



USE CASE GUIDE

HOW TO REPORT ON PERMISSION CHANGES TO SENSITIVE DATA ON SHAREPOINT ONLINE

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1. Introduction

Data breaches are a serious threat to any organization and action needs to be taken to keep the risk of their occurrence to a minimum. The focus at Lepide is to provide visibility over what's happening with your data and through visibility you can take the necessary action to mitigate risk and stay compliant.

This guide is in two parts. The first explains the ways in which you can use Lepide Data Security Platform to provide visibility to reduce data breaches with sensitive data. The [second part](#) gives step-by-step instructions on how to configure the SharePoint Online Permission Modification Reports to identify any changes to sensitive data permissions.

2. Sensitive Data

The types of sensitive data which companies hold can include information such as social security numbers, credit card details, bank account information, and other account data that identifies customers or employees.

This information is necessary for employees to perform essential business functions but if there is uncontrolled access to this sensitive data it can lead to data breaches including fraud and identity theft, and to non-compliance.

When a user, either intentionally or accidentally, misuses legitimate privileges they have been granted it is known as privilege abuse. Despite these privileges being legitimately granted, users may access resources or perform actions that compromise data security.

Whether privilege abuse occurs through users purposefully mishandling data, or through employee carelessness, it is a security threat that must be taken seriously.

3. Principle of Least Privilege (PoLP)

The Principle of Least Privilege (PoLP) is an information security concept in which a user is given the minimum levels of access needed to perform their job functions. Applying this principle is a highly effective way to greatly reduce the chance of an attack within an organization.

4. Tracking Permission Changes

Once the PoLP concept has been complied with and sensitive data is accessible to the minimum number of users, it is essential for an organization to be able to track any subsequent changes to sensitive data permissions. For example, a user could be given temporary access to a finance spreadsheet so that they can perform a particular task. If their temporary access gets forgotten about and the permissions are not revoked, then that user has unlimited access to the document which could result in a security breach.

However, if these permission changes are regularly monitored then it is a straightforward process to remove the access and keep the sensitive data secure.

To be able to do this, it is essential for an organization to have complete visibility over their sensitive data. But without a solution in place, keeping track of permission changes can be a complex and time-consuming task.

5. The Lepide Solution

The Lepide Data Security Platform provides a solution to this complexity with the Permission Modification Reports. These reports provide visibility as to any permissions that have been changed for sensitive documents.

Once there is clarity as to any changes that have been made regarding permissions to sensitive data, it is a straightforward process to correct this and remove any unnecessary document privileges.

The SharePoint Online Permission Modification Reports within the Lepide Solution are as follows:

- Document Library Permission Modified
- Document Permission Modified
- Item Permission Modified
- List Permission Modified
- Site Collection Permission Modified
- Folder Permission Modified

The report we will use as an example here is the **Document Permission Modified Report** but the Permission Modification Reports all work in a similar way so the steps will be the same for each of them.

File Name	File Location	Who	When	Operation	What	From
New Test Document.doc	https://lepidesoftware.share...	sudash@lepidesoftware.on...	11/11/2021 11:41:18 AM	Permissions Granted	New Test Document.doc; Per...	125.63.105.221
Shared Documents/General	https://lepidesoftware.share...	jasoon@lepidesoftware.on...	11/11/2021 11:41:18 AM	Sharing Inheritance Broken	Shared Documents/General	125.63.105.221
Gery Leon case 7896.pdf	https://lepidesoftware.share...	jasoon@lepidesoftware.on...	10/18/2021 9:30:24 AM	Permissions Granted	Gery Leon case 7896.pdf...	180.151.74.13
Shared Documents/Multicor	https://lepidesoftware.share...	jasoon@lepidesoftware.on...	10/18/2021 9:30:24 AM	Sharing Inheritance Broken	Shared Documents/Multicor...	180.151.74.13
Evidence 6723.apoc	https://lepidesoftware.share...	jasoon@lepidesoftware.on...	10/18/2021 9:29:37 AM	Permissions Granted	Evidence 6723.apoc; Perna...	180.151.74.13
Shared Documents/Multicor	https://lepidesoftware.share...	jasoon@lepidesoftware.on...	10/18/2021 9:29:37 AM	Sharing Inheritance Broken	Shared Documents/Multicor...	180.151.74.13
Shared Documents/Multicor	https://lepidesoftware.share...	jasoon@lepidesoftware.on...	10/18/2021 9:29:11 AM	Sharing Inheritance Broken	Shared Documents/Multicor...	180.151.74.13
Client list.xlsx	https://lepidesoftware.share...	jasoon@lepidesoftware.on...	10/18/2021 9:29:11 AM	Permissions Granted	Client list.xlsx; Permission...	180.151.74.13
CompanyDataFor_FY2021.bt	https://lepidesoftware.share...	jasoon@lepidesoftware.on...	10/18/2021 9:27:38 AM	Permissions Granted	CompanyDataFor_FY2021...	180.151.74.13
Shared Documents/General	https://lepidesoftware.share...	jasoon@lepidesoftware.on...	10/18/2021 9:27:38 AM	Sharing Inheritance Broken	Shared Documents/General...	180.151.74.13
Performance_FY21.xlsx	https://lepidesoftware.share...	jasoon@lepidesoftware.on...	10/18/2021 4:03:38 PM	Permissions Granted	Performance_FY21.xlsx; Per...	180.151.74.13
Indigent1 - Copy.bt	https://lepidesoftware.share...	sudash@lepidesoftware.on...	7/5/2021 4:10:58 PM	Permissions Granted	Indigent1 - Copy.bt; Perna...	180.151.74.13
Shared Documents/Indrage	https://lepidesoftware.share...	sudash@lepidesoftware.on...	7/5/2021 4:10:58 PM	Sharing Inheritance Broken	Shared Documents/Indrage...	180.151.74.13
Patent details.docx	https://lepidesoftware.share...	jasoon@lepidesoftware.on...	5/18/2021 12:27:49 PM	Permissions Granted	Patent details.docx; Perna...	180.151.74.13
Shared Documents/Patents	https://lepidesoftware.share...	jasoon@lepidesoftware.on...	5/18/2021 12:27:49 PM	Sharing Inheritance Broken	Shared Documents/Patents...	180.151.74.13

Figure 1: Document Permission Modified Report

This report shows information including who has made the permission change, the document that has been changed and what those changes are.

6.The Permission Modification Reports

6.1. Prerequisites

Before running any of the Permission Modification Reports, you will need to have configured SharePoint Online for user interaction and to enable auditing

6.2. Running the Document Permission Modified Report

- Click the **User and Entity Behavior Analytics**  icon
- Expand **SharePoint Online** (from the tree structure to the left side of the screen)
- Expand **SharePoint Online Modification Reports**
- Expand **Permission Modification Reports**
- Click on **Document Permission Modified** to display the **Document Permission Modified Report**:

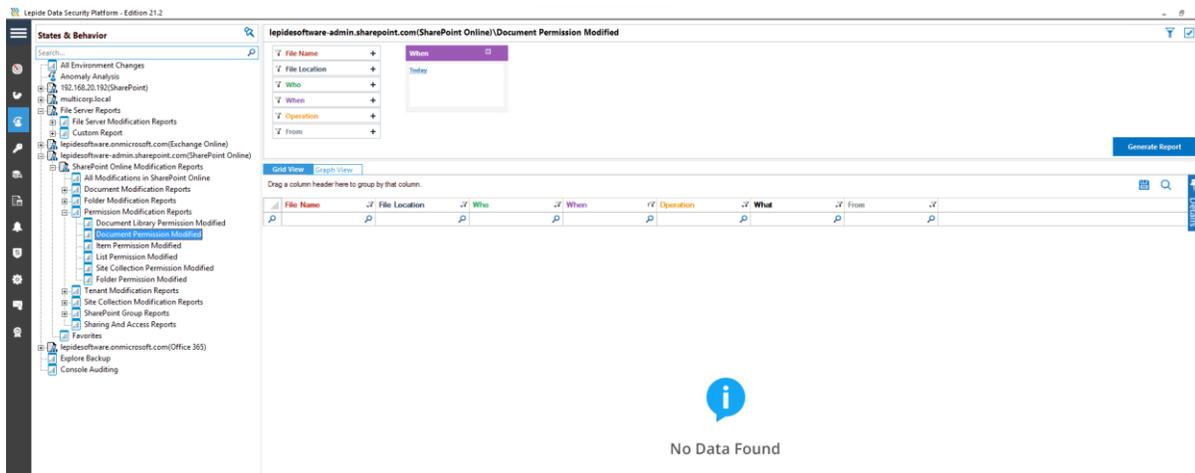


Figure 2: Document Permission Modified Report

Specify a Date Range

- From the top of the screen, under **When** click **Today** to choose a date range for the report
- The following dialog box is displayed:

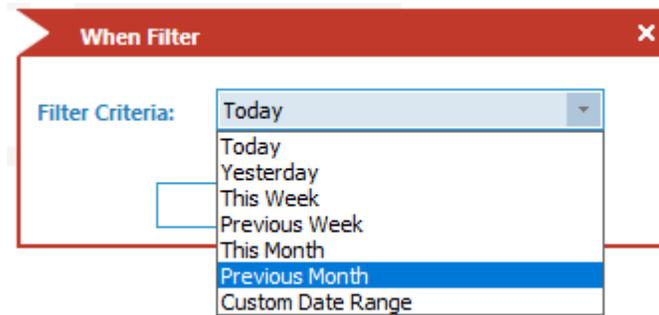


Figure 3: Date Range Filter

- Select a date range from the list
- Click **OK** and you will return to the **Document Permission Modified** screen
- Click **Generate Report**

File Name	File Location	Who	When	Operation	What	From
New Test Document.td	https://lepidesoftware.share...	audesh@lepidesoftware.on...	11/11/2021 11:41:18 AM	Permissions Granted	New Test Document.td: Per...	125.63.105.221
Shared Documents\General	https://lepidesoftware.share...	audesh@lepidesoftware.on...	11/11/2021 11:41:18 AM	Sharing Inheritance Broken	Shared Documents\General	125.63.105.221
Gary Loan case 7896.pdf	https://lepidesoftware.share...	simon@lepidesoftware.on...	10/19/2021 9:30:24 AM	Permissions Granted	Gary Loan case 7896.pdf	180.151.74.13
Shared Documents\Multicor	https://lepidesoftware.share...	simon@lepidesoftware.on...	10/19/2021 9:30:24 AM	Sharing Inheritance Broken	Shared Documents\Multicor...	180.151.74.13
Evidence 6723.pdf	https://lepidesoftware.share...	simon@lepidesoftware.on...	10/19/2021 9:29:37 AM	Permissions Granted	Evidence 6723.pdf: Permis...	180.151.74.13
Shared Documents\Multicor	https://lepidesoftware.share...	simon@lepidesoftware.on...	10/19/2021 9:29:37 AM	Sharing Inheritance Broken	Shared Documents\Multicor...	180.151.74.13
Client list.xlsx	https://lepidesoftware.share...	simon@lepidesoftware.on...	10/19/2021 9:29:11 AM	Permissions Granted	Client list.xlsx: Permissio...	180.151.74.13
CompanyDataFor_FY2021.td	https://lepidesoftware.share...	simon@lepidesoftware.on...	10/19/2021 9:27:38 AM	Permissions Granted	CompanyDataFor_FY2021.t...	180.151.74.13
Shared Documents\General	https://lepidesoftware.share...	simon@lepidesoftware.on...	10/19/2021 9:27:38 AM	Sharing Inheritance Broken	Shared Documents\General...	180.151.74.13
Performance_FY21.xlsx	https://lepidesoftware.share...	jaason@lepidesoftware.on...	10/18/2021 4:03:38 PM	Permissions Granted	Performance_FY21.xlsx: Per...	180.151.74.13
Indigent1 - Copy.td	https://lepidesoftware.share...	audesh@lepidesoftware.on...	7/5/2021 4:10:58 PM	Permissions Granted	Indigent1 - Copy.td: Permis...	180.151.74.13
Shared Documents\Indigen	https://lepidesoftware.share...	audesh@lepidesoftware.on...	7/5/2021 4:10:58 PM	Sharing Inheritance Broken	Shared Documents\Indigen...	180.151.74.13
Patent details.docx	https://lepidesoftware.share...	jaason@lepidesoftware.on...	5/18/2021 12:27:49 PM	Permissions Granted	Patent details.docx: Permis...	180.151.74.13
Shared Documents\Patents	https://lepidesoftware.share...	jaason@lepidesoftware.on...	5/18/2021 12:27:49 PM	Sharing Inheritance Broken	Shared Documents\Patents...	180.151.74.13

Figure 4: Document Permission Modified Report

The report shows all SharePoint Online document modifications within the specified time period.

The information displayed in this report includes:

When the modification was made, from which location, who made the change and the document for which permissions were changed. The **What** column shows details on exactly what has been changed.

- Hover the mouse on a particular row in the **What** column to display the information in more detail:

Broken	Shared Documents/Multicor...	180.151.74.13	
Broken	Shared Documents/Multicor...	180.151.74.13	
	Client list.xlsx; Permissions granted to SharingLinks.a8c72caf-2882-459c-a325-ba113d5cc4b5.Flexible.09e79518-653d-46fb-9dad-c19cee0a815e : "Contribute"		
	CompanyDataFor_FY2021.t...	180.151.74.13	
Broken	Shared Documents/General...	180.151.74.13	
	Performance_FY21.xlsx; Per...	180.151.74.13	

Figure 5: More Detail on the 'What' Column

Another way to see more detail for the **What** column is to display the **Details Window**:



- Click the **Details** icon to display the **Details Window**

Details about the selected row will be shown in this Window:

Details

- **File Name:** Client list.xlsx
- **File Location:** <https://lepidesoftware.sharepoint.com/sites/SalesDepartment2021/S>
- **Who:** simon@lepidesoftware.onmicrosoft.com
- **When:** 10/19/2021 9:29:11 AM
- **Operation:** Permissions **Granted**
- **From:** 180.151.74.13
- **What:**
 Client list.xlsx; Permissions **granted** to SharingLinks.a8c72caf-2882-459c-a325

Figure 6: The Details Window

- Click the Hide icon  to hide the Details Window

7. Filtering the Report

To add filters to the data, click on the filter area above the relevant column and type in the information you want to see.

For example, you may want to see data for a particular document type - so click at the top of the **File Name** column and type the file extension name to be filtered on:



Figure 7: Filter Area

In the example below, the report has been filtered to show Excel spreadsheets (xls file extension):

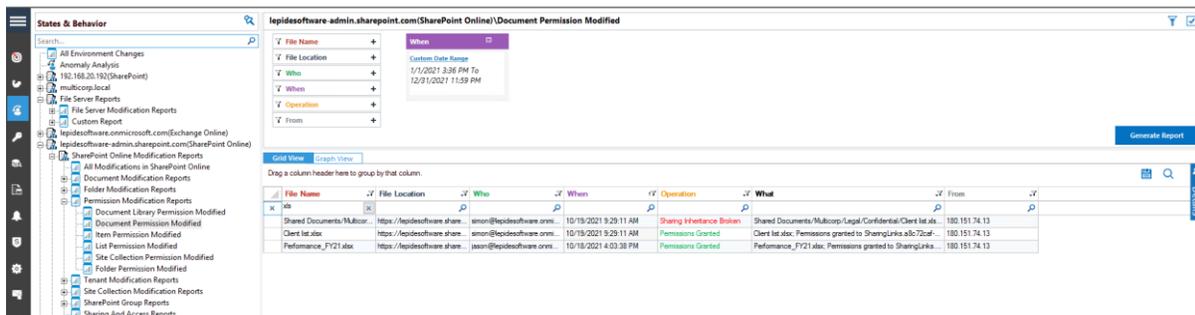


Figure 8: Report Filtered by File Name

The report can be scheduled, saved, and exported.

8. Creating an Alert

If you want to be notified about permission changes you can set up an automated alert on the Permission Modification Reports. As before, the example here will be using the **Document Permission Modified Report**.

To set up an alert:

- Click the **User Entity & Analytics** icon  to display the **States & Behavior** window
A list of reports is displayed in a tree structure on the left-hand side of the screen
- Navigate to the **Document Permission Modified Report**.
- Right click on the **Document Permission Modified Report** to display the context menu:

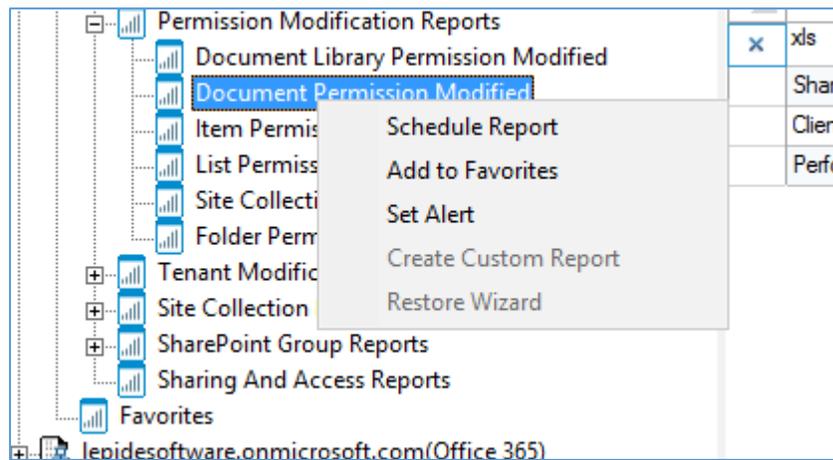


Figure 9: Context Menu

- Choose **Set Alert**

A Wizard will start, and the Select Reports dialog box is displayed:

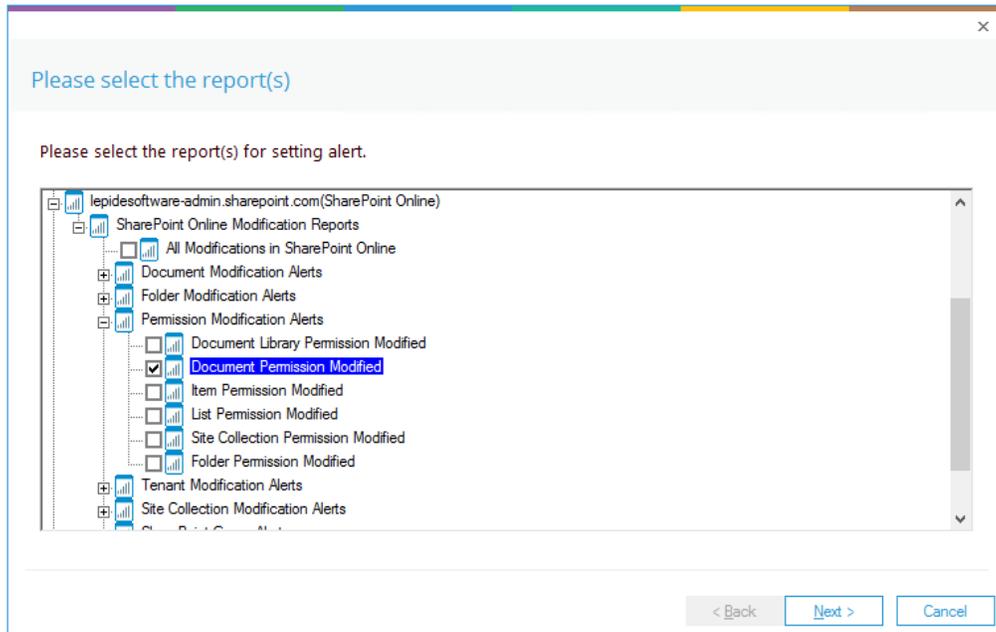


Figure 10: Select Report

Ensure that the report on which you want to set an alert is checked. In this case, it is the Document Permission Modified Report.

- Click **Next**

The Set Filter(s) dialog box is displayed:

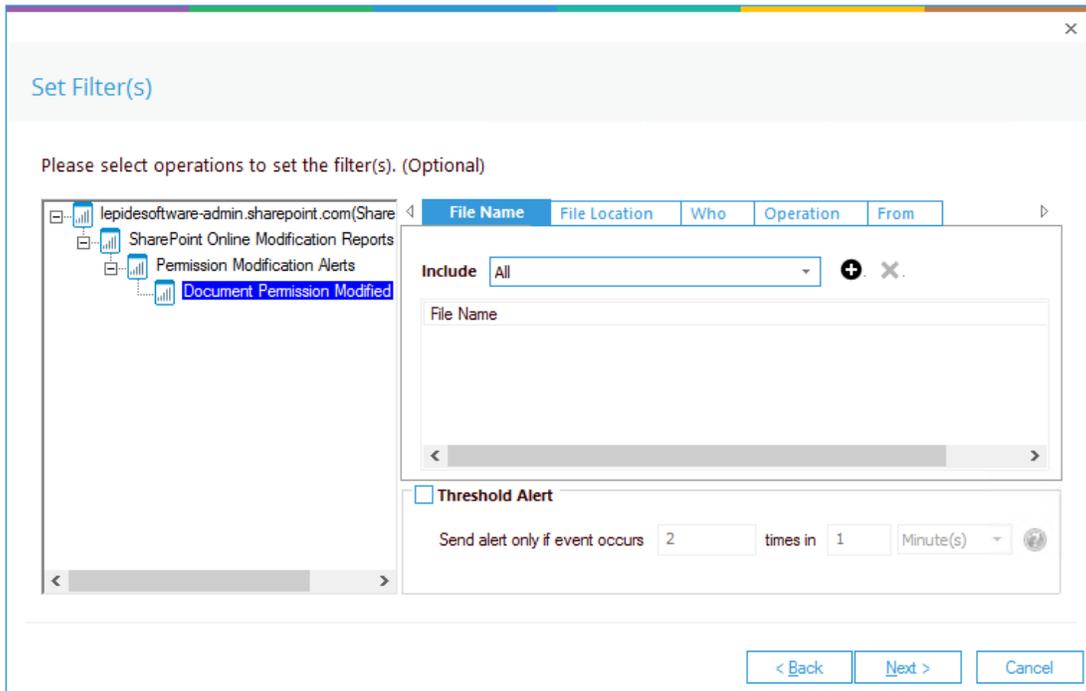


Figure 11: Set Filters

On the left of the dialog box, you can see the report you are working on which in this case is **Document Permission Modified**.

There are options to change the settings for **File Name**, **File Location**, **Who**, **Operation**, and **From** using the tabs at the top of this dialog box.

The threshold alert options can be customized as follows:

Threshold Alert: Check this box to switch threshold alerting on

Send alert only if event occurs: Enter the number of times the event occurs, the time value and time-period here

- Click Next

The **Alert Settings** dialog box is displayed:

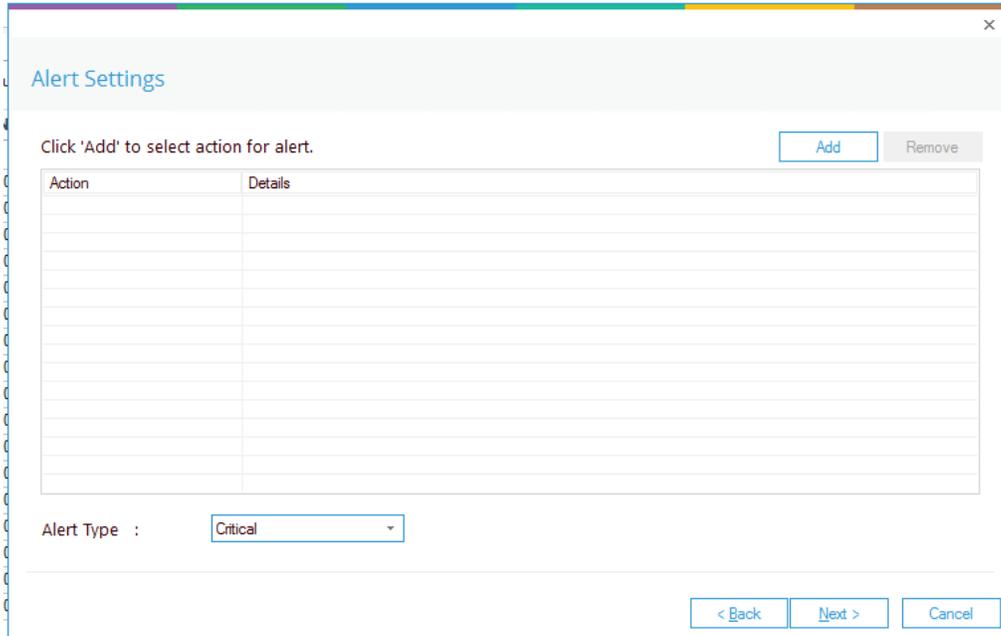


Figure 12: Alert Settings

This dialog box allows you to set up responses to occur when an alert has been triggered and displays any existing responses which have been set up. You can also change the **Alert Type**.

- To create a new response to an alert, click the **Add** button.

The **Add Alert Action** dialog box will be displayed:

Add Alert Action

Select Action : Send Email Alert

Please select or add new sender's email account, add recipient(s).

Sender/Recipient

Sender's Email Account : JILL Add New Email Account

Recipient Email(s):

Separate multiple emails by ","

Send Actions for past Days

Report Format

CSV MHT PDF

OK Cancel

Figure 13: Add Alert Action

- Click the **Select Action** drop down arrow to see a list of actions available:

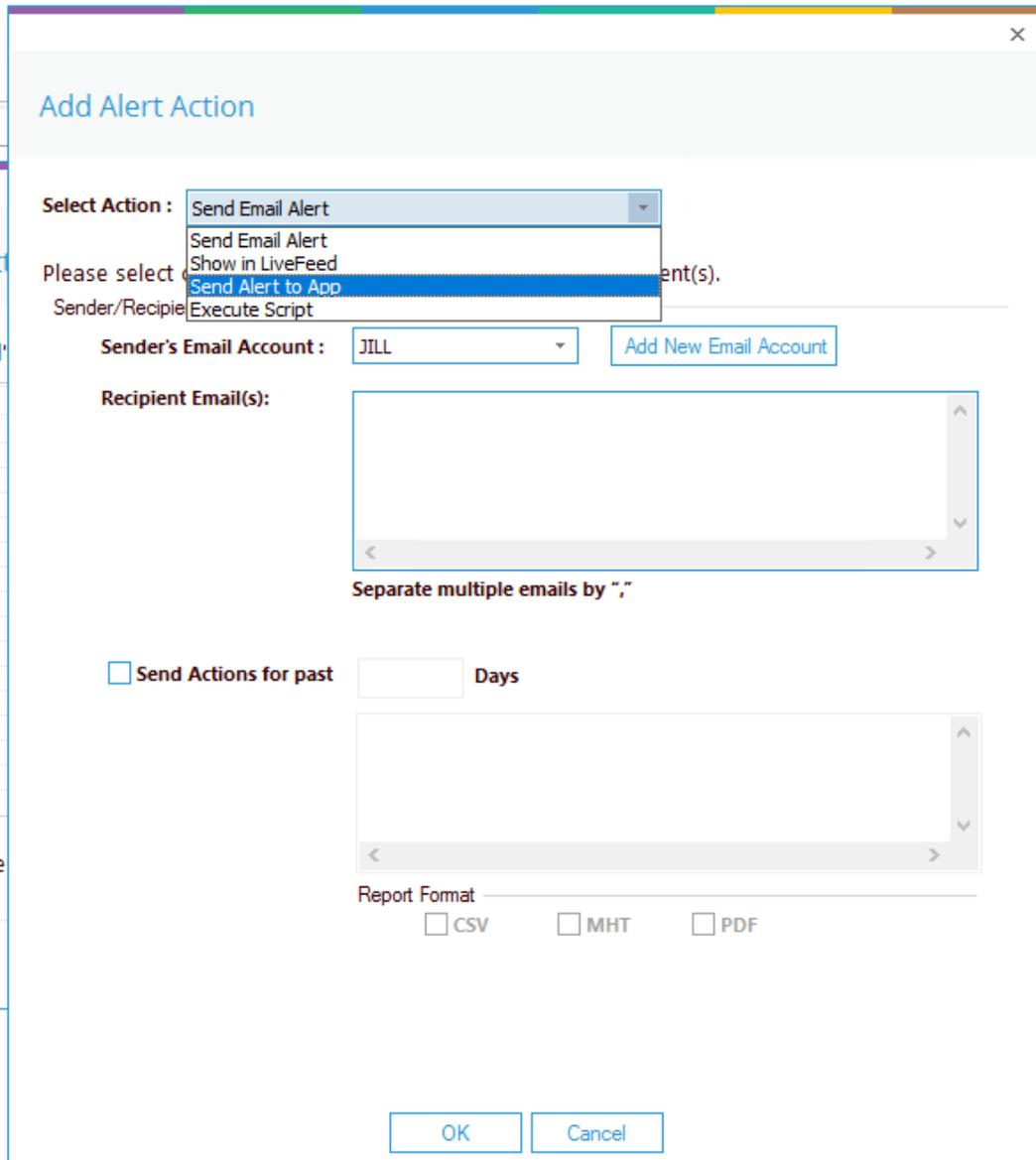


Figure 14: Add Alert Action Options

The Alert Actions are:

- Send Email Alert
- Show in LiveFeed
- Send Alert to App
- Execute Script

The configuration of each of these actions is explained as follows:

1. Send Email Alert

The screenshot shows a dialog box titled "Add Alert Action" with a close button (X) in the top right corner. The "Select Action" dropdown menu is set to "Send Email Alert". Below this, the text reads "Please select or add new sender's email account, add recipient(s)". Under "Sender/Recipient", the "Sender's Email Account" dropdown is set to "JILL", and there is an "Add New Email Account" button. The "Recipient Email(s)" field is an empty text area with scrollbars. Below it, the text says "Separate multiple emails by ','". There is a checkbox labeled "Send Actions for past" followed by an empty input field and the word "Days". Below this is another empty text area with scrollbars. The "Report Format" section has three radio buttons: "CSV", "MHT", and "PDF", all of which are unselected. At the bottom of the dialog are "OK" and "Cancel" buttons.

Figure 15: Add Alert Action - Send Email Alert

This option allows you to send an email once an alert has been triggered. The elements of the dialog box are as follows:

Sender's Email Account: The Sender's email account will be displayed here if it has been selected. Click **Add New Email Account** to enter a new Sender's Email Account

Recipient Email(s): Add recipient emails by typing the email addresses into the box. If there are multiple email addresses. separate them with a ','

Send Actions for past xx days: This option allows you to see everything that this user has done over the last number of specified days. For example, if an alert is triggered because permissions have been changed for a sensitive document, you may want to see what else has been happening for that account. Check this box and specify the number of days and an email will be sent with an attachment listing everything that the user has done over the specified number of days.
The attachment will contain a report and the format(s) can be specified by checking the relevant box. The formats are CSV, MHT and PDF.

- Click **OK** to save the alert action.

2. Show in LiveFeed

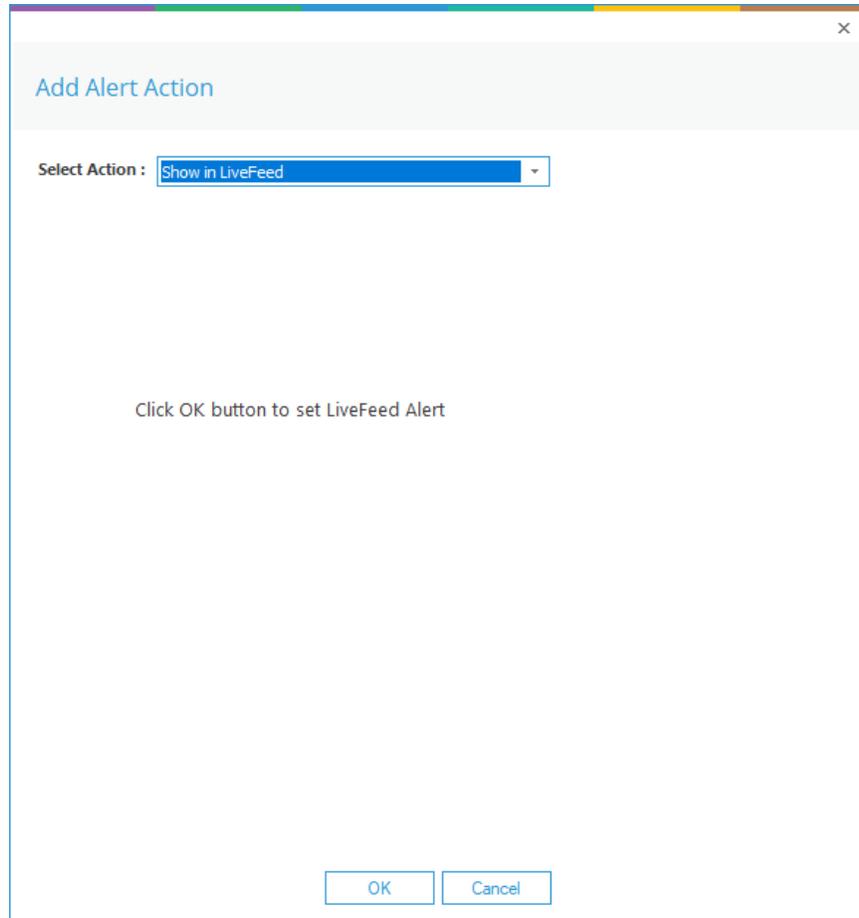


Figure 16: Add Alert Action – Show in LiveFeed

Show in LiveFeed means that the alert will be sent to the Lepide dashboard.

- Click **OK** to switch the **LiveFeed** alert on.

3. Send Alert to App

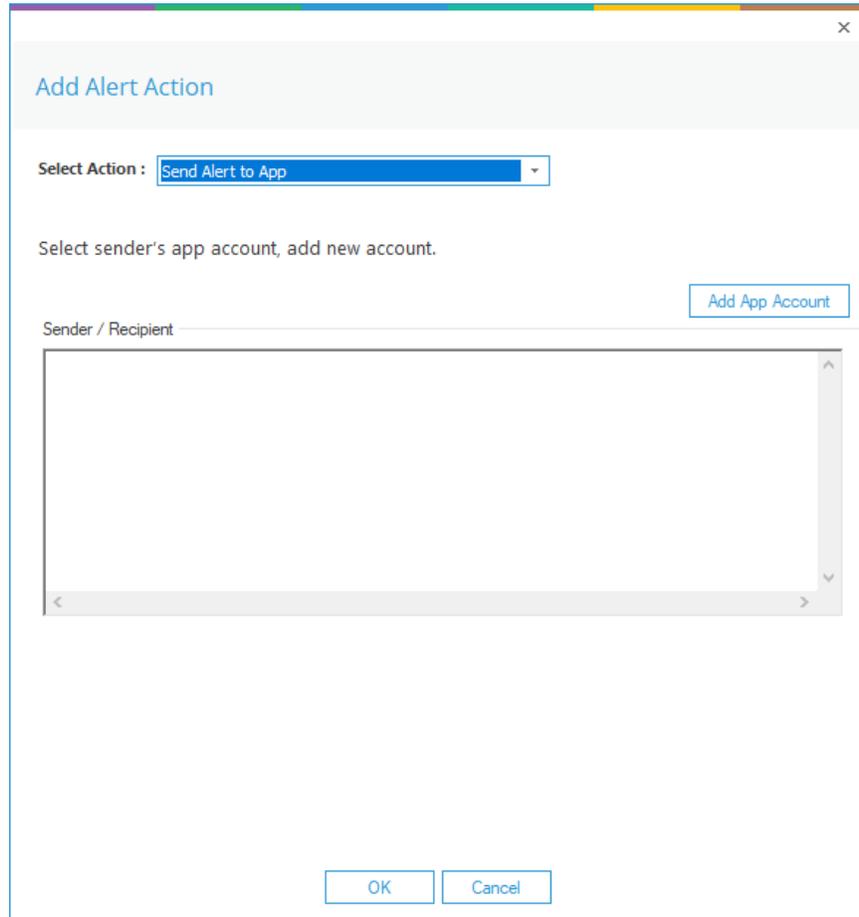


Figure 17: Add Alert Action – Send Alert to App

The **Send Alert to App** option sends the alert to a mobile device.

- Click **Add App Account** to add a new mobile account. The following dialog box is displayed:

Add App Account

Please enter login credentials for using both Windows and Mobile App

User ID :

Password :

Mobile App ID :

NOTE : Use this App ID to configure App on Android, iOS and Windows.



Figure 18: Add App Account

- Enter the **User ID** and **Password**
- Enter the **Mobile App ID** which is generated by using the mobile device to scan the QR code displayed at the bottom of the dialog box.
- Click **OK**

4. Execute Script

The screenshot shows a dialog box titled "Add Alert Action" with a close button (X) in the top right corner. The "Select Action" dropdown menu is set to "Execute Script". Below this is a "File Path" field with a browse button (...). There are three radio button options: "Run with SYSTEM account" (selected), "Run with selected account" (with a dropdown menu and an "Add Account" button), and "Notify me when script is executed" (with a "Configure" button). A large empty text area is present below the radio buttons. At the bottom right is a "Test Script" button. At the bottom center are "OK" and "Cancel" buttons.

Figure 19: Add Alert Action – Execute Script

The last action from the drop-down menu is **Execute Script**

This sets up the option to execute one of the predefined PowerShell scripts when an alert is triggered.

The elements of the dialog box are as follows:

File Path: Browse to choose the file path of the PowerShell script by clicking 

Choose either **Run with SYSTEM account** or

Run with selected account.

If you choose **Run with selected account**, you can use the drop-down to select the account or click **Add Account** to specify the account to be used.

9. Support

If you are facing any issues whilst installing, configuring or using the solution, you can connect with our team using the contact information below.

Product Experts

USA/Canada: +1(0)-800-814-0578

UK/Europe: +44 (0) -208-099-5403

Rest of the World: +91 (0) -991-004-9028

Technical Gurus

USA/Canada: +1(0)-800-814-0578

UK/Europe: +44 (0) -208-099-5403

Rest of the World: +91(0)-991-085-4291

Alternatively, visit <https://www.lepide.com/contactus.html> to chat live with our team. You can also email your queries to the following addresses:

sales@Lepide.com

support@Lepide.com

To read more about the solution, visit <https://www.lepide.com/data-security-platform/>.

10. Trademarks

Lepide Data Security Platform App, Lepide Data Security Platform App Server, Lepide Data Security Platform (Web Console), Lepide Data Security Platform Logon/Logoff Audit Module, Lepide Data Security Platform for Active Directory, Lepide Data Security Platform for Group Policy Object, Lepide Data Security Platform for Exchange Server, Lepide Data Security Platform for SQL Server, Lepide Data Security Platform SharePoint, Lepide Object Restore Wizard, Lepide Active Directory Cleaner, Lepide User Password Expiration Reminder, and LiveFeed are registered trademarks of Lepide Software Pvt Ltd.

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