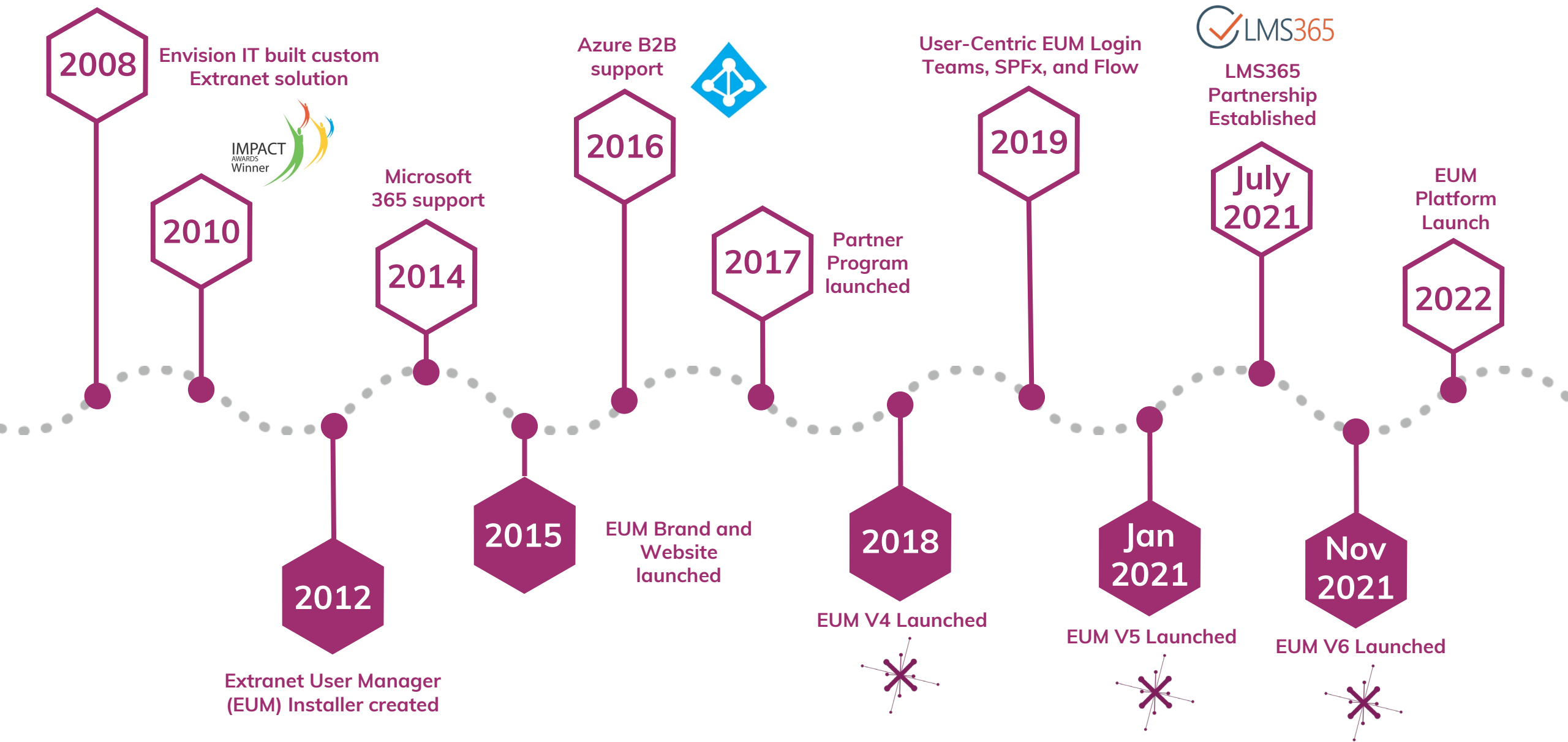# Logan Guest

- Sales and Marketing Manager, Extranet User Manager
- logan.guest@extranetusermanager.com
- www.extranetusermanager.com

Teams Meeting Etiquette

- This is a regular Teams meeting.

- Chat is open throughout the webinar.

- Feel free to ask questions or make comments through chat at any time.

- Please stay on mute. If you'd like to join the conversation, please ask on chat and wait for an invitation.

- Welcome, enjoy, and learn!

2008 Envision IT built custom Extranet solution

IMPACT AWARDS Winner

2010

Microsoft 365 support

2014

Azure B2B support

2016

2017 Partner Program launched

User-Centric EUM Login Teams, SPFx, and Flow

2019

LMS365

LMS365 Partnership Established

July 2021

EUM Platform Launch

2022

2015

EUM Brand and Website launched

2018

EUM V4 Launched

Jan 2021

EUM V5 Launched

Nov 2021

EUM V6 Launched

2012

Extranet User Manager (EUM) Installer created

ExtranetUserManager   eum.co

Customers around the Globe

100+ Customers Deployed Globally

ExtranetUserManager

eum.co

Peter Carson

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- Office Apps and Services Microsoft MVP
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- blog.petercarson.ca
- www.extranetusermanager.com
- twitter.com/carsonpeter
- President Toronto SharePoint User Group

Agenda

- Introductions
- Power BI Overview
- Power BI Licensing Models
- Building Applications with Power BI Embedded
- Power BI Security Best Practices
- Sample Power BI Portal Scenarios
- Summary, Q&A, and Closing

What is Power BI?

- Connect, model and visualize your data
- Connect all data sources to promote insights across your organization
- Design your reports in Excel or Power BI Designer
- Publish them to the web
- Power BI | Microsoft
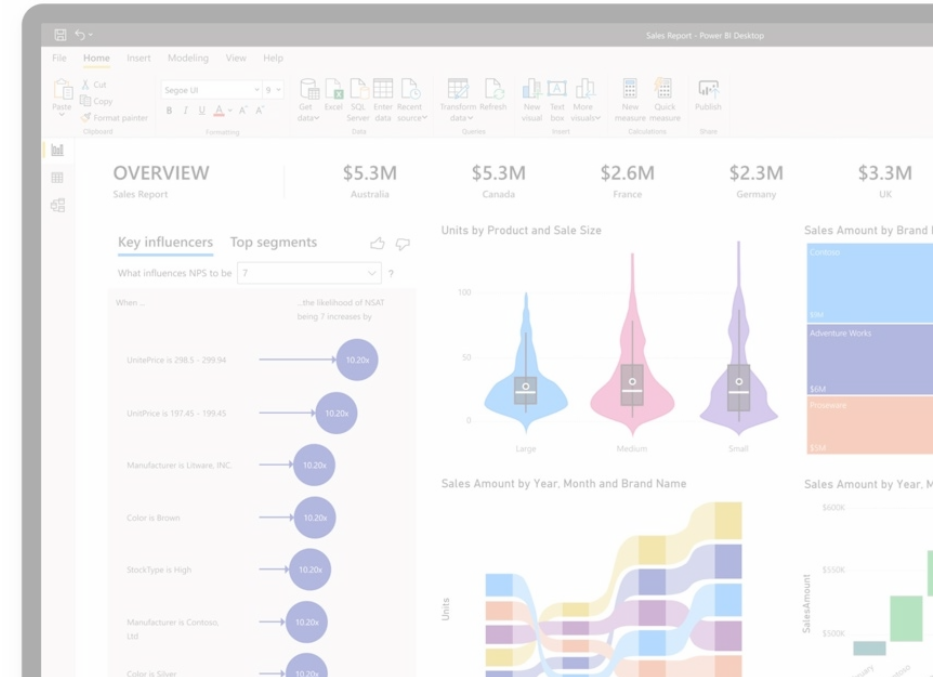
Power BI Paginated Reports

- Reports are formatted to fit well on a page
- Reports often have many pages
- Advantage is their ability to print all the data in a table
- Sensitivity labels can be applied
- Any number of different data sources:
  - Azure SQL
  - Azure Analysis Services
  - SQL Server
  - Power BI datasets
  - Oracle
  - Teradata
- [Info River](#)

[What are paginated reports in Power BI Premium | Microsoft Docs](#)

Power BI Services

Power BI Pro	Power BI Premium
Power BI Embedded	Power BI Report Server

Power BI Consumption Options

Browser

Power BI Mobile

SharePoint Webpart

MS Teams Report Embed

Power BI Desktop

Power BI Licensing Models

- Many organizations experience challenges determining how to license their users

- Options include:
  - Per user stand alone licenses
    - ~~Free~~
    - Pro
    - Premium
  - Subscription License Types
  - Standard - enables collaboration, publishing, sharing, and ad-hoc analysis. Shared storage capacity.
  - Premium - provides advanced administration and deployment controls. Reserved compute and storage resources.
  - Consumption based licensing

- Power BI Pro included in Microsoft 365 or Office 365 E5 package

[Microsoft Power BI Versions and Licensing | Envision IT](#)

Microsoft 365 Power BI Plans

Power BI Pro

- Mobile app access
- Publish Reports to share
- Model size limit = 1 GB
- Refresh rate = 8/day
- Connect to more than 100 data sources
- Create reports with PBI Desktop
- Embed APIs
- Data Security and Encryption
- Maximum storage: 10 GB/user

Power BI Premium Per User

- All of Pro plus Paginated RDL reports
- Model size limit = 100 GB
- Refresh rate = 48/day
- Advanced AI
- XMLA Endpoint read/write connectivity
- Dataflows
- Application lifecycle management
- Maximum storage: 100 TB

Power BI Premium Per Capacity

- All of Pro and Premium plus consume content without a per user license
- On-premises reporting with PBI Report Server
- Model Size limit = 400 GB
- Refresh rate = 48/day
- Multi-geo deployment
- Bring your own key (BYOK)
- Auto-scale add-on availability

Power BI Pricing

Power BI Free	Power BI Pro Per User	Power BI Premium Per User	Power BI Premium Per Capacity	Power BI Embedded
$0	$12.80 per user/month	$25.60 per user/month	Starts at $6,394 capacity/month	Starts at $1.30 capacity/hour

Pricing & Product Comparison | Microsoft Power BI

Pricing of Power BI Embedded | Microsoft Azure

Publish to Web (Public)

- Reports can be published to the web (public)
- No sign-in or license is required
- Don't need a capacity model, you can do this with Power BI Pro
- Anyone can view the report, it cannot be secured
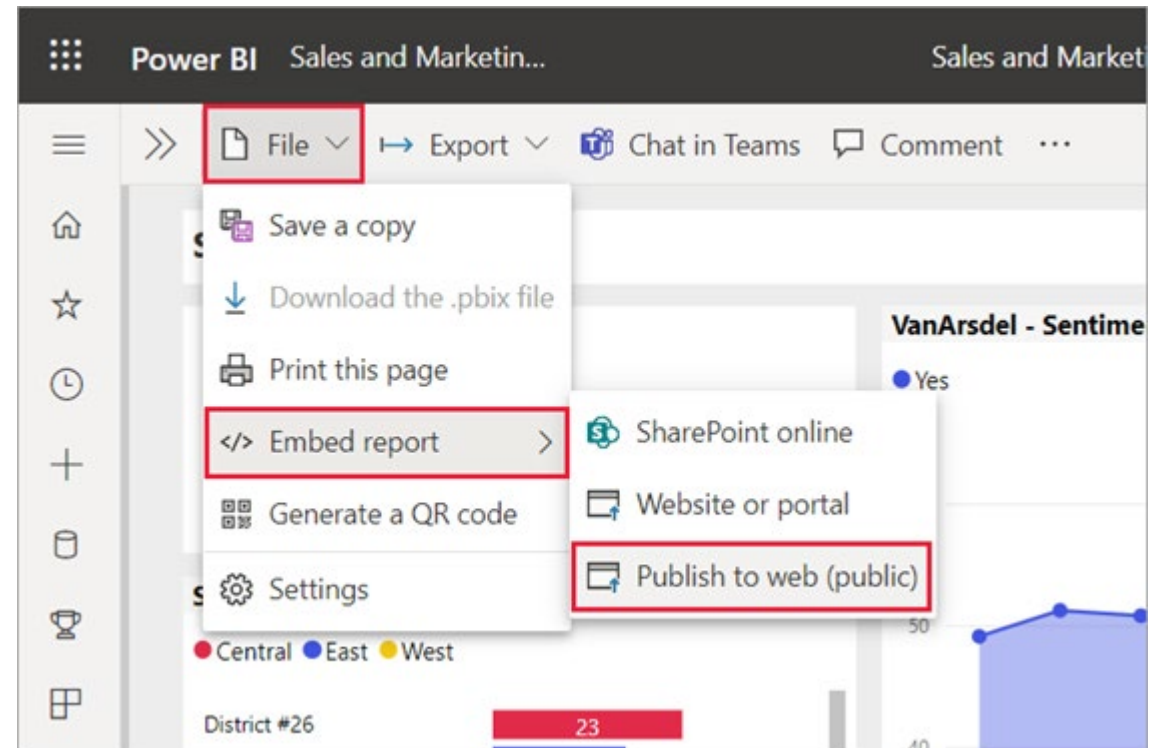
[Publish to web from Power BI | Microsoft Docs](#)

Guest User Power BI Access

- Guest user must have the proper licensing in place to view the content that you shared. Licensing options include:
  - Power BI Pro license
  - Premium Per User (PPU) license
  - Use the guest's Power BI Pro license
  - Power BI Premium
  - Power BI Embedded

- Sharing content with external guest users through Azure Active Directory Business-to-Business

- By default, external guests have mostly consumption experiences

- You can also choose to provide external users with elevated permissions to the workspaces to experience "Edit and Manage" privileges

- [List of considerations and limitations](#)

Power BI Embedded

- With Power BI embedded analytics you can:
  - Deliver compelling data experiences for your end users
  - Quickly and easily provide exceptional customer-facing reports, dashboards, and analytics in your own apps
  - Reduce developer resources by automating the monitoring, management, and deployment of analytics

- No per user licensing requirement for internal or external users

- External users don't need to login using Power BI credentials to view the embedded reports

- Two types of Power BI embedded offerings:
  - Power BI Embedded is an Azure offer
  - Embedding with Power BI – is a Power BI Premium offer

[Power BI embedded analytics overview | Microsoft Docs](#)

ExtranetUserManager

eum.co

Building Applications with Power BI Embedded

Power BI Embedded is focused on two solutions:

1. Embed for your organization
- Build an app that requires signing in using Power BI credentials
- Aimed at large organizations building apps for internal users
- https://docs.microsoft.com/en-us/power-bi/developer/embedded/embed-sample-for-your-organization

2. Embed for your customers
- Build an app that uses non-interactive authentication against Power BI
- Common for Independent Software Vendors (ISVs)
- https://docs.microsoft.com/en-us/power-bi/developer/embedded/embed-sample-for-customers

Embedding Power BI in EUM Portal App

- Data Portal has Power BI Embedded service built into portal pages

- Report access secured by EUM or Azure AD groups

- Report authoring and publishing managed with a single Power BI Premium user license

- Data Portal API has service paused when not in use

- When a report is requested, the service turns resumes

- Decreases consumption costs significantly!
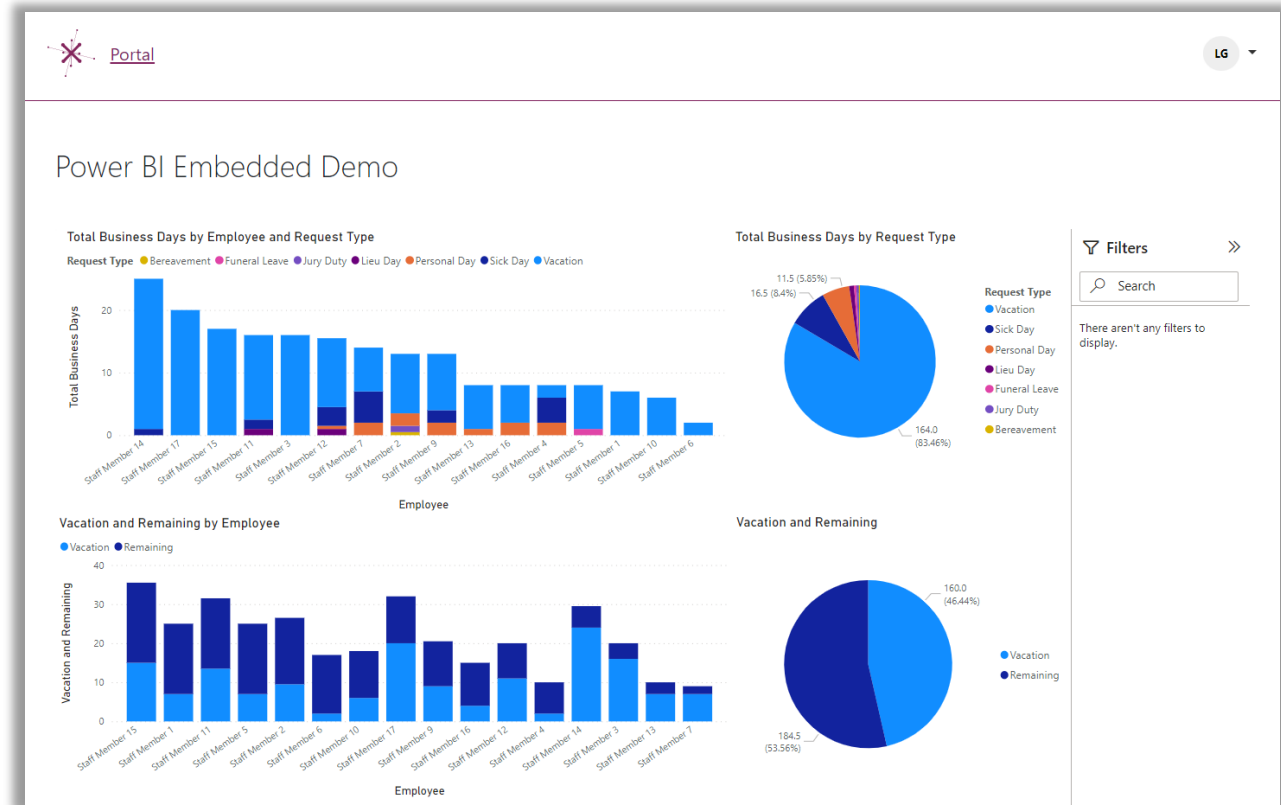
Try it out on EUM Portal Demo

Embedding Power BI in EUM Admin App

- EUM Admin provides simplified group and user management of Guest users in Microsoft 365

- Azure AD permissions harvester that collects user, group, and group membership data from Azure AD

- Harvester mashes it up with EUM data and Azure AD audit logs

- Details are shipped to Azure Storage and Power BI is pointed at the storage source
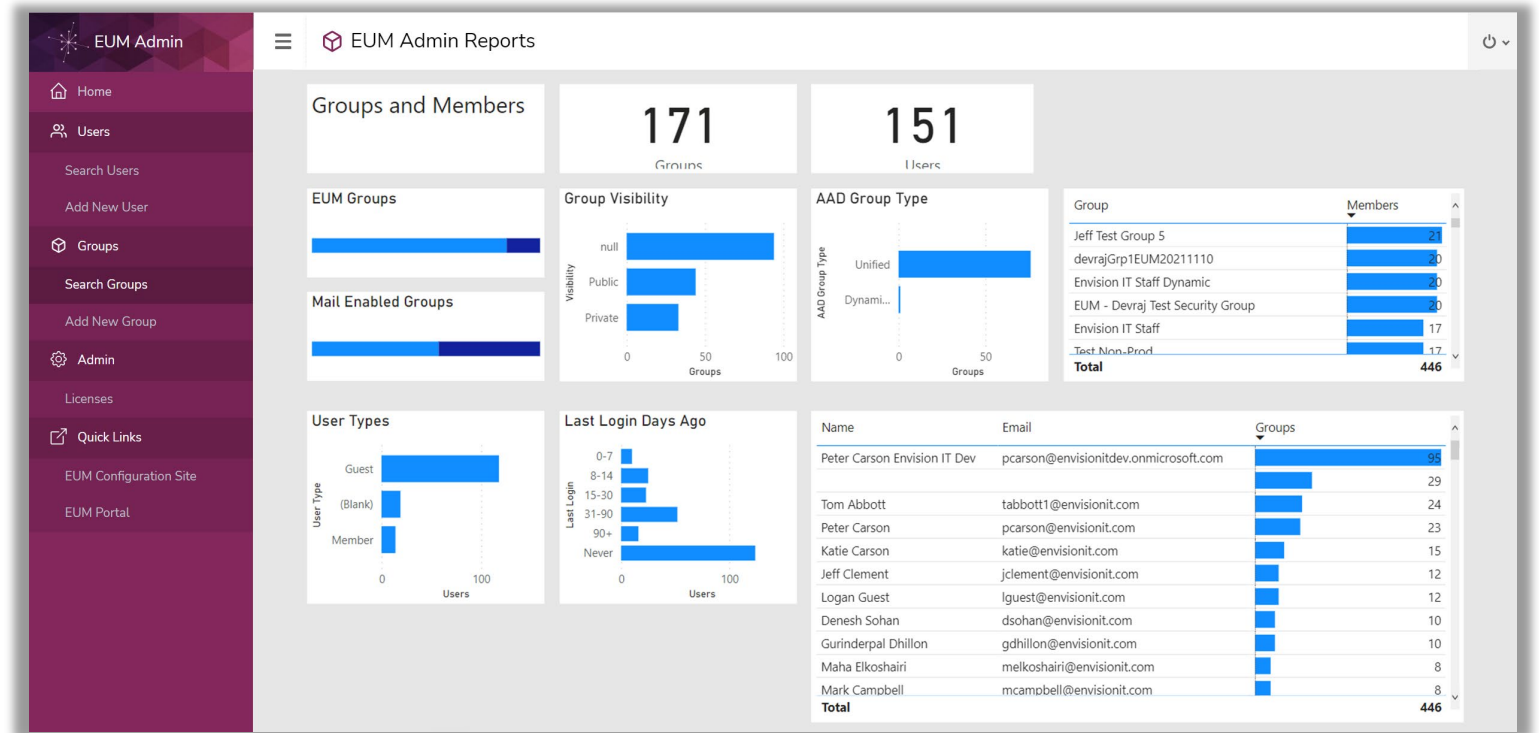
Power BI Embedded Security Best Practices

- You need to roll your own security

- Service principal access is the preferred way to access the service
    - This should be secured with a certificate that is securely managed on the server
    - Azure Key Vault or App Service certificate store
    - Need to enable this in Power BI Admin

- Service principal is granted access to the Power BI workspace

- Your code is responsible for providing an access token to the user to access the service

- You should keep users in groups and tag reports with the groups users need to belong to

- Check the user's group matches before issuing a token

Scenario One: Association & Membership Management Samples

- Association is an industry voice representing multiple associations
  - Municipal Benchmarking Canada (MBNCanada)
  - Electricity Canada
  - Ontario Association of Children's Aid Societies
- Typically involves a combination of public and secured portal pages
- Common activities include:
  - Analytics and reports
  - Committee and group meeting packages and details
  - Knowledge base for associations to upskill their own users
  - Learning Management System
  - General events and news information
  - Collection of annual membership fees
- Onboarding Scenarios
  - Self service registration and access to portal

Electricity Canada Members Portal

- Electricity Canada is the voice for safe, secure and sustainable electricity for all Canadians
- Members include electric utilities, power producers, transmission and distribution companies, and power marketers
- Offers members a broad range of innovative programs and services
- Delivers a viewpoint to decision makers on policy and regulatory issues
- Single Sign-On for All Applications
  - Electricity.ca – the Association's public website
  - Powerline – the Association's extranet site
  - LMS Courses – Electricity Fundamentals in Canada
  - Data Portal – a series of databases, reports, and visualizations on multiple platforms
- Single Data Platform (Reporting)
- Bilingual
- www.electricity.ca
- portal.electricity.ca

MBNCanada IT Data Warehouse

- The Municipal Benchmarking Network of Canada (MBNCanada)

- Enhances municipal service delivery through collaboration, networking, implementation of performance measurement and benchmarking

- Tracks services from 13 partner municipalities across 5 provinces

- The Data Warehouse includes 700 performance measures of municipal service delivery
  - Over 1,000 users input the data
  - Queried data was exported to Excel or Access and visualizations were manually built
  - Migrating to a modern cloud-based technology stack that simplifies data entry
    - User Manager
    - Publisher
    - Data Portal
    - Microsoft Teams
    - SharePoint Online
    - Excel Online
  - Power BI allows powerful dashboards and customizable reports that access data from multiple sources

- mbncanada.ca

Scenario Two: On-Premises Organization with Approaching Microsoft Deprecation Deadlines

- Organization provides insightful reports out their external users
- Users login through Forms Based Authentication into SharePoint On-Premises Extranet
- Reports are built in SSRS
- Reports are published in SharePoint Site for external user consumption
- Microsoft is beginning to deprecate some features of SSRS
- Replacement is Power BI Report Server
- Modern solution includes:
  - Azure B2B and User Manager for user onboarding
  - SharePoint Online modern sites specific to each client
  - Power BI embedded for report consumption

Wrap Up Points

Lots of ways to license Power BI

Premium is not the only capacity model

Value in having Power BI for everyone

There is work to use Embedded

Try out EUM Data Portal

Try it out on EUM Portal Demo

Next Steps

- Webinar presentation slides and recording will be published to the event page by tomorrow

- Follow up email will include a link to a Microsoft Forms Poll

- We're interested in what you would like to learn more about
  - Would you like a technical session that goes deeper into how the products are built?
  - What are other sessions you would like us to host?

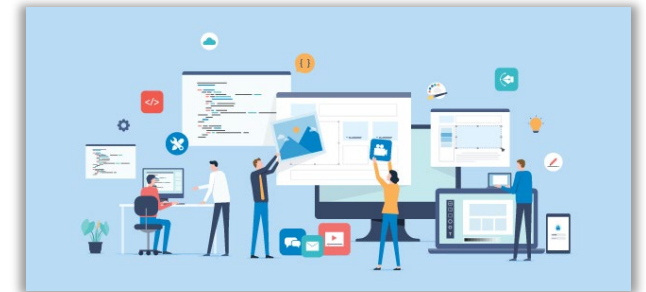- Schedule time with us to discuss your scenario

Upcoming Events

[Speaker at Microsoft 365 Conference](#)

April 6, 2022
12:15 – 1:15 PM PDT
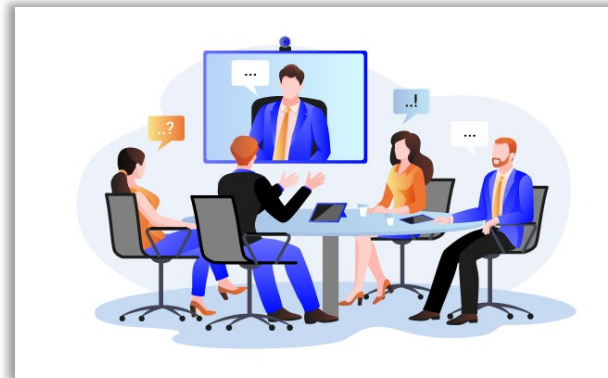
[Effective Board and Committee Management with Microsoft 365](#)

May 3, 2022
12:00 – 1:00 PM EDT

[Integrating your Line of Business Systems with Microsoft 365](#)

May 31, 2022
12:00 – 1:00 PM EDT

Thank you

Questions?