INGRAM MICRO CLOUD
More as a Service
December 12, 2024
Microsoft Purview Information Protection
Diego Lens
Ingram Micro Cloud BeNeLux
Course will start at 9h15
More as a Service™

1

INGRAM MICRO CLOUD
More as a Service
December 12, 2024
Microsoft Purview Information Protection
Diego Lens
Ingram Micro Cloud BeNeLux
More as a Service™

2

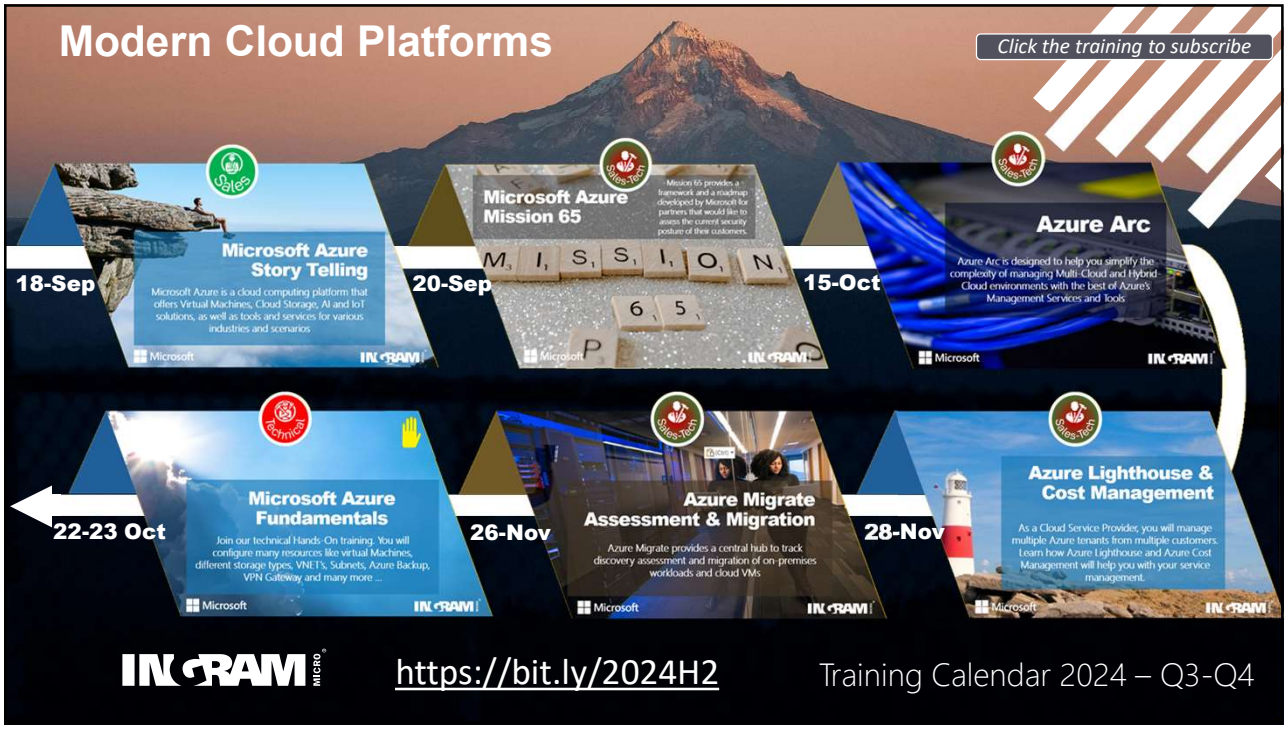
Diego Lens

- 24 Years working in Distribution
- Cloud Enablement
- Sales/Technical Trainings
- Microsoft Azure
- Microsoft 365
- Azure Virtual Desktop

- diego.lens@ingrammicro.com
- **linkedin.com/in/diegolens**

Proprietary information of Ingram Micro — Do not distribute or duplicate without Ingram Micro's express written permission.

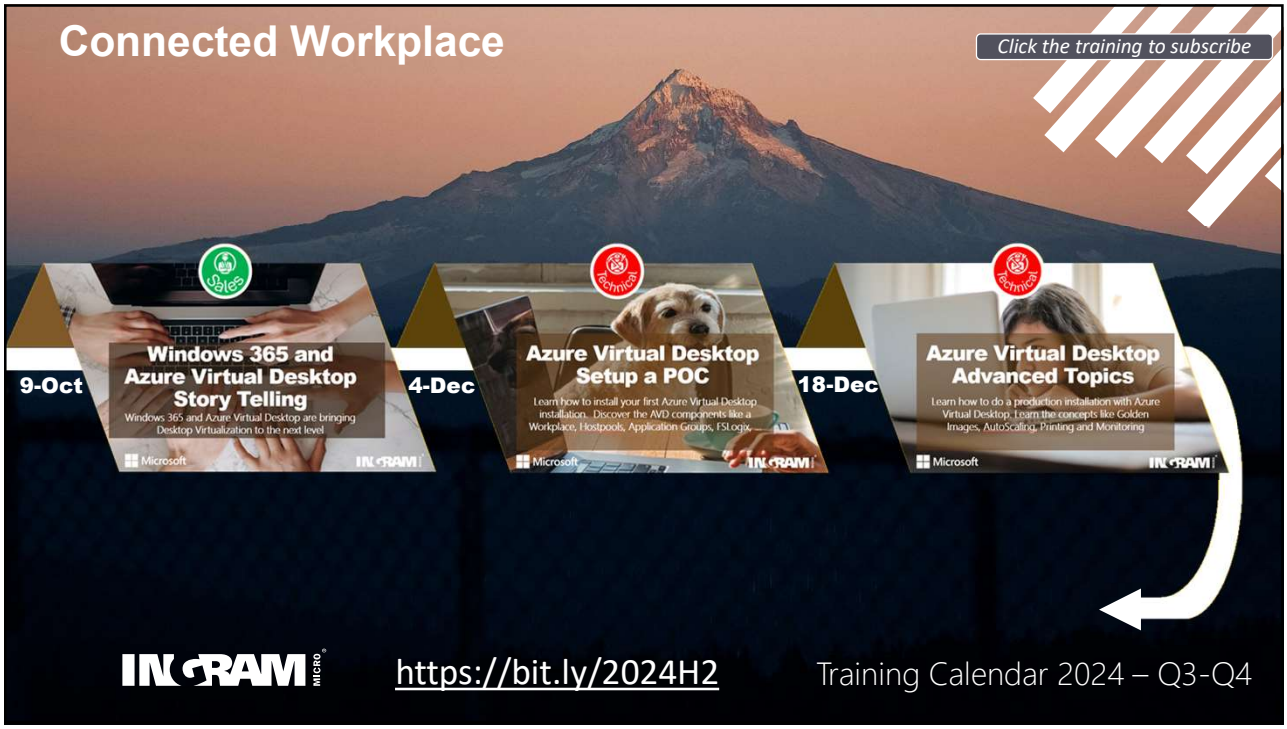
3



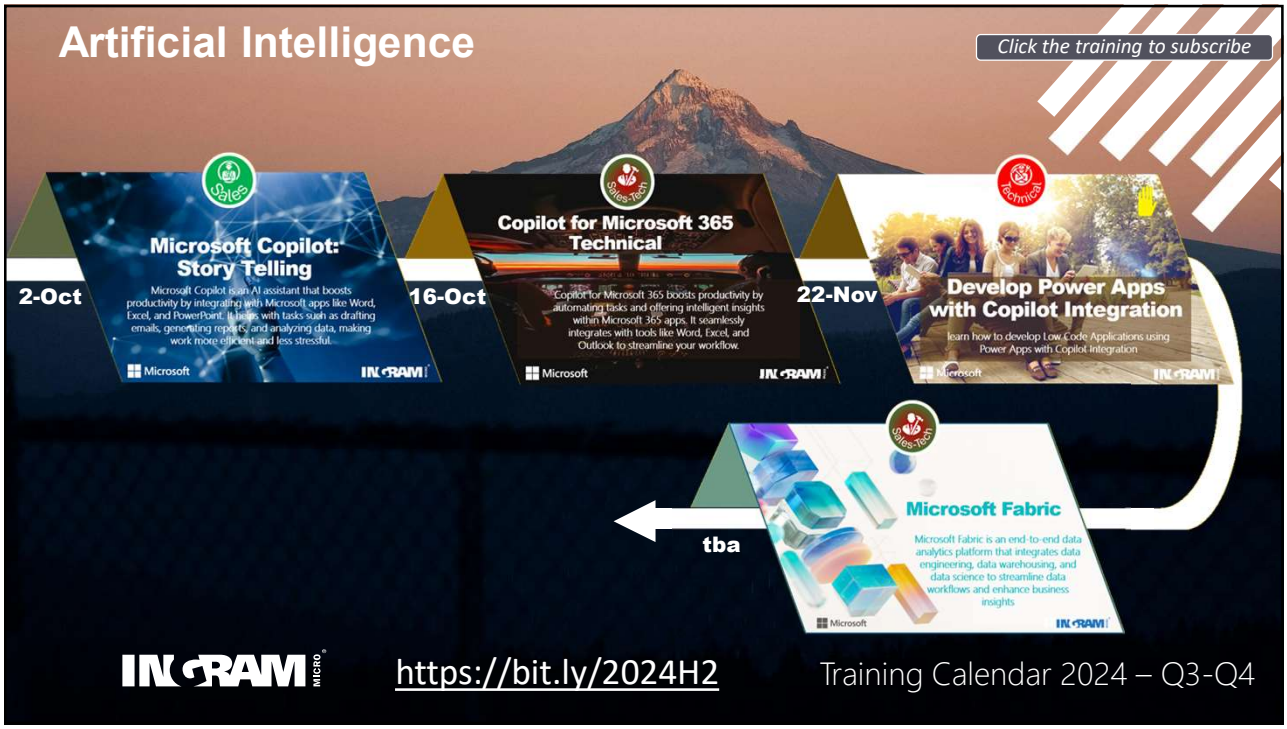
4

Seamless Security
Click the training to subscribe
25-Sep
Microsoft 365 Story Telling
Learn the stories you can use to explain the most important security features in a Microsoft 365 offering
6-Nov
Microsoft Intune
Microsoft Intune is a cloud-based service that manages and secures endpoints, applications and data across your organization
27-Nov
Microsoft Defender for Business
Microsoft Defender for Business is a security solution included in Microsoft 365 Business Premium to help protect small businesses against cyber security threats
13-Nov
Microsoft Entra Suite
Microsoft Entra Suite is the new product family that encompasses all of Microsoft's identity and access management capabilities
11-Dec
Microsoft Defender XDR
Microsoft Defender XDR is a set of security products and solutions that protect your organization from cyberattacks
20-Nov
Microsoft Purview Information Protection
Microsoft Purview Information Protection is a cloud-based service that helps you discover, classify, protect and govern sensitive data across your hybrid environment
https://bit.ly/2024H2
Training Calendar 2024 – Q3-Q4

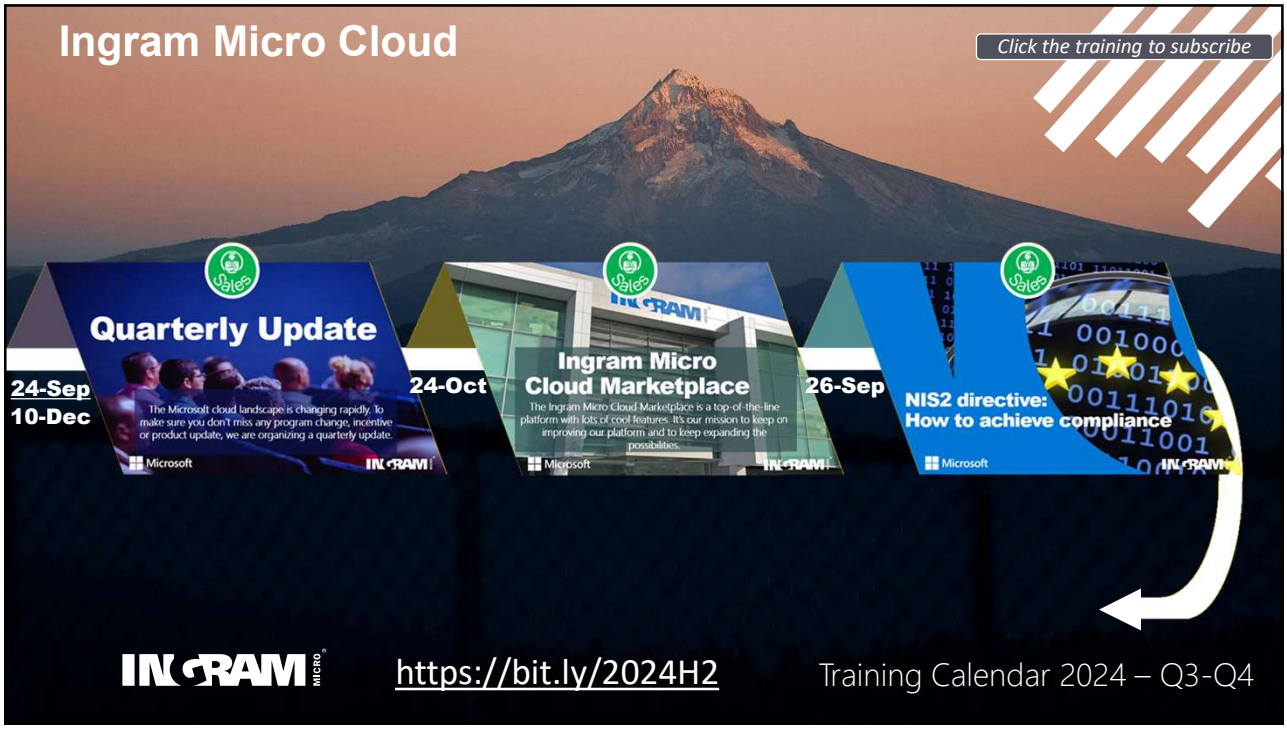
5


Connected Workplace
Click the training to subscribe
9-Oct
Windows 365 and Azure Virtual Desktop Story Telling
Windows 365 and Azure Virtual Desktop are bringing Desktop Virtualization to the next level
4-Dec
Azure Virtual Desktop Setup a POC
Learn how to install your first Azure Virtual Desktop installation. Discover the AVD components like a Workplace, Hostpools, Application Groups, FSLogix
18-Dec
Azure Virtual Desktop Advanced Topics
Learn how to do a production installation with Azure Virtual Desktop. Learn the concepts like Golden Images, AutoScaling, Printing and Monitoring
https://bit.ly/2024H2
Training Calendar 2024 – Q3-Q4

6


Artificial Intelligence
Click the training to subscribe
2-Oct
Microsoft Copilot: Story Telling
Microsoft Copilot is an AI assistant that boosts productivity by integrating with Microsoft apps like Word, Excel, and PowerPoint. It helps with tasks such as drafting emails, generating reports, and analyzing data, making work more efficient and less stressful.
16-Oct
Copilot for Microsoft 365 Technical
Copilot for Microsoft 365 boosts productivity by automating tasks and offering intelligent insights within Microsoft 365 apps. It seamlessly integrates with tools like Word, Excel, and Outlook to streamline your workflow.
22-Nov
Develop Power Apps with Copilot Integration
learn how to develop Low Code Applications using Power Apps with Copilot Integration
tba
Microsoft Fabric
Microsoft Fabric is an end-to-end data analytics platform that integrates data engineering, data warehousing, and data science to streamline data workflows and enhance business insights
https://bit.ly/2024H2
Training Calendar 2024 – Q3-Q4

7


Ingram Micro Cloud
Click the training to subscribe
24-Sep
10-Dec
Quarterly Update
The Microsoft cloud landscape is changing rapidly. To make sure you don't miss any program change, incentive or product update, we are organizing a quarterly update.
24-Oct
Ingram Micro Cloud Marketplace
The Ingram Micro Cloud Marketplace is a top-of-the-line platform with lots of cool features. It's our mission to keep on improving our platform and to keep expanding the possibilities.
26-Sep
NIS2 directive: How to achieve compliance
https://bit.ly/2024H2
Training Calendar 2024 – Q3-Q4

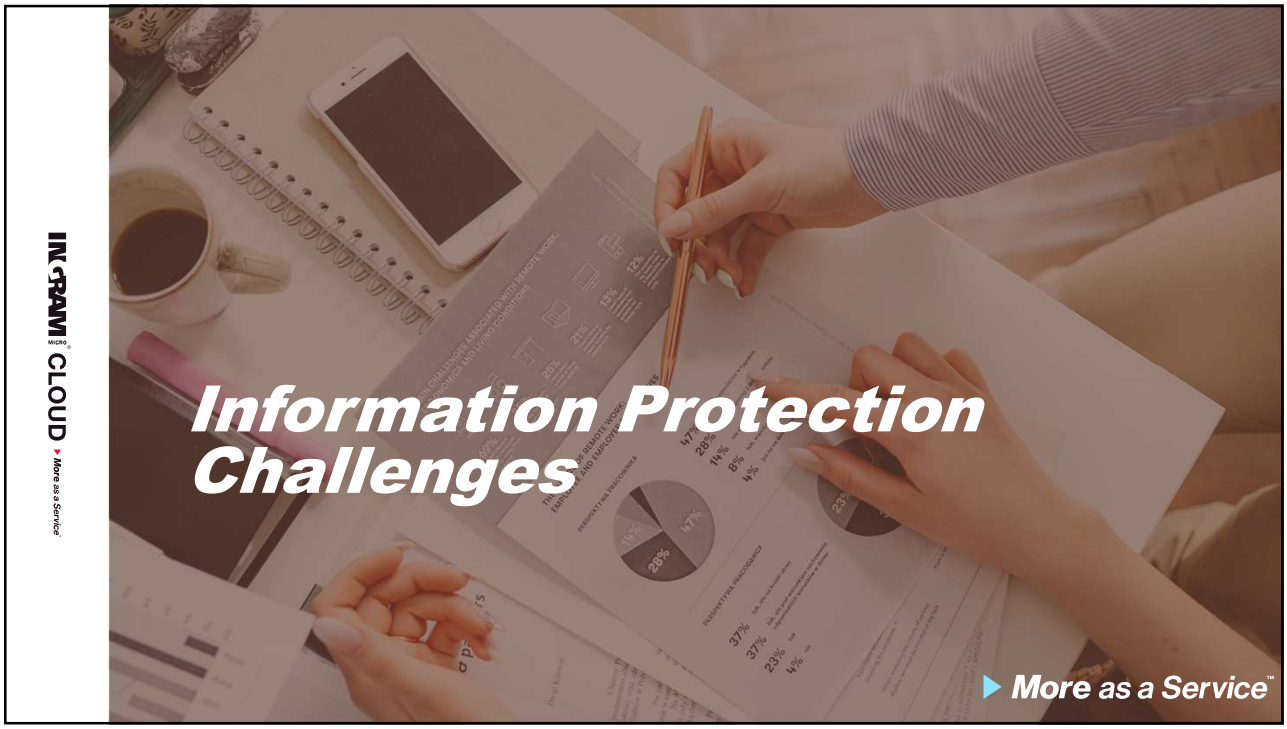
8

Are you organizing your own event for your customers ?
Searching for a speaker ?
diego.lens@ingrammicro.com
https://bit.ly/2024H2
Training Calendar 2024 – Q3-Q4

9

Agenda
• Information Protection Challenges
• Microsoft Purview Information Protection
• Know Your Data
• Protect Your Data
• Microsoft Purview Roadmap
• Prevent Data Loss
• Govern Your Data
• Microsoft Purview Licensing
10

10



11

Protecting data is challenging

#1
Protecting and governing sensitive data is biggest concern in complying with regulations[1]

63%
of organizations fear data leak/spillage during the pandemic[2]

88%
of organizations no longer have confidence to detect and prevent loss of sensitive data[3]

INGRAM MICRO CLOUD
More as a Service

[1] Microsoft GDPR research, 2017
[2] Microsoft COVID Security Priorities Survey 2020
[3] Forrester. Security Concerns, Approaches and Technology Adoption. December 2018

12

12

Cyber Attacks

CONDUENT

05-06-2020 | door: **Redactie**

Conduent is getroffen door Maze ransomware aanval

Outsourcer Conduent meldt dat zijn Europese activiteiten zijn getroffen door Maze ransomware waarbij sprake is van het lekken van interne bedrijfsdocumenten.

Emsisoft, evenals het beveiligingsbedrijf Bad Packets, melden dat Conduent lijkt te zijn getroffen door Maze ransomware. Maze heeft eerder Cognizant in april getroffen.

Bij de Conduent-aanval hebben de hackers twee zip-bestanden gepubliceerd over documenten die betrekking hebben op het werk van het bedrijf in Duitsland naar verluidt over Vodafone Deutschland.

Deze bestanden zijn woensdag vrijgegeven op een site die Maze-aanvallen publiceert.

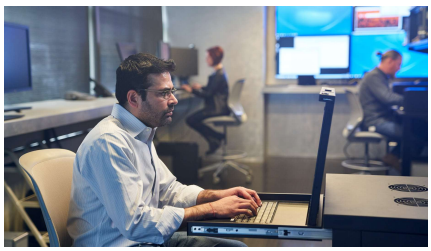
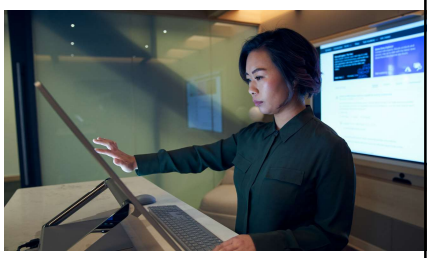
Conduent is opgericht als nieuwe bedrijf nadat Xerox in 2016 zijn outsourcingactiviteiten voor bedrijfsprocessen had stopgezet.

INGRAM MICRO CLOUD More as a Service

13

13

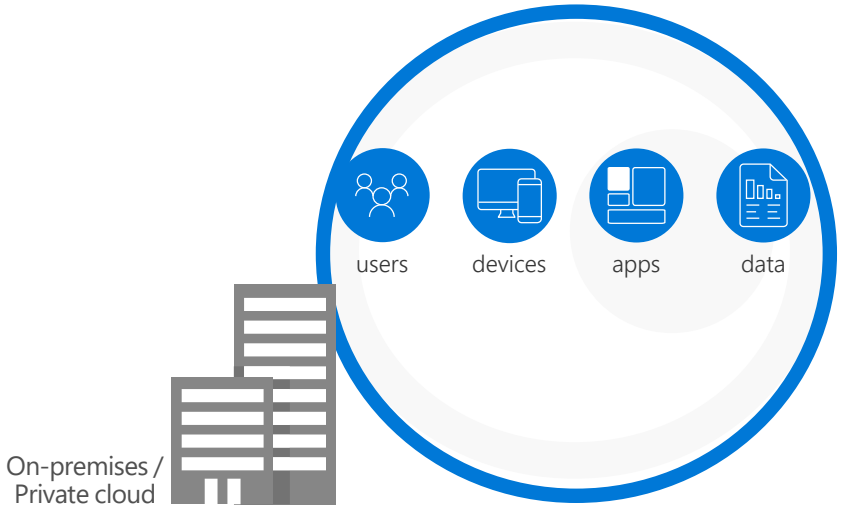
Information Protection Challenges

- Rapid shift in how people work
- Balance security with productivity
- Cost of breaches and regulations
- Struggle with ‘dark data’
- Complex patch work of ‘bolt-on’ solutions
- Correlating various signals to assess risk

14

Security perimeter in the past

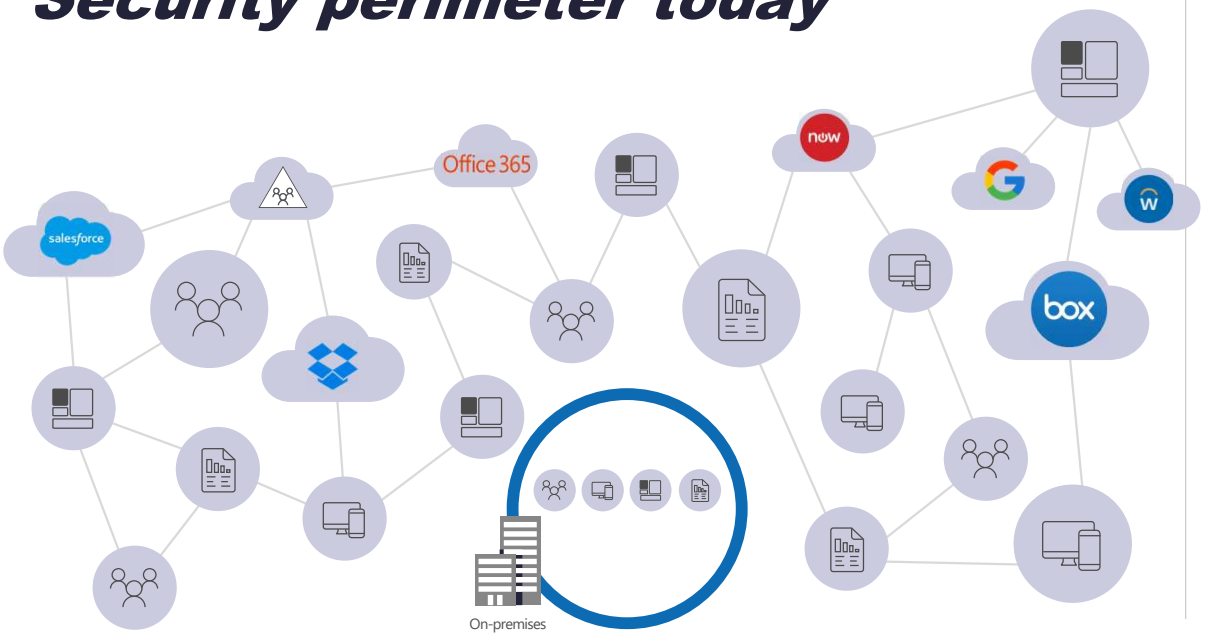


INGRAM MICRO CLOUD More as a Service

15

15

Security perimeter today



INGRAM MICRO CLOUD More as a Service

16

16

17

Microsoft Security Area's

+ PROTECT USERS

+ PROTECT DEVICES

+ PROTECT EMAIL & DOCUMENTS

+ MANAGE ENTERPRISE SECURITY

INGRAM MICRO CLOUD
More as a Service

18

18

Microsoft Security Solutions

IDENTITY AND ACCESS MANAGEMENT

THREAT PROTECTION

INFORMATION PROTECTION

SECURITY MANAGEMENT

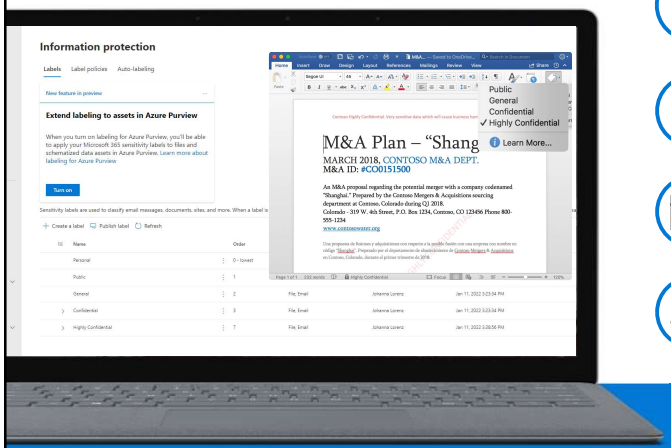
INGRAM MICRO CLOUD More as a Service

19

19

Microsoft Purview Information Protection

A built-in, intelligent, unified, and extensible platform and solution to protect sensitive data



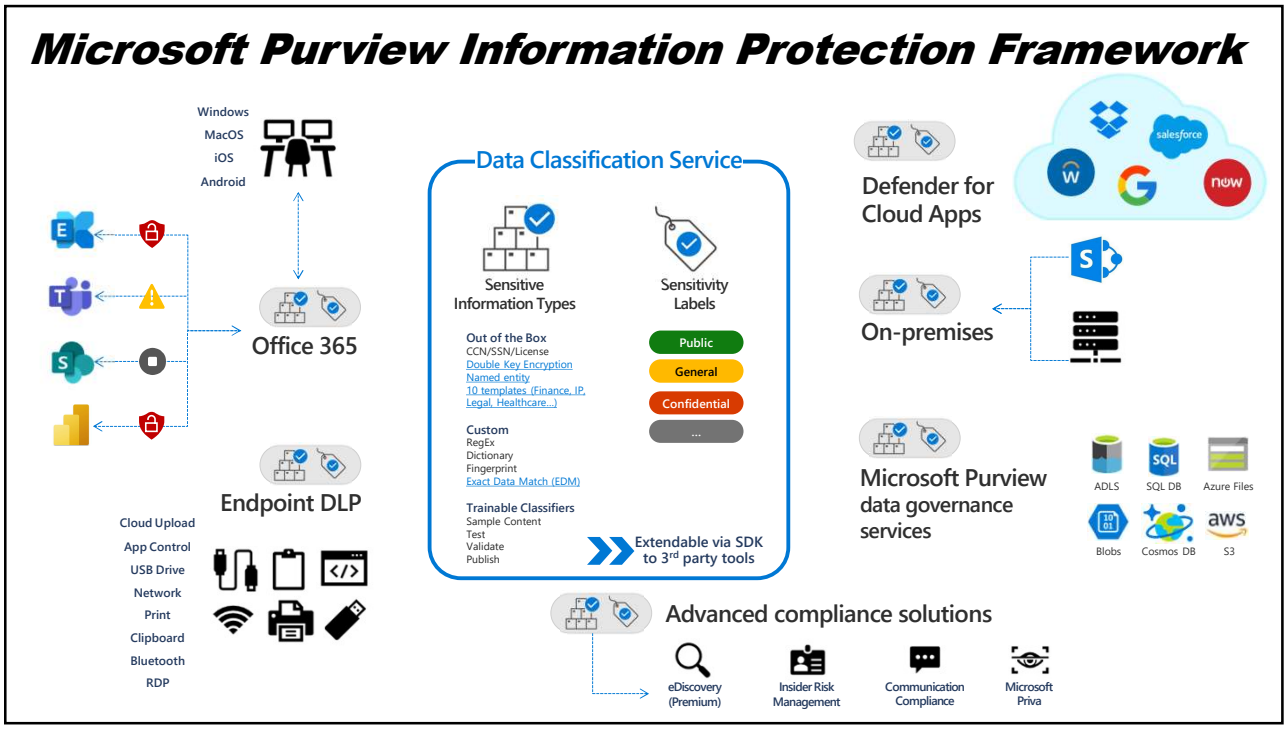
Built in
Built-in labeling and protection experience in Office apps, Office 365 services, other MS services like Power BI, Edge, and Windows

Intelligent
Accuracy in classification via ML based trainable classifiers exact data match and named entities

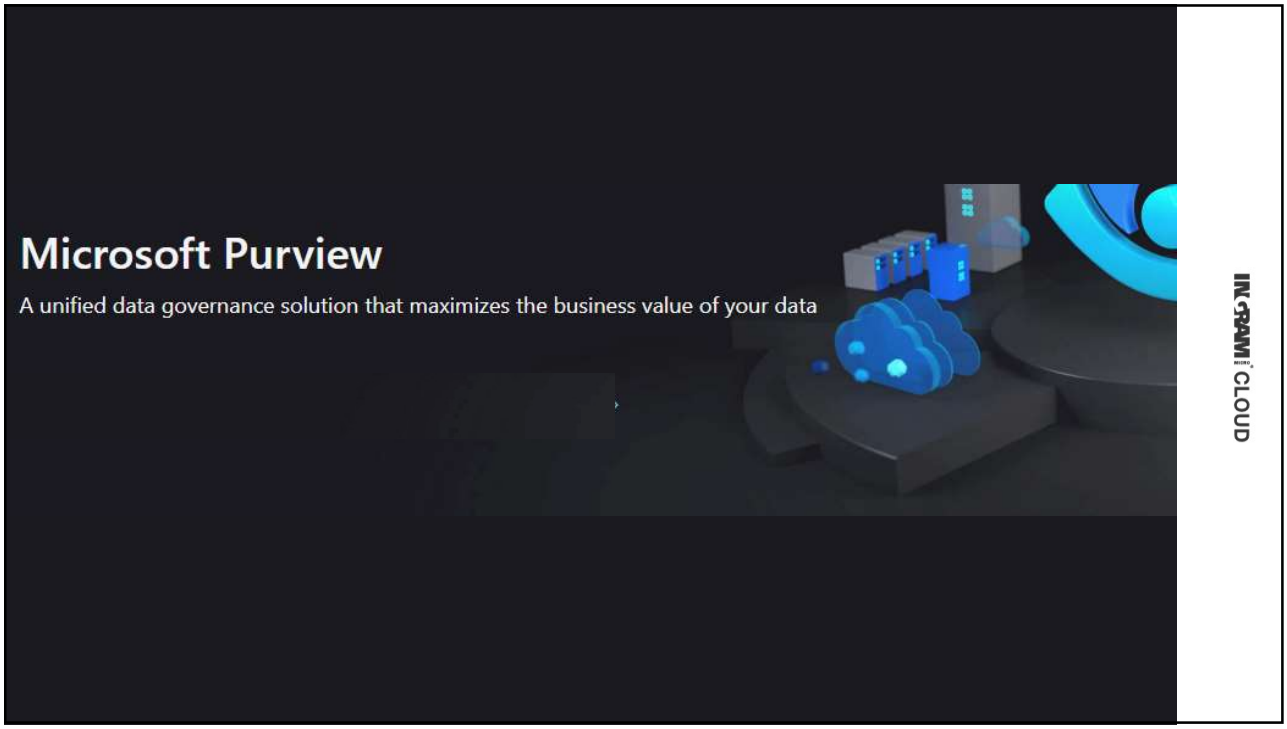
Unified
Single admin console to configure and manage your policies and view analytics across on-premises, Office apps, Microsoft 365 services, third-party services (via Microsoft Defender for Cloud Apps), and devices

Extensible
MIP SDK extends the protection experience, in a consistent way, to popular non-Microsoft apps and services

20


Microsoft Purview Information Protection Framework
Windows
MacOS
iOS
Android
Office 365
Endpoint DLP
Cloud Upload
App Control
USB Drive
Network
Print
Clipboard
Bluetooth
RDP
Data Classification Service
Sensitive Information Types
Sensitivity Labels
Out of the Box
CCN/SSN/License
Double Key Encryption
Named entity
10 templates (Finance, IP, Legal, Healthcare...)
Custom
RegEx
Dictionary
Fingerprint
Exact Data Match (EDM)
Trainable Classifiers
Sample Content
Test
Validate
Publish
Public
General
Confidential
...
Extendable via SDK to 3rd party tools
Defender for Cloud Apps
On-premises
Microsoft Purview data governance services
ADLS
SQL DB
Azure Files
Blobs
Cosmos DB
S3
Advanced compliance solutions
eDiscovery (Premium)
Insider Risk Management
Communication Compliance
Microsoft Priva

21


Microsoft Purview
A unified data governance solution that maximizes the business value of your data
IN THE CLOUD

22

Microsoft Purview Product Suite

Current Name	New Name
Double Key Encryption for Microsoft 365	Microsoft Purview Double Key Encryption
Records Management in Microsoft 365	Microsoft Purview Records Management
Office 365 Core eDiscovery	Microsoft Purview eDiscovery (Standard)
Office 365 Advanced eDiscovery	Microsoft Purview eDiscovery (Premium)
Microsoft 365 Information Barriers	Microsoft Purview Information Barriers
Microsoft Information Protection	Microsoft Purview Information Protection
Microsoft 365 Insider Risk Management	Microsoft Purview Insider Risk Management
Azure Purview portal	Microsoft Purview governance portal
Microsoft 365 compliance center	Microsoft Purview compliance portal
Azure Purview Data Insights	Microsoft Purview Data Estate Insights
Microsoft 365 Customer Key	Microsoft Purview Customer Key

Current Name	New Name
Microsoft 365 Basic Audit	Microsoft Purview Audit (Standard)
Microsoft 365 Advanced Audit	Microsoft Purview Audit (Premium)
Microsoft 365 Communication Compliance	Microsoft Purview Communication Compliance
Microsoft Compliance Manager	Microsoft Purview Compliance Manager
Office 365 Customer Lockbox	Microsoft Purview Customer Lockbox
Azure Purview Data Catalog	Microsoft Purview Data Catalog
Microsoft 365 Data Connectors	Microsoft Purview Data Connectors
Microsoft Information Governance	Microsoft Purview Data Lifecycle Management
Office 365 Data Loss Prevention	Microsoft Purview Data Loss Prevention
Azure Purview Data Map	Microsoft Purview Data Map

INGRAM MICRO CLOUD More as a Service

23

23

Microsoft Information Protection

Vision 2019

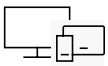
Discover

Classify

Protect

Monitor

Across



Devices

Apps

Cloud services

On-premises

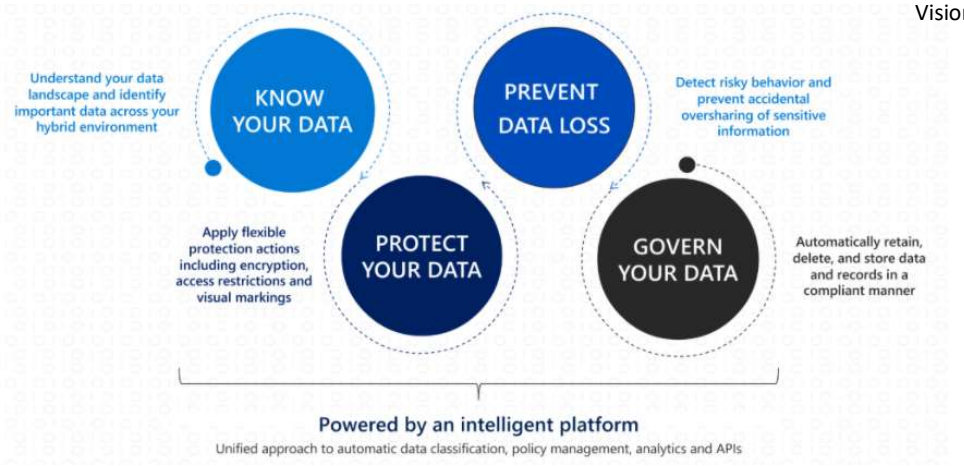
https://aka.ms/MIPdocs

INGRAM MICRO CLOUD

24

Microsoft Information Protection

Vision 2020



https://aka.ms/MIPdocs

INGRAM MICRO CLOUD

25

Microsoft Purview Information protection & governance

Protect and govern data wherever it lives (vision 2022)

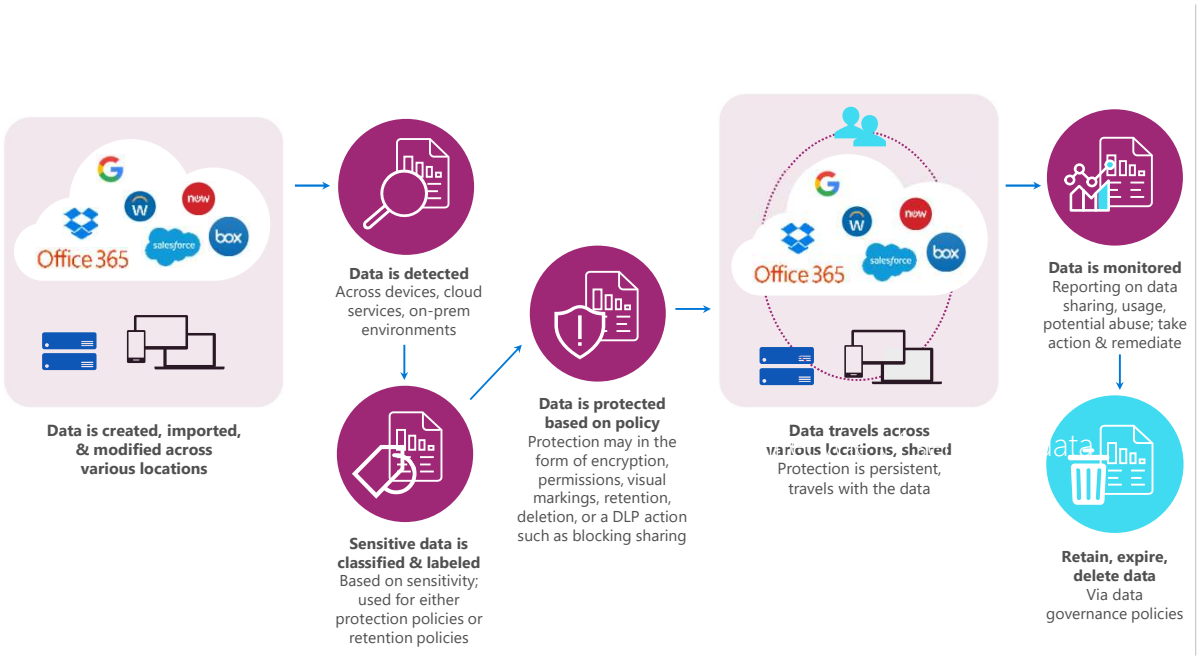
KNOW YOUR DATA	PROTECT YOUR DATA	PREVENT DATA LOSS	GOVERN YOUR DATA
Understand your data landscape and identify important data across your hybrid environment	Classify data with sensitivity labels, apply flexible protection, encryption, access restrictions and visual markings	Prevent unauthorized or accidental sharing, transfer, or use of sensitive data with policies	Automatically retain, delete, and store data and records in a compliant manner

POWERED BY AN INTELLIGENT PLATFORM
Unified approach to automatic data classification, policy management, analytics, and APIs

Devices · Apps · Cloud services · On-premises · ISV/3rd party

INGRAM MICRO CLOUD ▸ More as a Service

26



27

MIP : Finding more information

- https://www.yammer.com/askipteam/#/home?type=my_all
- https://docs.microsoft.com/en-us/azure/information-protection/

INGRAM MICRO CLOUD

28

History of Azure Information Protection

ADRMS → Azure RMS → Secure Islands acquisition → Azure Information Protection → Microsoft Information protection → Microsoft Purview Information Protection

2015 secure islands

INGRAM CLOUD

29

History of Azure Information Protection

On-Premises	Cloud

ADRMS → Azure RMS → Secure Islands acquisition → Azure Information Protection → Microsoft Information protection → Microsoft Purview Information Protection

2015 secure islands

Encryption
Access Control
Rights enforcement

Cloud Based Encryption Access Control Rights enforcement

Classification Protection Loss Prevention

INGRAM CLOUD

30

RMS, IRM or AIP ?

On-Premises products

AD RMS (Active Directory Rights Management)

- Also referred as HYOK (Hold Your Own Key)

Windows RMS (Windows Rights Management Services)

Cloud Based

Azure **RMS** (Azure Rights Management Services)

Microsoft RMS (Both AD RMS + Azure RMS)

IRM (Information Rights Management)

- Office implementation with AD RMS of Azure RMS (Older version of RMS)

AIP (Azure Information Protection)

- The new umbrella for the Cloud Based solutions above
- **Azure RMS** is still used as the protection technology for AIP

https://docs.microsoft.com/en-us/azure/information-protection/aka

INGRAM CLOUD

31

Know your Data

- Sensitive information types
  - Identify sensitive data
- Trainable classifiers
  - Classify your data with built-in classifiers & own classifiers
- Microsoft Purview Information Protection scanner

INGRAM CLOUD

32

Protect your data

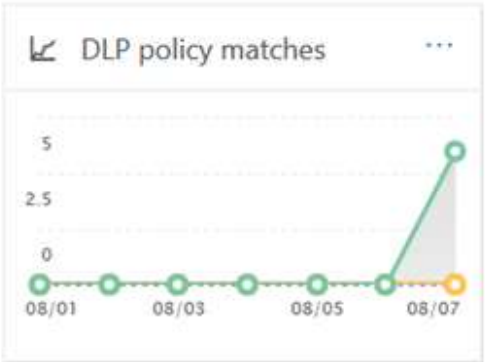
- Sensitivity labels
- Azure Information Protection Unified labeling
- Double Key Encryption
- AIP Unified labeling Scanner
- Microsoft Cloud App Security
- Microsoft Information Protection SDK

INGRAM CLOUD

33

Prevent Data Loss

- Data loss prevention (DLP)



INGRAM CLOUD

34

Govern your data

- Retain, delete and store data
- Microsoft Information Governance
- Retention Policies
- Retention Labels

INGRAM CLOUD

35

LAB 1 Task2

TASK1 : CREATE WINDOWS 10 TEST DEVICE

INGRAM CLOUD

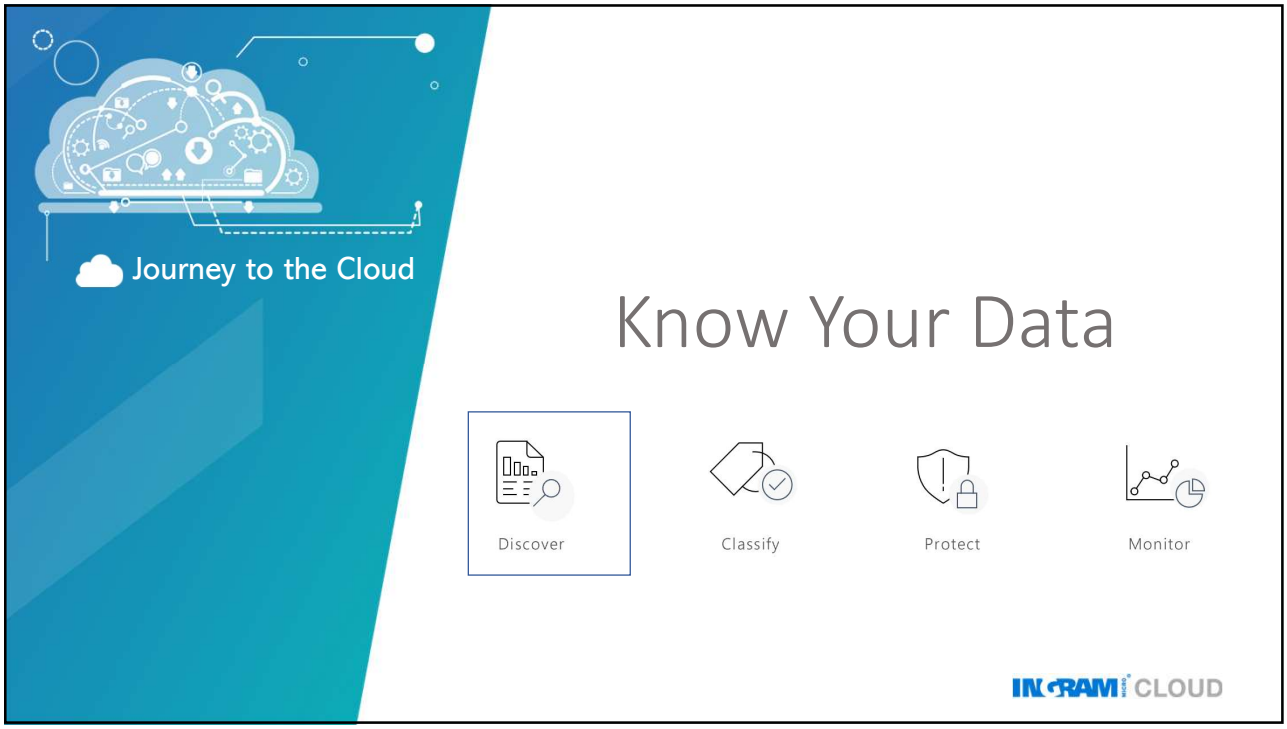
36

```
VM Name: AZU-APP-SRV  Public IP Address: 52.157.213.114
VM Name: AZU-ASS-APL  Public IP Address: 52.166.164.50
VM Name: adVM  Public IP Address: 20.160.106.15
VM Name: AZU-MIG-APL  Public IP Address: 20.16.230.28
VM Name: PUR1  Public IP Address: 172.166.132.226
VM Name: PUR10  Public IP Address: 172.167.29.31
VM Name: PUR11  Public IP Address: 51.140.179.251
VM Name: PUR12  Public IP Address: 20.0.248.152
VM Name: PUR2  Public IP Address: 172.167.25.149
VM Name: PUR3  Public IP Address: 172.167.217.21
VM Name: PUR4  Public IP Address: 172.166.143.146
VM Name: PUR5  Public IP Address: 20.162.223.101
VM Name: PUR6  Public IP Address: 51.145.33.221
VM Name: PUR7  Public IP Address: 172.166.181.221
VM Name: PUR8  Public IP Address: 20.58.44.7
VM Name: PUR9  Public IP Address: 20.162.248.218
```

INGRAM CLOUD

https://bit.ly/purview2412

37



38

Know your data – Top of mind questions

- Where is my sensitive data located?
- What are the risky activities happening in my organization – files shared externally, across 1st and 3rd party apps?
- I need to comply with a new regulation? Where is my PII data located & where is it being generated?
- How do I control data sprawl and build a strategy for dark data disposal before I bring data to the cloud from on-premise?
- How do I see activity around classification and labeling across retention and sensitivity labels once they have been used across governance and retention outcomes?
- How do I automate and scale classification across different types of data in my organization?

INGRAM CLOUD

39

Tools to know your data

INGRAM CLOUD

40

Discover your Data

Discover

Scan & detect sensitive data based on policy

Classify

Classify data and apply labels based on sensitivity

Protect

Apply protection actions, including encryption, access restrictions

Monitor

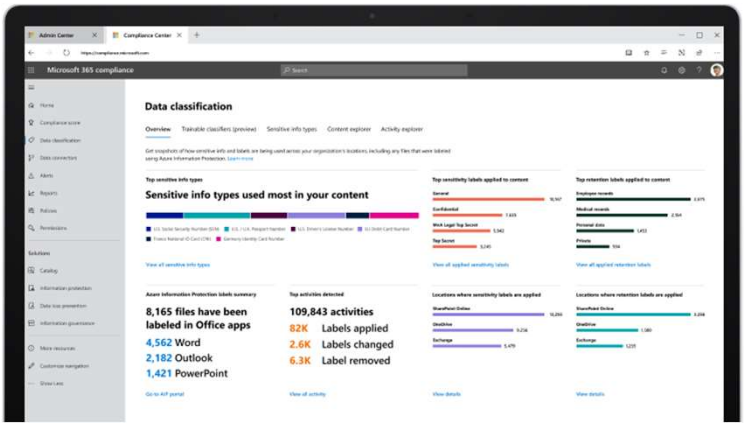
Reporting, alerts, remediation

INGRAM MICRO CLOUD

41

Discovering Data

- What Sensitive Information does exist in the Organization ?

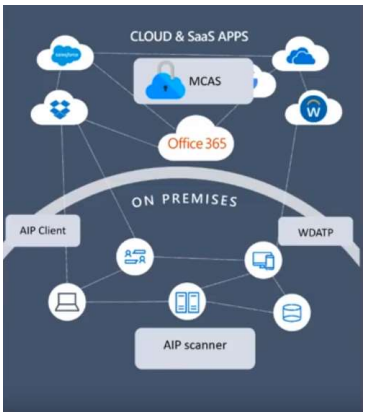


INGRAM MICRO CLOUD

42

Discover Sensitive Data

- Microsoft Purview Information Protection Scanner
- AIP unified labeling client
- Microsoft Defender for Endpoints
- Microsoft Cloud App Security



INGRAM CLOUD

43

What does Microsoft Purview Information Protection scanner do ?

Scans on-perm repositories: file shares, NAS or any other CIFS based repositories, or SharePoint 2013/2016

Remark : NFS Shares in Private Preview on 21/09/2020

Discover data in the scanned repositories and match it against AIP policy (sensitive info types, location or custom property)

Labels and protects the discovered data per AIP policy. AIP scanner uses the same AIP policy as AIP clients.

Create a report of discovered data, including the matched conditions for found patterns

INGRAM CLOUD

44

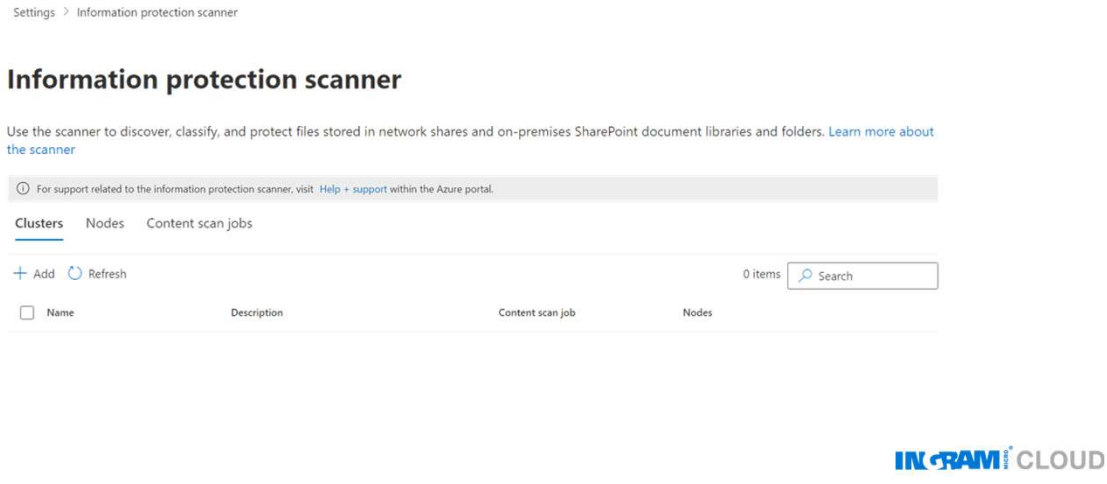
Why Microsoft Purview Information Protection scanner ?

- Our business policy, compliance or regulation (GDPR) requires all files to be classified.
  We label new created data using AIP client, but
  - What about the data that was created before we started to use AIP?
  - We had another solution and we want AIP to leverage the existing 3rd label
  - Some files are generated by automatic processes rather than created by end users
- We want to migrate to the cloud, but
  - We want to know what is going to be migrated
  - We want to label and encrypt data before it's moved to the cloud
  - We want to decide what data is move to the cloud and what stays on perm

INGRAM MICRO CLOUD

45

Microsoft Purview Information Protection scanner in portal

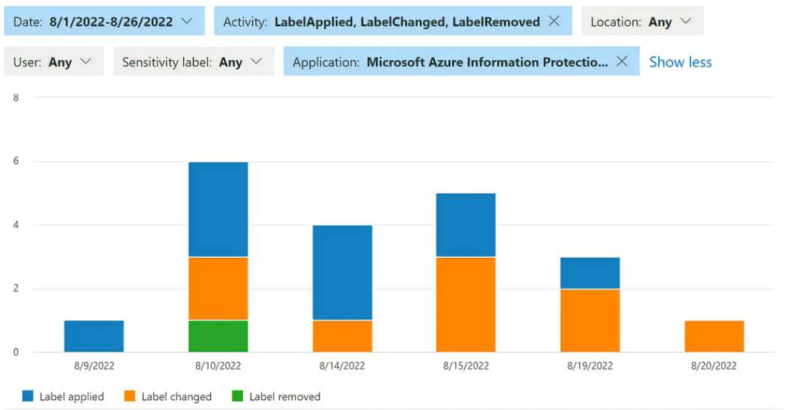


INGRAM MICRO CLOUD

46

Microsoft Purview Information Protection scanner Discovery

Query Audit Events in Activity Explorer



INGRAM MICRO CLOUD

47

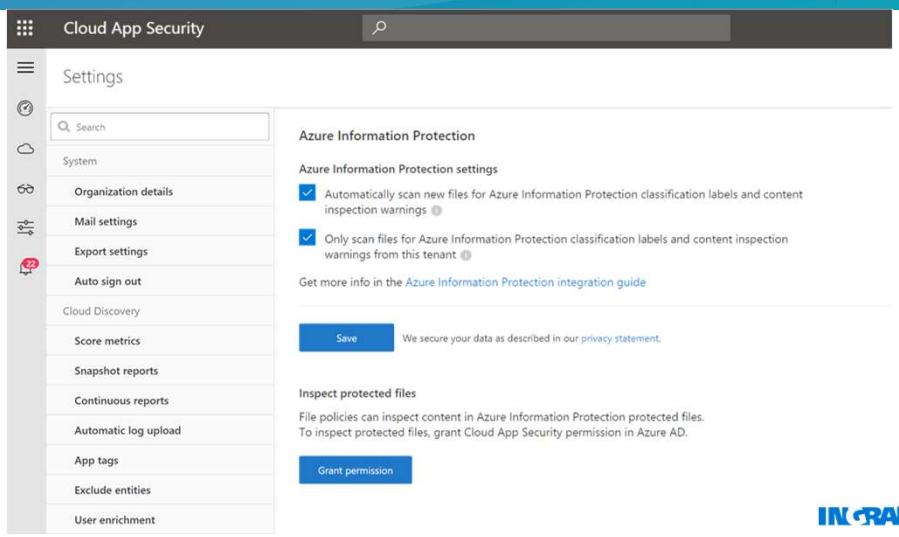
Endpont Data Discovery

AIP client	• Any set / remove / relabel event • Sensitive info types and custom regexes on file Save (preview)	• Win 7/8/10 + Office 2010/13/16 • Requires AIP client • Runs inside the app and inspect only files opened by app that uses AIP client
WDATP and AIP integration	• Labeled files created (for ex. downloaded) or modified on the endpoint • Sensitive info types and custom info-types matched in content (coming soon)	• Latest Win 10 (RS-5 at least) • No additional SW required • Runs on the OS level and inspect all newly created or modified files

INGRAM MICRO CLOUD

48

Microsoft Cloud App Security Integration



INGRAM MICRO CLOUD

49

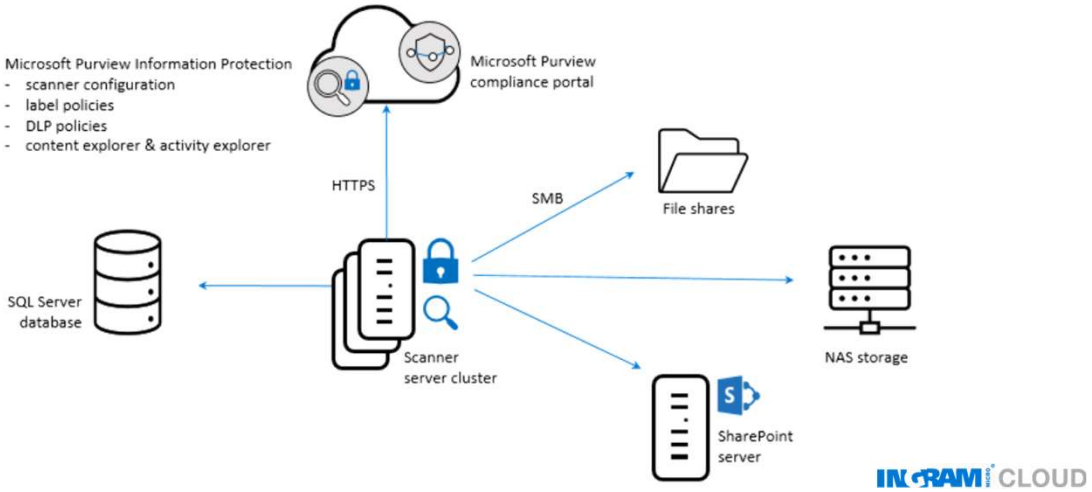
How to Start ?

- Start by discovery of your data, if you do not know what to search for just discovery all built-in infotypes
- Analyze the results and proceed to policy enforcement once you are confident
- Use discovery reports to find data at risk, abnormal behavior
- Use AIP client reports to find sensitive not scanner repos

INGRAM MICRO CLOUD

50

Microsoft Purview Information Protection Scanner Overview



INGRAM CLOUD

51

Microsoft Purview Information Protection scanner Requirements (1/5)

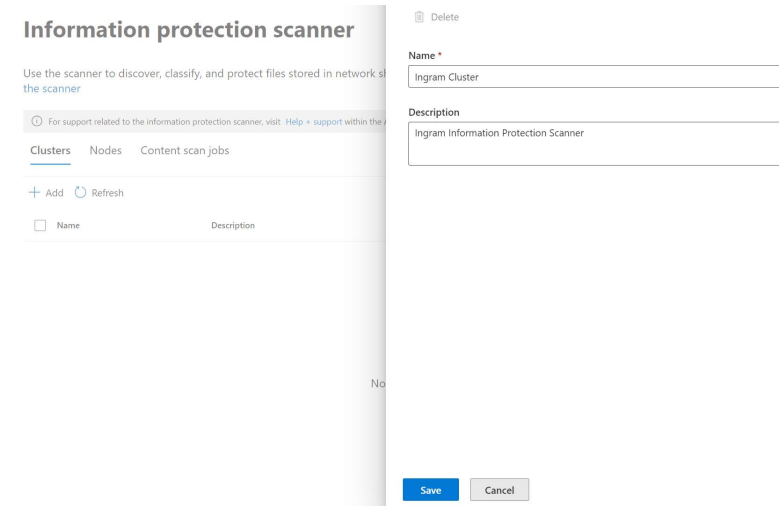
- Windows Server 2012R2 / 2016 / 2019 (64 bit)
- 4 core processors / 8 GB RAM /
- Internet Access (port 443)
- Unified Azure Information Protection client
- SQL database (SQL Express also possible)
- File Server(s) or SharePoint Server(s) or NFS shares
- A Service Account for the AIP Scanner Service

https://learn.microsoft.com/en-us/azure/information-protection/deploy-aip-scanner-prereqs

INGRAM CLOUD

52

Create a Microsoft Purview Information Protection scanner Cluster (2/5)

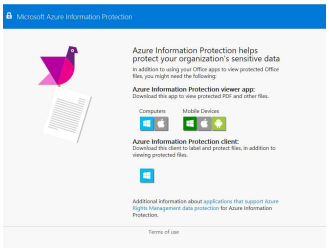


53

Install the AIP Scanner Software (3/5)

- Download the AIP Client
- https://portal.azurerms.com/#/Download
- Launch the Install-AIPScanner command

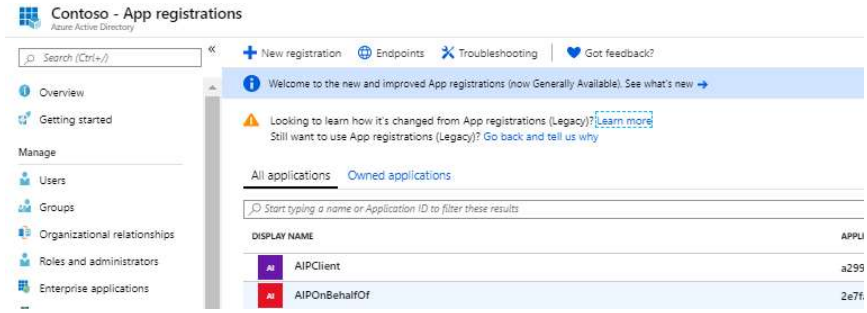
```
PowerShell
Install-AIPScanner -SqlServerInstance <name> -Cluster <cluster name>
```



54

Get an Azure AD Token for the Scanner (4/5)

- `Set-AIPAuthentication`
  `-webAppId` **`<ID of the "Web app / API" application>`**
  `-webAppKey` **`<key value generated in the "Web app / API" application>`**
  `-nativeAppId` **`<ID of the "Native" application>`**

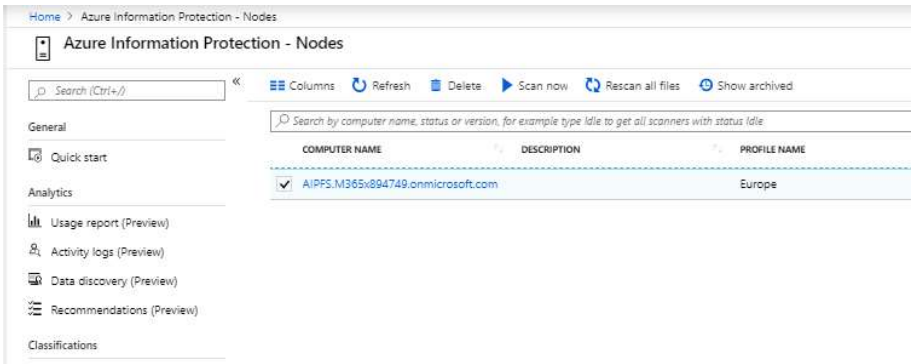


INGRAM MICRO CLOUD

55

Scan your Files (5/5)

- https://portal.azure.com



INGRAM MICRO CLOUD

56

Information Protection Packaging

Information Protection Feature	M365 Business Premium	M365 Enterprise E3	M365 Enterprise E5	Other
Windows Information Protection	Yes	Yes	Yes	
RMS, DLP	Yes	Yes	Yes	
Azure Information Protection P1	Yes	Yes	Yes	
Azure Information Protection P2			Yes	
Microsoft Intune	Yes	Yes	Yes	
Microsoft Cloud App Security			Yes	
AIP for Office 365	Option	Yes	Yes	
Automatic Labeling			Yes	

INGRAM MICRO CLOUD

57

57

Information Protection Plans

	Information Worker Plans											Frontline Worker Plans					
	Microsoft 365				Office 365			Enterprise Mobility + Security		Windows 10			Microsoft 365				Office 365
	E3	E5	E5 Security Add-on	E5 Compliance Add-on	E1	E3	E5	E3	E5	Pro (for reference)	Enterprise E3	Enterprise E5	F1	F3	F5 Security Add-on	F5 Compliance Add-on	F5 Sec+Comp Add-on	F3
USD ERP per user per month	$32	$57	$12	$12	$8	$20	$35	$8.80	$14.80		$5	$10	$2.25	$8	$8	$8	$13	$4
Information protection																		
Azure Information Protection	Plan 1	Plan 2		Plan 2		AIP for O365	AIP for O365	Plan 1	Plan 2				Plan 1	Plan 1		Plan 2	Plan 2	
Manual sensitivity labels	•	•				•	•	•	•					•		•	•	
Automatic sensitivity labels		•		•			•		•							•	•	
Machine Learning-based sensitivity labels		•		•												•	•	
Office 365 Data Loss Prevention (DLP) for emails and files	•	•				•	•									•	•	
Communication DLP (Teams chat)		•		•			•									•	•	
Endpoint DLP		•		•												•	•	
Basic Office Message Encryption	•	•				•	•	•	•				•	•				
Advanced Office Message Encryption		•		•			•									•	•	
Customer Key for Office 365		•		•			•									•	•	

Information Protection P1
Information Protection P2

INGRAM MICRO CLOUD

58

58

New Microsoft Purview Information Protection labeling client

MS **Martin Sieber** – March 21 at 09:04 PM

New Microsoft Purview Information Protection labeling client / Updated support lifecycle for AIP 2.x clients

The Azure Information Protection unified labeling client is joining the Purview family!

The Microsoft Purview Information Protection labeling client replaces the AIP UL client and includes the PowerShell, Scanner, File Labeler (previously AIP Classify & Protect) and Viewer. Client versions for the rebranded client begin with 3.X and do not include the AIP Add-in for Office.

Preview the Microsoft Purview Information Protection labeling client on April 11, 2024 from the Microsoft Download Center. The new client is Generally Available starting May 11, 2024 and is supported through May 11, 2025.

For AIP 2.x clients, we updated the support lifecycle on https://learn.microsoft.com/en-us/azure/information-protecti... The AIP Add-in for Office will continue to be supported until April 11, 2024, but support for the other AIP components of the latest AIP versions has been extended to allow time to switch to the new client:
Version 2.17.67.0AIP Add-in for Office is supported until 04/11/2024.
AIP PowerShell, Scanner, Classify & Protect and Viewer are supported until 06/30/2024.

Version 2.17.66.0
AIP Add-in for Office is supported until 04/11/2024.
AIP PowerShell, Scanner, Classify & Protect and Viewer are supported until 06/30/2024.

Version 2.16.73.0
AIP Add-in for Office is supported until 04/11/2024.
AIP PowerShell, Scanner, Classify & Protect and Viewer are supported until 04/25/2024.

Proprietary information of Ingram Micro — Do not distribute or duplicate without Ingram Micro's express written permission.

59

LAB 1

TASK2 : PREPARE WINDOWS 10 DEVICE

TASK3 : CONNECT AS A USER

TASK 4 : VERIFY LICENSES

60

Journey to the Cloud

Protect Your Data

INGRAM CLOUD

61

Information Protection Vocabulary

Classification	Labels	Label Policies	Trainable Classifiers
Sub-Labels	Sensitive Information Types	Conditions	Default Label

INGRAM CLOUD

62

Classification

- Microsoft Purview provides three ways to classify your data :

1. Manually by users
2. Automated with Sensitive Information Types (SIT)
3. Automated with Machine Learning

INGRAM CLOUD

63

1. Manual Classification

- Requires human judgment and action
- Users/Admins categorize content as they encounter it

INGRAM CLOUD

64

2. Sensitive Information Types

- A Sensitive information Type (SIT) is the ability to determine the confidentiality of specific sets of sensitive information
- A Sensitive information Type is a regular expression or **pattern-based expression** that can help identify the data

([0-9]+?)-\d{3}-^[A-Z]+

INGRAM CLOUD

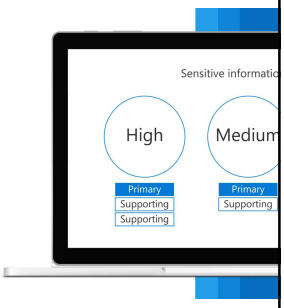
65

Different Sensitive Info Types

- Two Types
  - Preset Information Types
    - Social Security Number
    - Bank Card Numbers
    - Belgium eID
    - …
  - Custom Info Types
    - Own Regular Experssion definition
    - Keywords
    - Dictionaries

Microsoft 365

Confidence levels

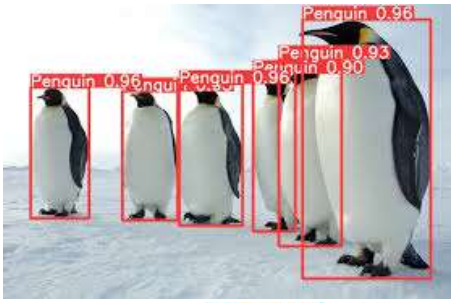


INGRAM CLOUD

66

3. Trainable Classifiers

- Data that isn't easily identified
  - by Manual Categorizing
  - by Automated Pattern-matching (Sensitive Information Types)
- Search content by giving similar samples
  - Give multiple similar samples
  - Narrow your search by giving more samples
  - Train the system to detect that kind of data

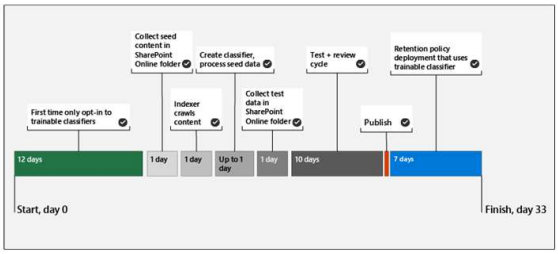


INGRAM CLOUD

67

Different Trainable Classifiers

- Two Types
  - Pre-trained classifiers
    - Discrimination
    - Financial Audit Reports
    - Harrassment
    - Healthcare
    - ...
  - Custom trainable classifiers
    - Create your own Classifiers
    - Feed examples that are definitely in the category
    - Sort out :
      - True Positives
      - True Negatives
      - False Positives
      - False Negatives



True Positive	False Positive
False Negative	True Negative

INGRAM CLOUD

68

What are Sensitivity Labels ?

- Metadata Written into document Files
- Travels with the document as it moves
- In clear text so that other systems such as a DLP engine can read it
- Used for the purpose of applying a protection action or data governance action – determined by a policy
- Can be customized per the organization's needs

INGRAM CLOUD

69

Default Sensitivity Labels

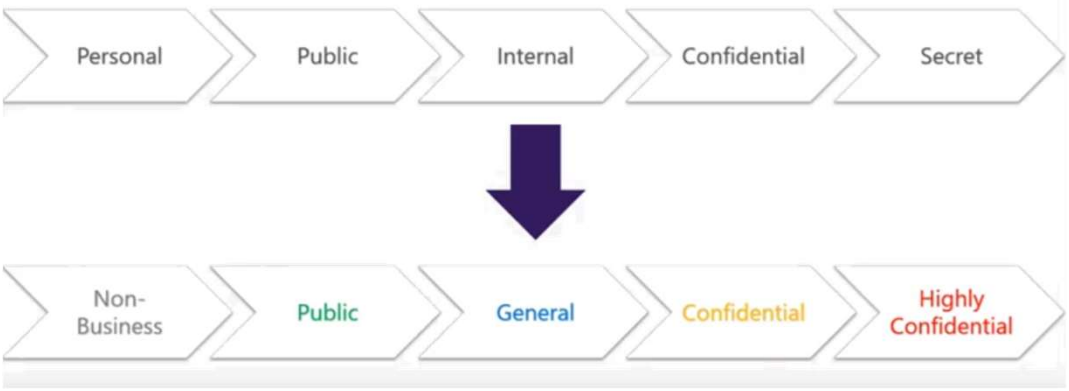
- **Non-Business** data which does not belong to Contoso. Data is not encrypted and cannot be tracked or revoked. Do not use Non-Business to classify any personal data which is collected by or which belongs to Contoso. Such content should be classified as either Confidential or Highly Confidential.
- **Public** To be used for business data specifically prepared and approved for public consumption. Data is not Encrypted and owners cannot track or revoke content using AIP.
- **General** To be used for business data which is NOT meant for public consumption. However, this can be shared with internal employees, business guests and external partners as needed. Data is not Encrypted and owners cannot track or revoke content using AIP. This is default label.
- **Confidential** To be used on sensitive business data which could cause business harm if over-shared. Recipients (see table above) are trusted and get full delegation rights (including the ability to remove the Encryption). Data is protected using AIP and owners can track and revoke content.
- **Highly Confidential** To be used on very sensitive business data which would certainly cause business harm if over-shared. Recipients do NOT get delegation rights (or rights to modify or remove the Encryption). Data is protected using AIP and owners can track and revoke content.

INGRAM CLOUD

70

Microsoft New Default Taxonomy Labels

Starting April 2019

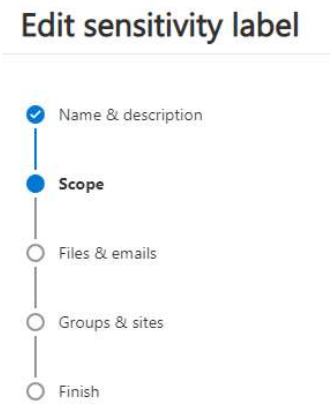


INGRAM CLOUD

71

Configuring Sensitivity Labels

- Name
- Scope (Files, Emails, Teams, Sharepoint, PC)
- Protection (Encryption, Visual Marking)
- Permissions (Read, Write, Delete, Print)
- Auto-labeling settings
- Visual Marking (watermark / header / footer)
- Conditions
  - Sensitive info types
  - Trainable classifiers



INGRAM CLOUD

72

Label Settings

Common	Visual Marking	Protection	Conditions
Name	Visual existence of Label	Encryption	Automatic Labeling

INGRAM CLOUD

73

Visual Markings

- Watermark – Header – Footer Added

INGRAM CLOUD

74

Benefits of labeling

- A label travels with the data
- Labels can be applied automatically based on Sensitive Info Types

INGRAM CLOUD

75

Other Possible Sensitivity Labels

- L1 PUBLIC
- L2 RESTRICTED
- L3 CONFIDENTIAL
- L4 SECRET

- PUBLIC
- INTERNAL
- CONFIDENTIAL
- SECRET

- PUBLIC
- INTERNAL
- CONFIDENTIAL
- STRICTLY CONFIDENTIAL

- PUBLIC
- INTERNAL
- CONFIDENTIAL

- INTERNAL
- CONFIDENTIAL
- SECRET

- OFFICIAL
- SECRET
- TOP SECRET

INGRAM CLOUD

76

Sub-Labels

- Within a label you can create sublabels
- Users can select just one label at a time for each document
- Sub-Labels can only go One-Level deep !
- Labels and Sub-Labels have a priority order

INGRAM CLOUD

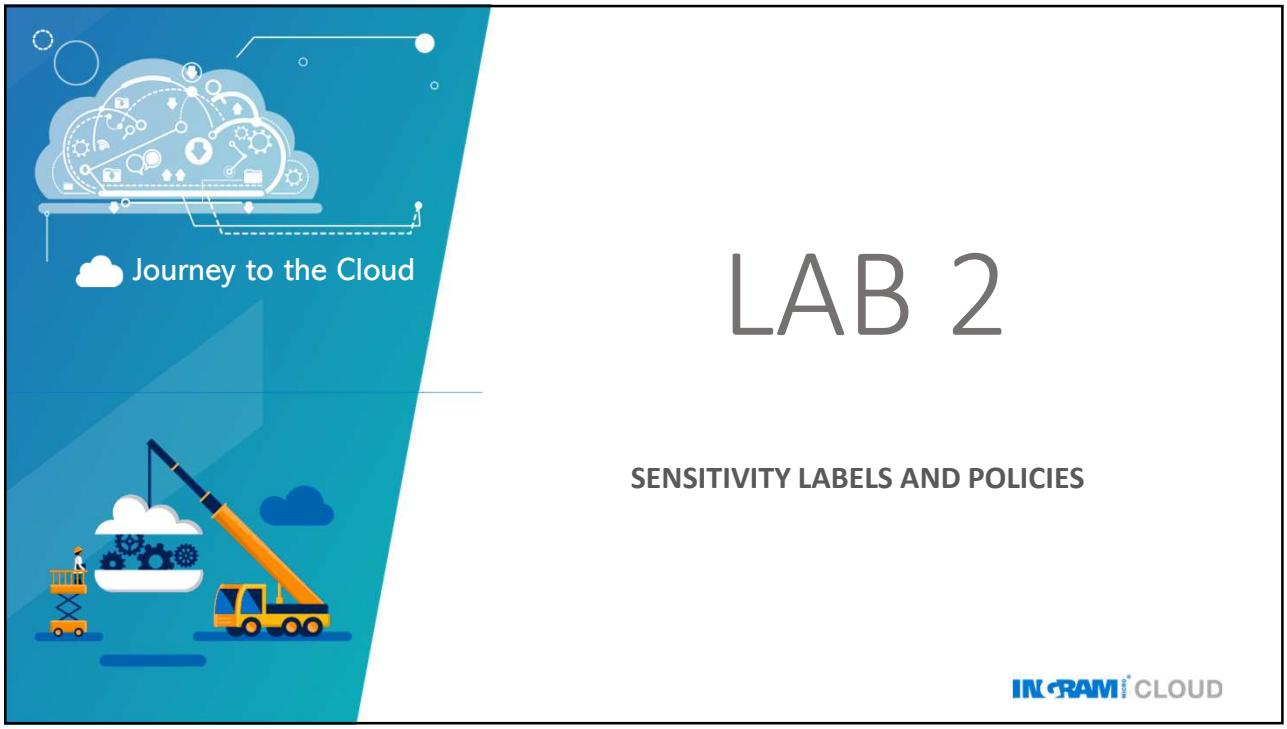
77

Dynamic Marking

Variable	Description	Example when label applied
`${Item.Label}`	Current label display name	General
`${Item.Name}`	Current file name or email subject	Sales.docx
`${Item.Location}`	Current path and file name of the document, or the email subject for an email	\\Sales\2020\Q3\Report.docx
`${User.Name}`	Current user display name	Richard Simone
`${User.PrincipalName}`	Current user Azure AD user principal name (UPN)	rsimone@contoso.com
`${Event.DateTime}`	Current date and time for the local time zone	8/10/2020 1:30 PM

INGRAM CLOUD

78


Journey to the Cloud
LAB 2
SENSITIVITY LABELS AND POLICIES
INGRAM CLOUD

79

Journey to the Cloud
Module 3 :
Unified Labeling
INGRAM CLOUD

80

Labeling Client for Office Apps

- You can label your office documents using:
  - AIP Unified Labeling Add-in for Office Applications
    - Does exist already multiple years
    - Deprecated in 2024
    - Built-in client disabled when AIP Client is installed (Registry Key)
  - Built-In labeling
    - More stability
    - Better performance
    - Latest Purview Features
    - Labeling technology extends across platforms (Windows, macos, IOS, Android, Web)

https://docs.microsoft.com/en-us/microsoft-365/compliance/sensitivity-labels-aip?view=o365-worldwide

81

81

Built-In Labeling Client

- You need to deploy Office 365 as a Subscription Edition
  - For example Microsoft 365 Apps for Enterprise or Microsoft 365 Apps for Business
- Built-In labeling is not available with Standalone editions (Office Perpetual)
- Look and feel of labeling is different
- Only for labeling Office Documents & Emails
  - Word, Excel, Powerpoint, Outlook
- Supported on Windows, macOS, iOS, Android and Office Web Applications

82

82

AIP Unified Labeling Client

- Contains the following capabilities & components :
  - AIP Unified labeling Add-In for Office apps in Windows (retirement April 11, 2024)
  - AIP Viewers on Windows / iOS / Android
  - AIP PowerShell extension
  - Right-click Classify & Protect (File Explorer support)
  - AIP Scanner
  - Can Label / Encrypt other document types as well
  - Download link :
    - https://www.microsoft.com/en-us/download/details.aspx?id=53018

Verify that the Outlook client is using built-in labeling. To do this, check the following registry subkey on the client computer:

`HKEY_CURRENT_USER\Software\Microsoft\Office\16.0\Common\Security\Labels`

If the registry subkey is present, and the `UseOfficeForLabelling` value is set to **0**, this indicates that Outlook is using the AIP client instead of the built-in support for sensitivity labels. In this case, set the `UseOfficeForLabelling` value to **1** so that Outlook uses the built-in support for sensitivity labels.

83

Office 365 File Type Supported

Classification & Protection

.doc	.potx	.vsdm	.xlsb
.docm	.pps	.vsdx	.xlt
.docx	.ppsm	.vssm	.xlsm
.dot	.ppsx	.vssx	.xlsx
.dotm	.ppt	.vstm	.xltm
.dotx	.pptm	.vstx	.xltx
.potm	.pptx	.xls	.xps

84

Other File Type Supported

Classification & Protection

Original file name extension	Protected file name extension
.bmp	.pbmp
.gif	.pgif
.jfif	.pjfif
.jpe	.pjpe
.jpeg	.pjpeg
.jpg	.pjpg
.jt	.pjt
.png	.ppng
.tif	.ptif
.tiff	.ptiff
.txt	.ptxt
.xla	.pxla
.xlam	.pxlam
.xml	.pxml

INGRAM MICRO CLOUD More as a Service

85

85

File Type Classification

- **Adobe Portable Document Format**: .pdf
- **Microsoft Project**: .mpp, .mpt
- **Microsoft Publisher**: .pub
- **Microsoft XPS**: .xps .oxps
- **Images**: .jpg, .jpe, .jpeg, .jif, .jfif, .jfi, .png, .tif, .tiff
- **Autodesk Design Review 2013**: .dwfx
- **Adobe Photoshop**: .psd
- **Digital Negative**: .dng
- **Microsoft Office**: The following file types, including 97-2003 file formats and Office Open XML formats for Word, Excel, and PowerPoint:

.doc	.potx	.vsd	.vstx
.docm	.pps	.vsdm	.xls
.docx	.ppsm	.vsdx	.xlsb
.dot	.ppsx	.vss	.xlt
.dotm	.ppt	.vssm	.xlsm
.dotx	.pptm	.vst	.xlsx
.potm	.pptx	.vstm	.xltm
	.vdw	.vssx	.xltx

https://learn.microsoft.com/en-us/azure/information-protection/rms-client/clientv2-admin-guide-file-types

INGRAM MICRO CLOUD More as a Service

86

86

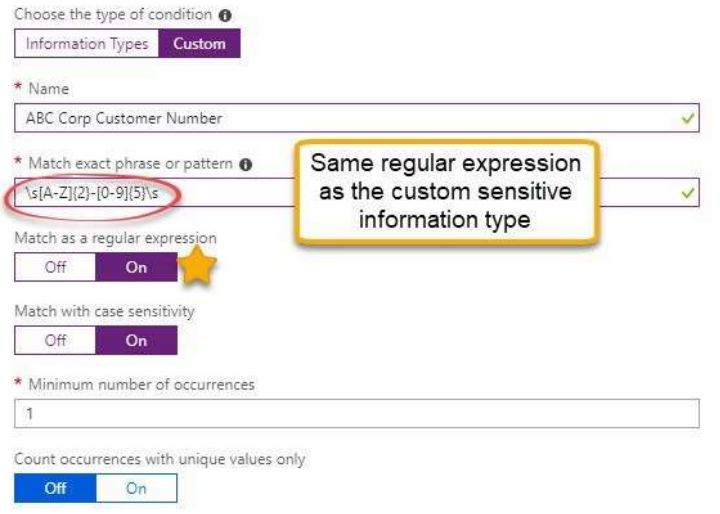
Sensitive Info Types

- Two Types
  - Preset Information Types
    - Social Security Number
    - Bank Card Numbers
    - Belgium eID
    - …
  - Custom Info Types
    - Own Regular Experssion definition
    - Keywords
    - Dictionaries

INGRAM CLOUD

87

Custom Info Types



INGRAM CLOUD

88

Regular Expressions

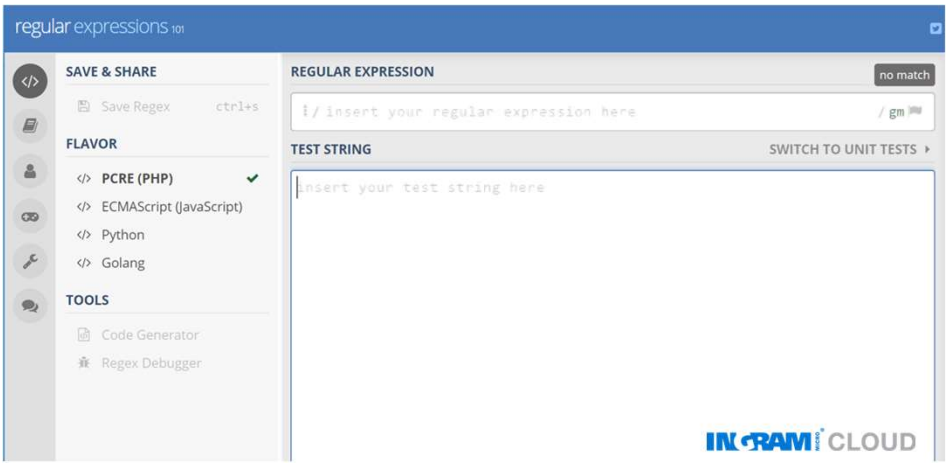
- [a-z] Any lowercase Letter
- [a-z0-9] Any Number or lowercase Letter
- \. Escape charater for special characters . ( ) [ ] ^ $
- \.? A point can follow but do not need to follow
- a{1,9} Preceeding character minimum 1x, maximum 9x
- . Any character
- \d decimal character 0-9
- (?ab|cd|ef) ab or cd or ef
- \s whitespace

INGRAM CLOUD

89

Test your Regular Expressions

- https://regex101.com



90

Examples Pre-trained classifiers

- Resumes (overview of accounts, profession, qualification, experience)
- Source Code (C#, C++, Java, Perl, Python, …)
- Harassment (offensive language, religion, gender, sexual orientation)
- Profanity (offensive language, embarrassing people)
- Threat (offensive language, physical harm, damage)

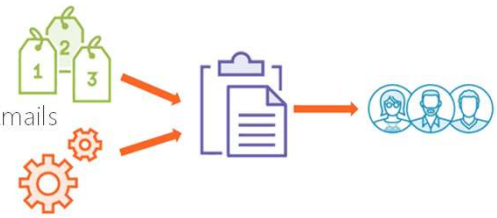
https://docs.microsoft.com/en-us/microsoft-365/compliance/classifier-learn-about?view=o365-worldwide

INGRAM CLOUD

91

Label Policies (Publishing Labels)

- A Group of Labels and Label Settings pushed to a group of Users or all Users is called a Policy
- A Policy contains :
  - Labels
    - Apply Classification Value to documents and Emails
    - Labels are part of a specific Policy
  - Settings
    - Change the Default behavior of the AIP Client
- A Policy is assigned to Users, Groups of Users, All Users



INGRAM CLOUD

92

Policy Components

Common Name

Groups and Users

Labels

Global Overrides

INGRAM CLOUD

93

Journey to the Cloud

LAB 3

UNIFIED LABELING AGENT

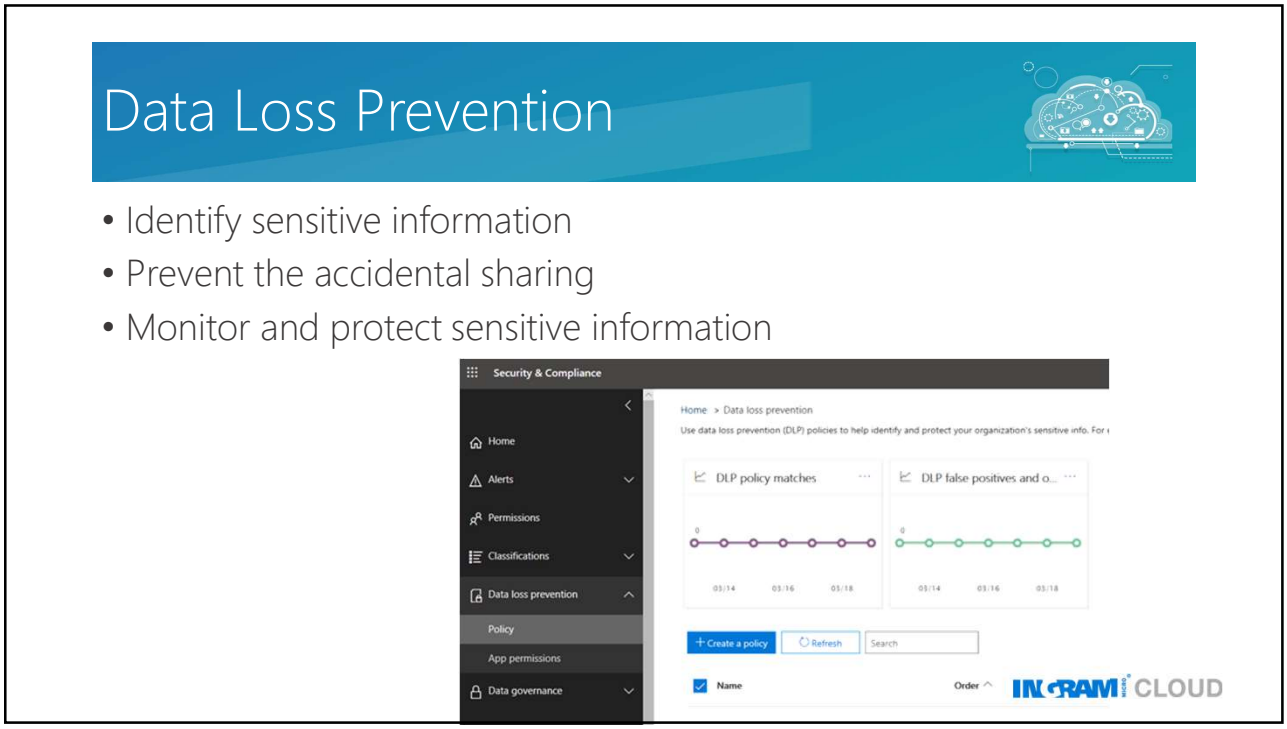
CUSTOM INFO TYPES

INGRAM CLOUD

94

Journey to the Cloud
Prevent Data Loss
Understand your data landscape and identify important data across your hybrid environment
KNOW YOUR DATA
PREVENT DATA LOSS
Detect risky behavior and prevent accidental oversharing of sensitive information
Apply flexible protection actions including encryption, access restrictions and visual markings
PROTECT YOUR DATA
GOVERN YOUR DATA
Automatically retain, delete, and store data and records in a compliant manner
INGRAM MICRO CLOUD

95


Data Loss Prevention
• Identify sensitive information
• Prevent the accidental sharing
• Monitor and protect sensitive information
Security & Compliance
Home
Alerts
Permissions
Classifications
Data loss prevention
Policy
App permissions
Data governance
Home > Data loss prevention
Use data loss prevention (DLP) policies to help identify and protect your organization's sensitive info.
DLP policy matches
DLP false positives and o...
Create a policy
Refresh
Search
Name
Order
INGRAM MICRO CLOUD

96

Reuse Sensitive Information Types

- Use the same sensitive information types as in AIP

Sensitive information types (81)

Name	Publisher
ABA Routing Number	Microsoft Corporation
Argentina National Identity (DNI) Number	Microsoft Corporation
Australia Bank Account Number	Microsoft Corporation
Australia Driver's License Number	Microsoft Corporation
Australia Medical Account Number	Microsoft Corporation
Australia Passport Number	Microsoft Corporation
Australia Tax File Number	Microsoft Corporation
Belgium National Number	Microsoft Corporation
Brazil CPF Number	Microsoft Corporation
Brazil Legal Entity Number (CNPJ)	Microsoft Corporation
Brazil National ID Card (RG)	Microsoft Corporation

INGRAM CLOUD

97

DLP Configuration

- Rules
  - Protect your Data
- Conditions
  - When ?
- Actions
  - How ?
- Locations
  - Exchange Online
  - OneDrive
  - SharePoint
  - Teams
  - …

INGRAM CLOUD

98

DLP Location Configuartion

Choose locations

Status	Location	Include	Exclude
On	Exchange email	All Choose distribution groups	None Exclude distribution groups
On	SharePoint sites	All Choose sites	None Exclude sites
On	OneDrive accounts	All Choose accounts	None Exclude accounts
On	Teams chat and channel messages	All Choose accounts	None Exclude accounts

Back Next Cancel

INGRAM CLOUD

99

New DLP Locations in 2020

On	Exchange email	All	Choose distribution group
On	SharePoint sites	All	Choose sites
On	OneDrive accounts	All	Choose account
On	Teams chat and channel messages	All	Choose account
On	Devices	All	Choose user or group
Off	Microsoft Cloud App Security		

INGRAM CLOUD

100

Data Loss Prevention for Endpoints

- Available in Plan 2 Bundles
- Protect Documents on the Device

INGRAM CLOUD

101

New DLP Locations in 2021

Status	Location	Included	Excluded
On	Exchange email	All Choose distribution group	None Exclude distribution group
On	SharePoint sites	All Choose sites	None Exclude sites
On	OneDrive accounts	All Choose account or distribution group	None Exclude account or distribution group
On	Teams chat and channel messages	All Choose account or distribution group	None Exclude account or distribution group
On	Devices	All Choose user or group	None Exclude user or group
On	Microsoft Cloud App Security	All Choose instance	None Exclude instance
On	On-premises repositories	All Choose repositories	None Exclude repositories

INGRAM CLOUD

102

DLP Locations 2022

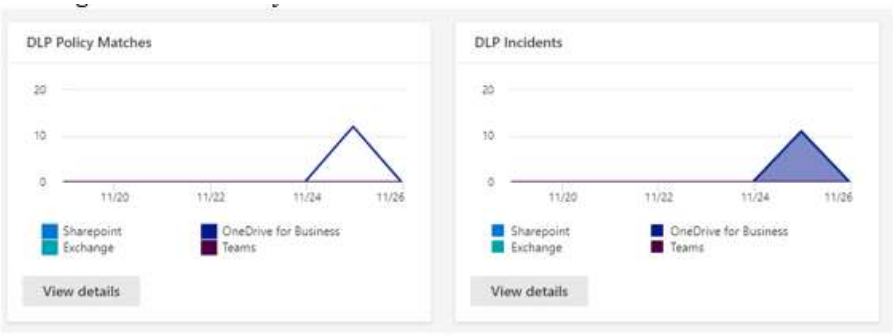
Status	Location	Included	Excluded
On	Exchange email	All Choose distribution group	None Exclude distribution group
On	SharePoint sites	All Choose sites	None Exclude sites
On	OneDrive accounts	All Choose account or distribution group	None Exclude account or distribution group
On	Teams chat and channel messages	All Choose account or distribution group	None Exclude account or distribution group
On	Devices	All Choose user or group	None Exclude user or group
On	Microsoft Defender for Cloud Apps	All Choose instance	None Exclude instance
On	On-premises repositories	All Choose repositories	None Exclude repositories
Off	Power BI (preview)		

INGRAM CLOUD

103

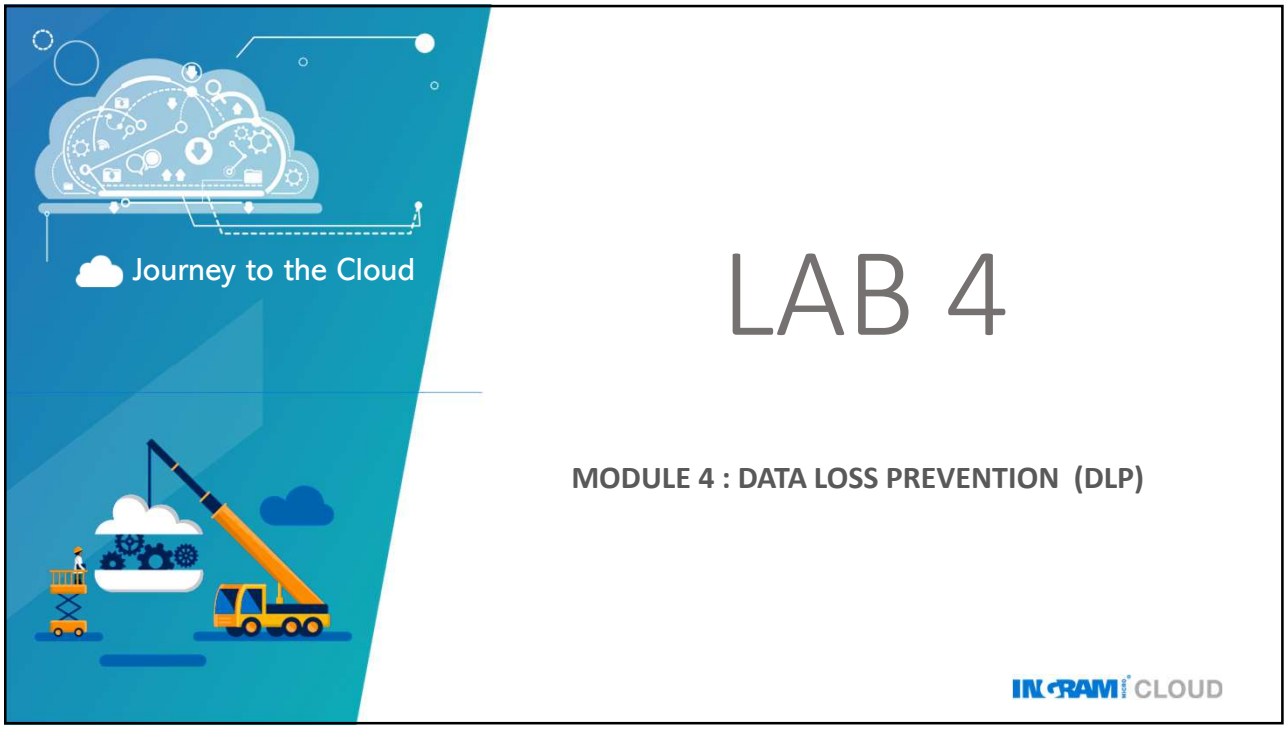
DLP Notifications & Alerts

- https://compliance.microsoft.com

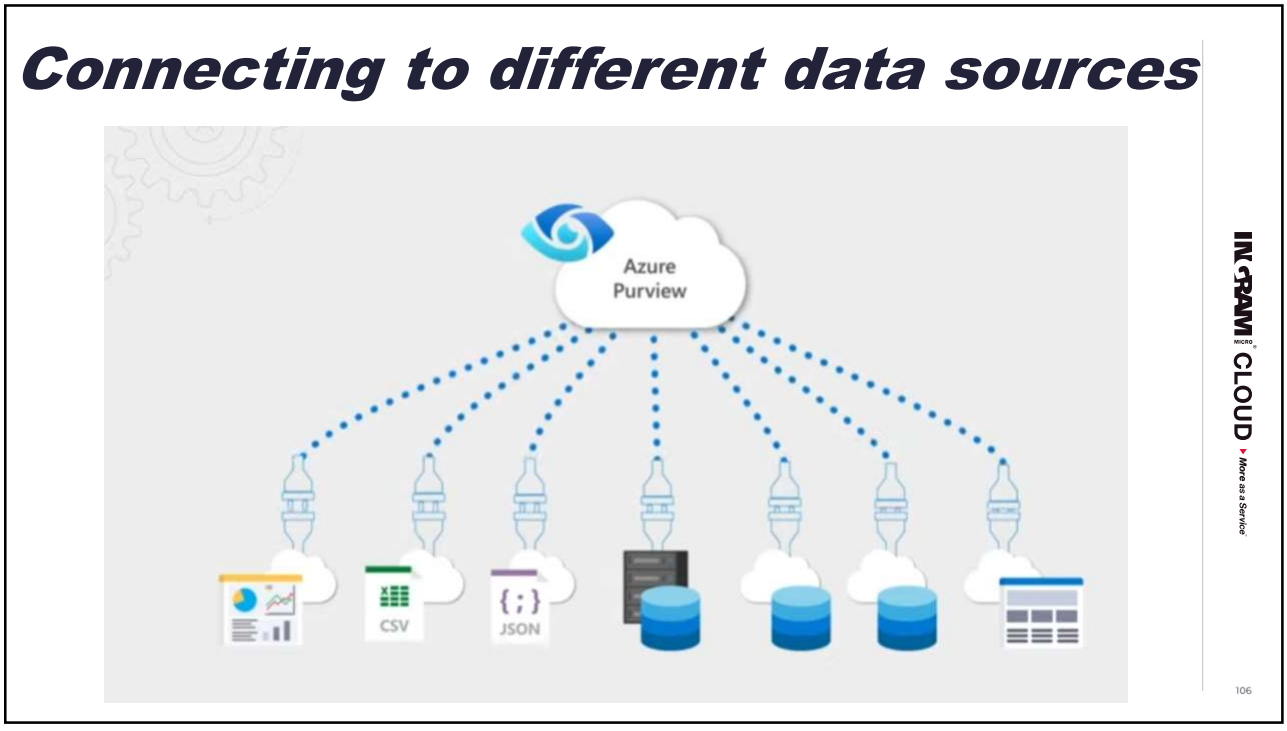


INGRAM CLOUD

104

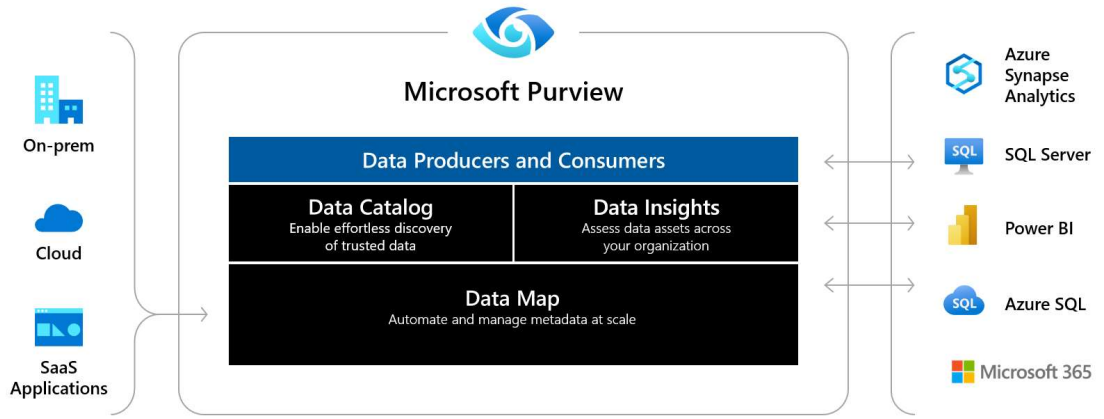

Journey to the Cloud
LAB 4
MODULE 4 : DATA LOSS PREVENTION (DLP)
INGRAM MICRO CLOUD

105


Connecting to different data sources
Azure Purview
CSV
JSON
INGRAM MICRO CLOUD
More as a Service
106

106

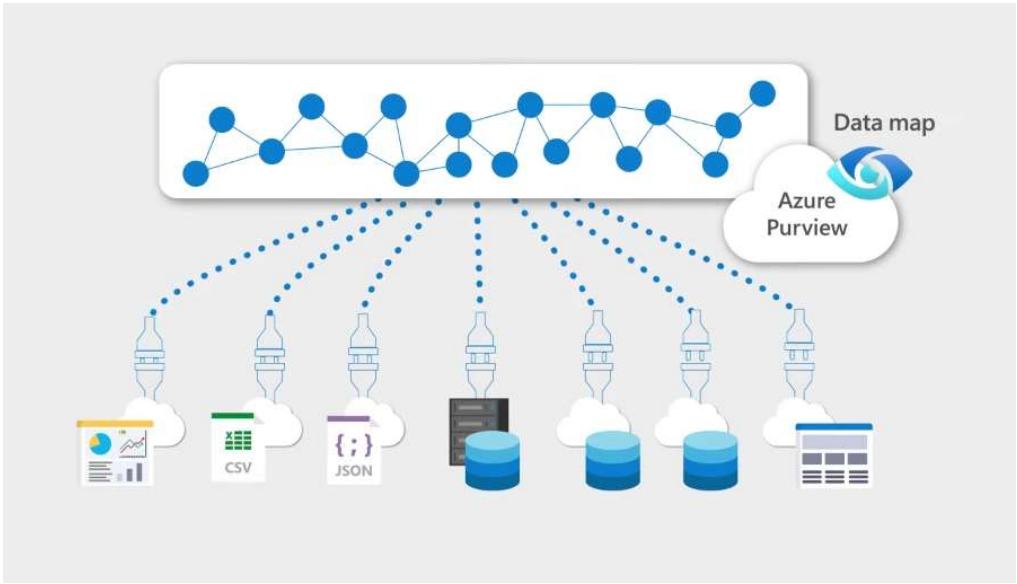
Microsoft Purview Roadmap



107

107

Microsoft Purview Data map



108

108

Microsoft Purview Data Map

- Microsoft Purview Data Map is a metadata store
- Labels are applied to the asset metadata; not applied to the actual files
- Sensitivity labels don't modify your files and databases
- Labels are applied to the Asset Metadata

INGRAM MICRO CLOUD More as a Service

109

109

Microsoft Purview Data Map Preview

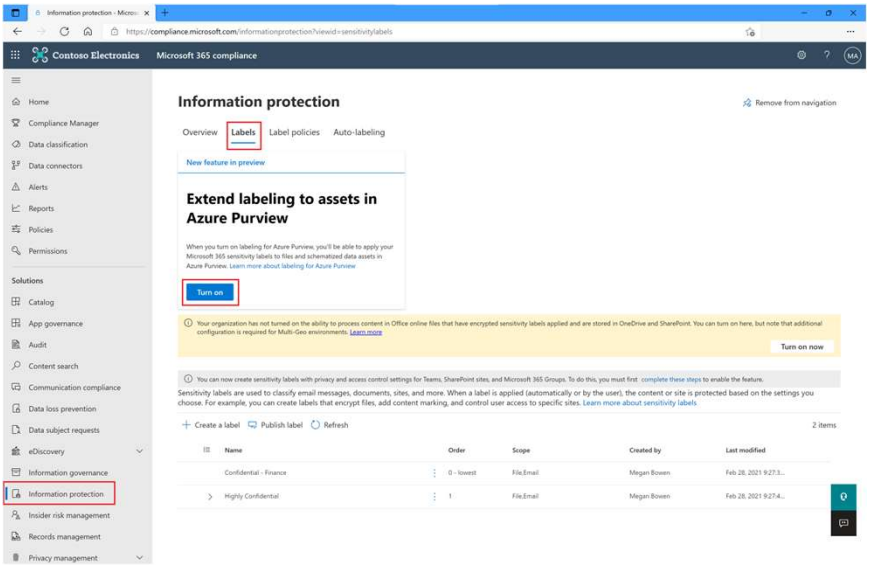
Data type	Sources
Automatic labeling for files	- Azure Blob Storage - Azure Files - Azure Data Lake Storage Gen 1 and Gen 2 - Amazon S3
Automatic labeling for schematized data assets	- SQL server - Azure SQL database - Azure SQL Database Managed Instance - Azure Synapse Analytics workspaces - Azure Cosmos Database (SQL API) - Azure database for MySQL - Azure database for PostgreSQL - Azure Data Explorer

INGRAM MICRO CLOUD More as a Service

110

110

Extend labeling to assets Preview



111

111

Limitations of MS Purview Data Maps

- Data Maps supports automatic labeling only
- Manual applying a label to a Data Map is not possible
- Scanning for credentials is not supported
- Data Maps does not support encryption (only Metadata)
- Microsoft Purview Data Map does not currently provide DLP capabilities
- Trainable Classifiers are not supported yet

112

112

Licensing

- Microsoft Purview Data Map :
  - Microsoft 365 E5/A5
  - Office 365 E5

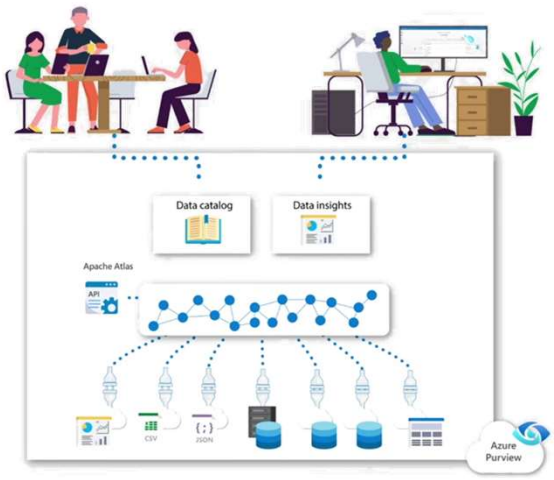
INGRAM MICRO CLOUD More as a Service

113

113

Microsoft Purview Data Catalog

- Spend less time looking for data
- Have more time getting value of your data
- Create insights into data sets



- https://aka.ms/AzurePurview
- https://azure.microsoft.com/en-us/services/data-catalog/

INGRAM MICRO CLOUD More as a Service

114

114

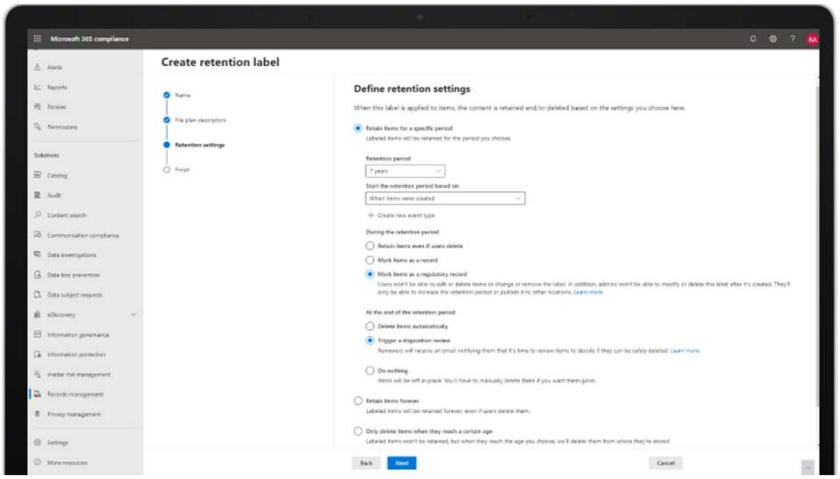
Journey to the Cloud

Govern your Data

INGRAM MICRO CLOUD

115

Microsoft Information Governance

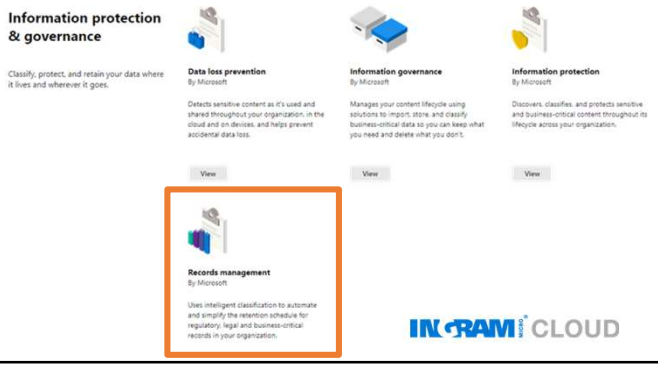


INGRAM MICRO CLOUD

116

Records Management

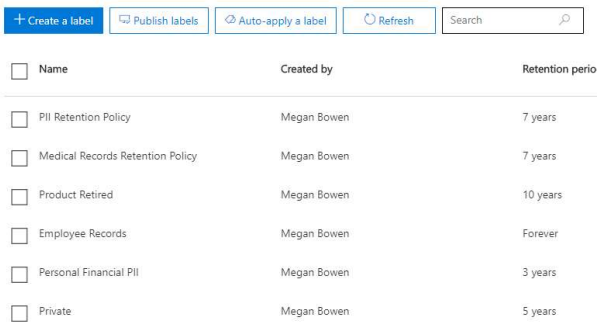
- https://compliance.microsoft.com/recordsmanagement
- Intelligent Classification
- Regulations
- Corporate Policies



117

Retention Labels

- Retention labels for different types of content
- Compare with Sensitivity Labels



118

Retention Policies

- Data is increasing daily
  - Comply with industry regulations
  - Comply with internal policies
  - Reduce risk of security breach
  - Share knowledge effectively
- Retaining
  - Content can't be permanently deleted before …
- Deleting
  - Content permanently delete at the end of …

INGRAM CLOUD

119

Retention Actions

- Retain Only
- Delete Only
- Retain and Delete

INGRAM CLOUD

120

Apply Retention Policies

- Exchange email
- SharePoint site
- OneDrive accounts
- Microsoft 365 Groups
- Skype for Business
- Exchange public folders
- Teams channel messages
- Teams chats
- Yammer community messages
- Yammer private messages

INGRAM CLOUD

121

Journey to the Cloud

Information Protection Licensing

Discover

Classify

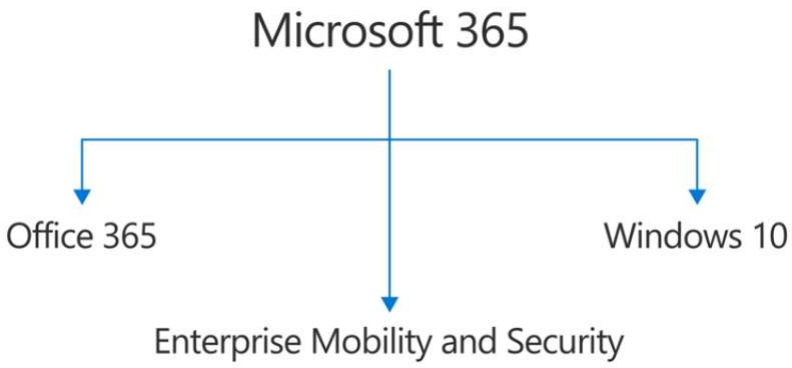
Protect

Monitor

INGRAM CLOUD

122

Microsoft 365



INGRAM CLOUD

123

Microsoft 365 Subscription Options

Microsoft 365 Enterprise	Microsoft 365 Business	Microsoft 365 Education
Microsoft 365 E5 Microsoft 365 E3 Microsoft 365 F1	Microsoft 365 Business Premium	Microsoft 365 A5 Microsoft 365 A3

A : Academic
F : Firstline Workers

INGRAM CLOUD

124

Microsoft 365 Subscription Options

Designed for a Secure Productive Enterprise

Designed for small & midsize business

Up to 300 users

Microsoft 365 Enterprise	Microsoft 365 Business	Microsoft 365 Education
Microsoft 365 E5 Microsoft 365 E3 Microsoft 365 F1	Microsoft 365 Business Premium	Microsoft 365 A5 Microsoft 365 A3

A : Academic
F : Firstline Workers

INGRAM CLOUD

125

Enterprise Mobility + Security

- Bundles five products
  - Entra ID
  - Microsoft Intune
  - Information Protection
  - Microsoft Cloud App Security
  - Advanced Threat Analytics

INGRAM CLOUD

126

EnterPrise Mobility & Security Suites

- EM + S E5
- EM + S E3

BENEFIT / EM+S SKU	Identity & access management	Managed mobile productivity	Information protection	Identity-driven security
EM+S E5	Azure Active Directory Premium P2	Microsoft Intune	Azure Information Protection Premium P2	Microsoft Cloud App Security
EM+S E3	Azure Active Directory Premium P1	Microsoft Intune	Azure Information Protection Premium P1	Microsoft Advanced Threat Analytics

INGRAM MICRO CLOUD

127

Microsoft 365 E3, E5, E5 Security, E5 Compliance

Information protection	Microsoft 365 E3	Microsoft 365 E5	Microsoft 365 E5 Security[2]	Microsoft 365 E5 Compliance[1]
Azure Information Protection Plan 1	•			
Azure Information Protection Plan 2		•		•
Manual, default, and mandatory sensitivity labeling in Microsoft 365 apps	•	•		
Automatic sensitivity labeling in Microsoft 365 apps		•		•
Manual sensitivity labeling for Teams meetings[2]		•		•
Manual labeling with the AIP app and plugin	•	•		
Automatic labeling in the AIP plugin		•		•
Default sensitivity labels for SharePoint document libraries		•		•
Automatic sensitivity labels in Exchange, SharePoint, and OneDrive		•		•
Sensitivity labels based on Machine Learning/Trainable Classifiers/Exact Data Match		•		•
Sensitivity labeling for containers in Microsoft 365	•	•		
Basic Message Encryption	•	•		
Advanced Message Encryption		•		
Customer Key		•		
Personal Data Encryption	•	•		

IPG SKU
Information Protection & Governance

	Description	SKU	PFAM	Pool	License/Device Buy	License/Device 1M Subscr	At
☐	M365 E5 IP & Govern Sub Per User	1C9-00002	M365 E5 IP & Govern	SER		5.57	

INGRAM MICRO CLOUD

128

IPG E5 or IPG F5

Security and compliance (+ = Can be added, N/A = Not available)	E3	E5	F1	F3
Microsoft 365 E5 Security	+	•	N/A	N/A
Microsoft 365 E5 Compliance	+	•	N/A	N/A
Microsoft 365 E5 Info Protection and Governance	+	•	N/A	N/A
Microsoft 365 E5 Insider Risk Management	+	•	N/A	N/A
Microsoft Purview Insider Risk Management forensic evidence[10]	N/A	+	N/A	N/A
Microsoft 365 E5 eDiscovery and Audit	+	•	N/A	N/A
Microsoft 365 F5 Security	N/A	N/A	+	+
Microsoft 365 F5 Compliance	N/A	N/A	+	+
Microsoft 365 F5 Security + Compliance	N/A	N/A	+	+
Microsoft 365 F5 Info Protection and Governance	N/A	N/A	+	+
Microsoft 365 F5 Insider Risk Management	N/A	N/A		
Microsoft 365 F5 eDiscovery and Audit	N/A	N/A		
Microsoft Defender for Identity	+	•		

INGRAM MICRO CLOUD

129

IPG E5 SKU +Business Premium

Microsoft 365

Supplemental Licenses for Small and Medium-sized Businesses

• = Included
+ = Can be added
N/A = Not available

Security and Compliance	Microsoft Teams Essentials[1]	Microsoft 365 Business: Basic	Microsoft 365 Business: Standard	Microsoft 365 Business: Premium
Microsoft 365 E5 Info Protection and Governance	N/A	+[1]	+[1]	+
Microsoft 365 E5 Insider Risk Management	N/A	+	+	+
Microsoft 365 E5 eDiscovery and Audit	N/A	+	+	+
Microsoft Defender for Business	N/A	+	+	•
Microsoft Defender for Business servers add-on for Microsoft Defender for Business	N/A	+[5]	+[5]	+[5]
Microsoft Defender for Identity	N/A	+	+	+
Microsoft Defender for Office 365 Plan 1	N/A	+	+	•
Microsoft Defender for Office 365 Plan 2	N/A	+	+	+
Microsoft Defender for Cloud Apps	N/A	+	+	+
App governance add-on for Microsoft Defender for Cloud Apps	N/A	+[2]	+[2]	+[2]
Microsoft Defender for Endpoint Plan 1	N/A	+	+	+
Microsoft Defender for Endpoint Plan 2	N/A	+	+	+
Premium Assessments add-on for Compliance Manager[3]	N/A	+	+	+
Azure Active Directory Premium Plan 1	N/A	+	+	•
Azure Active Directory Premium Plan 2	N/A	+	+	+
Microsoft Intune	N/A	+	+	•
Microsoft Purview Data Loss Prevention (for email and files)	N/A	+	+	•
Exchange Archiving	N/A	+	+	•
Microsoft Intune Remote Help	N/A	+[4]	+[4]	+

[1] Reflects Microsoft Teams Essentials (AAD Identity) licenses purchased through a Microsoft Partner. For important differences with Microsoft Teams Essentials licenses purchased directly from the Microsoft website or customer admin portal, please refer to https://docs.microsoft.com/MicrosoftTeams/get-started-with-teams-essentials.

[2] Requires EMS E3 or Azure Information Protection Plan 1 standalone required.
[3] Requires Microsoft Defender for Cloud Apps.
Get details on available assessments.
[4] Requires Microsoft Intune.
[5] Requires Microsoft Defender for Business or Microsoft 365 Business Premium. Maximum quantity/seat cap is 60 licenses per customer.

INGRAM MICRO CLOUD

130

Wrap-up

- The Security Opportunity
- Microsoft Information Protection
- Know Your Data
- Protect Your Data
- Prevent Data Loss
- Govern Your Data
- Information Protection Licensing

INGRAM CLOUD

131

Journey to the Cloud

Thank You !

INGRAM CLOUD

132