## **User Manual**

# **Active Directory Change Tracker**



Last Updated: June 2022

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# 1 General

About ADChangeTracker
System Requirements
Who can use ADChangeTracker?
How to purchase?
How to activate the software?

**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

### For the computer running ADChangeTracker

**Processor** Intel Pentium Processor

**Disk Space & Memory** 512 MB RAM and minimum of 20 MB of free disk space

Operating System

Windows 10 / Windows 8.1 / Windows 8 / Windows Server 2008 / Windows Server 2008 R2 / Windows Server 2012 / Windows Server 2012 R2 with .NET Framework 4.0 or higher with the latest service packs.

Database

Microsoft SQL Server 2012 (Enterprise / Standard / Developer / Express edition) or Microsoft SQL Server 2008 (Enterprise / Standard / Developer / Express edition) running in local / remote computer with latest

Service Pack.

**Software** MDAC v2.5/2.6/2.8

## For the computers reported by ADChangeTracker

Windows Server 2012 R2 / Windows Server 2012 / Windows Server 2008 R2 / Windows Server 2008 running Active Directory.

## 1.3 Who can Use ADChangeTracker?

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 2012 R2 / 2012 / 2008 R2 / 2008 Active Directory servers

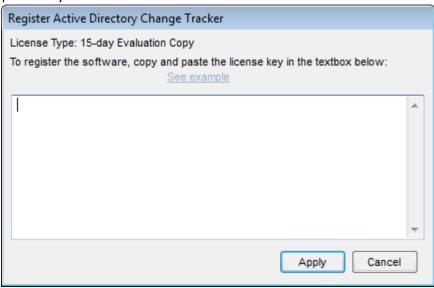
## 1.4 How to Register the Software?

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. You can also request the license key by using the "Request license key..." button in "About" dialog.
- **4)** Click 'Apply' in Help -> About ADChangeTracker -> Register license Key button to see the Register 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 'See example' link in the Register dialog (as shown in Image 2).

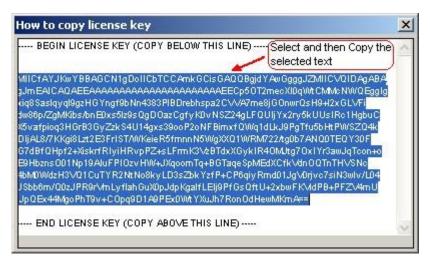


Image 2 - How to copy license key screen

## **Request License Key:**

- Select Help -> AboutADChangeTracker... from toolbar.
- The About ADChangeTracker dialog will appear as shown below:

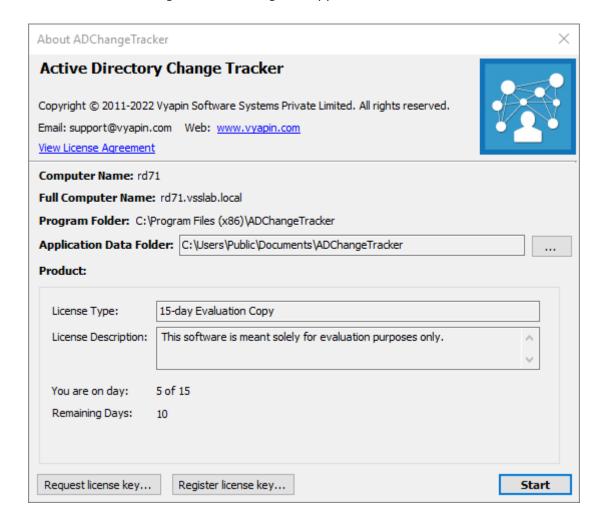


Image 3 - About screen

• Click **Request license key...** button. The Request License Key dialog will appear as shown below:

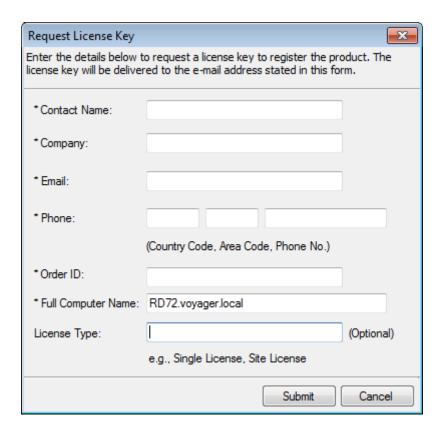


Image 4 - Request License Key image

- Enter the following details and click Submit to place the license key request through email.
  - **Contact Name:** End-user of the product.
  - **Company:** End-user Company Name.
  - **Email:** Email address where the license key has to be sent.
  - Phone: Phone number with country code and area code.
  - Order ID: Order/Transaction ID reference.
  - License Type: License that was purchased.

# 2 Getting Started

Configure Active Directory Auditing Chang Application Data Folder location How to get the change made by value successfully

## 2.1 Configure Active Directory Auditing

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**, rightclick **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

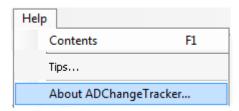
- 1) Click Start, point to Administrative Tools, and then click Active Directory Users and Computers.
- **2)** Right-click the organizational unit (OU) (or any object) for which you want to enable auditing, and then click **Properties**.
- 3) Click the **Security** tab, click **Advanced**, and then click 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 This object and all descendant 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 subtree and Create all child objects too.
- **7)** Click **OK** until you exit the property sheet for the OU or other object.

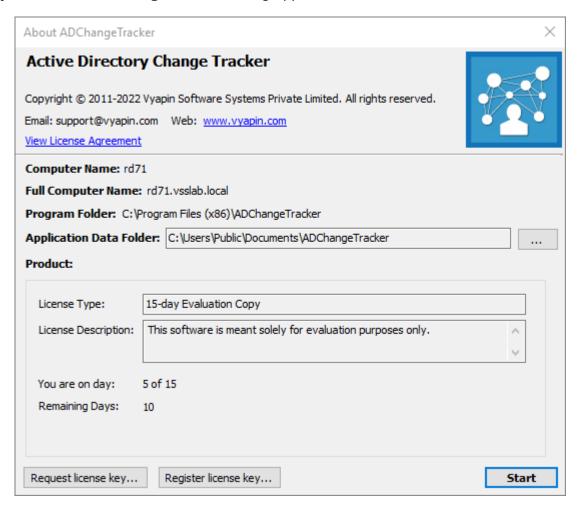
## 2.2 Change Application Data folder location

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:

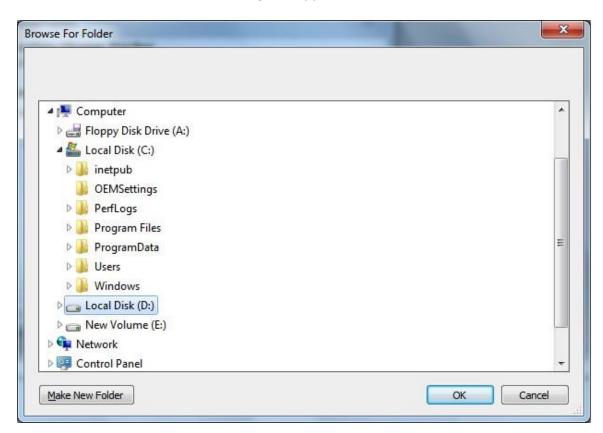
1) Select About ADChangeTracker from Help menu.



2) The About ADChangeTracker dialog appears as shown below:



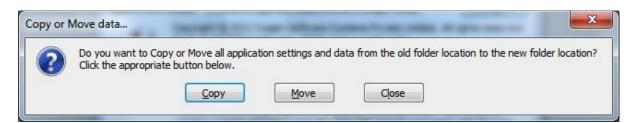
**3)** Click ... button to change **Application Data** folder location of ADChangeTracker application.



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.

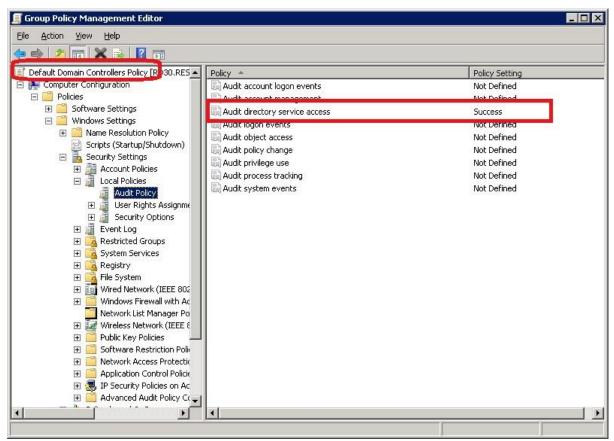
## 2.3 How to Get the Change Made by Value Successfully?

**ADChangeTracker** reports the 'Change made by' value for all AD objects' changes in the Active Directory. The 'Change made by' is retrieved from the event log of the domain controller in which the change is made. This feature is applicable for **Windows Server 2008 or later** operating systems only.

The 'Change made by' field in the report may sometimes not get reflected immediately after a change is observed in AD (will be empty/blank in the report window). This may be due to a delay/failure in receiving the Event subscription notification by the ADCT Service application. Click Refresh button in the report window to refresh the 'Change made by' field.

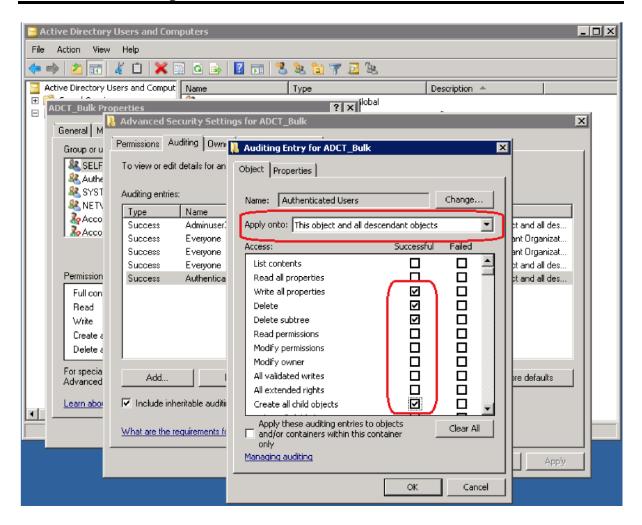
If the 'Change made by' value continues to remain unavailable, please ensure the following points in order to retrieve Change made by value successfully:

- **a)** Select the 'Use Security event log in DC to retrieve additional Change data (Who & When)' checkbox in the Add domain or Edit domain dialog.
- **b)** Enable the **Audit directory service access** Policy and set to success in **Default Domain Controllers Policy** as shown below:



c) Select Write all properties, Delete, Delete subtree and Create all child objects properties for the OU or domain in which you wish to track changes as shown below:

#### **CHAPTER 2 – Getting Started**



- **d)** Ensure that there is no Event flooding which may sometimes prevent the ADCT Service application from receiving the subscribed events. For example, ensure that "Read All Properties" is not selected in object's Auditing. Selecting this setting will create a flurry of events in DC and will cause Event flooding.
- **e)** Disable firewall protection to read event logs: Ensure that the target Domain Controller is not protected by Windows firewall to read event logs by remote clients.
- **f)** Ensure that the 'ADCT Listener Service' is running in the computer where AD Change Tracker application is installed (can be verified in How to view the subscription status of domain controllers?).

# 3 ADChangeTracker Features

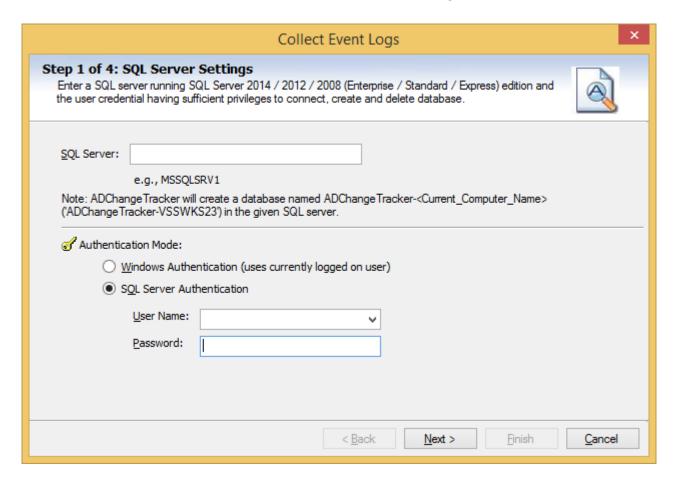
Collect Data Search Reports History Manager Events Reports

#### 3.1 Collect Data

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



Select button in the toolbar. The Collect Event Logs window will be launched...



## **User Authentication**

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

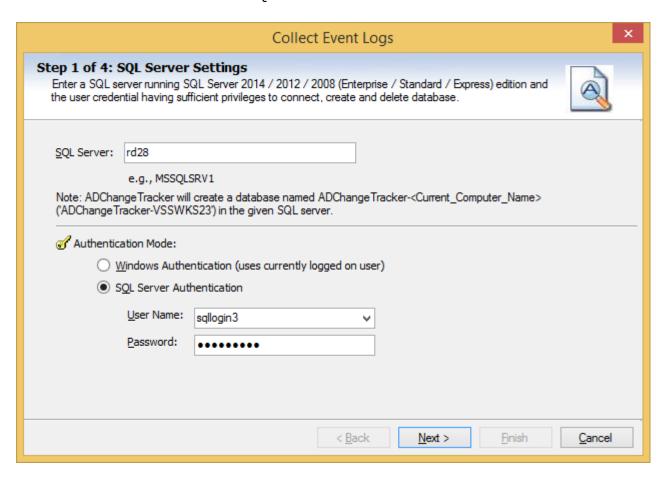
#### A. Windows Authentication:

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

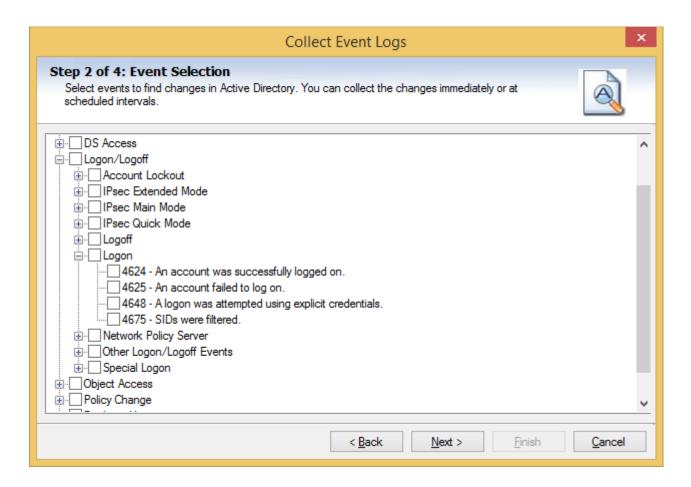
#### **B. SQL Authentication:**

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.

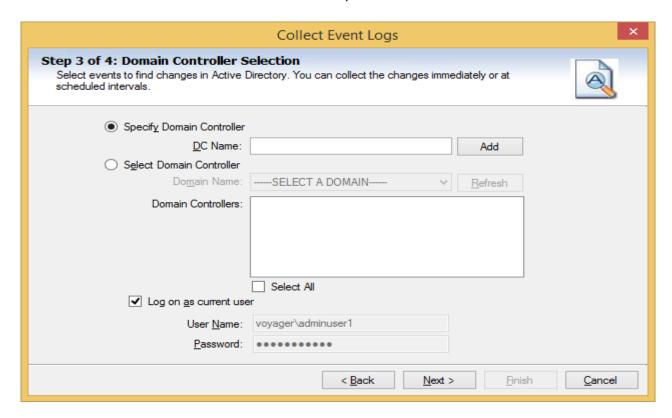
**Note:** ADChangeTracker expects the user account to have sufficient privileges to create, add to and delete database in the SQL server.



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

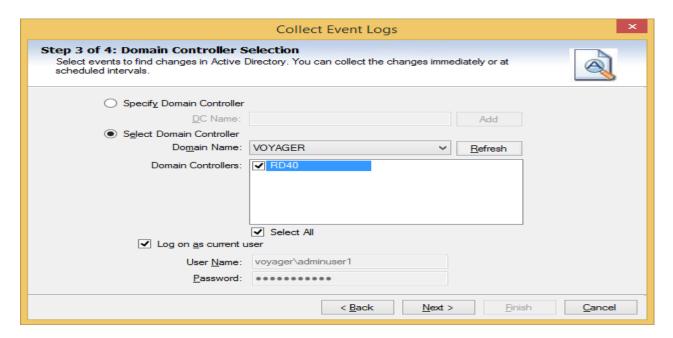


Select event IDs to find events in Active Directory and Click **Next** button

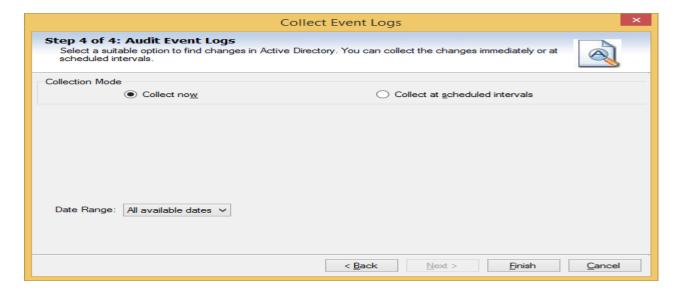


- a. In the Specify domain controller, click **Add** button to add a domain to the list using DC Name textbox.
- b. The list of domains available in the network will be loaded in the Domain Name dropdown.
- c. Select a domain from the Domain Name dropdown.
- d. The list of domain controllers for the selected domain will be loaded in the Domain Controller Name dropdown.

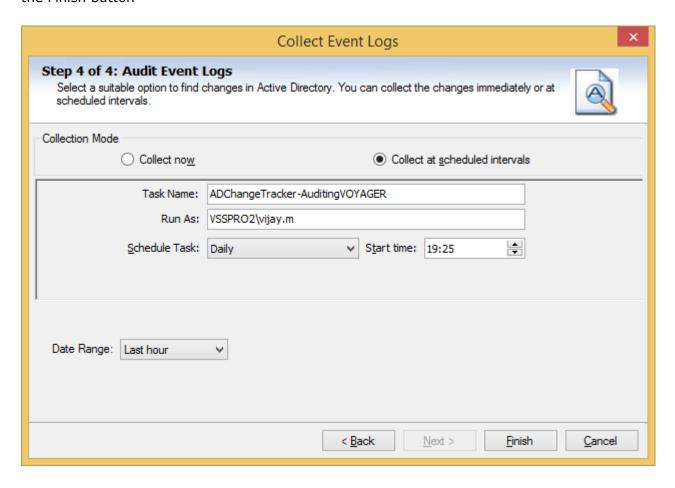
Select a domain controller from the Domain Controller Name dropdown.



Specify user name and the corresponding password to connect to the specified server and Click **Next** button.



Select Collect now option to collect events in Active Directory domain immediately upon clicking the Finish button



Or select Collect at scheduled intervals option to collect changes made to Active Directory domain at scheduled intervals.

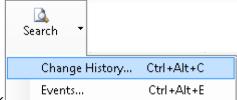
Change the task schedule settings as required and set the password for the specified Run As user and Click **Finish** to save the task details .

Events will be collected since the last time a collect data was performed. The collecting process will only collect the event data and store it in the application's change history database

## 3.2 Search Reports

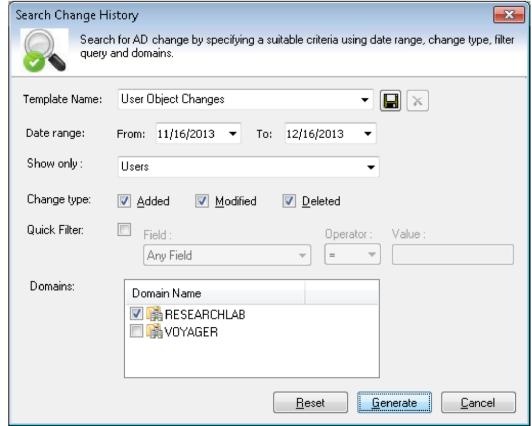
## 3.2.1 How to Search Change History?

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 periods'. You can specify a search criteria based on the different search options available.



To launch 'Search Change History' window, click menu in the toolbar. The 'Search Change History' dialog will appear as shown below:

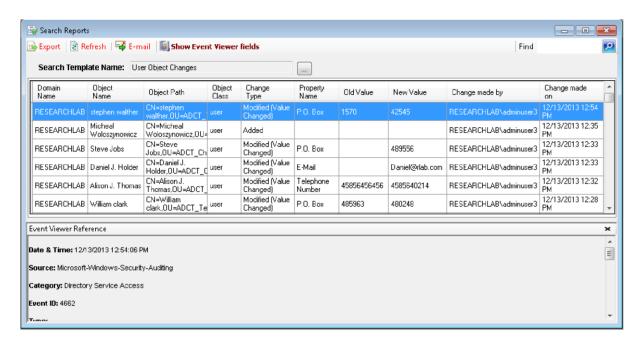
- > Specify the Date range, Object type, Change type and a field based Filter criteria to find specific changes in the application's Change History database.
- > Select the desired **Domains** to perform your search on.
- Optionally, you can save this search by specifying a name for your search and clicking 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 on Generate button to begin search.



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

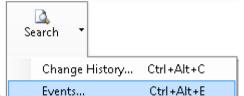
click on Save again to save the modified search. Once you load a saved search, you may click Generate to perform a search.

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



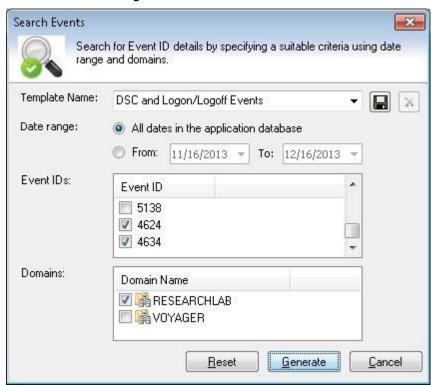
#### 3.2.2 How to Search Events?

The **Search Events** is a powerful feature that allows you to locate specific events that occurred over a time period and stored in the application's Events History database.



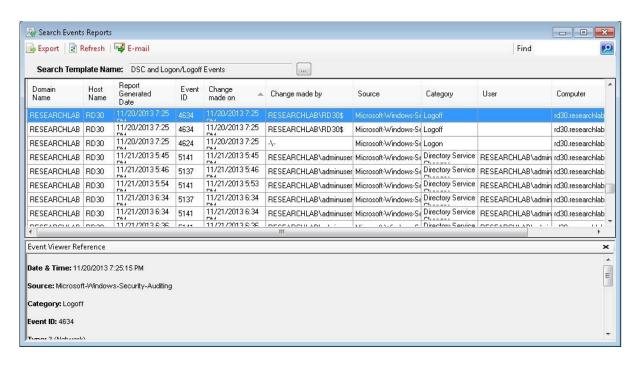
To launch 'Search Events' window, click menu in the toolbar. The 'Search Events' dialog will appear as shown below:

- > Specify the **Date range** and **Event IDs** to find in the application's Events History database. You can also select multiple events for search.
- You can also perform the events search for the entire database by selecting the All dates in the application database option.
- > 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.



If you want to use an already saved search, select the name of saved search from the drop down list. This will load the saved search's settings. 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:



## 3.3 History Manager

## 3.3.1 How to Cleanup Events History?

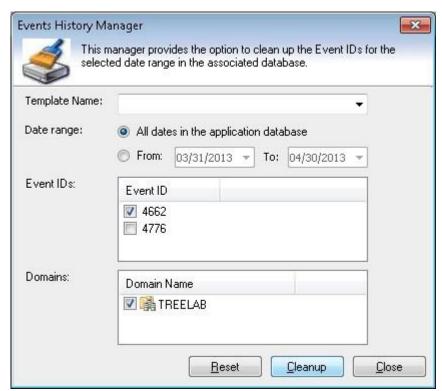
The Events History Manager allows you to clean up any unwanted events and their related data from the Events History database. The Events History database contains all events from the time you configured the specified event ID in the application. Please be careful while you perform cleanups of events as this will permanently delete the selected events 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 events data.



To launch 'Events History Manager' window, click History Manager' dialog will appear as shown below:

menu in the toolbar. The 'Events

- > Specify the **Date range** and **Event IDs** to cleanup specific event ID in the application's Events History database.
- > Select the desired **Domains** to perform the cleanup.
- > Optionally, you can cleanup the events by selecting a template from the saved templates.
- > Click on **Cleanup** button to delete all the events for the selected date range and domain.



**NOTE:** You can also delete the entire events history by selecting the 'All dates in the application database' option.

## 3.4 Events Reports

## 3.4.1 About Events Reports

**Events Reports** in ADChangeTracker is a powerful feature that enables the user to report the events data for **AD object changes, User logon/logoff activities, Password change activities and Terminal Services activities** based on specific event ID(s) in the security event log of domain controller. This feature is powered by a listener Service called **ADCT Listener Service**. ADCT Listener Service collects the events data and stores in the application's Events History database. You can view events data by specifying the timestamp, domain, change type, category and field based filter query that occurred over a time period.

#### **Benefits**

- Reports User Logon/Logoff activities in a domain with valuable information like Client Name, Logon Type and Workstation Name.
- Reports events data with When and Who made the changes for Password change activities in Active Directory.
- Reports Terminal Services Activities of roaming users in a domain with valuable information like Connected User Name, Workstation Name and Session Type.
- Reports What exactly changed, along with Old Value and New Value, When the change
  was made, Where the change was made in Active Directory and Who made the changes
  in Active Directory objects.

## 3.4.2 Configure Events Reports

This section provides step-by-step procedure for configuring Events Reports. This process consists of three primary steps:

- > Enable audit policy.
- > Configure event ID(s) in application for security event log data collection.
- > Set up auditing in object's SACL. This step is applicable for Object Change Reports and Permissions Change Reports only.

## **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**, rightclick **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 the Policy pertaining to the report as shown in the following table and then click **Properties**.

Report Name	Policy
User Logon/Logoff Reports	Audit logon events
Password Change Reports	Audit account management
Terminal Services Activity Reports	Audit logon events
Object Change Reports	Audit directory service access
Permissions Change Reports	Audit directory service access

- 5. Select the **Define these policy settings** check box.
- 6. Under Audit these attempts, select the Success check box, and then click OK.

## Configure event ID(s) in application for security event log data collection.

For security event log data collection, configure event ID(s) corresponding to each report in **Real Time Events** -> **Alerts** as stated in the following table:

Report Name	Event ID(s)
User Logon/Logoff Reports	4624, 4634

Password Change Reports	4724
Terminal Services Activity Reports	4778, 4779
Object Change Reports	5136, 5137, 5139, 5141
Permissions Change Reports	5136

#### Set up auditing in object's SACL:

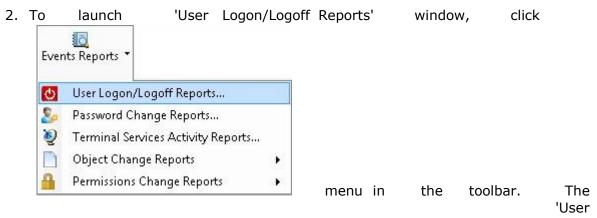
To set up **SACL** auditing for directory objects, perform the following steps.

- 1. Click **Start**, point to **Administrative Tools**, and then click **Active Directory Users and Computers**.
- 2. Right-click the organizational unit 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 This object and all descendant objects.
- 6. For Object Change Reports: Under Access, select the Successful check box for Write all properties. If you want to report events data for creation and deletion of objects, select the Successful check box for Delete, Delete subtree and Create all child objects too.
- For Permission Change Reports: Under Access, select the Successful check box for Modify Permissions.
- 8. Click **OK** until you exit the property sheet of the organizational unit or other object.

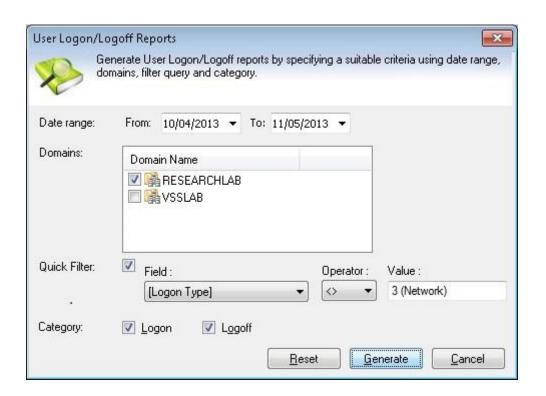
## 3.4.3 How to generate User Logon/Logoff Reports?

To generate the User Logon/Logoff Reports, perform the following steps.

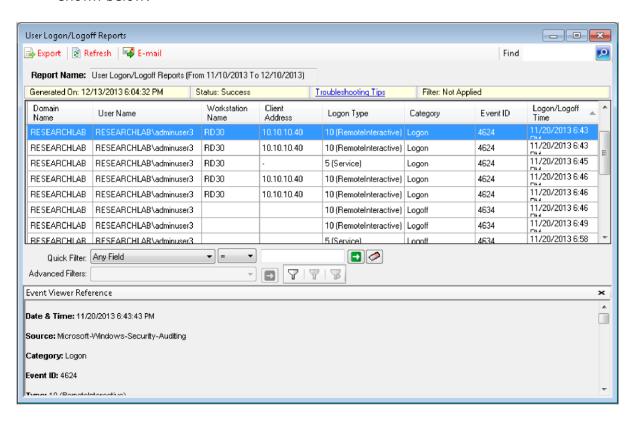
1. Configure settings for 'User Logon/Logoff Reports' as stated in Configure Events Reports.



Logon/Logoff Reports' window will appear as shown below:



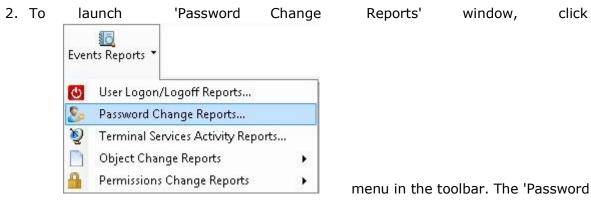
- 3. Specify the Date range, Category and a field based Filter criteria to find the User logon/logoff events in the application's Events History database.
- 4. Select the desired Domains to generate your reports on.
- 5. Click Generate button to generate the report.
- 6. Once the data collection is complete, the report will be generated in a report window as shown below:



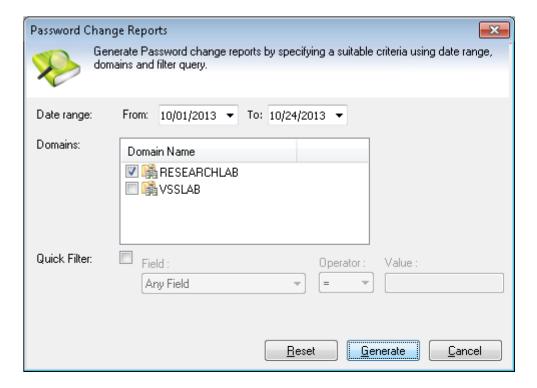
## 3.4.4 How to generate Password Change Reports?

To generate the Password Change Reports, perform the following steps.

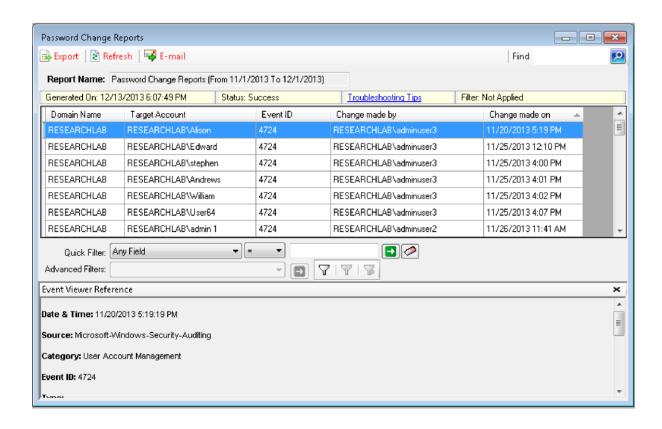
1. Configure settings for 'Password Change Reports' as stated in Configure Events Reports.



Change Reports' window will appear as shown below:



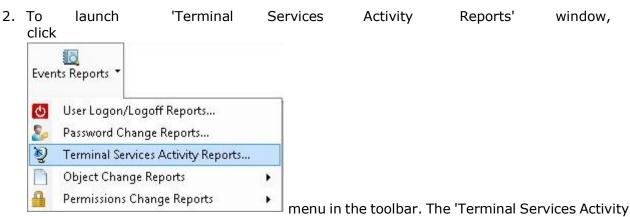
- 3. Specify the Date range and a field based Filter criteria to find the Password change events in the application's Events History database.
- 4. Select the desired Domains to generate your reports on.
- 5. Click Generate button to generate the report.
- 6. Once the data collection is complete, the report will be generated in a report window as shown below:



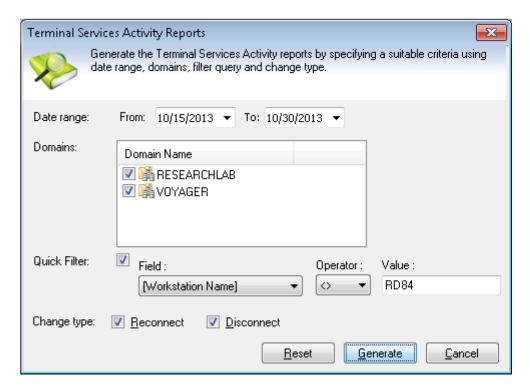
# 3.4.5 How to generate Terminal Services Activity Reports?

To generate the **Terminal Services Activity Reports**, perform the following steps.

1. Configure settings for 'Terminal Services Activity Reports' as stated in Configure Events Reports.

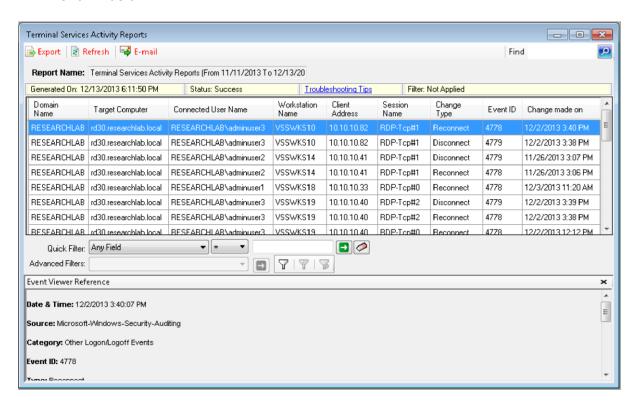


Reports' window will appear as shown below:



- 3. Specify the Date range, Change type and a field based Filter criteria to find the Terminal Services activity events in the application's Events History database.
- 4. Select the desired Domains to generate your reports on.
- 5. Click Generate button to generate the report.

6. Once the data collection is complete, the report will be generated in a report window as shown below:



# 3.4.6 Object Change Reports

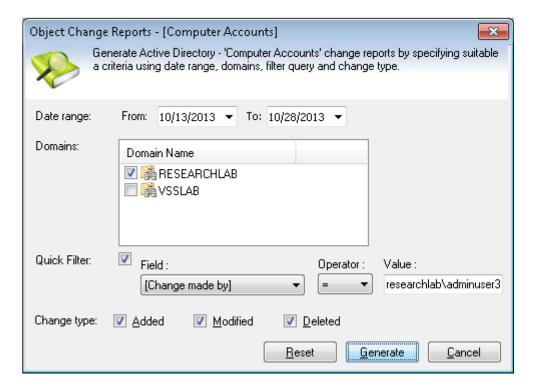
Object Change Reports in ADChangeTracker allows you to view events data for any change made to your Active Directory objects since the application is configured for event data collection.

By default, ADChangeTracker collects and reports events data for the following objects only: Builtin-Domain, Computer, Contact, Domain, Domain DNS, Group, Group Policy Container, Organizational Unit, User.

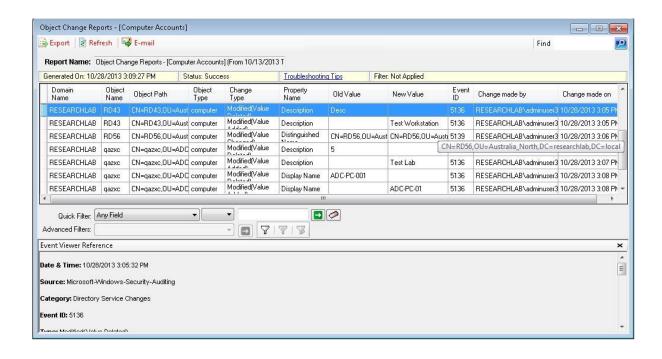
# 3.4.6.1 How to generate Computer Accounts Change Reports?

To generate the Computer Accounts Change Reports, perform the following steps.

- 1. Configure settings for 'Object Change Reports' as stated in Configure Events Reports.
- 2. To launch 'Object Change Reports [Computer Accounts]' window, click Events Reports > Object Change Reports -> Computer Accounts... menu in the toolbar. The 'Object Change Reports - [Computer Accounts]' window will appear as shown below:



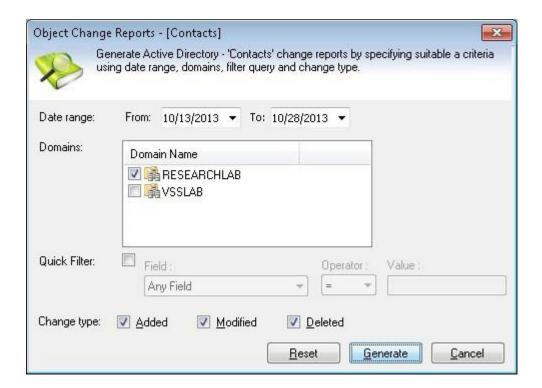
- 3. Specify the Date range, Change type and a field based Filter criteria to find the Computer Accounts change events in the application's Events History database.
- 4. Select the desired Domains to generate your reports on.
- 5. Click Generate button to generate the report.
- 6. Once the data collection is complete, the report will be generated in a report window as shown below:



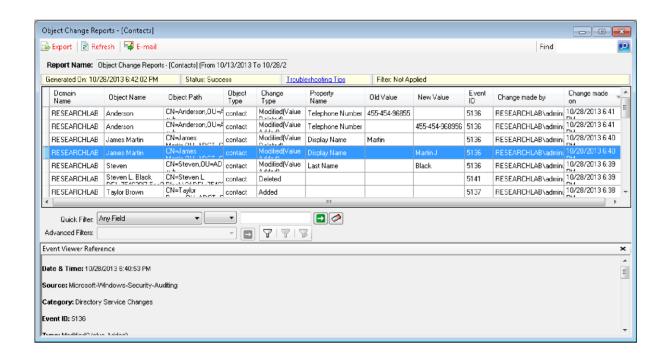
# 3.4.6.2 How to generate Contacts Change Reports?

To generate the Contacts Change Reports, perform the following the steps.

- 1. Configure settings for 'Object Change Reports' as stated in Configure Events Reports.
- To launch 'Object Change Reports [Contacts]' window, click Events Reports -> Object Change Reports -> Contacts... menu in the toolbar. The 'Object Change Reports -[Contacts]' window will appear as shown below:



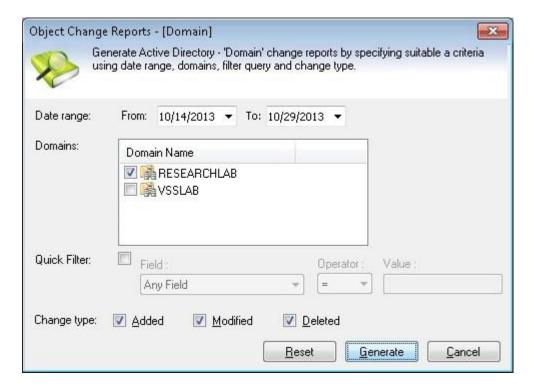
- 3. Specify the Date range, Change type and a field based Filter criteria to find the Contacts change events in the application's Events History database.
- 4. Select the desired Domains to generate your reports on.
- 5. Click Generate button to generate the report.
- 6. Once the data collection is complete, the report will be generated in a report window as shown below:



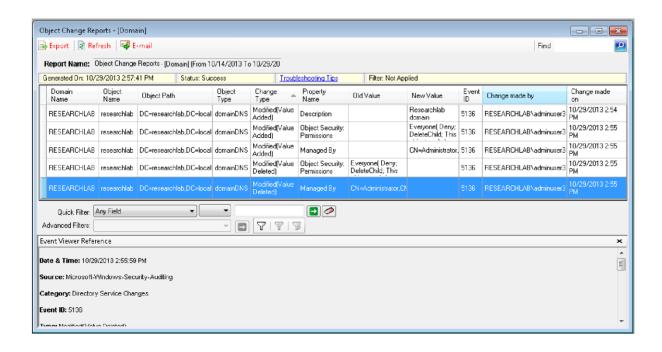
# 3.4.6.3 How to generate Domain Change Reports?

To generate the **Domain Change Reports**, perform the following steps.

- 1. Configure settings for 'Object Change Reports' as stated in Configure Events Reports.
- 2. To launch 'Object Change Reports [Domain]' window, click Events Reports -> Object Change Reports -> Domain... menu in the toolbar. The 'Object Change Reports [Domain]' window will appear as shown below:



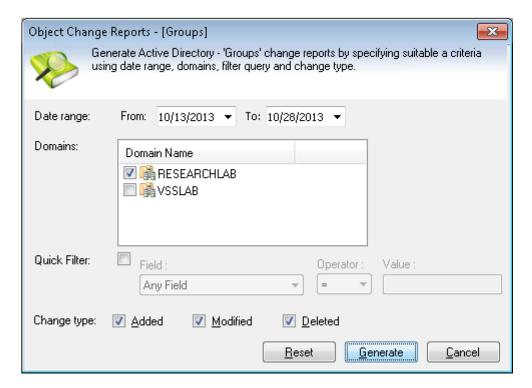
- 3. Specify the Date range, Change type and a field based Filter criteria to find the Domain change events in the application's Events History database.
- 4. Select the desired Domains to generate your reports on.
- 5. Click Generate button to generate the report.
- 6. Once the data collection is complete, the report will be generated in a report window as shown below:



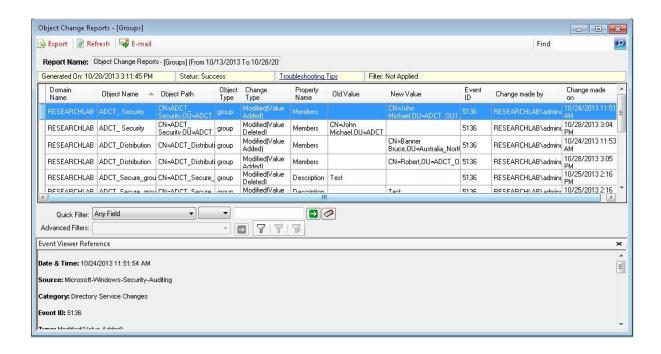
# 3.4.6.4 How to generate Groups Change Reports?

To generate the Groups Change Reports, perform the following steps.

- 1. Configure settings for 'Object Change Reports' as stated in Configure Events Reports.
- 2. To launch 'Object Change Reports [Groups]' window, click Events Reports -> Object Change Reports -> Groups... menu in the toolbar. The 'Object Change Reports [Groups]' window will appear as shown below:



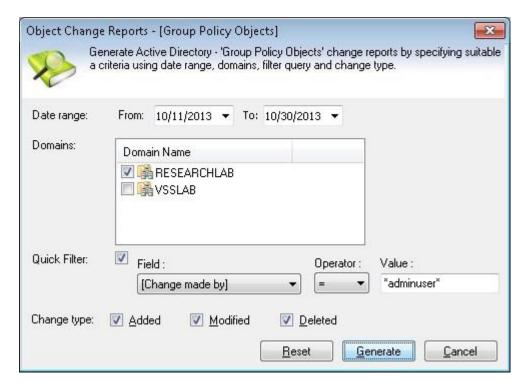
- 3. Specify the Date range, Change type and a field based Filter criteria to find the Groups change events in the application's Events History database.
- 4. Select the desired Domains to generate your reports on.
- 5. Click Generate button to generate the report.
- 6. Once the data collection is complete, the report will be generated in a report window as shown below:



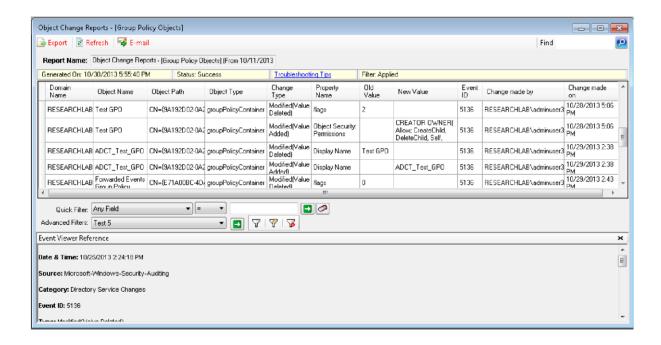
# 3.4.6.5 How to generate Group Policy Objects Change Reports?

To generate the **Group Policy Objects Change Reports**, perform the following steps.

- 1. Configure settings for 'Object Change Reports' as stated in Configure Events Reports.
- 2. To launch 'Object Change Reports [Group Policy Objects]' window, click Events Reports -> Object Change Reports -> Group Policy Objects... menu in the toolbar. The 'Object Change Reports [Group Policy Objects]' window will appear as shown below:



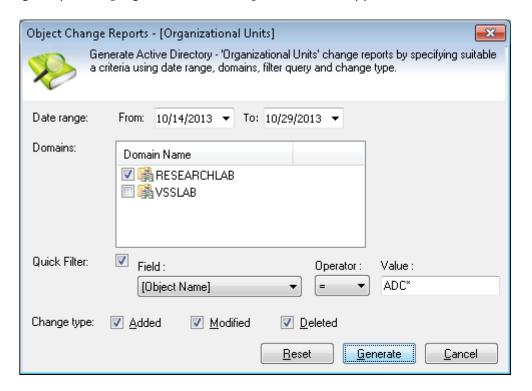
- 3. Specify the Date range, Change type and a field based Filter criteria to find the Group Policy Objects change events in the application's Events History database.
- 4. Select the desired Domains to generate your reports on.
- 5. Click Generate button to generate the report.
- 6. Once the data collection is complete, the report will be generated in a report window as shown below:



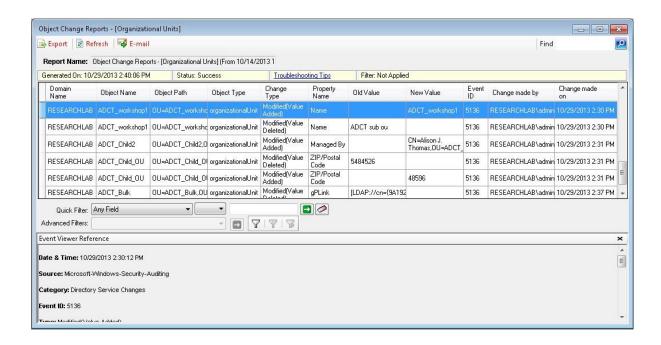
# 3.4.6.6 How to generate Organizational Units Change Reports?

To generate the Organizational Units Change Reports, perform the following steps.

- 1. Configure settings 'Object Change Reports' as stated in Configure Events Reports.
- 2. To launch 'Object Change Reports [Organizational Units]' window, click Events Reports Object Change Reports -> Organizational Units... menu in the toolbar. The 'Object Change Reports [Organizational Units]' window will appear as shown below:



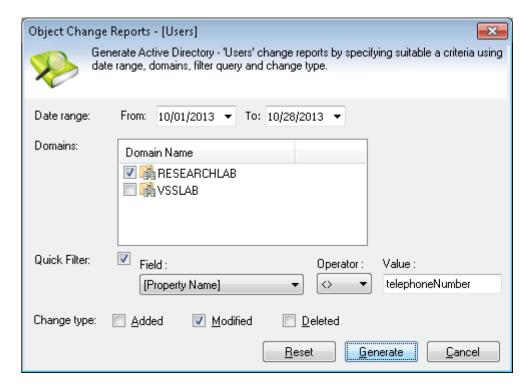
- 3. Specify the Date range, Change type and a field based Filter criteria to find the Organizational Units change events in the application's Events History database.
- 4. Select the desired Domains to generate your reports on.
- 5. Click Generate button to generate the report.
- 6. Once the data collection is complete, the report will be generated in a report window as shown below:



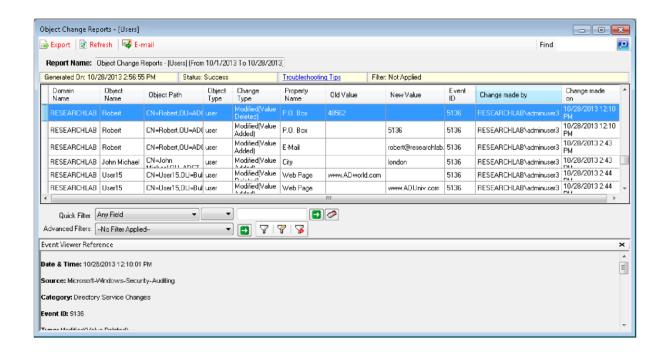
# 3.4.6.7 How to generate Users Change Reports?

To generate the Users Change Reports, perform the following steps.

- 1. Configure settings 'Object Change Reports' as stated in Configure Events Reports.
- 2. To launch 'Object Change Reports [Users]' window, click Events Reports -> Object Change Reports -> Users... menu in the toolbar. The 'Object Change Reports [Users]' window will appear as shown below:



- 3. Specify the Date range, Change type and a field based Filter criteria to find the Users change events in the application's Events History database.
- 4. Select the desired Domains to generate your reports on.
- 5. Click Generate button to generate the report.
- 6. Once the data collection is complete, the report will be generated in a report window as shown below:



# **3.4.7 Permissions Change Reports**

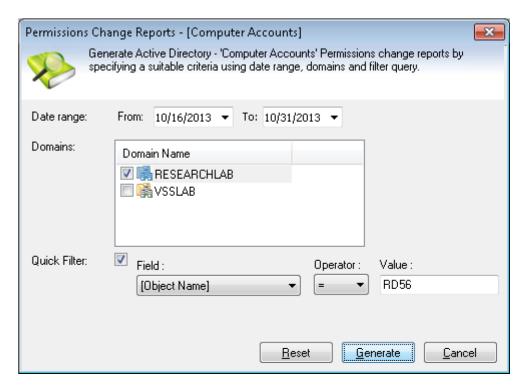
Permissions Change Reports in ADChangeTracker allows you to view events data for Permissions changes made to your Active Directory objects since the application is configured for event data collection.

By default, ADChangeTracker collects and reports events data for the following objects only: Builtin-Domain, Computer, Contact, Domain, Domain DNS, Group, Group Policy Container, Organizational Unit, User.

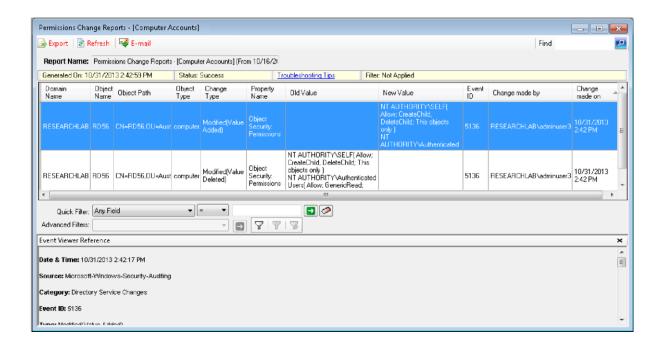
# 3.4.7.1 How to generate Computer Accounts Permissions

To generate the Computer Accounts Permissions Change Reports, perform the following steps.

- 1. Configure settings for 'Permissions Change Reports' as stated in Configure Events Reports.
- 2. To launch 'Permissions Change Reports [Computer Accounts]' window, click Events Reports -> Permissions Change Reports -> Computer Accounts... menu in the toolbar. The 'Permissions Change Reports [Computer Accounts]' window will appear as shown below:



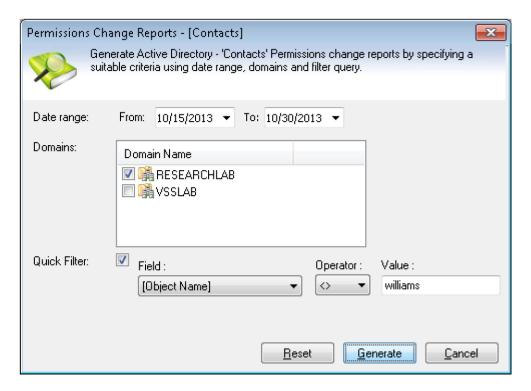
- 3. Specify the Date range and a field based Filter criteria to find the Computer Accounts Permissions change events in the application's Events History database.
- 4. Select the desired Domains to generate your reports on.
- 5. Click Generate button to generate the report.
- 6. Once the data collection is complete, the report will be generated in a report window as shown below:



# 3.4.7.2 How to generate Contacts Permissions Change Reports?

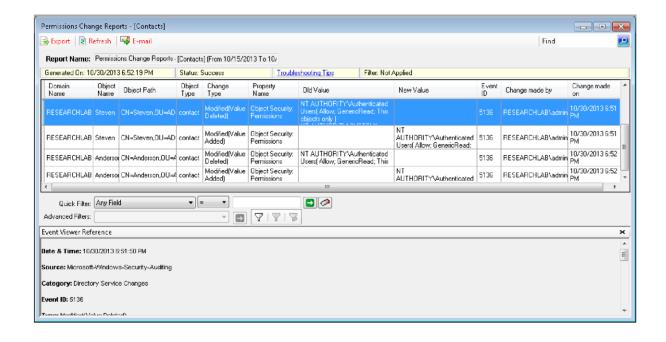
To generate the Contacts Permissions Change Reports, perform the following steps.

- 1. Configure settings for 'Permissions Change Reports' as stated in Configure Events Reports.
- 2. To launch 'Permissions Change Reports [Contacts]' window, click Events Reports -> Permissions Change Reports -> Contacts... menu in the toolbar. The 'Permissions Change Reports [Contacts]' window will appear as shown below:



- 3. Specify the Date range and a field based Filter criteria to find the Contacts Permissions change events in the application's Events History database.
- 4. Select the desired Domains to generate your reports on.
- 5. Click Generate button to generate the report.
- 6. Once the data collection is complete, the report will be generated in a report window as shown below:

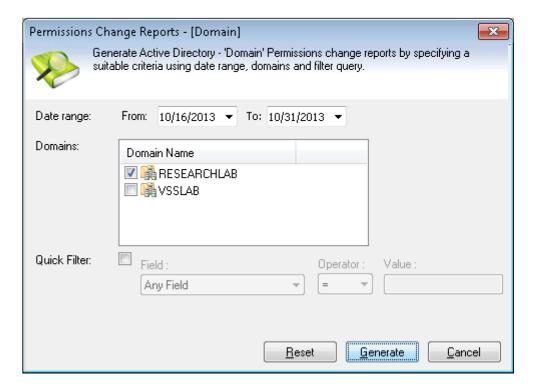
### **CHAPTER 3 - ADChange Tracker Features**



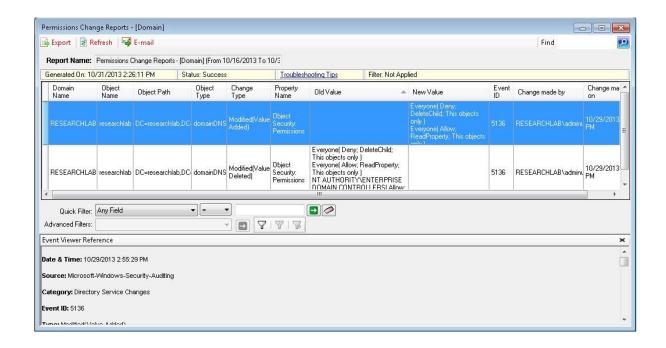
# 3.4.7.3 How to generate Domain Permissions Change Reports?

To generate the **Domain Permissions Change Reports**, perform the following steps.

- 1. Configure settings for 'Permissions Change Reports' as stated in Configure Events Reports.
- 2. To launch 'Permissions Change Reports [Domain]' window, click Events Reports -> Permissions Change Reports -> Domain... menu in the toolbar. The 'Permissions Change Reports [Domain]' window will appear as shown below:



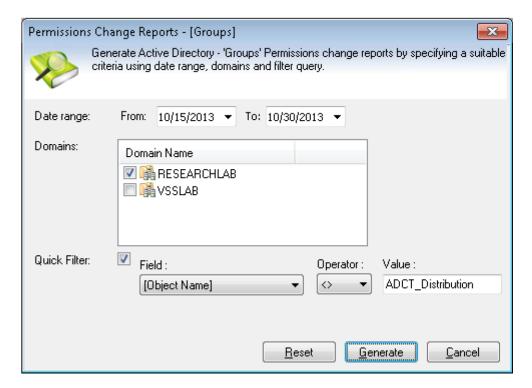
- 3. Specify the Date range and a field based Filter criteria to find the Domain Permissions change events in the application's Events History database.
- 4. Select the desired Domains to generate your reports on.
- 5. Click Generate button to generate the report.
- 6. Once the data collection is complete, the report will be generated in a report window as shown below:



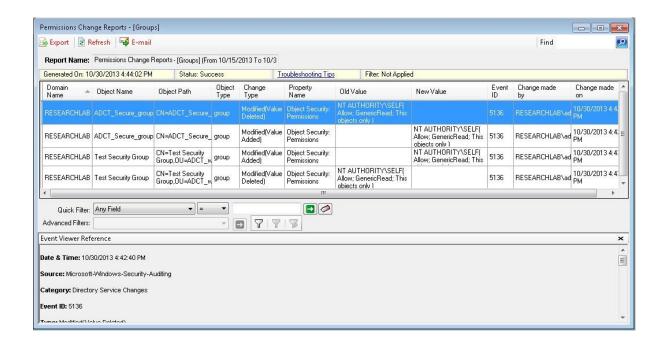
# 3.4.7.4 How to generate Groups Permissions Change Reports?

To generate the **Groups Permissions Change Reports**, perform the following steps.

- 1. Configure settings for 'Permissions Change Reports' as stated in Configure Events Reports.
- 2. To launch 'Permissions Change Reports [Groups]' window, click Events Reports > Permissions Change Reports -> Groups... menu in the toolbar. The 'Permissions Change Reports [Groups]' window will appear as shown below:



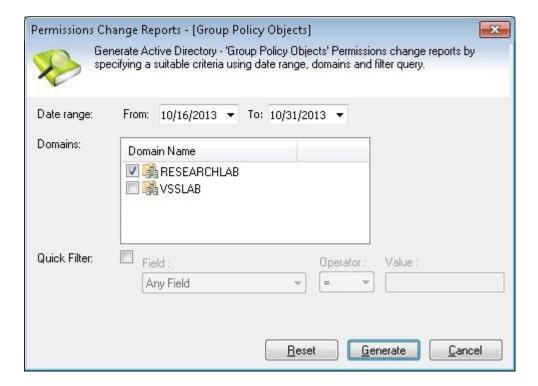
- 3. Specify the Date range and a field based Filter criteria to find the Groups Permissions change events in the application's Events History database.
- 4. Select the desired Domains to generate your reports on.
- 5. Click Generate button to generate the report.
- 6. Once the data collection is complete, the report would be generated in a report window as shown below:



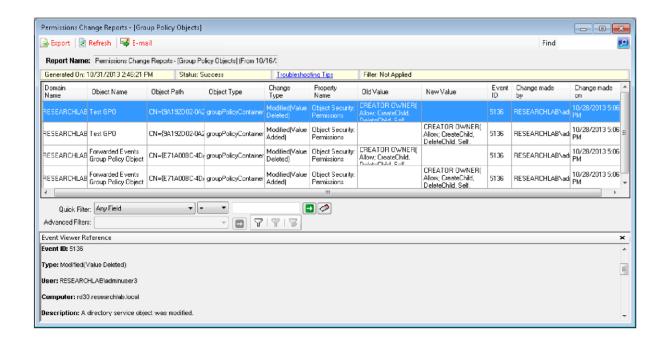
# 3.4.7.5 How to generate Group Policy Objects Permissions change Reports?

To generate the Group Policy Objects Permissions Change Reports, perform the following steps.

- 1. Configure settings for 'Permissions Change Reports' as stated in Configure Events Reports.
- 2. To launch 'Permissions Change Reports [Group Policy Objects]' window, click Events Reports -> Permissions Change Reports -> Group Policy Objects... menu in the toolbar. The 'Permissions Change Reports [Group Policy Objects]' window will appear as shown below:



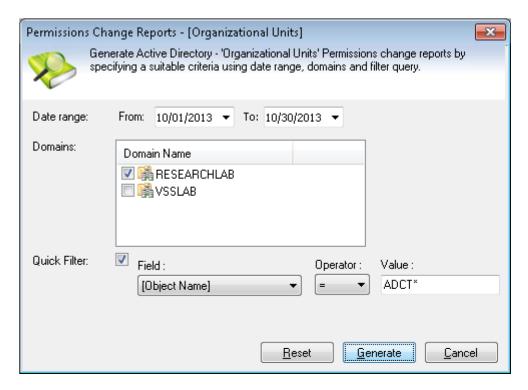
- 3. Specify the Date range and a field based Filter criteria to find the Group Policy Objects Permissions change events in the application's Events History database.
- 4. Select the desired Domains to generate your reports on.
- 5. Click Generate button to generate the report.
- 6. Once the data collection is complete, the report will be generated in a report window as shown below:



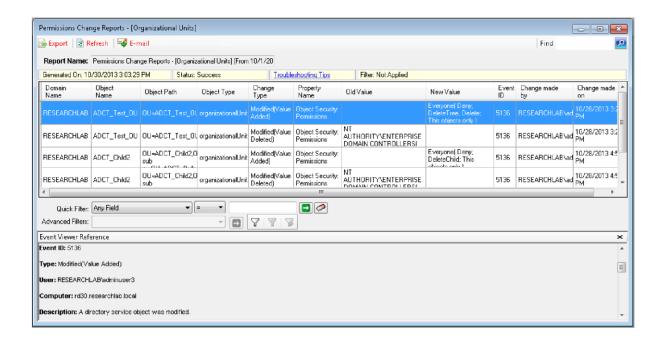
# 3.4.7.6 How to generate Organizational Units Permissions change Reports?

To generate the Organizational Units Permissions Change Reports, perform the following steps.

- 1. Configure settings for 'Permissions Change Reports' as stated in Configure Events Reports.
- 2. To launch 'Permissions Change Reports [Organizational Units]' window, click Events Reports -> Permissions Change Reports -> Organizational Units.. menu in the toolbar. The 'Permissions Change Reports [Organizational Units]' window will appear as shown below:



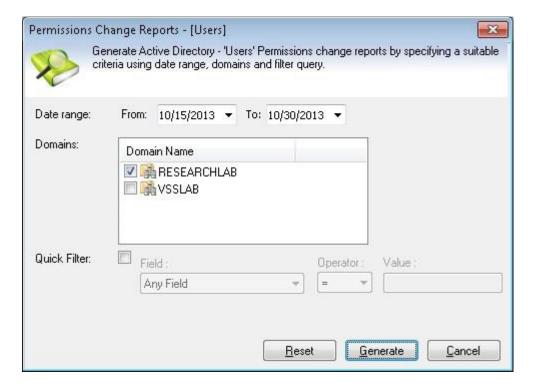
- 3. Specify the Date range and a field based Filter criteria to find the Organizational Units Permissions change events in the application's Events History database.
- 4. Select the desired Domains to generate your reports on.
- 5. Click Generate button to generate the report.
- 6. Once the data collection is complete, the report will be generated in a report window as shown below:



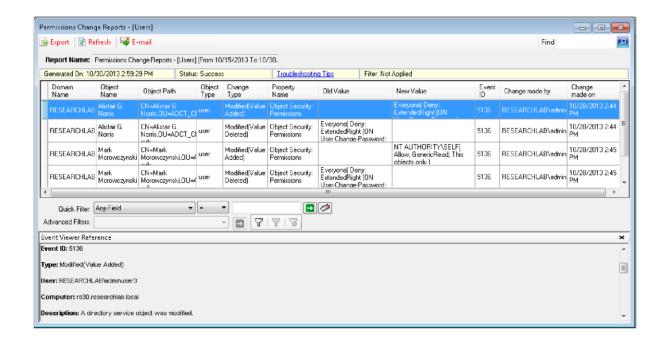
# 3.4.7.7 How to generate Users Permissions Change Reports?

To generate the Users Permissions Change Reports, perform the following steps.

- 1. Configure settings for 'Permissions Change Reports' as stated in Configure Events Reports.
- 2. To launch 'Permissions Change Reports [Users]' window, click Events Reports -> Permissions Change Reports -> Users... menu in the toolbar. The 'Permissions Change Reports [Users]' window will appear as shown below:



- 3. Specify the Date range and a field based Filter criteria to find the Users Permissions change events in the application's Events History database.
- 4. Select the desired Domains to generate your reports on.
- 5. Click Generate button to generate the report.
- 6. Once the data collection is complete, the report will be generated in a report window as shown below:



# 3.5 How to use Advanced Filter?

Advanced Filter tool in Events Reports allows you to filter report data based on complex filter conditions. Unlike Quick Filter, Advanced Filter gives the user the ability to create filter conditions that include one or more fields in the report and is also capable of reporting fields with empty values in the report.

The Advanced Filter tool is available below the report grid in the right pane as shown below:



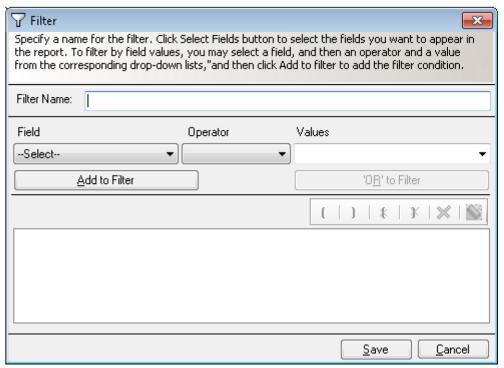
To apply a filter to the current report, select the filter from the Advanced Filters dropdown and click on button.

To remove a filter applied to the current report, select **No Filter Applied** from the Advanced Filters drop-down and click on button.

#### Create a new filter

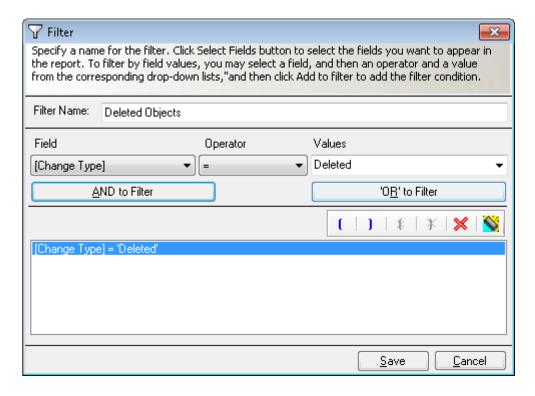
Click on to create a new advanced filter for the current report.

The Filter window will appear as shown below:



To set a filter condition, perform the following steps.

- 7. Specify a name for the filter.
- 8. Choose a field name, an operator and a possible value from the respective dropdowns.
- 9. Click the Add to Filter button to add the filter condition.
- 10. The **Add to Filter** button will change to **AND to Filter**. **OR to Filter** button will be enabled. The selected condition will be added as shown below.



11. Click **Save** to apply the filter to the current report. Also, the filter will be saved to the filter database for future use.

The report status label above the grid, shows the filter status "**Filter**:" followed by its current status.

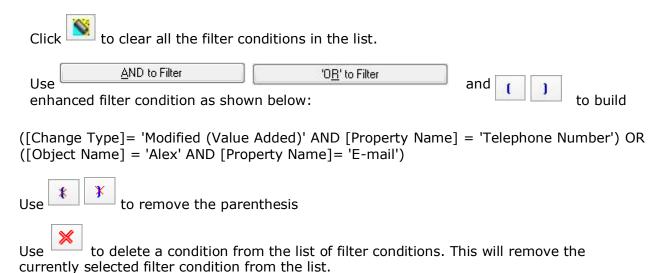
Filter: Not Applied

Filter: Applied

For a normal view, the filter status will appear as

For a filtered view, the filter status will appear as

#### Note:



#### Edit an existing filter

To edit an existing saved filter, select the filter from the advanced filters drop-down and

then click the button. The filter window will appear on the screen. You may edit the fields-list and filter conditions. Also, you can choose to save the filter in a different name, retaining the original filter, or overwrite the existing filter with the new filter conditions and fields-list.

# Delete an existing filter

To delete an existing filter, select the filter from the advanced filters drop-down list and click the button.

However, if the filter is already applied to a report, **ADChangeTracker** clears the filter in the report and deletes the selected filter.

#### 3.6 How to use Quick Filter?

The Quick Filter in **Events Reports** allows you to view a narrow subset of data by specifying a filter condition that could either be applied to any of the fields or to a specific field in the current report.

The Quick Filter tool is available below the report grid in the right pane as shown below:



#### **Apply Filter**

To filter report data, perform the following steps:

- 1. Select a field from the fields drop-down. If you want to apply the filter condition to any of the fields in the current report, select "Any Field" from the fields dropdown.
- 2. Select an operator from the operators drop-down, next to fields drop-down.
- 3. Type in a filter condition in the edit box.

**Note:** You can use wildcard characters such as "\*" and "?" in the filter condition.

The filter condition can include regular characters as well as wildcard characters as given below:

Filter Condition	Description	Example
a*	Character starting with a	[Object Name] = a* finds object name beginning with a, for example Adminuser, Administrator.
a?	Character starting with a and maximum of two characters including a	[Object Name] = a? finds object name that has only two characters, starting with a, for example AD.
a?d*	Minimum of three characters, the first character being a, middle character may be any single character and the last character being d	[Object Name] = a?d* finds object name beginning with a, that has any single character in the middle and ending with d followed by zero or more characters.

Click on to apply the filter condition.

#### **Remove Filter**

#### 3.7 How to find data in a report?

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

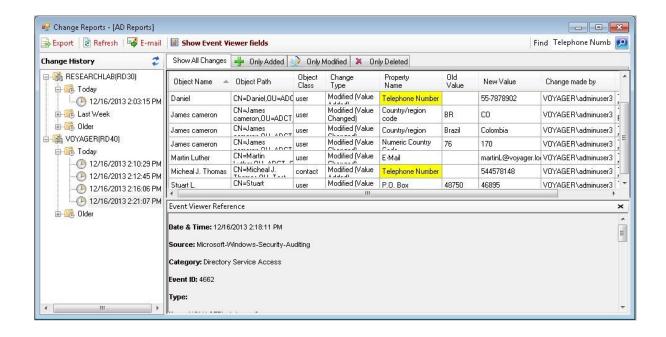
- 1. ADChangeTracker performs a case insensitive search of the specified search criteria in the report.
- 2. The search criteria should not be enclosed within quotation marks.
- 3. You can use the "\*" wildcard character in the search criteria. The "\*" wildcard character act as a place holder for zero 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 click 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.

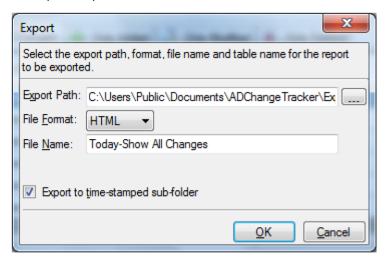
4. ADChangeTracker finds additional occurrences of the specified search criteria instantaneously. To locate other occurrences of the same search criteria in a report you need to scroll the report grid downwards.



### 3.8 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/CSV/XLSX.

Click on 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 'YYYYMM-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.

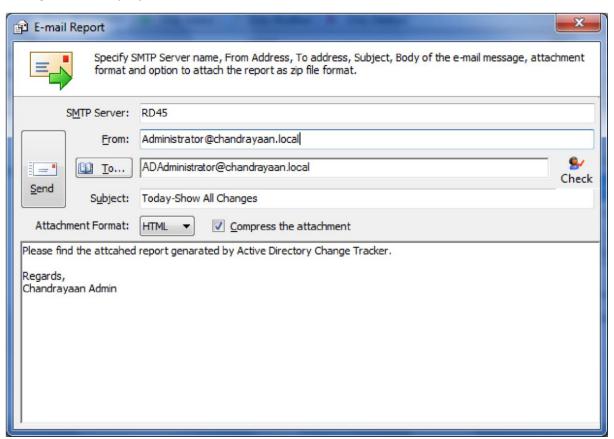
In CSV file format, the information is stored as comma separated values. For each report, a CSV file will be generated. The name of the CSV file will be the name of the report.

In HTML and XLSX file formats, the information is stored in html and xlsx 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.

#### 3.9 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 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.

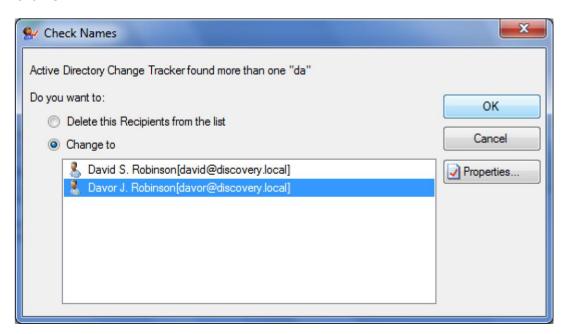
Click button to send the r

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

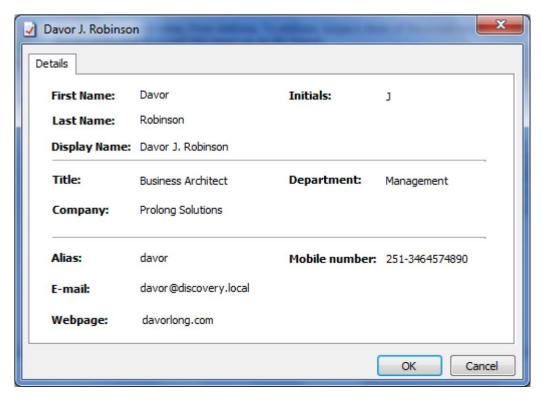
#### **Check names**

ADChangeTracker provides check name feature to check the existence of corresponding

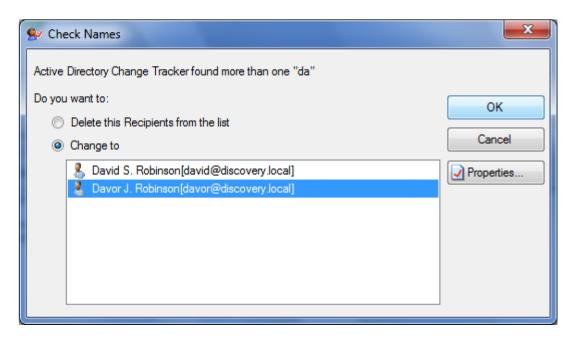
mail-enabled recipient object in Active Directory. To check name, click Check button. If the entered name matches with a mail object in the Active directory / its trusted domain, name entered in From address textbox will be replaced by the corresponding active directory recipient object. If there is 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



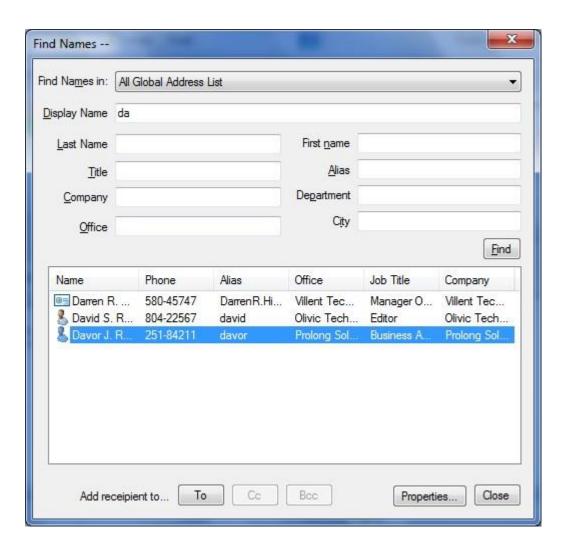
If there is no match for the name entered by the user in Active Directory, a dialog will appear as shown below:



Select Delete option in the above dialog to remove the recipient name from 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.



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 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

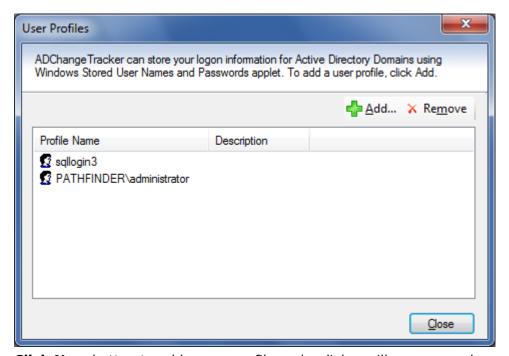
The stored user profile persists for all subsequent logon sessions on the same computer where ADChangeTracker is installed. The stored user profiles are visible to the application under other logon sessions on the same computer.

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, 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:



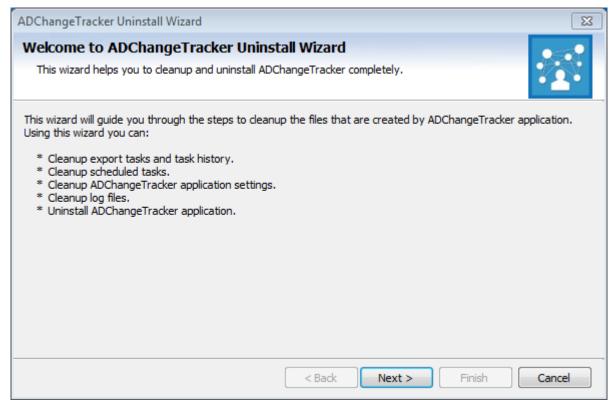
Click Remove button in the User Profiles dialog to remove available profiles.

# **5 References**

Frequently asked questions How to uninstall ADChangeTracker Technical Support 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.

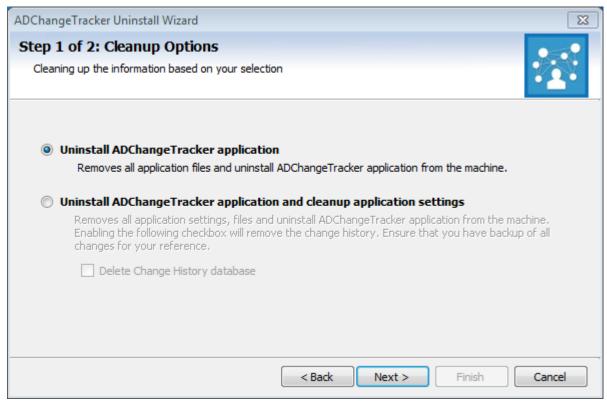
- 1) Launch the *Uninstall wizard* by clicking **Start -> Programs -> Active Directory**Change Tracker -> Uninstall ADChangeTracker.
- 2) The ADChangeTracker Uninstall Wizard dialog will be shown as below:



**CHAPTER-5- References** 

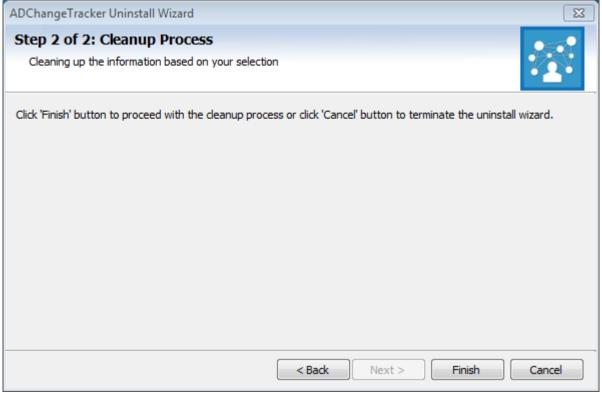
Click **Next** to Proceed.

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



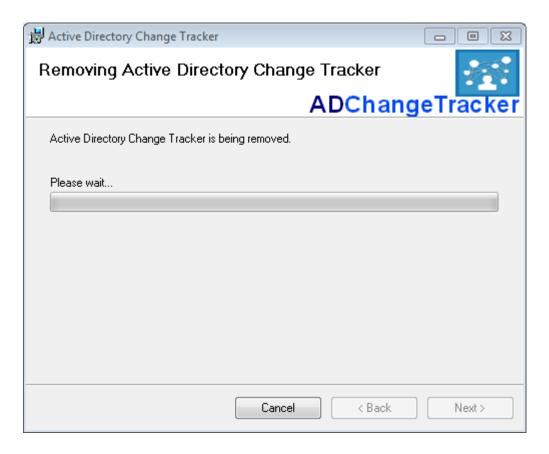
Click **Next** to Proceed.

4) Confirm the cleanup and/or uninstall process.



**CHAPTER-5- References** 

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



**1)** 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.

Error log file - e.g., < Application Data Folder > \ADChangeTracker \ADChangeTracker ErrorLog.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 2003 C:\Documents and Settings\All Users\Documents
- **b)** Windows 10, Windows 8.1, Windows 8, Windows 7, Windows Vista, Windows 2008, Windows 2008 R2, Windows 2012, Windows 2012 R2 C:\Users\Public\Documents

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