



K2's Implementing DLP For Better Security And Privacy

What About Randy?



- 40+ years of technology experience, top-rated speaker for almost 40 years
- Top 25 Thought Leaders in Accounting 2011-2024
- 2004-2023 Accounting Today 100 Most Influential in Accounting for twenty years
- Inducted Accounting Hall of Fame, Feb 2011
- Monthly columns on technology in CPA Practice Advisor, weekly podcasts on technology
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Learning Objectives



Upon completing this session, you should be able to:

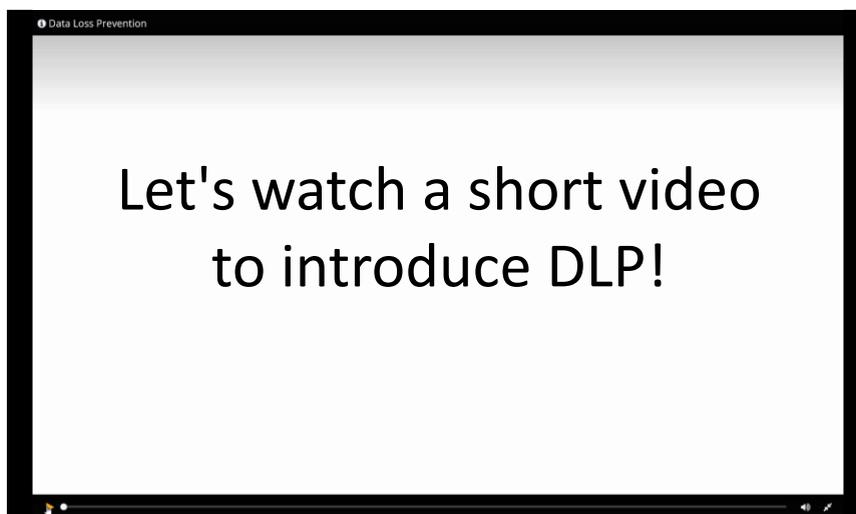
- Define Data Loss Prevention (DLP)
- List examples of how DLP can enhance organizational security
- Name tools and services available that support DLP
- Identify the process for creating DLP rules in platforms such as Microsoft 365



WHAT IS DATA LOSS PREVENTION AND HOW DOES IT ENHANCE ORGANIZATIONAL SECURITY?



Introduction To DLP



What Is Data Loss Prevention?



- Data Loss Prevention (DLP) is a means of creating and enforcing security policies in an organization to reduce the risk of disclosing sensitive data, either accidentally or maliciously
- DLP can be applied at the network level, the application level, the endpoint level, or in a combination of levels
- When applied to a network, DLP tools analyze network traffic to detect potentially sensitive data
- When applied to endpoints, DLP tools can control data before it hits the network

Why Is DLP Necessary?



- Email is a notoriously insecure means of transmitting data
- Yet according to one report:
 - 56% have sent email to the wrong person
 - 53% have received unencrypted emails containing sensitive information
 - 21% have sent sensitive corporate information without encryption
 - 20% know of someone at their company who has been caught sending sensitive information without following established security protocol

Abigail Wang, *PC Magazine*

Why Is DLP Necessary?



- Consider Excel workbooks stored in a shared drive on a corporate server
- The workbook contains sensitive employee information, including Social Security numbers
- Should everyone who has access to that drive have access to the Social Security numbers?
- WellPoint exposed 128K customer medical records, including Social Security numbers, on an unsecured server for over a year

How Does DLP Enhance Security?



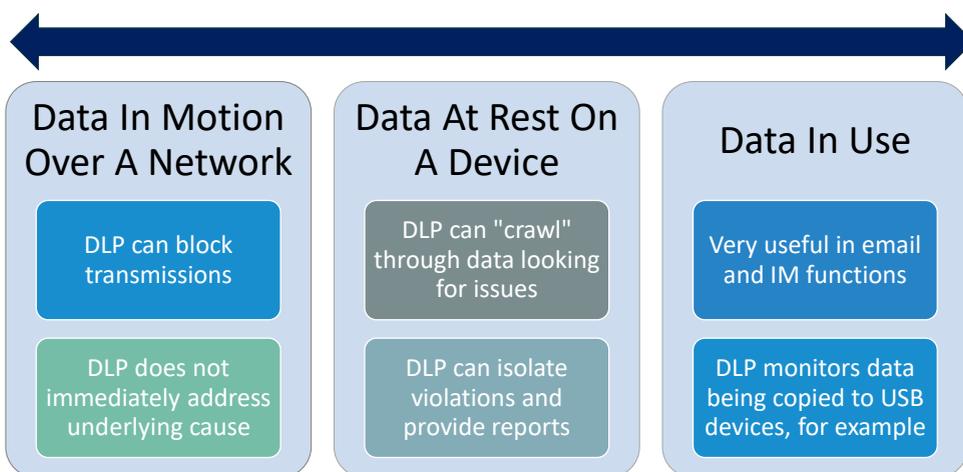
- DLP analyzes data in real-time, looking for patterns in the data that match specified characteristics
 - Social Security numbers and credit card numbers
- When DLP finds data that matches specified characteristics, it takes the action designated in the implemented policy
 - Sending a notification to the user and/or IT staff
 - Blocking the traffic altogether, with or without notifications to the user and/or the IT staff

Is DLP A Firewall?



- No! DLP and firewalls are fundamentally different technologies
- Firewalls serve as buffers between two networks, typically your local network and the Internet, blocking unauthorized access from one to the other
- Firewalls do not have content monitoring capabilities and do not analyze the data passing through as DLP does
- Both are necessary to help protect your systems and the sensitive data that resides on them

DLP Protects Across Three Fronts



DLP Must Have Features



- Cloud Support – must be flexible enough to support cloud, hybrid, and on-premise environments
- Advanced analytics – should expose insights on data usage, user behavior, and security risks in a way that allows anticipation of data vulnerabilities
- Data classification – ability to automatically scan information stacks to classify and tag data (possibly using AI/ML) as to risk or sensitivity
- Endpoint integration – must integrate seamlessly with servers, PCs, laptops, mobile devices, and peripherals

Before Rushing To Implement DLP



- Ensure that appropriate written policies are in place regarding the protection of sensitive data
- Educate team members on why DLP is important and how to handle matters regarding sensitive data
- How does a staff member handle a client request to email a document containing sensitive info?
 - Delicate balance between customer/client service and data/information security

Before Rushing To Implement DLP



- Ensure that tools are in place to allow team members to respond to the requests and needs of clients and customers
 - Is a secure portal a viable option?
 - What about encrypted email?
 - What about simply encrypting a PDF document with a password?
 - What other options exist to satisfy the client or customer without unduly burdening your client or staff while providing exceptional service?



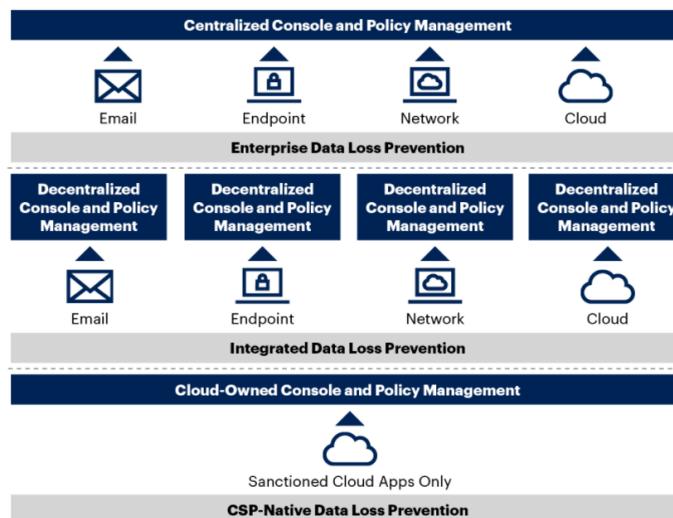
LEADING DLP TOOLS AND SERVICES

Three Classes of DLP Solutions



- Enterprise DLP – offer centralized policy management and reporting and generally incorporate advanced content inspection techniques
- Integrated DLP – are natively integrated within a service, such as secure email, web gateway, or endpoint protection, with generally limited policy and reporting capabilities
- Cloud Service Provider Native DLP – built in to provide data protection and visibility within a cloud ecosystem from a SaaS or IaaS provider

DLP Class Comparison



Gartner DLP Market Guide



Small and mid-size organizations tend to deploy DLP integrated within specific services (IDLP). CSP-Native DLP solutions offer capabilities much like those of EDLP vendors and are increasingly being chosen by organizations pursuing a cloud-first strategy.

Gartner DLP Market Guide

Some DLP Solutions



- [Microsoft Purview Data Loss Prevention](#)
- [Forcepoint DLP](#)
- [Broadcom Symantec Data Loss Prevention](#)
- [Fortra Data Protection](#)
- [Trellix Data Loss Prevention Endpoint](#)
- [GTB Technologies DLP](#)
- [Proofpoint Enterprise Data Loss Prevention](#)
- And many more on the [Gartner DLP reviews site](#)

Forrester Wave for Data Security Platforms, Q1 2023



- The DLP market has followed data into the cloud and most platforms run as a service against cloud data
- With many employees remaining either hybrid or remote, it is natural to migrate both applications and data protection to the cloud
- Significant threats to consider include leakage through the use of AI platforms like ChatGPT, collaboration platforms like Slack and Teams
- These threats are in addition to the standard threats such as unprotected web shares outside the organization and e-mail attachments

DLP In Context



- DLP is helpful for blocking inappropriate data sharing through email and other web platforms, but the real problem which must be addressed is user behavior
- While behavior cannot be changed overnight, a critical first step to any information protection initiative is to assess and enhance the organization's security awareness training
- Security awareness training from vendors like KnowBe4, SANS Institute, and others is just as important as DLP
- If users don't know what is acceptable/unacceptable, they are much more likely to engage in risky behavior

KnowBe4

Security Awareness Training



- **Train Your Users.** The world's most extensive library of security awareness training content. Automated training campaigns with scheduled reminder emails.
- **Phish Your Users.** Best-in-class, fully automated simulated phishing attacks, thousands of templates with unlimited usage, and community phishing templates.
- **See The Results.** Enterprise-strength reporting, showing stats and graphs for training and phishing, is ready for management. Show the great ROI!
- Learn more at <https://www.knowbe4.com/>



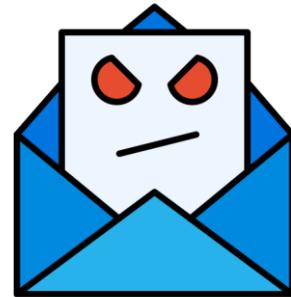
KnowBe4 Phishing Training Results

Go Phish

Open-Source Phishing Framework



- Gophish is a robust, open-source phishing framework that makes it easy to test your organization's exposure to phishing.
- Set Templates & Targets. Gophish makes it easy to create or import pixel-perfect phishing templates. Their web UI includes a full HTML editor, making it easy to customize your templates right in your browser.
- Launch the Campaign. Launch the campaign, and phishing emails are sent in the background. You can also schedule campaigns to launch whenever you'd like.
- Track Results. Detailed results are delivered in near real-time. Results can be exported for use in reports.
- Get started for free at <https://getgophish.com/>



IMPLEMENTING DLP RULES TO PROTECT SENSITIVE DATA IN MICROSOFT 365

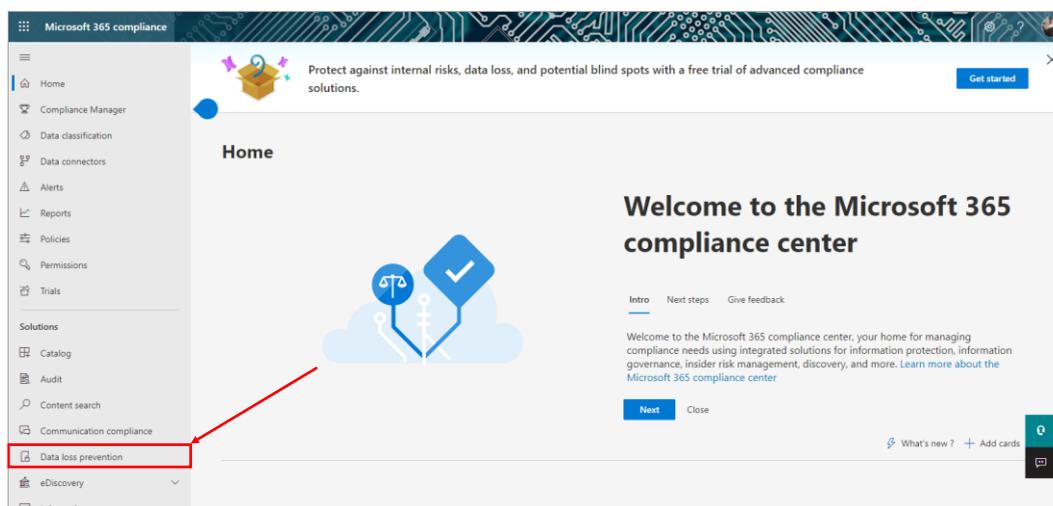
Implementing DLP In Exchange Online



- Many business professionals today have email provided through Exchange Online accounts, often as part of Microsoft Office 365 subscription
- Administrative users in Exchange Online can create and deploy DLP rules, provided the organization has a Plan 2 Exchange account, which includes Office 365 E3 and E5
- A good place to start is this TechNet article <http://bit.ly/2IMnSGu>



Open The 365 Compliance Center



Click Policies



The screenshot shows the Microsoft 365 compliance center interface for Data loss prevention. The left-hand navigation pane includes sections for Home, Compliance Manager, Data classification, Data connectors, Alerts, Reports, Policies (highlighted), Permissions, Trials, Solutions, Catalog, Audit, Content search, Communication compliance, Data loss prevention, and eDiscovery. The main content area is titled "Data loss prevention" and has tabs for Overview, Policies (selected), Alerts, Endpoint DLP settings, and Activity explorer. A red arrow points to the "Policies" tab. Below the tabs, there are sections for "DLP resources" with links to read official docs, get news, and watch videos; "Stay informed about DLP" with a notification; "DLP Policy Matches" with a line chart showing matches for Sharepoint Exchange and OneDrive for Business Teams from 3/16/2022 to 3/17/2022; and "DLP false positives and overrides" with another line chart showing false positives and overrides for the same period.

Click Create Policy



The screenshot shows the Microsoft 365 compliance center interface for Data loss prevention. The left-hand navigation pane is similar to the previous screenshot, with "Policies" highlighted. The main content area is titled "Data loss prevention" and has tabs for Overview, Policies (selected), Alerts, Endpoint DLP settings, and Activity explorer. A red arrow points to the "+ Create policy" button. Below the button, there are "Export" and "Refresh" options. A table lists existing policies, with one entry: "U.S. Patriot Act" with an order of 0, last modified on Feb 26, 2019 3:52 PM, and status "On".

Select A Policy Template



Microsoft 365 compliance

Data loss prevention > Create policy

Choose the information to protect

- Choose the information to protect
- Name your policy
- Locations to apply the policy
- Policy settings
- Test or turn on the policy
- Review your settings

Start with a template or create a custom policy

Choose an industry regulation to see the DLP policy templates you can use to protect that info or create a custom policy start from scratch. If you need to protect labeled content, you'll be able to choose labels later. Learn more about DLP policy templates

Search for specific templates: United States of America

Categories

- Financial
- Medical and health
- Privacy
- Custom

Templates

- PCI Data Security Standard (PCI DSS)
- U.S. Financial Data
- U.S. Federal Trade Commission (FTC) Consumer Rules
- U.S. Gramm-Leach-Bliley Act (GLBA)

U.S. Financial Data

Helps detect the presence of information commonly considered to be financial information in United States, including information like credit card, account information, and debit card numbers.

Protect this information:

- Credit Card Number
- U.S. Bank Account Number
- ABA Routing Number

Next Cancel

Use The Default Name



Microsoft 365 compliance

Data loss prevention > Create policy

Choose the information to protect

- Choose the information to protect
- Name your policy
- Locations to apply the policy
- Policy settings
- Test or turn on the policy
- Review your settings

Name your DLP policy

Create a DLP policy to detect sensitive data across locations and apply protection actions when the conditions match.

Name *

U.S. Financial Data

Description

Helps detect the presence of information commonly considered to be financial information in United States, including information like credit card, account information, and debit card numbers.

Back Next Cancel

Choose Locations To Apply



Microsoft 365 compliance

Data loss prevention > Create policy

- Choose the information to protect
- Name your policy
- Locations to apply the policy**
- Policy settings
- Test or turn on the policy
- Review your settings

Choose locations to apply the policy

We'll apply the policy to data that's stored in the locations you choose.

Protecting sensitive info in on-premises repositories (SharePoint sites and file shares) is now in preview. Note that there are prerequisite steps needed to support this new capability. [Learn more about the prerequisites](#)

Status	Location	Included	Excluded
<input checked="" type="checkbox"/> On	Exchange email	All Choose distribution group	None Exclude distribution group
<input checked="" type="checkbox"/> On	SharePoint sites	All Choose sites	None Exclude sites
<input checked="" type="checkbox"/> On	OneDrive accounts	All Choose account or distribution group	None Exclude account or distribution group
<input checked="" type="checkbox"/> On	Teams chat and channel messages	All Choose account or distribution group	None Exclude account or distribution group
<input checked="" type="checkbox"/> On	On-premises repositories	All Choose repositories	None Exclude repositories

[Back](#) [Next](#) [Cancel](#)

Click Next



Microsoft 365 compliance

Data loss prevention > Create policy

- Choose the information to protect
- Name your policy
- Locations to apply the policy
- Policy settings**
- Test or turn on the policy
- Review your settings

Define policy settings

Decide if you want to use the default settings from the template you selected to quickly set up a policy or configure custom rules to refine your policy further.

- Review and customize default settings from the template.
 - Credit Card Number
 - U.S. Bank Account Number
 - ABA Routing Number
- Create or customize advanced DLP rules

[Back](#) [Next](#) [Cancel](#)

Identify Info To Protect



Microsoft 365 compliance

Data loss prevention > Create policy

- Choose the information to protect
- Name your policy
- Locations to apply the policy
- Policy settings
 - Info to protect
 - Protection actions
 - Customize access and override settings
 - Test or turn on the policy
 - Review your settings

Info to protect

This policy will protect content that matches these conditions. Review them and make any necessary changes. For example, you can edit the conditions to detect additional sensitive info or content that has specific sensitivity or retention labels applied.

Content contains any of these sensitive info types:
Credit Card Number
U.S. Bank Account Number
ABA Routing Number

Edit

Detect when this content is shared from Microsoft 365:
 With people outside my organization
 Only with people inside my organization

Back Next Cancel

Select A Single Instance



Microsoft 365 compliance

Data loss prevention > Create policy

- Choose the information to protect
- Name your policy
- Locations to apply the policy
- Policy settings
 - Info to protect
 - Protection actions
 - Customize access and override settings
 - Test or turn on the policy
 - Review your settings

Protection actions

We'll automatically create detailed activity reports so you can review the content that matches this policy. What else do you want to do?

When content matches the policy conditions, show policy tips to users and send them an email notification
Tips appear to users in their apps (like Outlook, OneDrive, and SharePoint) and help them learn how to use sensitive info responsibly. You can use the default tip or customize it to your liking. Learn more about notifications and tips
Customize the tip and email

Detect when a specific amount of sensitive info is being shared at one time
At least or more instances of the same sensitive info type

Send incident reports in email
By default, you and your global admin will automatically receive the email. Incident reports are supported only for activity in Exchange, SharePoint, OneDrive, and Teams.
Choose what to include in the report and who receives it

Send alerts if any of the DLP rules match
By default, you and any global admins will automatically be alerted if a DLP rule is matched.
Customize alert configuration

Back Next Cancel

Customize Access And Override



Create The Policy



Confirm Policy Created



Microsoft 365 compliance

Data loss prevention > Create policy

- Choose the information to protect
- Name your policy
- Locations to apply the policy
- Policy settings
- Test or turn on the policy
- Review your settings

✓ New policy created

Data loss prevention policy has been created.

Next steps
Monitor alerts to review policy matches. [Learn about reviewing alerts](#)

Related tasks

Try communication compliance free for 90 days
Further minimize risks by setting up communication compliance policies to detect and act on inappropriate or sensitive messages in email and Teams. You'll be able to quickly create policies that monitor communications for:

- Inappropriate language and images
- Sensitive info, like credit card or social security numbers
- Financial info that might be related to insider trading
- Conflicts of interest between two groups of users

[Learn more about communication compliance and the compliance solutions trial.](#)

[Done](#)

Return To DLP Compliance



Microsoft 365 compliance

Data loss prevention

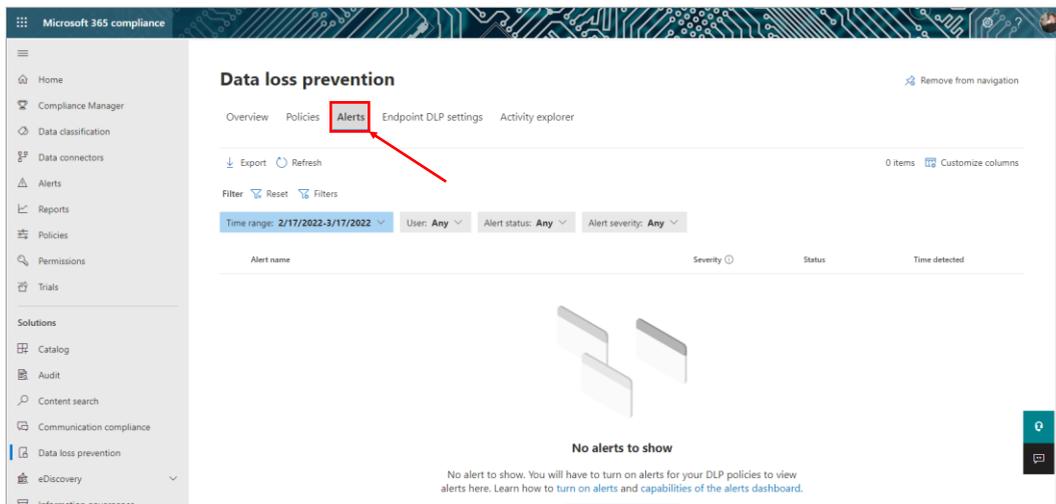
Overview **Policies** Alerts Endpoint DLP settings Activity explorer

Use data loss prevention (DLP) policies to help identify and protect your organization's sensitive info. For example you can set up policies to help make sure information in email and docs isn't shared with the wrong people. [Learn more about DLP](#)

[+ Create policy](#) [↓ Export](#) [↻ Refresh](#) 2 items

Name	Order	Last modified	Status
U.S. Patriot Act	0	Feb 26, 2019 3:52 PM	On
U.S. Financial Data	1	Mar 17, 2022 8:31 PM	Test without notifications

Violations Appear On Alerts Tab



DLP SharePoint Policy Tip



**Override Only
Appears If You
Chose To Allow
Overrides**

 PayPal

 This item conflicts with a policy in your organization.
[View policy tip](#)

File Flagged in
SharePoint
Document Library

Policy tip for 'PayPal [redacted].pdf'

This item is protected by a policy in your organization.

[Open the item](#) to fix the issues or **click Resolve to override the policy** or report a problem.

Issues

- Item is shared with people outside your organization
- Item contains the following sensitive information: Credit Card Number

Last scanned: 3/19/2017

Resolve Close

Take Aways



- Establishing policies and training end-users is still a vital aspect of information security
- Recognize the human element and understand that mistakes – some honest and some intentional – will compromise the security of sensitive data
- DLP provides an added layer of protection to block the outflow of sensitive data before we have a significant breach
- DLP has become a must-have technology in modern business

QUESTIONS?

