names and Passwords' applet for its usage.

**NOTE: ADChangeTracker expects the user account to have sufficient privileges to create, add to and delete database in the SQL server.**

### **Database Creation**

ADChangeTracker creates databases in SQL Server as per the information outlined below:

ADChangeTracker creates a single application database in the default data storage location used by the SQL Server during application launch. ADChangeTracker uses the following naming convention:

ADChangeTracker-<COMPUTERNAME>, where COMPUTERNAME is the name of the computer running ADChangeTracker.

For example, if the computer running the ADChangeTracker is 'CLIENT01', ADChangeTracker creates 'ADChangeTracker-CLIENT01' with data ('ADChangeTracker-CLIENT01.mdf') and log ('ADChangeTracker-CLIENT01\_log.LDF') files stored in the default SQL data folder in the SQL server (for example, C:\Program Files\Microsoft SQL Server\MSSQL.1\MSSQL\Data).

### **Database Cleanup**

ADChangeTracker will delete the application database while uninstalling the ADChangeTracker application from the computer.

### 4.7 User Profiles

---

ADChangeTracker creates a user profile in **Windows Stored User Names and Passwords** applet, in order to store the SQL and Directory Server user context for report generation.

The stored user profile will be useful for generating reports using ADChangeTracker under the following scenarios:

- a) Using an SQL Server having a dedicated SQL user account for report generation using ADChangeTracker (highly recommended)
- b) Using an SQL Server where SQL authentication mode is enabled
- c) Using an alternate user account to connect to the Directory Server to retrieve AD information

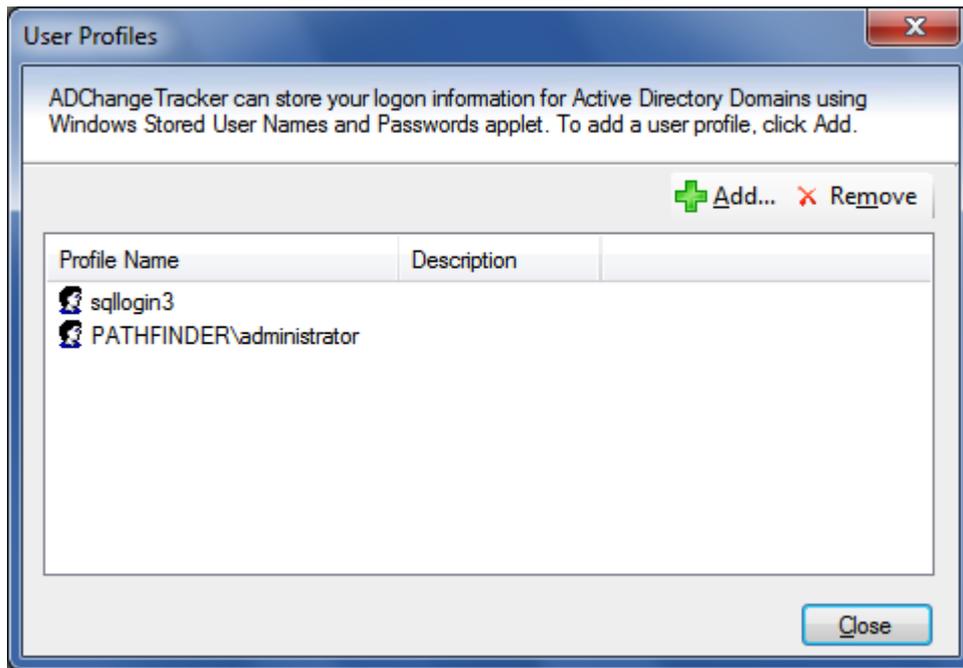
The stored user profile persists for all subsequent logon sessions on the same computer where ADChangeTracker is installed. The stored user profiles are visible to the application under other logon sessions on the same computer.

The stored user profile created by ADChangeTracker is restricted to the Windows User Profile context. If the Windows User Profile is maintained locally, ADChangeTracker stored user profile is accessible only by the same user in the same computer. If the user who creates ADChangeTracker stored user profile, has a Roaming user account in the enterprise, the ADChangeTracker stored user profile can be accessed by the same user in any computer in the Windows enterprise.

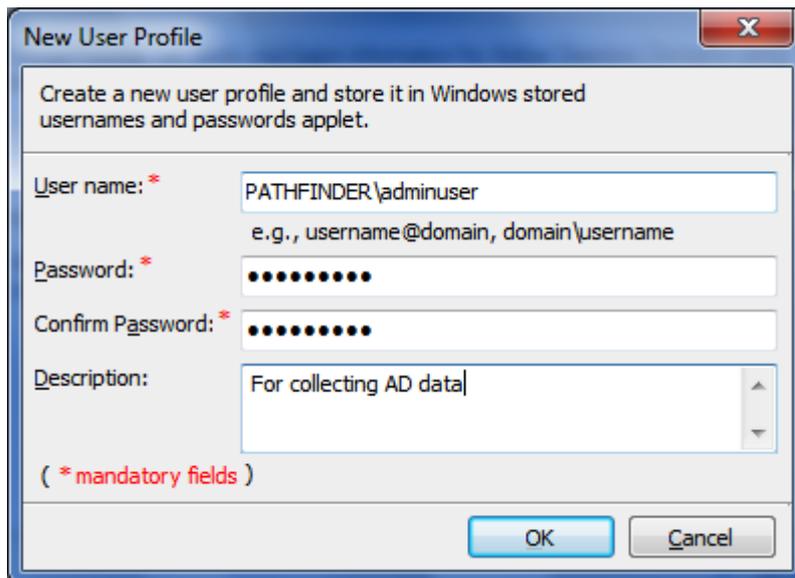
The stored user profile is a generic credential of **Windows Stored User Names and Passwords** applet and can be used by ADChangeTracker application only. The credential information is stored securely in an 256 bit encrypted format in **Windows Stored User Names and Passwords** applet.

The stored user profile corresponding to the SQL user account will be used by ADChangeTracker application in order to connect to the SQL Server, if SQL authentication is enabled in ADChangeTracker SQL settings.

Using the User Profiles dialog shown below (**Tools -> User Profiles...**), new profile can be created and available profiles can be removed from the profiles list.



Click **New** button to add a new profile and a dialog will appear as shown below:

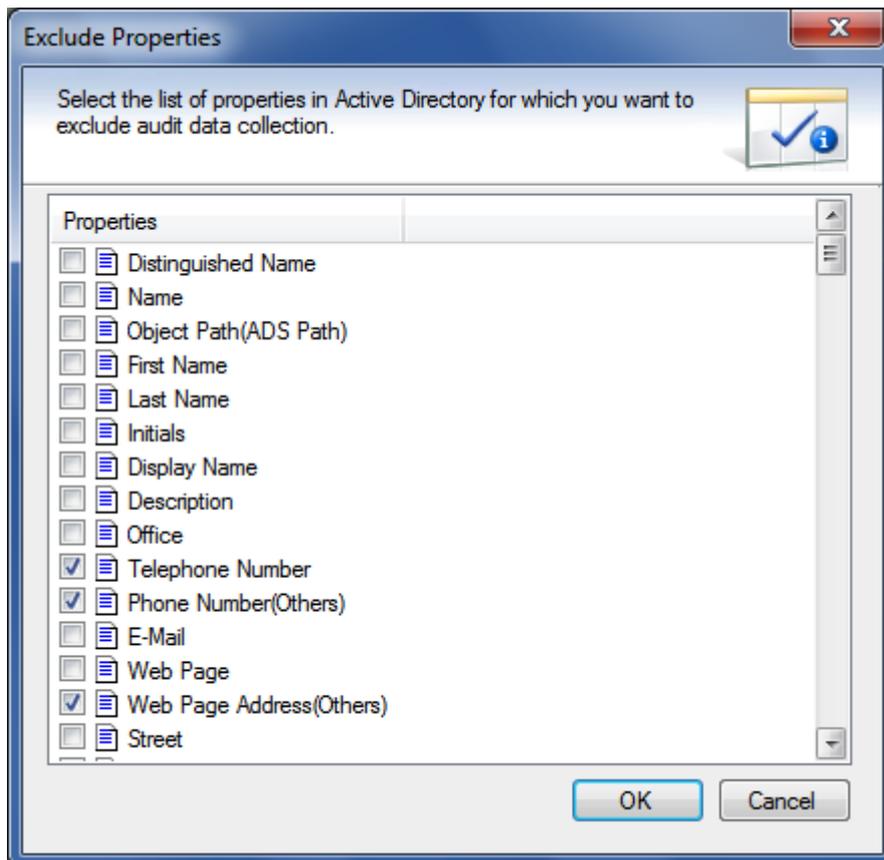


Click **Remove** button in the *User Profiles dialog* to remove available profiles.

### 4.8 How to Exclude Properties?

---

ADChangeTracker provides an option to exclude AD attributes from being tracked. To exclude properties from audit data collection by ADChangeTracker, click on **Tools -> Exclude Properties....** This will launch the dialog as shown below:



Select the list of properties to be excluded from data collection and click *OK* to save the settings

**NOTE:** By default, ADChangeTracker DOES NOT track the following changes (owing to the repetitive nature of data):

**(Original USN, Current USN, Modified Date, Bad Password Count, Last Logon, Last Logoff, Member Of, Logon Count, Last Logon Timestamp, Direct Reports, Managed Objects)**



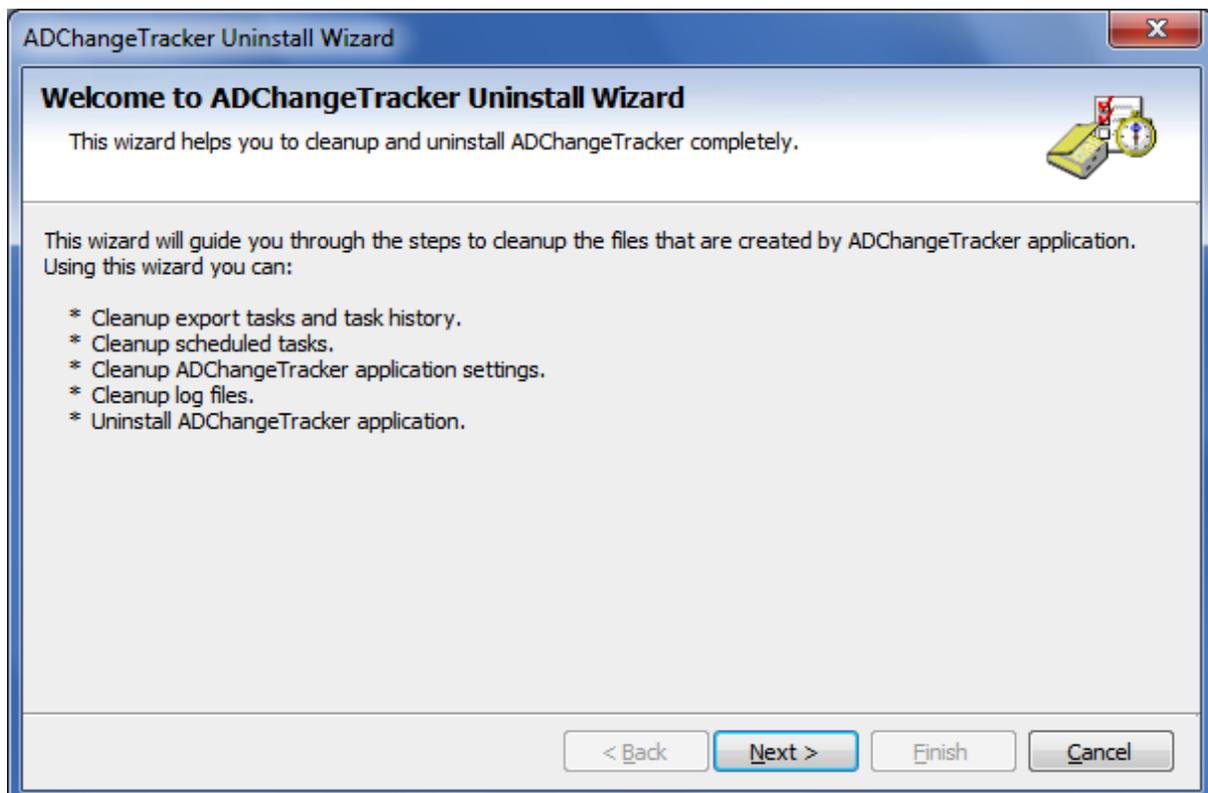
## 5 References

### 5.1 How to Uninstall ADChange Tracker?

When you *uninstall ADChangeTracker* through **Control Panel - Add / Remove Programs** applet, *Windows Installer program* will remove only the application files from your computer. But, the application related files created by ADChangeTracker remain in the computer. In order to remove ADChangeTracker worker files completely, the *uninstall wizard* provides a set of *cleanup options* to perform the cleanup operation based upon your selection.

Use this wizard to cleanup the files that are created by ADChangeTracker application selectively and *uninstall ADChangeTracker completely* from the computer.

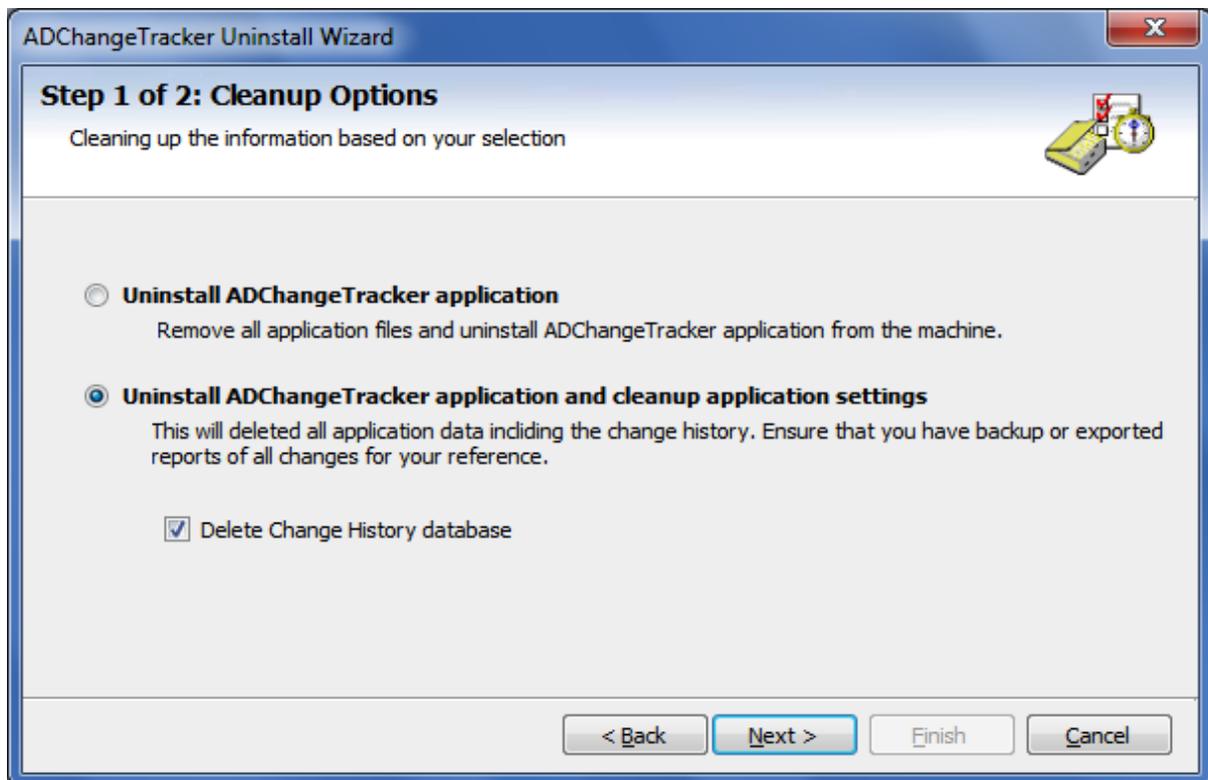
- 1) Launch the *Uninstall wizard* by clicking **Start -> Programs -> Active Directory Change Tracker -> Uninstall ADChangeTracker**.
- 2) The **ADChangeTracker Uninstall Wizard** dialog will be shown as below:



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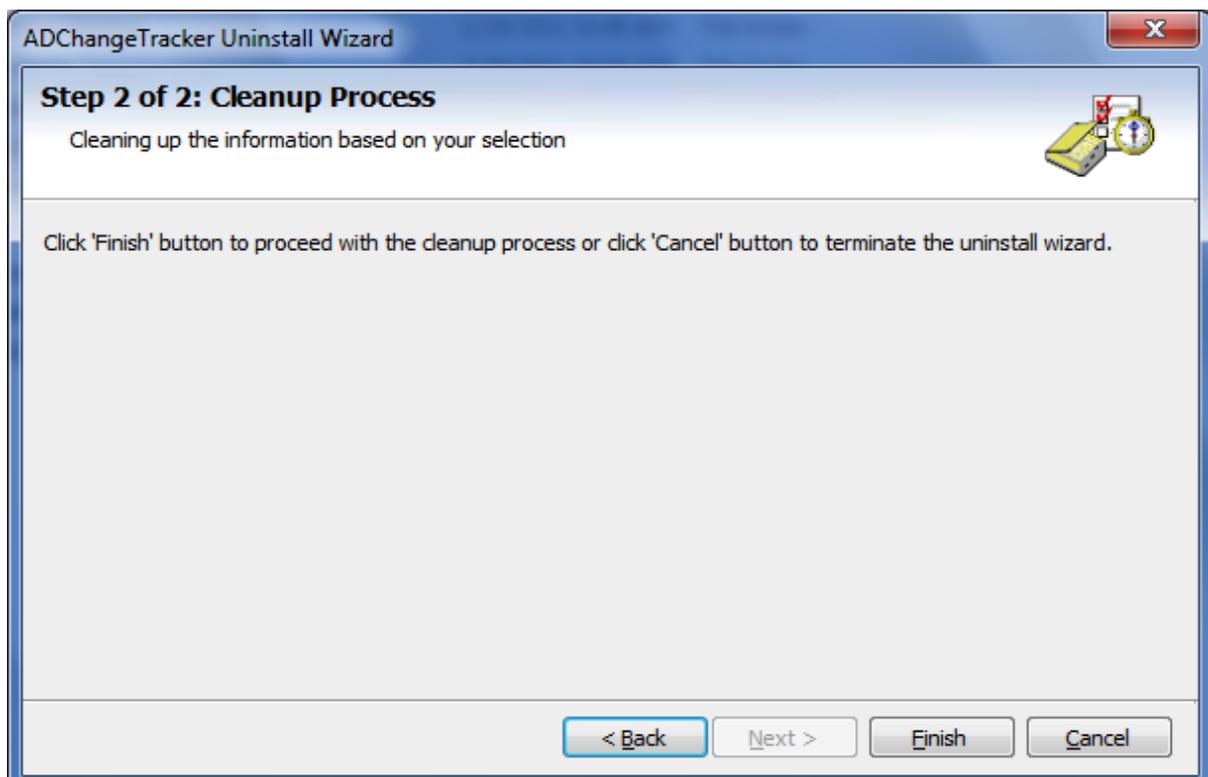
Click **Next** to Proceed.

**3) Select** required **cleanup options** as shown below:



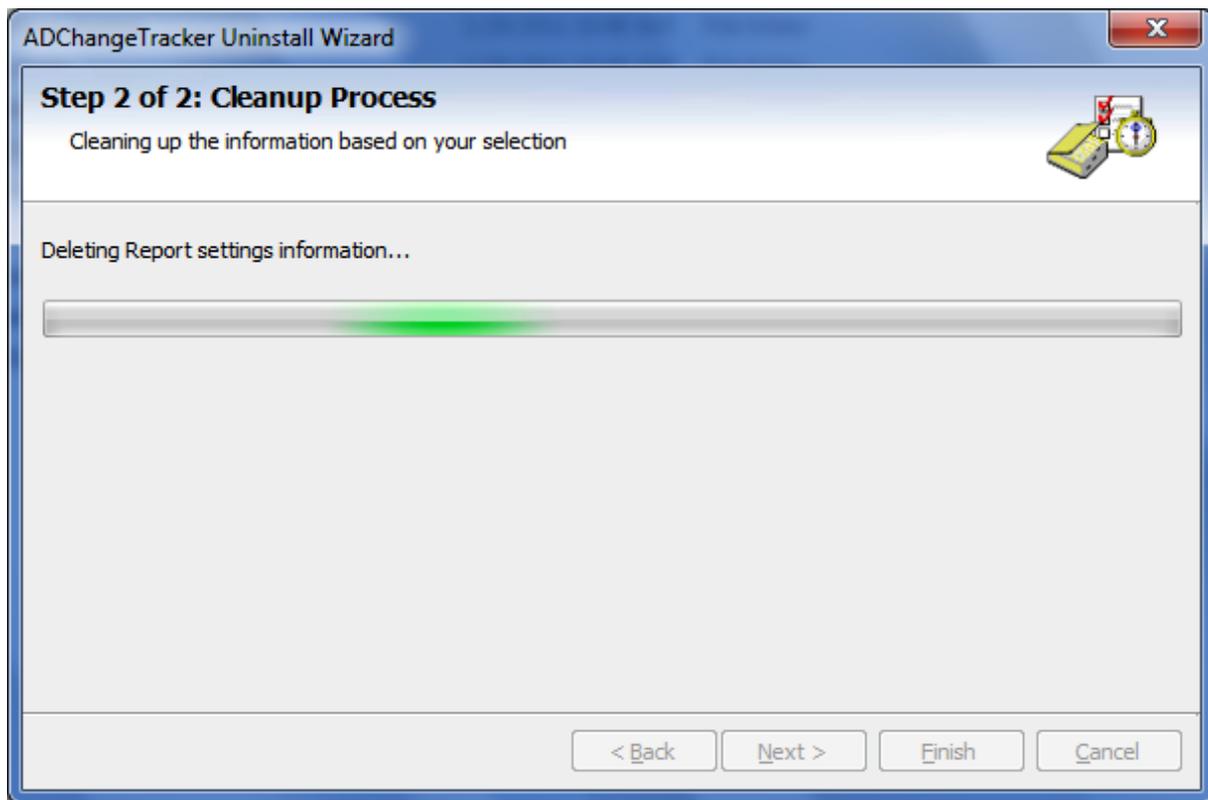
Click **Next** to Proceed.

**4) Confirm** the **cleanup and/or uninstall** process.



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Click **Finish** to run cleanup and/or uninstall process. Click **Cancel** to close the wizard.



- 5) Once the file cleanup process is *complete*, the *uninstall wizard* will automatically run *Windows Installer* program to *remove ADChangeTracker application* from the computer.

### 5.2 Technical Support

---

If and when a problem arises, please forward the following information to support@vyapin.com to revert back to you with a solution. These files will be available where ADChangeTracker is installed.

*Error log file - e.g., <Application Data Folder>\ADChangeTracker\ADChangeTrackerErrorLog.log*

The *<Application Data Folder>* is the common location where ADChangeTracker settings will be stored in the computer running ADChangeTracker application. The *<Application Data Folder>* can be found from the **Help -> About** screen. The default path of *<Application Data Folder>* is as follows:

- a) Windows XP, Windows 2000, Windows 2003-C:\Documents and Settings\All Users\Documents
- b) Windows 7, Windows Vista, Windows 2008 - C:\Users\Public\Documents

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