

How to use Lepide to identify users with excessive privileges to sensitive data.

Use case guide.

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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 section](#) gives step-by-step instructions on how to configure the Excessive Permissions Reports to determine who has access to what data and whether that access is required.

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 which they have been given 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.



To be able to do this, however, it is essential for an organization to have visibility over the complete list of users who have access to sensitive information. But as organizations grow, being able to see and understand who has access to sensitive data can become a complex and time-consuming task.

4. The Solution

The Lepide Data Security Platform provides a solution to this complexity with excessive permissions reports which provide visibility as to **who** has access and **what** type of sensitive data they have access to.

Once there is clarity as to exactly who requires access to do their job, it is a straightforward process to remove privileges for those who don't need them.

There are two reports within the Lepide Data Security Platform which can be used to see Excessive Permissions to sensitive data. They will both display the same data but in different ways depending on how you want to view the data. The reports are called Excessive Permissions by Object and Excessive Permissions by User. They are shown below and explained in detail in Section 5.

Here is an example of the Excessive Permissions by Object Report:

Object Name	Owner	Last Scan
Accounts	Ipde4\Ethan.Hunt	2023-06-07 15:55:35
Clients	Ipde4\James.Howlett	2023-06-07 15:55:35
Finance	Ipde4\Neal.Gamby	2023-06-07 15:55:35
HR	Ipde4\Neal.Gamby	2023-06-07 15:55:35
IT	Ipde4\Marty.Byrde	2023-06-07 15:55:35
Marketing	Ipde4\Roy.Petty	2023-06-07 15:55:35
Sales	Ipde4\Marty.Byrde	2023-06-07 15:55:35
SDR Team	Ipde4\Administrator	2023-06-07 15:55:35

Account (Principal)	Effective Permission	Object Name	Content Type	Compliance	Monetary Value	Risk Level
Ipde4\Admi...	Full Control	45967...	SSN	PCI-DSS	\$ 5000	7000
Ipde4\Aakash	Full Control	45956...	SSN	PCI-DSS	\$ 5000	7000
Ipde4\Bill	Full Control	67949...	SSN	PCI-DSS	\$ 5000	7000
Ipde4\Devel...	Full Control	Addre...	No Sensitive...	N/A	N/A	N/A
Ipde4\Disan...	Full Control	Client ...	SSN	GLBA	\$ 3516	1758
Ipde4\Justin...	Full Control	Confid...	Address + P...	NPPLPHI	\$ 9083	6739
Ipde4\Kelly...	Full Control	Custo...	Address + P...	NPPLPHI	\$ 9083	6739
Ipde4\Lou.B...	Full Control					

Figure 1: Excessive Permissions by Object Report

The second report is the Excessive Permissions by User Report:



Once a report has been generated, it can be scheduled to run on a regular basis, saved and exported.

5. The Excessive Permissions Reports

As described previously, there are two reports which show excessive permissions to sensitive data. In this document, we will focus on the **Excessive Permissions by Object Report** but both reports work in a similar way.

The Excessive Permissions by Object Report can be run for file servers or for SharePoint online.

5.1 Prerequisites

Before running either of the Excessive Permissions Reports, you will need the following:

- To have configured [Windows File Server](#) to enable auditing for file server reports
- To have configured [SharePoint Online](#) to enable auditing for SharePoint Online reports
- To have enabled [Data Discovery and Classification](#) and run an initial scan for file server reports
- To have run an [initial permissions scan](#)

5.2 Excessive Permissions by Object Report for File Server

Once the prerequisites are met and a scan has run, the **Excessive Permissions by Object Report** can be generated as follows:

- From the Web Console Home screen, choose **Lepide Trust**
- From the **Lepide Trust** Menu at the top of the screen, choose **Reports**

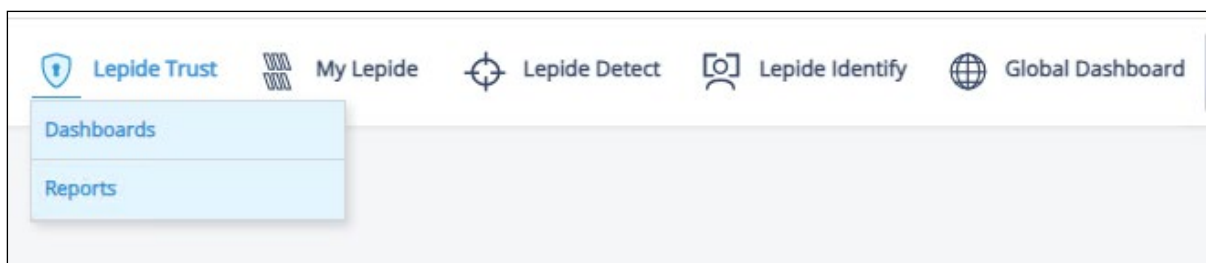


Figure 3: Lepide Trust Reports Menu

From the tree structure to the left side of the screen, expand Risk Analysis to see the Excessive Permissions by Object Report:

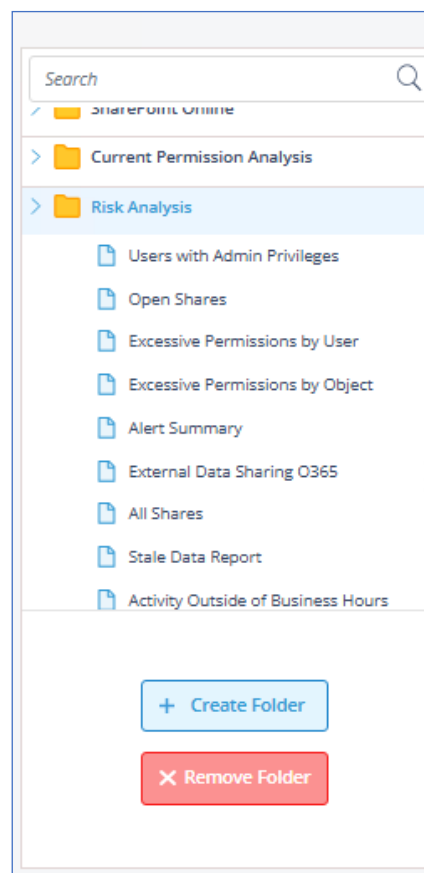


Figure 4: Tree Structure showing Risk Analysis Reports

- Click on the Excessive Permissions by Object Report from the tree structure

The empty Excessive Permissions by Object Report is displayed:

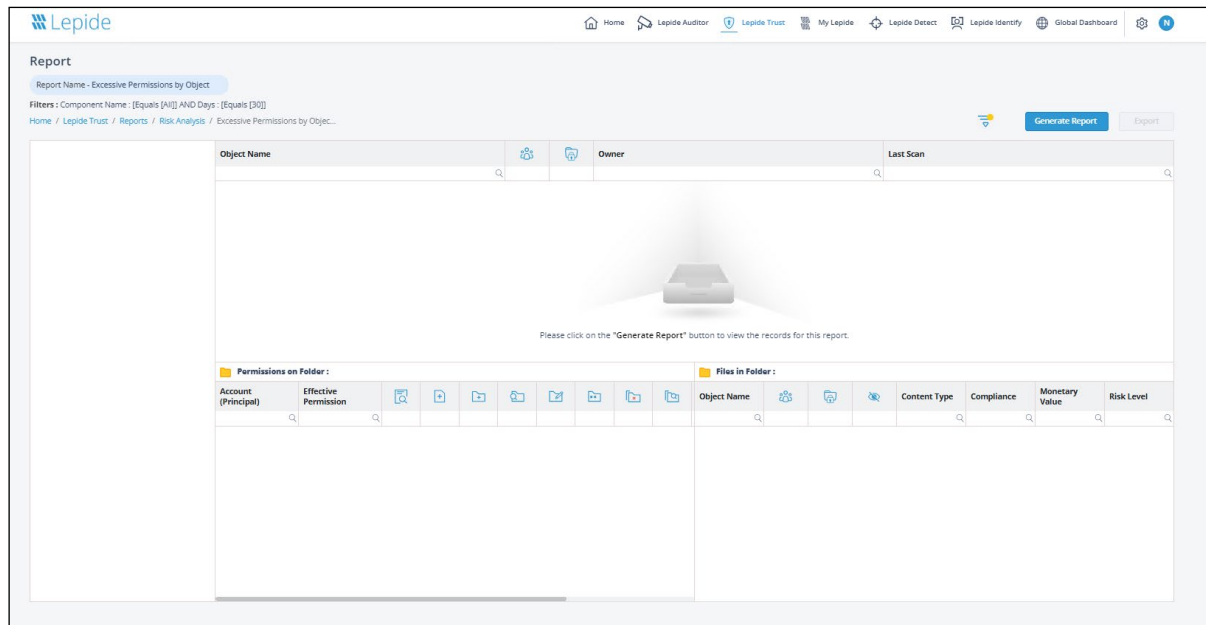



Figure 5: Excessive Permissions by Object Report

- From the top of the screen, click the Filter icon 
- The following dialog box is displayed:

The 'Modify Filters' dialog box is shown. It has a title bar with a close button. Inside, there is a dropdown menu labeled 'Select' with a downward arrow. Below it is a button labeled 'Condition'. Then, there are two input fields: 'Component Name' with a value of 'All' and 'Days' with a value of 'Equals (30)'. Both input fields have edit icons. At the bottom, there are 'Cancel' and 'Apply' buttons.

Figure 6: Modify Filters

- Here you can select **Component Name** and the number of **Days**

- Click the edit filter icon  next to **Component Name** and then select the required File Server from the list

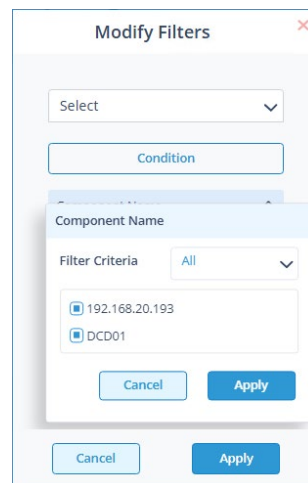


Figure 7: Component Name

- Click **Apply** when finished
- From the Modify Filters dialog box, click to edit the **Days** filter
- The Filter by Days dialog box is displayed:

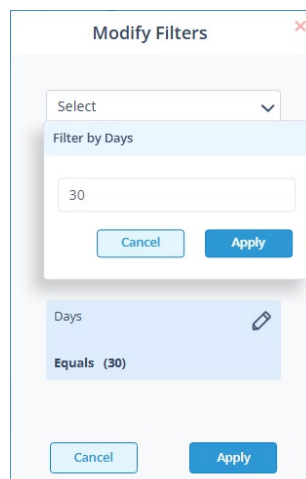


Figure 8: Days Filter

- Specify the number of days as required and click **Apply** when finished
- Click **Apply** to return to the report
- Click **Generate Report**

The report will run showing the objects in a tree structure:

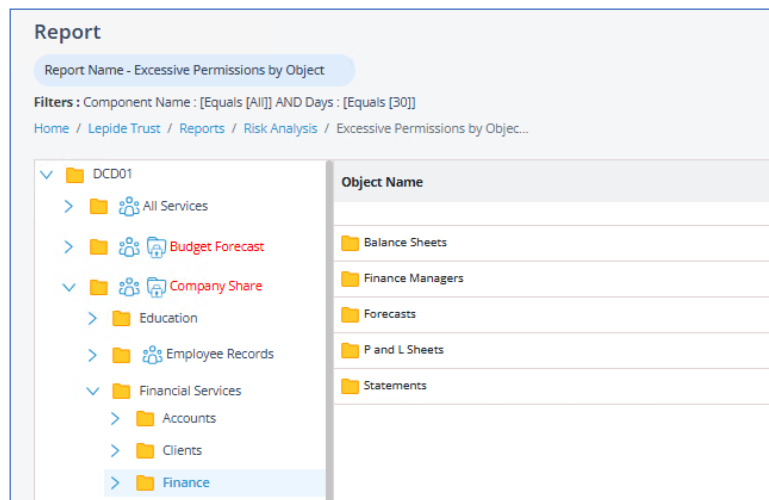


Figure 9: Object List

To see a list of users and permissions, click on the required folder from the tree structure:

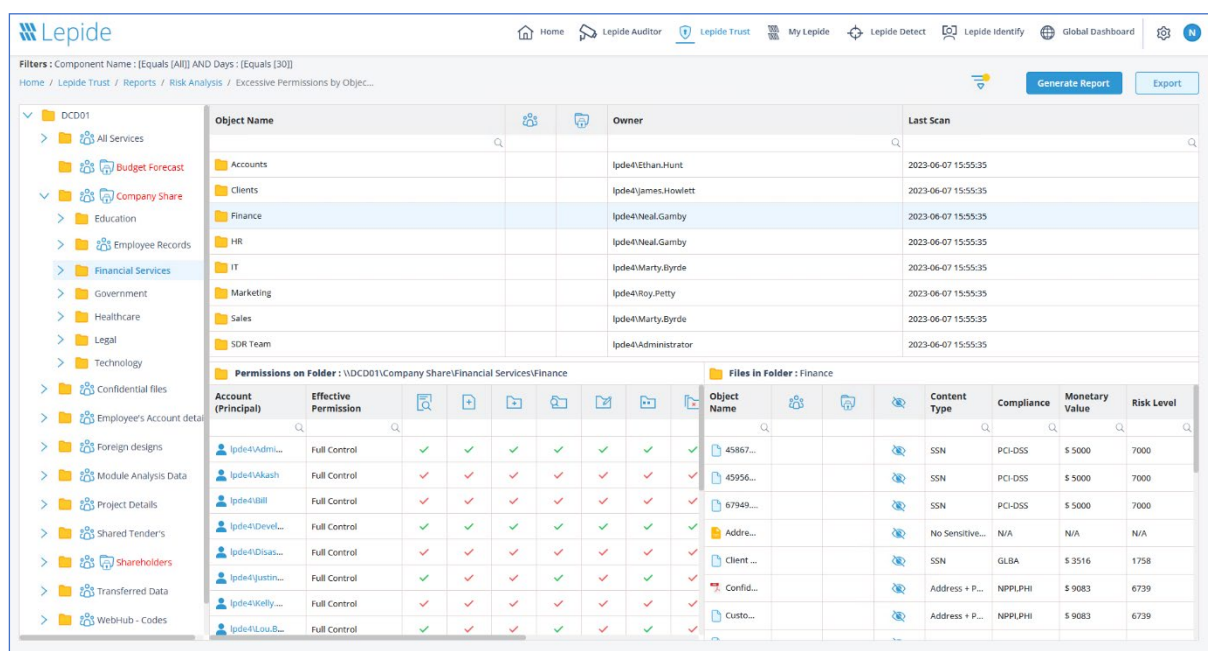


Figure 10: Excessive Permissions by Object Report

The example above shows the **Finance** folder has been selected. Users within the **Finance** folder are then listed along with their permissions to the lower left of the screen and to the right are the files contained within the **Finance** folder.

5.2.1 User Permissions

This section of the window shows the username, the permission which that user has and then the individual permissions for that user:

Permissions on Folder : \\DCD01\\Company Share\\Financial Services\\Finance										
Account (Principal)	Effective Permission									
Ipde4\\Admi...	Full Control	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ipde4\\Akash	Full Control	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ipde4\\Bill	Full Control	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ipde4\\Devel...	Full Control	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ipde4\\Disas...	Full Control	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ipde4\\Justin...	Full Control	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ipde4\\Kelly...	Full Control	✓	✓	✓	✓	✓	✓	✓	✓	✓
Ipde4\\Lou.B...	Full Control	✓	✓	✓	✓	✓	✓	✓	✓	✓

Figure 11: User Permissions

The red ticks show that the user has a permission but **has not** used it in the time period specified in the Days filter.

The green ticks show that a user has a permission and **has** used it within the time period specified in the Days filter.

Therefore, this example shows that many of the users have permissions that they do not need. This scenario should be avoided as permissions should only be given when a user needs them to do their job. Eliminating unnecessary permissions will mitigate security risks as less users will have access to sensitive data.

5.2.2 Files within the Selected Folder

Files in Folder : Finance					
Object Name	Content Type	Compliance	Monetary Value	Risk Level	
458673.bmp	Names	GLBA + NPPI	\$ 4225	1495	
459565496.bmp	Phone Numbers	GLBA + NPPI	\$ 4875	2925	
67949.bmp	Address	GLBA + NPPI	\$ 2688	966	
Addresses.txt	Address	GLBA + NPPI	\$ 2925	1755	
Client portfolio New.pptx	No Sensitive Content	N/A	N/A	N/A	
Client portfolio.pptx	Name + Phone Numbers	GLBA + NPPI	\$ 2518	1811	
Confidential.pdf	SSN	GLBA + NPPI	\$ 2472	1512	
Customer contact info.xlsx	Name + Phone Numbers	GLBA + NPPI	\$ 1591	1244	
Customer list.pptx	Names	GLBA + NPPI	\$ 2628	876	
Employee list.docx	Names	GLBA + NPPI	\$ 1692	564	
Expenses.xlsx	SSN + Names	GLBA + NPPI	\$ 2124	708	
Investments.pptx	SSN	GLBA + NPPI	\$ 1105	459	
Legal.txt	SSN	GLBA + NPPI	\$ 2080	864	
List 568.txt	Address	GLBA + NPPI	\$ 4225	1755	
Passport copies.pdf	SSN	GLBA + NPPI	\$ 3380	1404	
Property details.pptx	Phone Number + Address	GLBA + NPPI	\$ 1133	447	

Figure 12: Files in Folder


This section of the screen shows details about the files which are contained within the selected folder. The information here includes the filename, the content type, any compliance regulations the file is needed for, the monetary value and risk level. These can all be configured in the Data Discovery and Classification configuration section.

This Report can then be scheduled, saved or exported.

5.3 Excessive Permissions by Object Report for SharePoint Online

Running the Excessive Permissions Reports for SharePoint Online needs to be done using the Lepide Data Security Platform Legacy Console and the steps for running it are as follows:

Once the prerequisites are met and a scan has run, the **Excessive Permissions by Object Report for SharePoint Online** can be generated as follows:

From the icons to the left-hand side of the screen, click the **Permissions and Privileges**  icon and the following screen will be displayed:

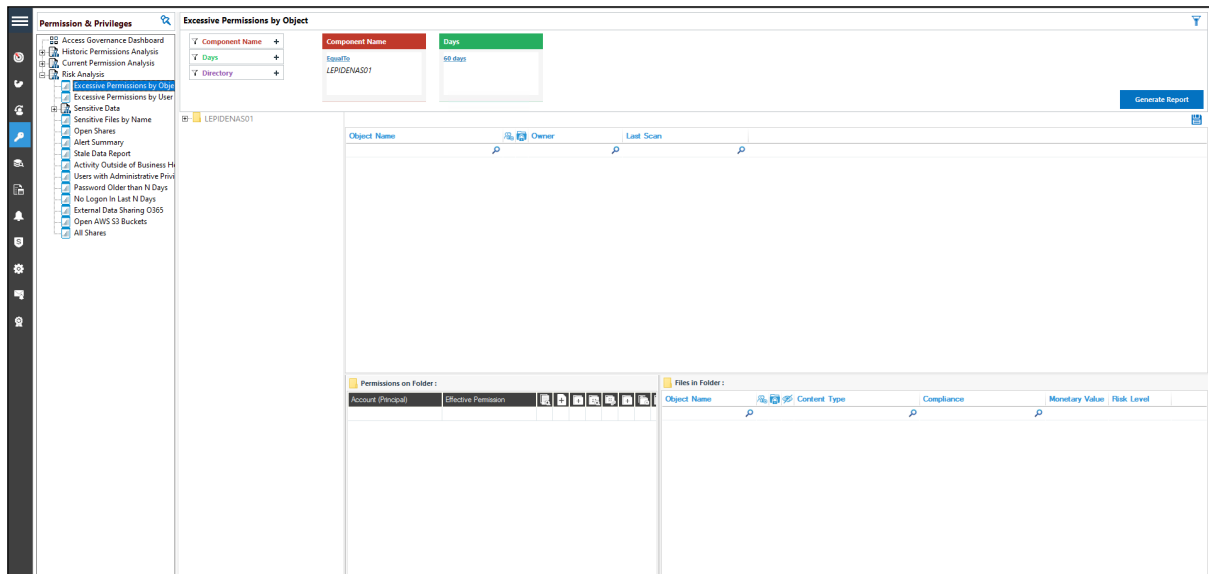


Figure 13: Permissions and Privileges

Expand **Risk Analysis** (from the tree structure to the left side of the screen)

Click on **Excessive Permissions by Object**

From the top of the screen, under the Component Name filter, click **Component Name**

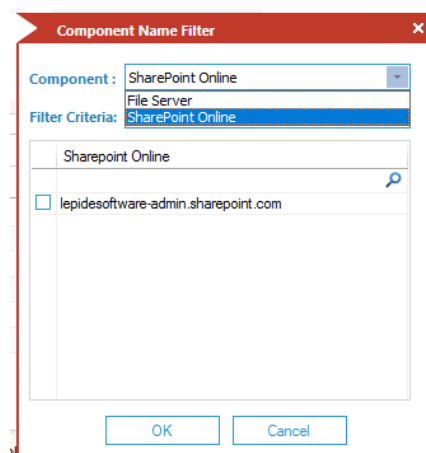


Figure 14: Component Name Filter

Select **SharePoint Online** from the Component drop down menu

Select the **Tenant Name** from the list and click **OK**.

You will return to the Excessive Permissions by Object screen

From the top of the screen, under **Days** click to select the number of days to report on

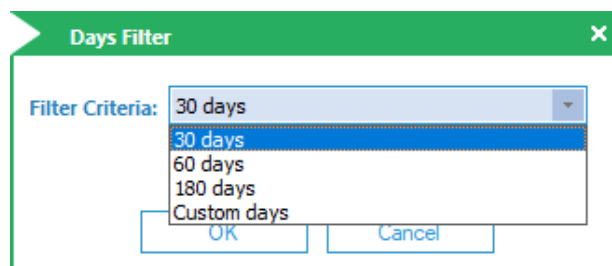


Figure 15: Days Filter

Click **OK**

Click **Generate Report**

The report will run showing the objects in a tree structure:

Figure 16: Excessive Permissions by Object Report for SharePoint Online

5.4 The Excessive Permissions by User Report

This is the second of the two Excessive Permissions Reports. It is showing the same data but based around an individual user rather than an object.

Follow the steps given previously but choose **Excessive Permissions by User**.

Click **Generate Report** to run the report:



The report can be scheduled, saved or exported.

Support

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

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

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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/>.

Trademarks

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