



# Protect your data with Microsoft Purview Information Protection



**Ehsan Eskandari**

**Microsoft Azure MVP**

**Mississauga .Net User Group**  
**September 28, 2023**  
**Tek System**

About me: Ehsan Eskandari



Senior Consultant

B.S. & M.Sc. Software Engineering



<http://passionatecoder.ca>



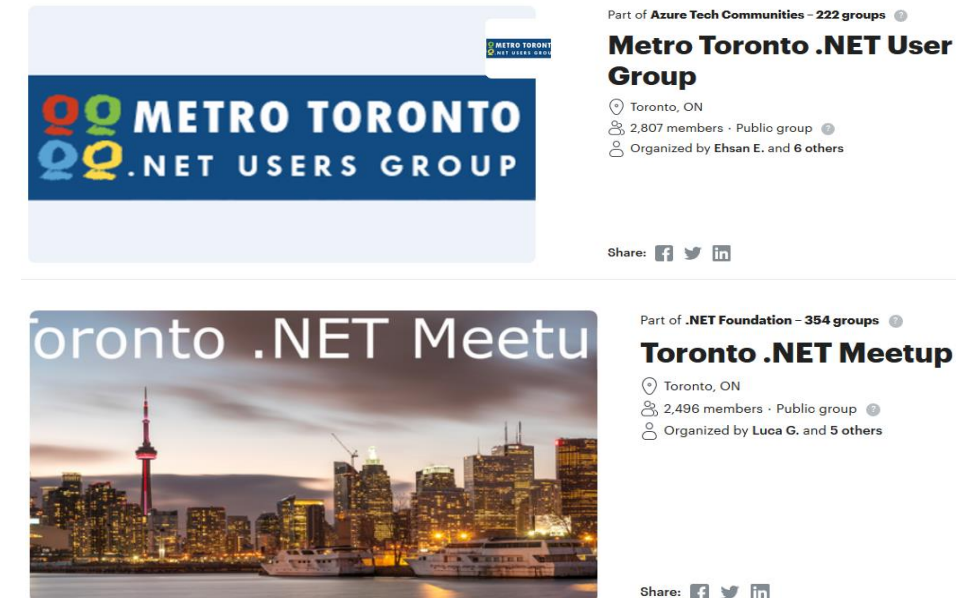
@EhsanEskandarim



Ehsan.Eskandari@BuildOnCloud.net

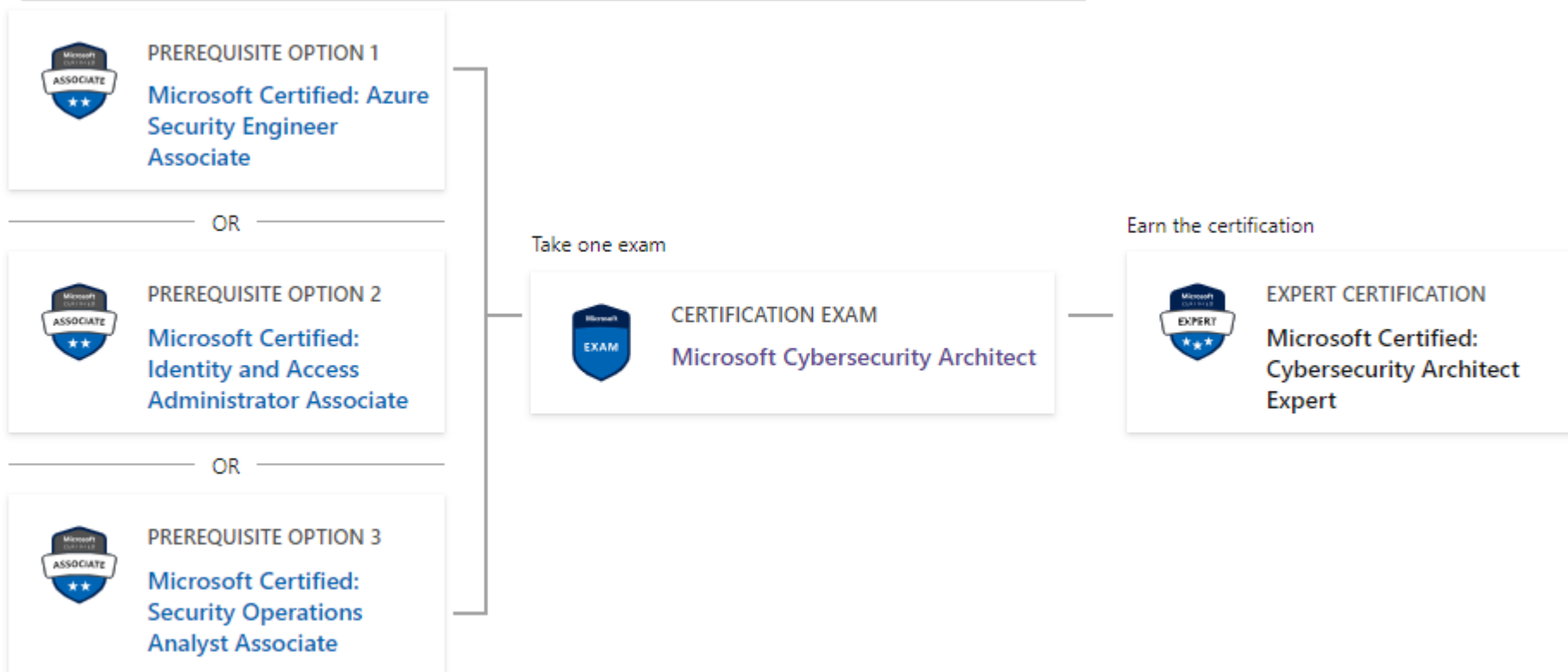


Az-220, Az-203, Data Analyst



# Microsoft Security

<b>SC-200</b>	Microsoft Security Operations Analyst	SC200WATERLOO
<b>SC-300</b>	Microsoft Identity and Access Administrator	SC300VANDALIA
<b>SC-400</b>	Microsoft Information Protection Administrator	SC400EMPORIA
<b>SC-900</b>	Microsoft Security, Compliance, and Identity Fundamentals	SC900TUPELO



# Development



Join the Microsoft 365  
Developer Program  
today!



Join now >



 **Renewable E5 subscription**

Expires on Jan 23, 2022

 **Administrator**

ContosoDev@12345.onmicrosoft.com


 **Users**






25 user licenses



days left

[Go to subscription](#)

 **Sample data packs**

 Users	 Mail & Events	 Microsoft Teams	1  SharePoint	 SharePoint
--	---	---	---	---

# The most urgent data security challenges



**Discover** your most valuable asset, your data

---

**Secure configuration** to prevent sophisticated attacks

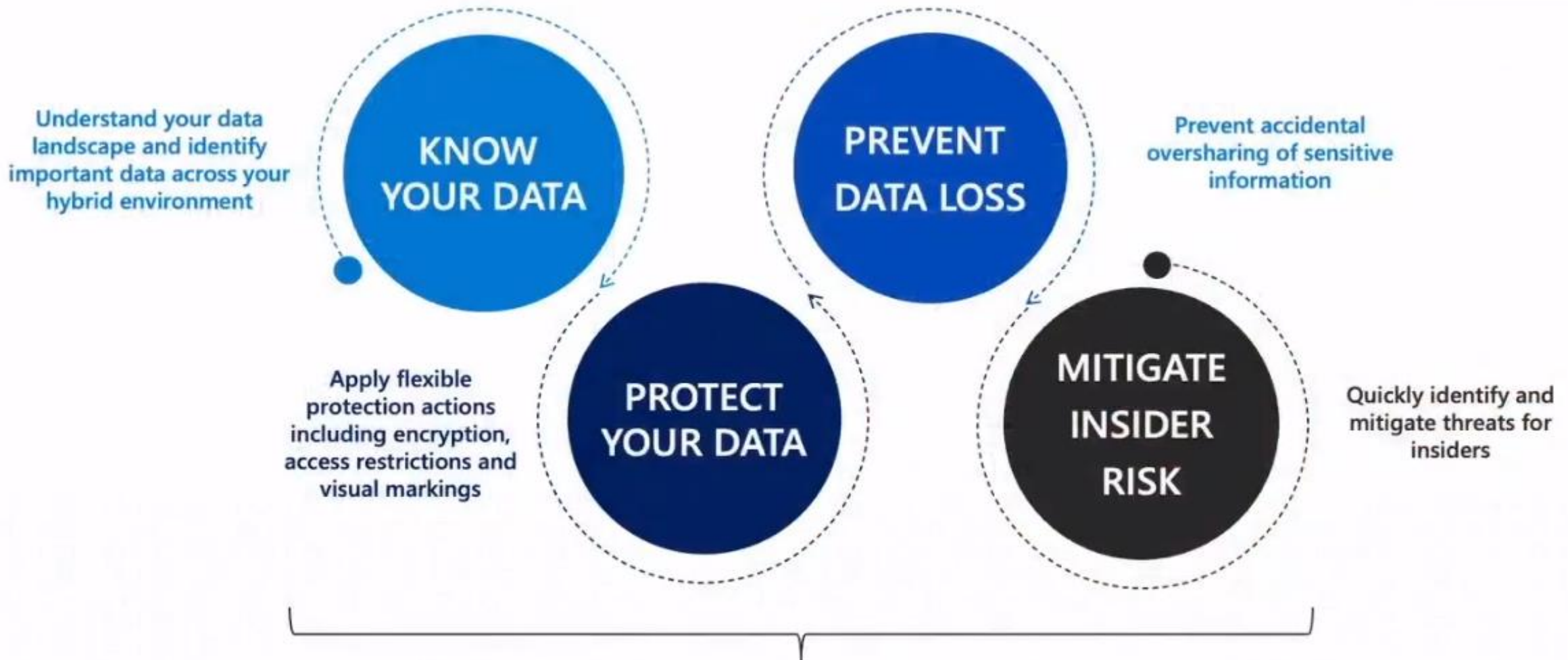
---

Detect how users are **interacting with data** and identify **insider risks**

---

Ensure your data remains **secure** from **data leakage** and **data exfiltration** activities

# Data Security



**Powered by an intelligent platform**

Unified approach to automatic data classification, policy management, analytics and APIs



# Fortify data security with Microsoft Purview

## Information Protection

- **Discover, classify, and protect** data at scale, using automation and ML
- Productivity tools with built-in **user-selectable sensitivity labels** for precise controls
- Data is **protected (encrypted) across environments**, throughout its lifecycle

## Insider Risk Management

- Leverage **analytics, machine learning, sequencing** to understand user context and intent
- Investigate potential incidents with **curated, high-quality, and enriched** alerts and evidence
- Ensure user privacy while identifying **highest risk users**

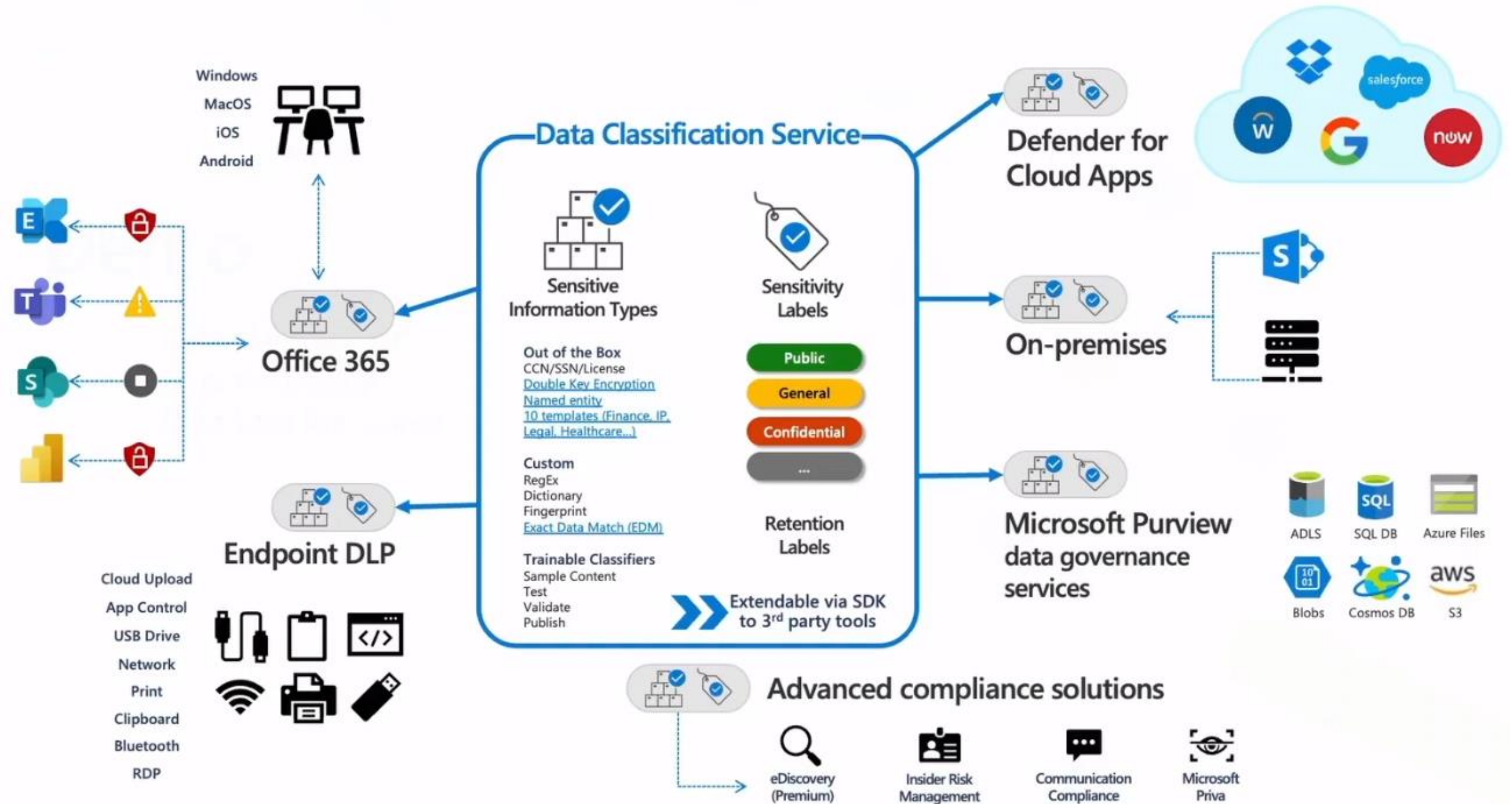
## Data Loss Prevention

- **Prevent unauthorized use**, like improperly saving, storing or printing sensitive data
- Create, deploy, and manage DLP policies **across all cloud, apps, and devices from a single location**
- Leverage data classification, labeling, and user **insights to finetune and adapt DLP policies**

## Adaptive Protection

- Dynamically adjust data security controls based on user risk level

# Data Security in Microsoft Purview





# Compliance Portal



## Overview

Get snapshots of how sensitive info and labels are being used across your organization's locations. [Learn more](#)

### Top trainable classifiers

#### Trainable classifiers used most in your content

Classifier	Count
Finance	141
HR	43
IT	37
Targeted Harassment	5
Tax	5
Agreements	5

[View all trainable classifiers](#)

### Top sensitive info types

#### Sensitive info types used most in your content

Sensitive Info Type	Count
Credit Card Number	363
OPERS Customer ID	40
NYCHA Vendor ID - No Keyword	13
U.S. Social Security Number (SSN) Copy	2

[View all sensitive info types](#)

### Top sensitivity labels applied to content

Sensitivity Label	Count
Confidential/Confidential Internal	141
General	43
Sensitive Information - ACS	37
Public	5

[View all applied sensitivity labels](#)

### Top retention labels applied to content

Retention Label	Count
1 yr Retain and then delete	363
DOF - 5yr Retain/Auto-Delete	40
FOIA Public Record	13
Agency Contract	2

[View all applied retention labels](#)

### Daily labeling activity by users

[View all activities](#)

### Top activities detected

**882 activities**

- 623 DLP rule matched
- 85 File created
- 57 Archive created

[View all activities](#)

### Locations where sensitivity labels are applied

### Locations where retention labels are applied

# Content Explorer

## Content explorer

Explore the email and docs in your organization that contain sensitive info or have labels applied. You drill down further by reviewing the source content that's currently stored in Exchange, SharePoint, and OneDrive. Support for more locations is coming soon. [Learn more](#)

Filter on labels, info types, or categories		All locations	
Sensitive info types		Export	4 items
Credit Card Number	84153	<input type="checkbox"/> Name	Files
OPERS Customer ID	73913	<input type="checkbox"/> Exchange	71744 >
NYCHA Vendor ID - No Keyword	61809	<input type="checkbox"/> OneDrive	77 >
EU Debit Card Number	31919	<input type="checkbox"/> SharePoint	12272 >
Credit Card Number copy	31864	<input type="checkbox"/> Teams	60 >
U.S. Social Security Number (SSN) copy	23741		
U.S. Social Security Number (SSN) - No supporting Element	19486		
U.S. Social Security Number (SSN)	17463		
U.S. Social Security Number (SSN) copy copy	15935		
UAE Identity Card Number	13679		
All Full Names	6638		
All Physical Addresses	1596		
U.S. Physical Addresses	1459		

# Content Explorer

Contoso Electronics

Microsoft Purview

Home

Compliance Manager

Data classification

Overview

Classifiers

Content explorer

Activity explorer

Data connectors

Alerts

Policies

Roles & scopes

Trials

Solutions

Catalog

App governance

Audit

Content search

Communication compliance

Data loss prevention

eDiscovery

Data lifecycle management

Content explorer

Explore the email and docs in your organization that contain sensitive info or have labels applied. You drill down further by reviewing the source content that's currently stored in Exchange, SharePoint, and OneDrive. Support for more locations is coming soon. [Learn more](#)

Filter on labels, info types, or categories

Sensitive info types

NYCHA Vendor ID - No Keyword

39202

OPERS Customer ID

34575

EU Debit Card Number

12283

U.S. Social Security Number (SSN) copy

12273

Credit Card Number

12272

Credit Card Number copy

12161

U.S. Social Security Number (SSN) - No supporting Element

8102

U.S. Social Security Number (SSN)

5925

U.S. Social Security Number (SSN) copy copy

4629

UAE Identity Card Number

1682

All Full Names

816

Japanese My Number Corporate

616

All Medical Terms And Conditions

322

Diseases

187

All locations > SharePoint

The number of site/folder items listed below and on the left is a calculation and may not match the total number of actual items you'll see when you open a specific site/folder.

Export

	Name	Files
<input type="checkbox"/>	https://m365x868515.sharepoint.com/sites/MCARLogs	12224
<input type="checkbox"/>	https://m365x868515.sharepoint.com/sites/FINANCE	13
<input type="checkbox"/>	https://m365x868515.sharepoint.com/sites/SalesAndMarketing	7
<input type="checkbox"/>	https://m365x868515.sharepoint.com/sites/HealthServices	4
<input type="checkbox"/>	https://m365x868515.sharepoint.com	4
<input type="checkbox"/>	https://m365x868515.sharepoint.com/sites/FinanceInternal	4
<input type="checkbox"/>	https://m365x868515.sharepoint.com/sites/Financev-teamPartners	3
<input type="checkbox"/>	https://m365x868515.sharepoint.com/sites/LAW	3
<input type="checkbox"/>	https://m365x868515.sharepoint.com/sites/SensitiveFiles	3
<input type="checkbox"/>	https://m365x868515.sharepoint.com/sites/ChildrenServices	3
<input type="checkbox"/>	https://m365x868515.sharepoint.com/sites/ACSInternal	2
<input type="checkbox"/>	https://m365x868515.sharepoint.com/sites/LegalDepartment	1

# Content Explorer

The screenshot displays the Microsoft Purview Content Explorer interface. On the left sidebar, the navigation pane includes sections for Home, Compliance Manager, Data classification, Overview, Classifiers, Content explorer (selected), Activity explorer, Data connectors, Alerts, Policies, Roles & scopes, Trials, Solutions, Catalog, App governance, Audit, Content search, Communication compliance, Data loss prevention, eDiscovery, and Data lifecycle management.

The main area is titled "Content explorer" and contains the following elements:

- Filter bar:** A search filter set to "Filter on labels, info types, or categories".
- Breadcrumb:** All locations > SharePoint > https://m365x868515.sharepoint.com/sites/FINANCE
- Sensitive info types list:** A list of sensitive information types found in the location. The "Credit Card Number" type is highlighted at the bottom with a count of 13.
- Item details table:** A table showing details for selected items. The first item, "Company Expense...", is selected. The table has columns: Name, Sensitive info type, Trainable classifiers, and a rightmost column with icons. It lists various files like "Participants - Infor...", "fakecreditcards (1)...", "fakecreditcards (2)...", "financial Confident...", "Test Info.txt", "Client Credit cards...", "OneDrive\_2021-10...", and "Test Credit Card - v...".
- Preview pane:** Displays the content of the selected document, "Company Expenses.docx". It shows a table with headers: Last Name, First Name, Credit Card, Security, and Expiration. The table lists employee records such as Julie Brune, Darell Welcher, Brenda Edmondson, etc., along with their credit card numbers and expiration dates.
- Action bar:** At the bottom right, there are buttons for "Not a match" and "Match", and a status indicator showing "1 of 26" items.



# Information Protection: Public Label

Contoso Electronics

Microsoft Purview

Catalog

App governance

Audit

Content search

Communication compliance

Data loss prevention

eDiscovery

Data lifecycle management

Information protection

Labels

Label policies

Auto-labeling

Information barriers

Overview

Segments

Policies

Policy application

Insider risk management

Records management

Privacy risk management

Subject rights requests

Labels

Sensitivity labels are used to classify email messages, documents, sites, and more. When a label is applied (automatically or by the user), the content or site encrypt files, add content marking, and control user access to specific sites. [Learn more about sensitivity labels](#)

+ Add a sublabel

Create auto-labeling policy

Publish label

Edit label

Reorder

Delete label

Refresh

<input type="checkbox"/>	Name	Order	Scope	Created by
<input checked="" type="checkbox"/>	Public	0 - lowest	File, Email, Site, UnifiedGroup	Bruce Wayne II
<input type="checkbox"/>	Sensitive Information - ACS	1	File, Email, Site, UnifiedGroup	Bruce Wayne II
<input type="checkbox"/>	Restricted and Confidential - ACS	2	File, Email, Site, UnifiedGroup	Bruce Wayne II
<input type="checkbox"/>	General	3	File, Email	Bruce Wayne II
<input type="checkbox"/>	Confidential	4	File, Email	Bruce Wayne II
<input type="checkbox"/>	Highly Confidential	10	File, Email	Bruce Wayne II
<input type="checkbox"/>	Protected Sites and Channels	14	Site, UnifiedGroup	Bruce Wayne II
<input type="checkbox"/>	Limited Access - Sites and Channels	15	Site, UnifiedGroup	Bruce Wayne II
<input type="checkbox"/>	PBI - Sensitive	16 - highest	File, Email, Meetings, Site, UnifiedGrou...	Bruce Wayne II

Public

+

Name

Public - ACS

Display name

Public

Description for users

• Salary Information • Publicly available Court proceeding reports • Name or Address • Parking Tickets Records \* These examples are not conclusive

Scope

File, Email, Site, UnifiedGroup

Encryption

None

Content marking

None

Auto-labeling for files and emails

None

Group settings

None

Site settings

None

Auto-labeling for schematized data assets (preview)

None

# Information Protection: Confidential Label

Contoso Electronics

Microsoft Purview

Catalog

App governance

Audit

Content search

Communication compliance

Data loss prevention

eDiscovery

Data lifecycle management

Information protection

- Overview
- Labels**
- Label policies
- Auto-labeling

Information barriers

- Overview
- Segments
- Policies
- Policy application

Insider risk management

Records management

Privacy risk management

Subject rights requests

## Labels

Sensitivity labels are used to classify email messages, documents, sites, and more. When a label is applied (automatically or by the user), the content or site encrypt files, add content marking, and control user access to specific sites. [Learn more about sensitivity labels](#)

+ Add a sublabel   Create auto-labeling policy   Publish label   Edit label   Reorder   Delete label   Refresh

<input type="checkbox"/>	Name	Order	Scope	Created by
<input type="checkbox"/>	Public	0 - lowest	File, Email, Site, UnifiedGroup	Bruce Wayne II
<input type="checkbox"/>	Sensitive Information - ACS	1	File, Email, Site, UnifiedGroup	Bruce Wayne II
<input type="checkbox"/>	Restricted and Confidential - ACS	2	File, Email, Site, UnifiedGroup	Bruce Wayne II
<input type="checkbox"/>	General	3	File, Email	Bruce Wayne II
<input checked="" type="checkbox"/>	> Confidential	4	File, Email	Bruce Wayne II
<input type="checkbox"/>	> Highly Confidential	10	File, Email	Bruce Wayne II
<input type="checkbox"/>	Protected Sites and Channels	14	Site, UnifiedGroup	Bruce Wayne II
<input type="checkbox"/>	Limited Access - Sites and Channels	15	Site, UnifiedGroup	Bruce Wayne II
<input type="checkbox"/>	PBI - Sensitive	16 - highest	File, Email, Meetings, Site, UnifiedGrou...	Bruce Wayne II

## Confidential

+   Create auto-labeling policy   Publish label   Edit label   Reorder   Delete label   Refresh

Name

Confidential

Display name

Confidential

Description for users

This parent label is for Confidential files and emails

Description

This parent label is for Confidential files and emails

Scope

File, Email

Encryption

None

Content marking

None

Auto-labeling for files and emails

None

Auto-labeling for schematized data assets (preview)

None

# Information Protection: Edit Label 1

## Edit sensitivity label

- ☒ Name and tooltip
- ☐ Scope
- ☐ Items
- ☐ Groups & sites
- ☐ Schematized data assets (preview)
- ☐ Finish

### Parent label

Confidential

### Name \*

Confidential Internal

### Display name \*

Confidential Internal

### Description for users \*

This label is for internal employees only. The content will be encrypted and can only be decrypted by internal employees. Content that contains more than 10 instances of sensitive information will automatically be encrypted. Additionally, ONLY internal employees will be able to access Teams and SharePoint sites.

### Description for admins

Enter a description that's helpful for admins who will manage this label.

### Label color

The color selected below is currently applied to the parent label. As a result, all sublabels of the parent label will inherit the same color. If you want to use a different color, edit the parent label. [Learn more about label color](#)



Next

Cancel

# Information Protection: Edit Label 2

## Edit sensitivity label

- ✓ Name and tooltip
- Scope**
- Items
- Groups & sites
- Schematized data assets (preview)
- Finish

### Define the scope for this label

Labels can be applied directly to items (such as files, emails, meetings), containers like SharePoint sites and Teams, Power BI items, schematized data assets, and more. Let us know where you want this label to be used so you can configure the applicable protection settings. [Learn more about label scopes](#)

- ☒ **Items**  
Be aware that restricting the scope to only files or emails might impact encryption settings and where the label can be applied. [Learn more](#)
  - ☒ **Files**  
Protect files created in Word, Excel, PowerPoint, and more.
  - ☒ **Emails**  
Protect messages sent from all versions of Outlook.
  - ☐ **Meetings**  
Protect calendar events and meetings scheduled in Outlook and Teams.
- ☒ **Groups & sites**  
Configure privacy, access control, and other settings to protect labeled Teams, Microsoft 365 Groups, and SharePoint sites.
- ☒ **Schematized data assets (preview)**  
Apply labels to files and schematized data assets in Microsoft Purview Data Map. Schematized data assets include SQL, Azure SQL, Azure Synapse, Azure Cosmos, AWS RDS, and more.

# Information Protection: Edit Label 3

## Edit sensitivity label

- ✓ Name and tooltip
- ✓ Scope
- Items**
- Groups & sites
- Schematized data assets (preview)
- Finish

### Choose protection settings for labeled items

Configure encryption and content marking settings to protect labeled items.

- ☒ **Apply or remove encryption**  
Control who can access items that have this label applied.
- ☒ **Apply content marking**  
Add custom headers, footers, and watermarks to items that have this label applied.
- ☐ **Protect Teams meetings and chats**  
Configure protection settings for Teams meetings and chats.

ⓘ To protect Teams meetings and chats, your org must have a Teams Premium license. [Learn more about Teams Premium](#)

Back

Next

Cancel



# Information Protection: Edit Label 4

## Edit sensitivity label

- ✓ Name and tooltip
- ✓ Scope
- Items
- Encryption
  - Content marking
  - Auto-labeling for files and emails
- Groups & sites
- Schematized data assets (preview)
- Finish

Control who can access items that have this label applied. Items include emails, Office files, Power BI files, and meeting invites (if you chose to configure meeting settings for this label). [Learn more about encryption settings](#)

- ☐ Remove encryption if the file or email or calendar event is encrypted
- ☒ Configure encryption settings

Assign permissions now or let users decide?

Assign permissions now

The encryption settings you choose will be automatically enforced when the label is applied to email and Office files.

User access to content expires ⓘ

Never

Allow offline access ⓘ

Always

Assign permissions to specific users and groups \* ⓘ

[Assign permissions](#)

1 item

Users and groups	Permissions	Edit	Delete
M365x868515.onmicrosoft.com	Co-Author		

☐ Use Double Key Encryption ⓘ

# Demo

## -Microsoft 365 Admin portal -Compliance Portal Overview

### -Confidential Internal Word Document Not Accessible outside Organization

1. Define a Label for Files: File-Label-Confidential-Internal
2. Publish label for all users: Confidential Internal Only Files
3. create document with internal account and label it with the label
4. the document is not accessible with other org accounts: if you email it to [Ehsan.Eskandari@BuildOnCloud.Net](mailto:Ehsan.Eskandari@BuildOnCloud.Net) for example you can not open this document.

# Thank You

ευχαριστώ   Salamat Po   متشكراً   شكراً   Grazie  
благодаря   ありがとうございます   Kiitos   Teşekkürler   谢谢  
ឧបត្ថម្ភ   Obrigado   شكریه   Terima Kasih   Dziękuję  
Hvala   Köszönöm   Tak   Dank u wel   ДЯКУЮ   Tack  
Mulțumesc   спасибо   Danke   Cám ơn   Gracias  
多謝晒   Ďakujem   תודה   நன்றி   Děkuji   감사합니다