CAMSA Tour - Irvine

March 2025
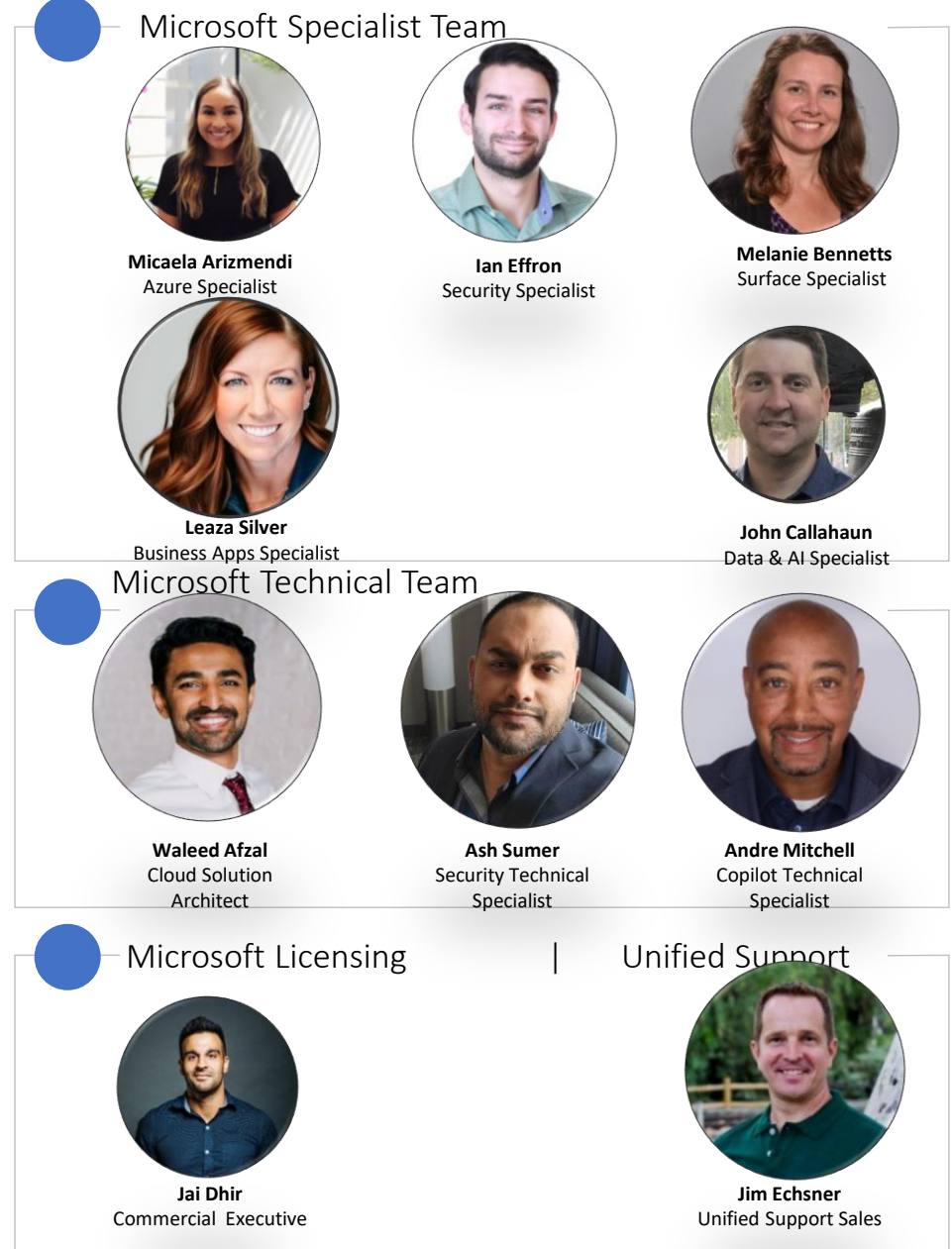
Softchoice   CITE™ CALIFORNIA IT IN EDUCATION   Microsoft
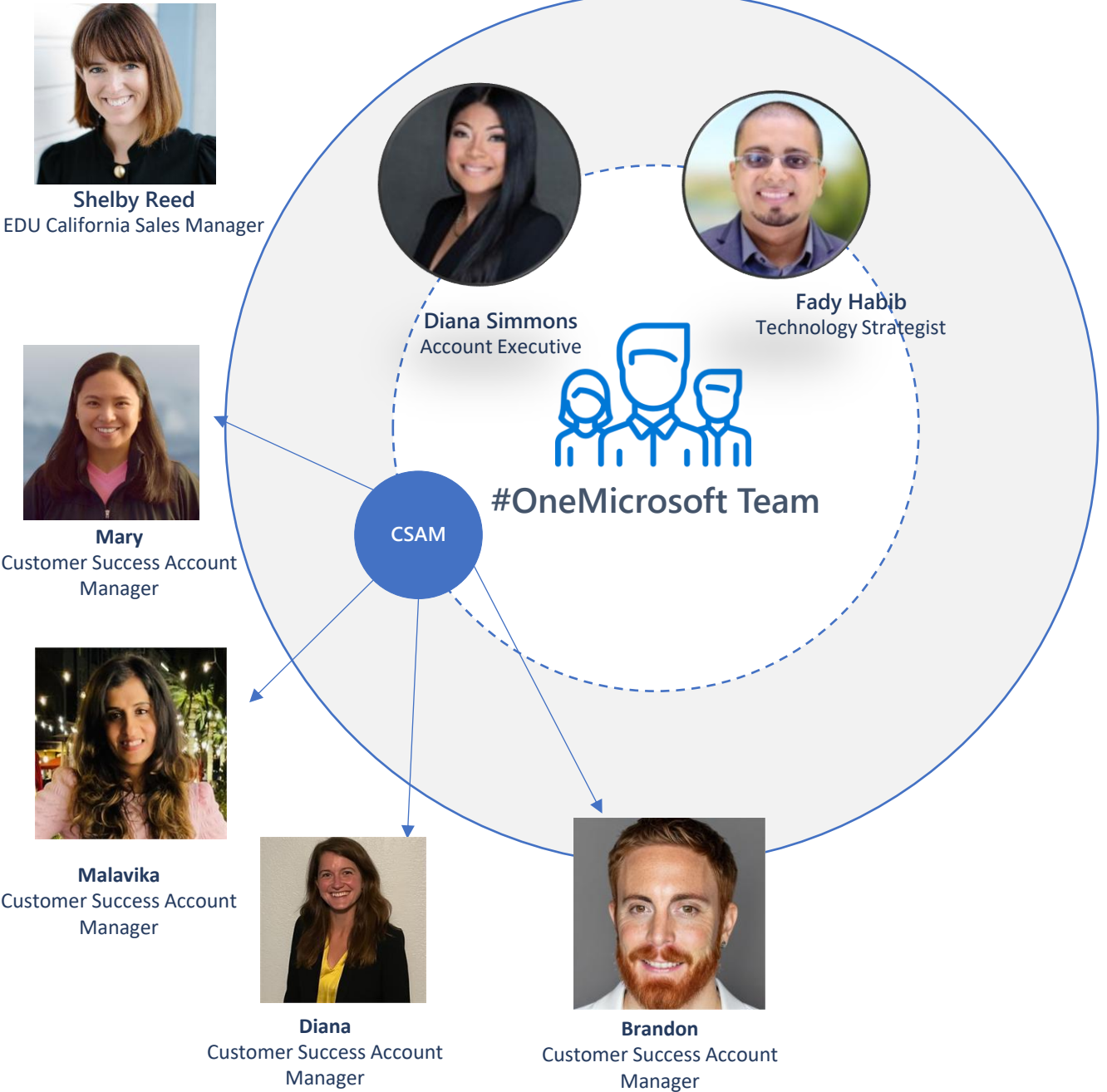
Table of Contents

Welcome - CITE Intro	CITE	5 min
Introductions	CITE/Softchoice/Microsoft	5 mins
Value Add Benefits to Program	Softchoice	30 mins
Copilot Interactive Activity	Microsoft (Andre + Andrea)	1 hr
Customer Spotlight	Local Customer	30 mins
Lunch		1 hr
Technical Review - Effortless Server Management: Your Time-Saving Lifesaver for Security and Updates	Fady/Micaela	30Mins
Security/Intune (TBD)	TBD	30Mins
Commvault Presentation		30 mins
Facility Tour		1 hr

Microsoft

Copilot Interactive Activity

Enhancing Experiences with AI-driven Tools

Andre Mitchell

Technical Specialist

Andrea Tseng-Rioux

Senior Customer Success, Microsoft

The AI technology is here.

How can you leverage it?

USA TODAY — New Bing with ChatGPT brings the power of AI to Microsoft's signature search engine

INSIDE HIGHER ED — How AI Is Shaping the Future of Higher Ed

M'hammed Abdous considers the myriad ways artificial intelligence is transforming higher education's administrative, teaching and research practices.

The Verge — MICROSOFT / TECH / ARTIFICIAL INTELLIGENCE

Microsoft launches Azure OpenAI service with ChatGPT coming soon /

ChatGPT is coming to this Azure service soon, as businesses get to use new AI models in their own apps.

EducationWeek — CLASSROOM TECHNOLOGY EXPLAINER

What Is ChatGPT and How Is It Used in Education?

EdTech Focus On Higher Education — SOFTWARE

Microsoft Makes a Major Investment in ChatGPT Tech

A multibillion-dollar agreement with OpenAI aims to bring artificial intelligence capabilities to Microsoft tools and the Bing search engine.

GMA — LIVING → EDUCATION — March 8, 2023

An inside look at a 5th grade classroom using ChatGPT

AI and the Future of Teaching and Learning

Strategic Priority

- AI is increasingly viewed as a strategic priority in education, with a focus on enhancing teaching and learning experiences.

Training and Development

- There is a significant emphasis on training faculty and staff to effectively integrate AI into educational practices, i.e., upskilling and reskilling existing personnel.

Use in Education

- AI is being used in various educational contexts, like, academic integrity, coursework, assessment practices, and curriculum design.

Workforce Development

- Institutions are focusing on developing AI skills among students to prepare them for future job markets, including integrating AI literacy into the curriculum.

Why Copilot?

It's powerful and protective

Access to powerful AI models

- Access to advanced AI models like GPT-4o and DALL-E 3
- No additional cost with your school login

Transparent and current

- Citations provided for each response
- Responses sourced with up-to-date information

Enterprise data protection

Organization data is protected

- Included with school login
- Your data is private
- Your access controls and policies apply to Copilot
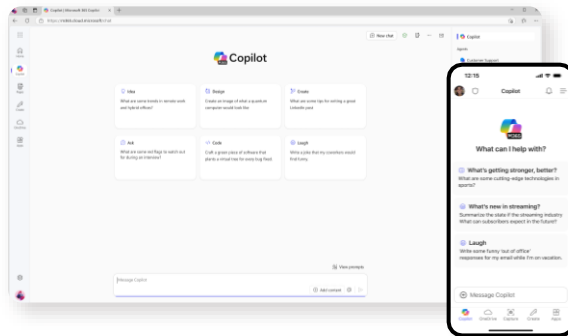- Chat data is not used to train the model

Introducing
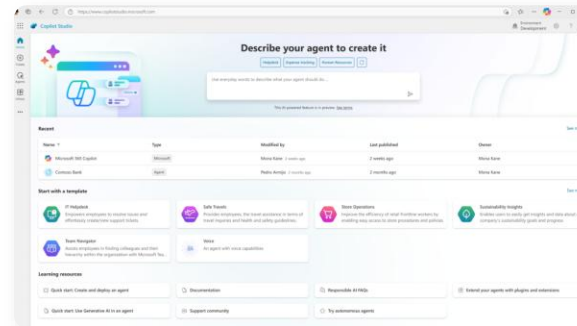

Microsoft 365 Copilot Chat

Microsoft 365 Copilot Chat

Chat
+
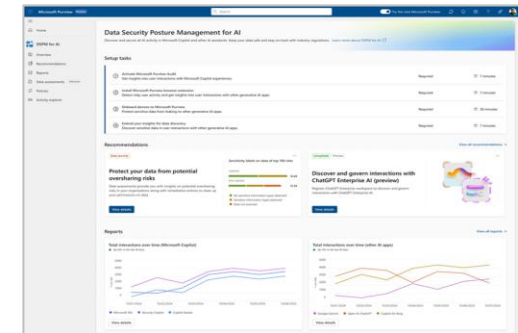Free, secure AI chat –
powered by GPT-4o and web grounded

Agents
+
Integrated into the chat experience and
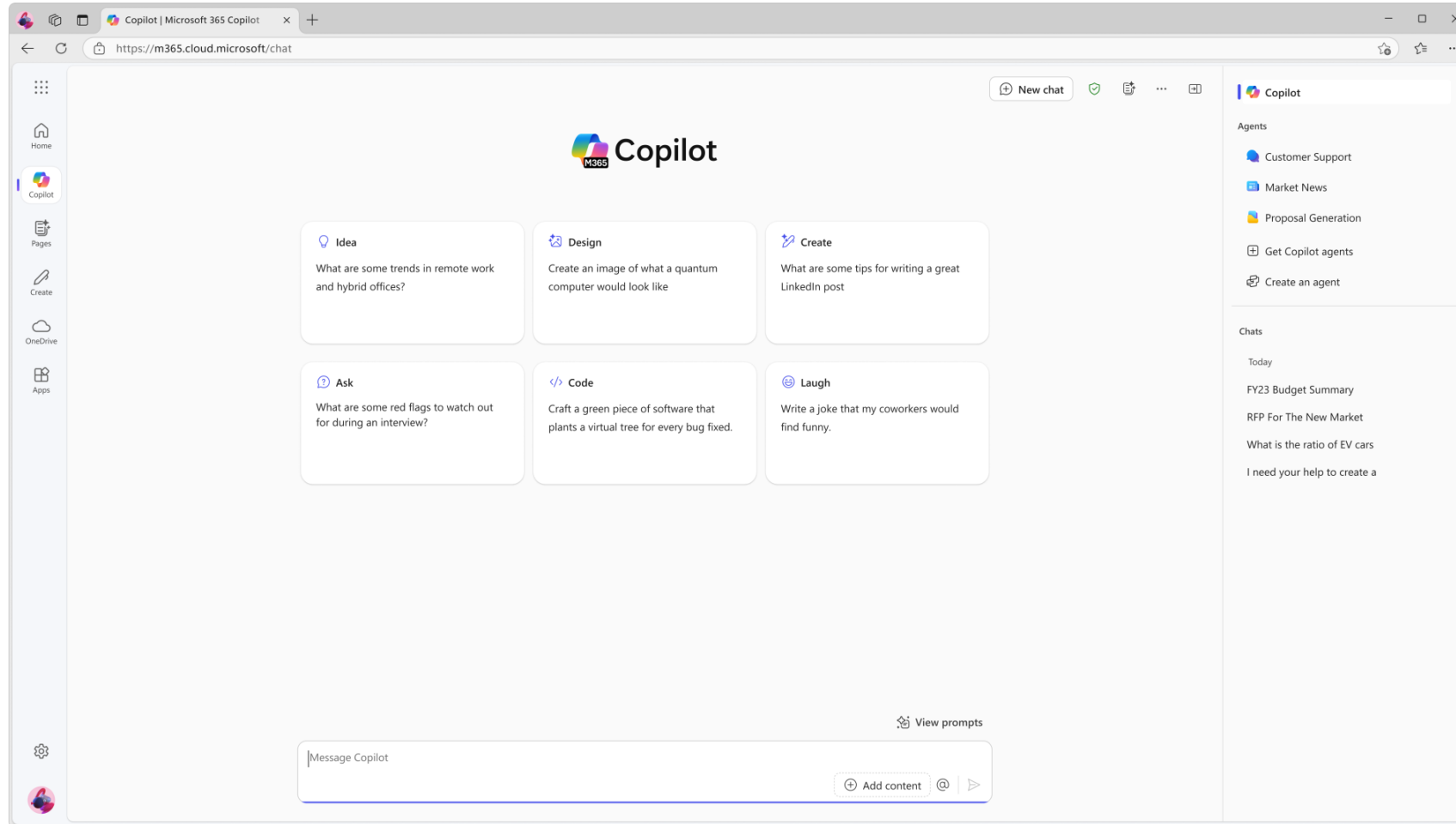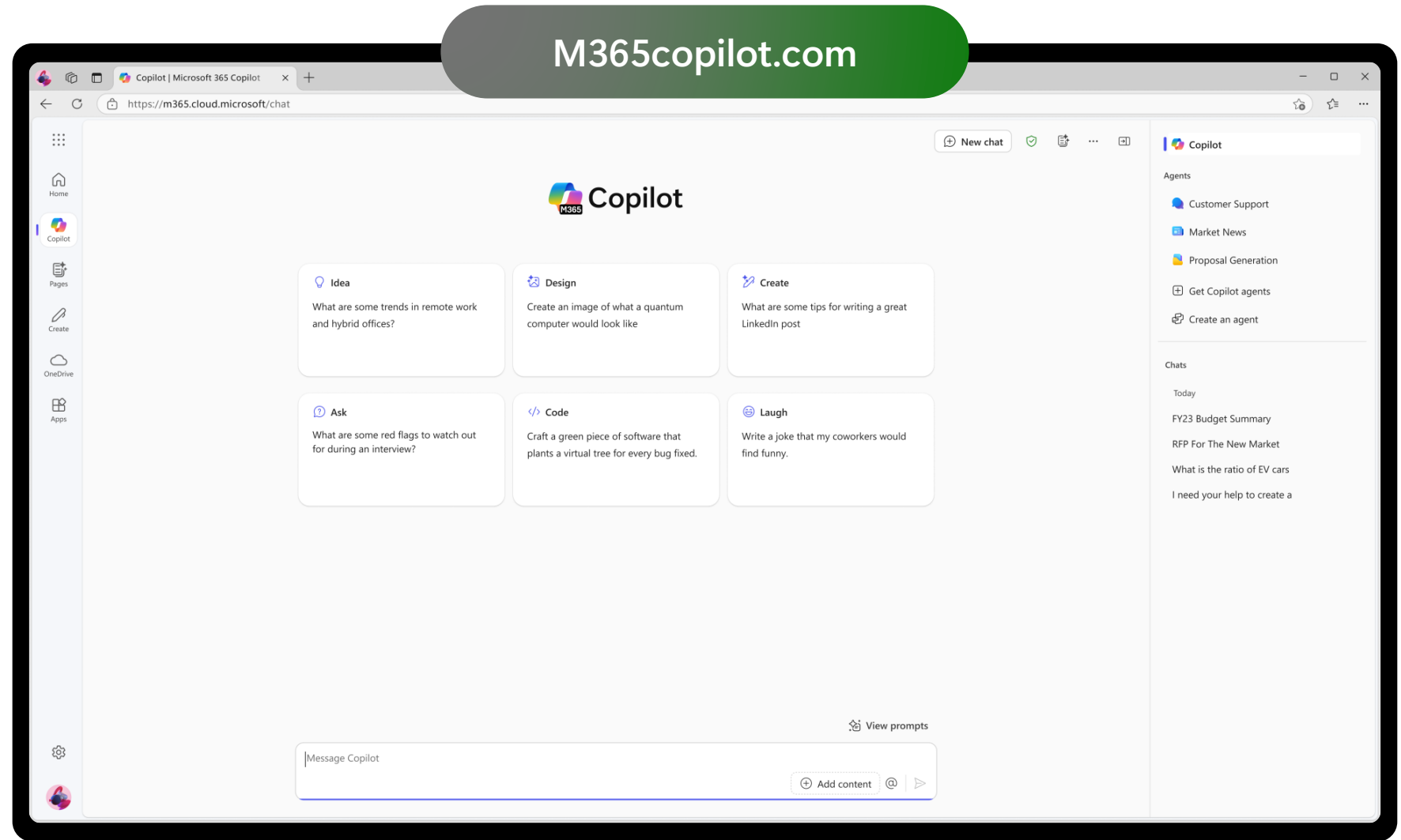paid for on a consumption basis

IT Controls
Enterprise Data Protection
and agent management
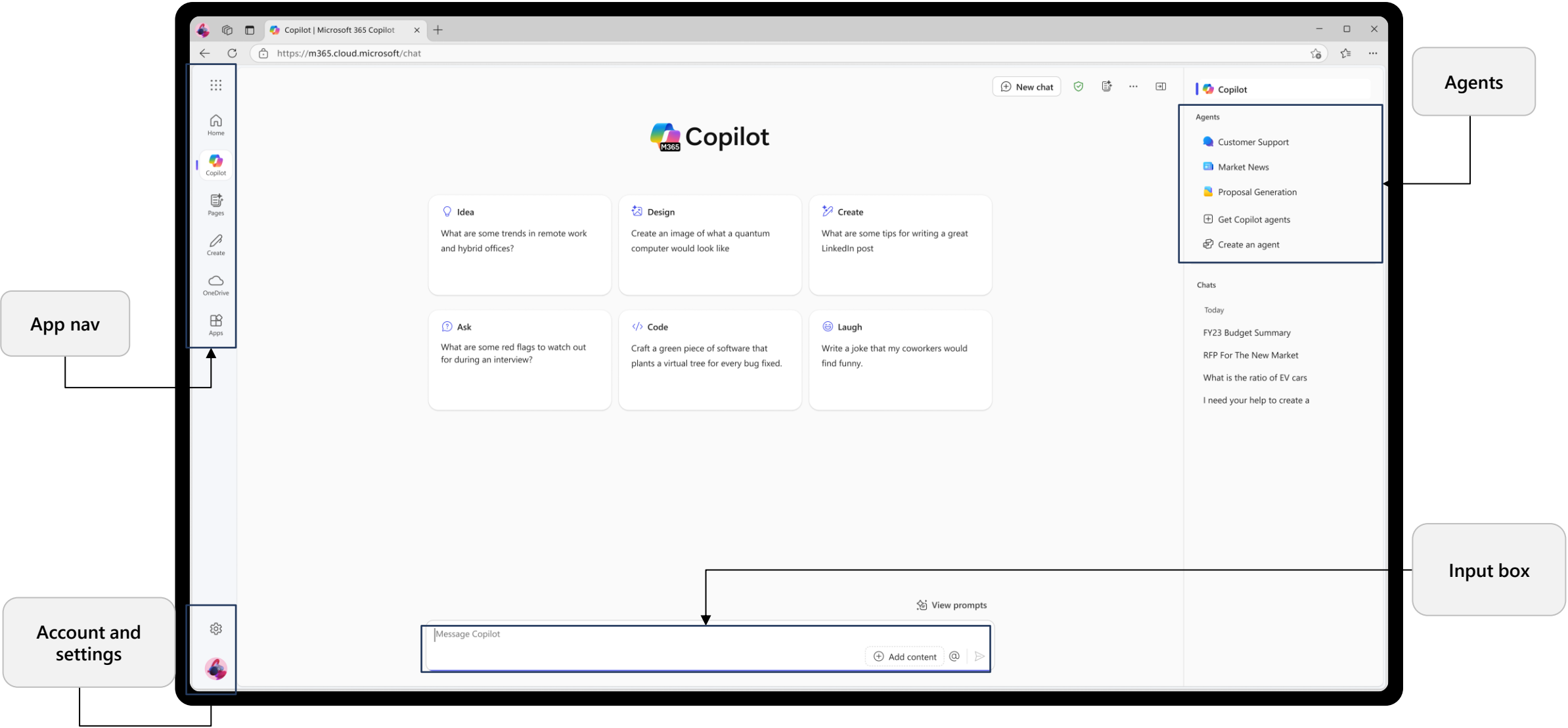
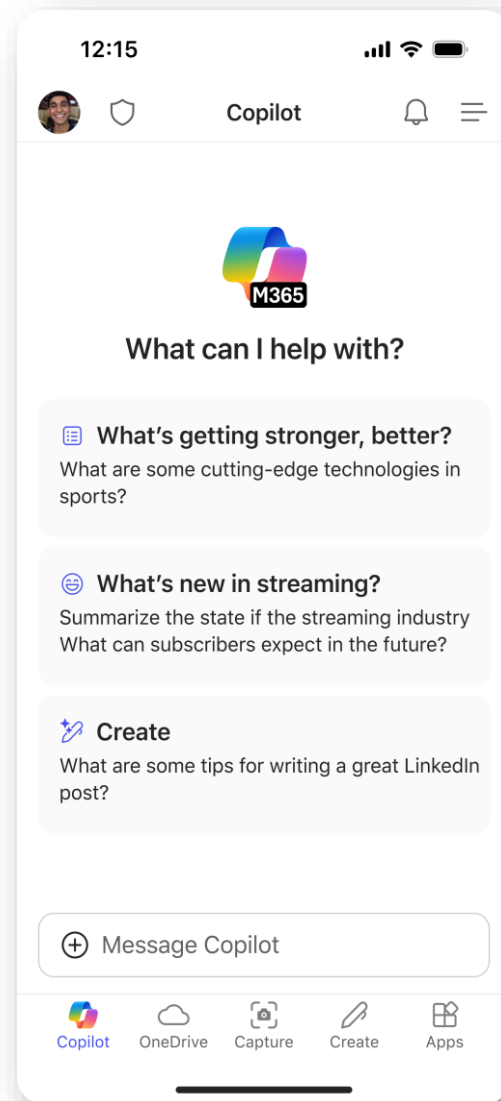# Get started from the Microsoft 365 Copilot app

M365copilot.com

Get started from the Microsoft 365 Copilot app

M365copilot.com

Copilot Chat App UI Elements

Agents

App nav

Account and settings

Input box

Copilot | Microsoft 365 Copilot

https://m365.cloud.microsoft/chat

Home
Copilot
Pages
Create
OneDrive
Apps

New chat

Copilot

Idea
What are some trends in remote work and hybrid offices?

Design
Create an image of what a quantum computer would look like

Create
What are some tips for writing a great LinkedIn post

Ask
What are some red flags to watch out for during an interview?

Code
Craft a green piece of software that plants a virtual tree for every bug fixed.

Laugh
Write a joke that my coworkers would find funny.

Copilot

Agents
- Customer Support
- Market News
- Proposal Generation
- Get Copilot agents
- Create an agent

Chats

Today

FY23 Budget Summary

RFP For The New Market

What is the ratio of EV cars

I need your help to create a

View prompts

Message Copilot

Add content

Copilot Chat on mobile

Get to know Copilot
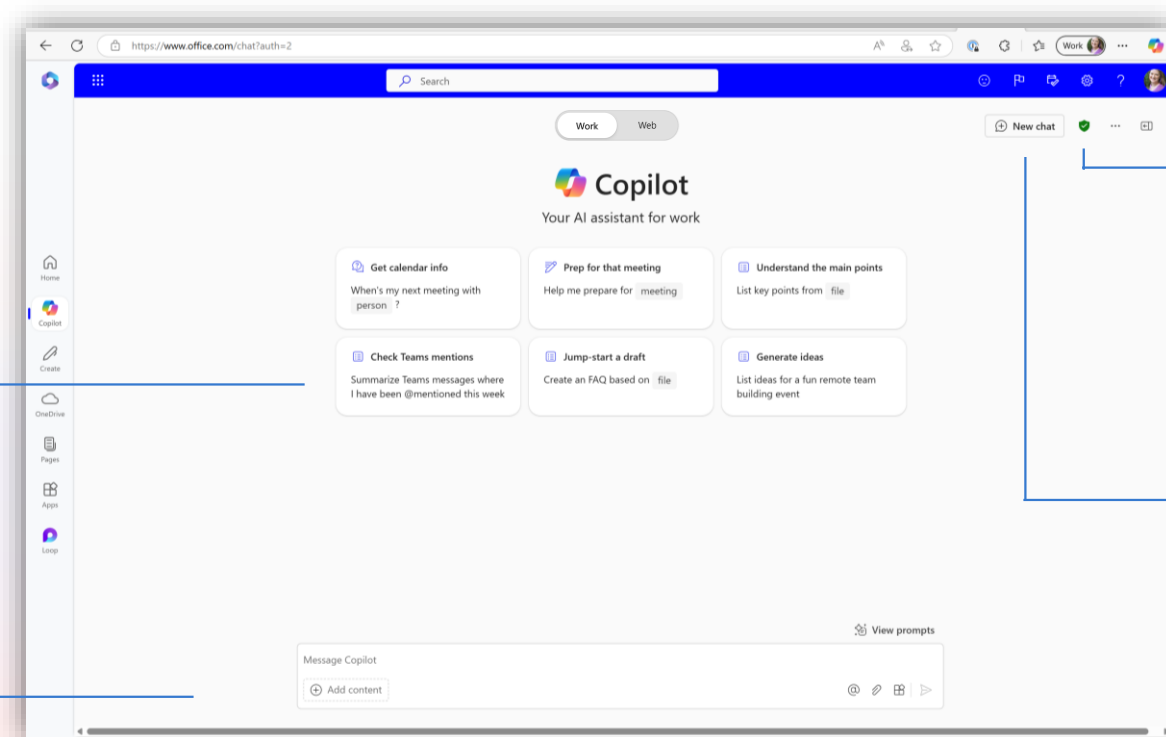
Start at **M365copilot.com**

Here is a visual tour of Copilot:

Suggested prompts
If you're not sure what to ask, try or modify a sample prompt!

Text box
Enter your question (your "*prompt*") here.

Protected badge
Ensure you're signed in with your work account and confirm that you see ✅. If the shield icon is missing, sign in with your work account.

Start a new chat button
Clear your past chat and start a new conversation.

Re-Introduce Yourself

Learning to Prompt using Copilot Lab

1. Navigate to https://M365copilot.com
2. Familiarize yourself with interface
   1. Suggested Prompts
   2. Attaching files
   3. Agents (popout if needed)
3. Go to Prompt Gallery
4. Save a prompt
5. Go to Copilot Prompt Gallery

WOMEN HISTORY
Month
5:00

Microsoft 365 Copilot
Writing a good prompt

Goal + Context + Source + Expectations

Goal

What response do you want from Copilot?

_____

"Generate 3-5 bullet points..."

Context

Why do you need it and who is involved

_____

"...to prepare me to give a presentation on the importance of grant writing.

Source

Which information sources or samples should Copilot use?

_____

"Focus on documents in my OneDrive."

Expectations

Who should Copilot respond to best meet your expectations

_____

"Please use simple language so I can get up to speed quickly."

The art and science of prompting

Prompts are how you ask Copilot to do something for you — like creating, summarizing, editing, or transforming.

Think about prompting like having a conversation, using plain but clear language and providing context like you would with an assistant.

Tell Copilot what you need

Learn about projects and concepts:
"What is [Project X] and who are the key stakeholders working on it?"

Edit text:
"Check this product launch rationale for inconsistencies."

Transform documents:
"Transform this FAQ doc into a 10-slide onboarding guide."

Summarize information:
"Write a session abstract of this [presentation]."

Create engaging content:
"Create a value proposition for [Product X]."
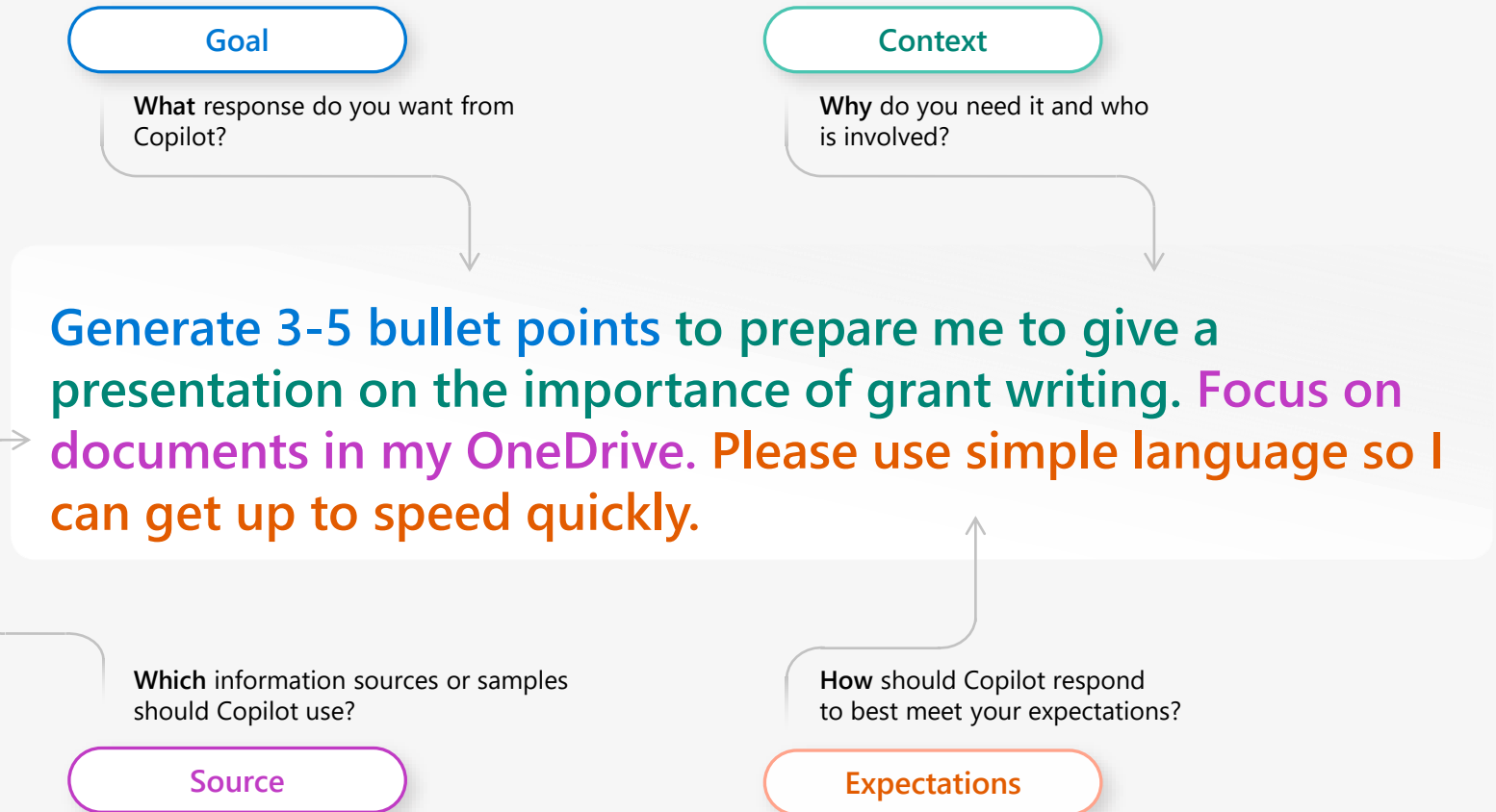
Catch-up on missed items:
"Provide a summary of the updates and action items on [Project X]."

The art and science of prompting

To get the best response, it's important to focus on some of the **key elements** when phrasing your Copilot prompts.

Include the right prompt ingredients

Goal
What response do you want from Copilot?

Context
Why do you need it and who is involved?

Generate 3-5 bullet points to prepare me to give a presentation on the importance of grant writing. Focus on documents in my OneDrive. Please use simple language so I can get up to speed quickly.

Which information sources or samples should Copilot use?

How should Copilot respond to best meet your expectations?

Source

Expectations

Spark JOY with Copilot

Escape the Room

Here is the prompt:

Turn the linked informational website into an "escape the room" challenge where we compete to solve each puzzle or problem. The attached paper will provide ideas, and you will use your abilities to challenge me, but also assist me if I get stuck. Don't show the other rooms until I've escape them, so one at a time and keep it to just four total rooms. Describe any equipment or rooms with enough detail that I can interact with them given that I am not in the room physically. Ensure the problem requires deep thinking skills, not just pressing buttons. Keep responses simple and straightforward. Let's see who escapes first! /https://learn.microsoft.com/en-us/training/modules/empower-educators-explore-potential-artificial-intelligence/introduction-ai

https://aka.ms/EDU_Prompts

08:00

Copilot agents and Copilot Studio agent builder

Copilot agents give Copilot new ways to access data and take actions. Create Copilot agents quickly using natural language directly in M365 Copilot Chat and SharePoint.
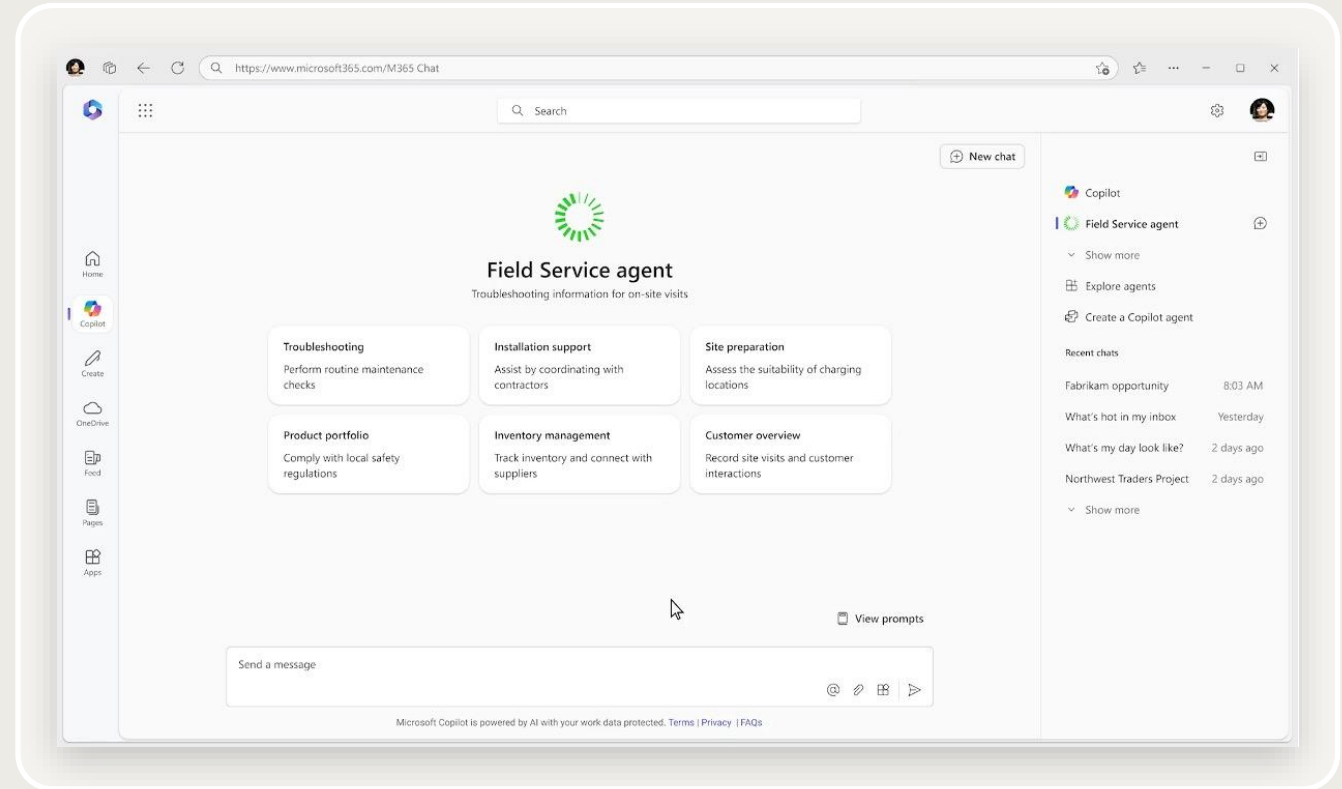
M365

Microsoft 365 Copilot

Your AI assistant for work

$30

Copilot Chat
Free, secure AI chat
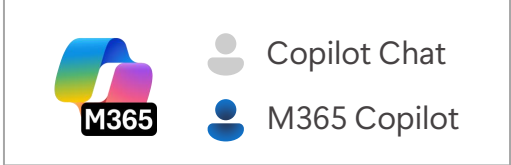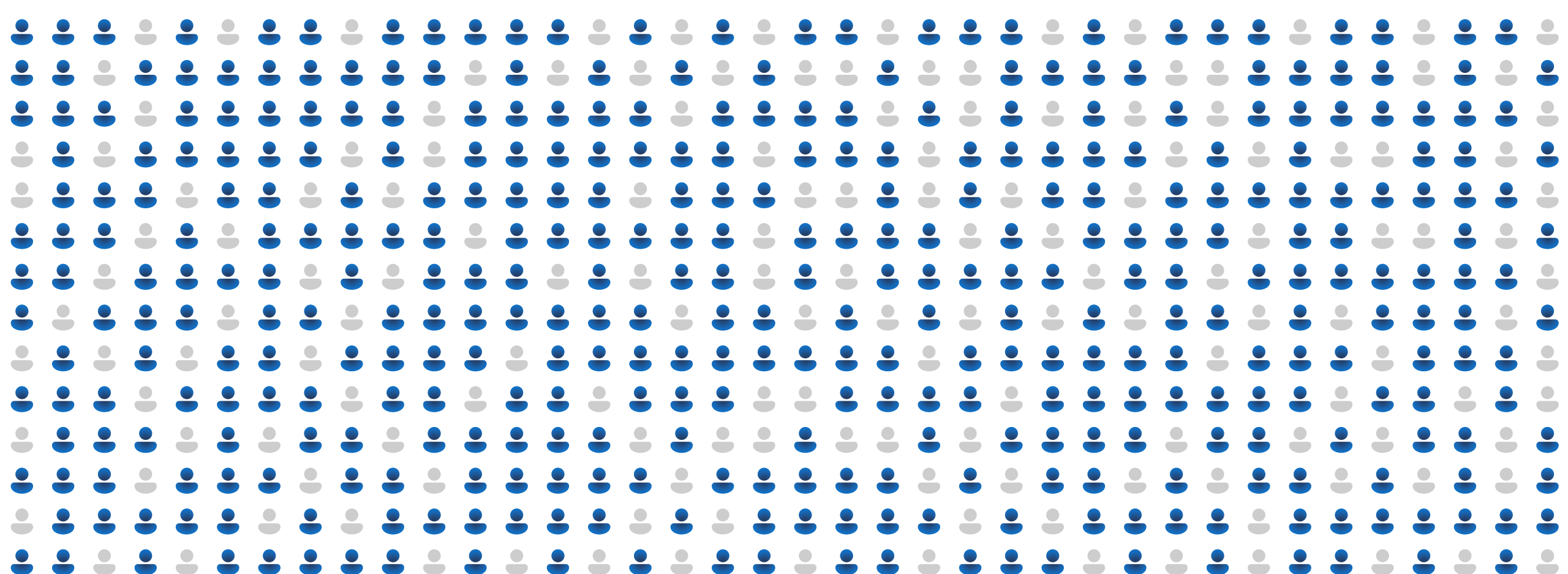
➕

Chat
Work-grounded

Copilot in M365 apps
Teams, Outlook, Word, Excel, PowerPoint

Agents

Copilot Control System

Copilot Analytics

Scaling AI Transformation

Copilot Chat

M365 Copilot

Examples of agent templates in Copilot Chat

The simplest way to get started with agents. Once enabled by an admin, users can @mention the agent in Copilot Chat or open it directly by selecting it from the right-side pane.

Agent Name	Description
Writing Coach	Provides detailed feedback on writing. Helps change the tone of messages, translates text, and assists in writing tasks
Idea Coach	Helps users brainstorm and organize ideas
Prompt Coach	Assists users in creating effective well-structured prompts for Copilot
Career Coach	Provides personalized career development suggestions including role understanding, skill gap analysis, learning opportunities, and career transition plans
Learning Coach	Helps users understand complex topics by breaking them down into simple, intermediate, and advanced summaries. Provides guided practice and learning plans
Visual Creator	Assists users with creating images and videos

Writing Coach

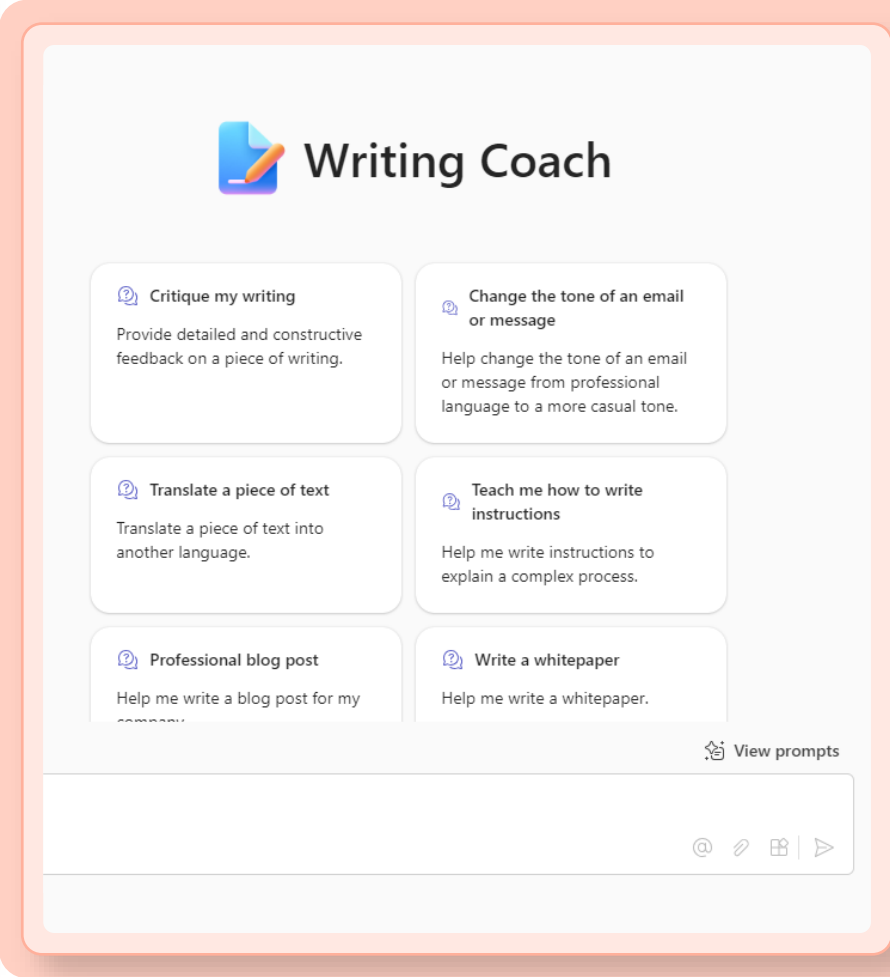## Business Challenge – Speed content creation

Business success depends on a rapid sharing of ideas. Written communication is crucial as it ensures clear, precise, and permanent records of information, facilitating effective decision-making and accountability. It also enhances professionalism and helps in building strong relationships with clients, partners, and employees by conveying messages accurately and consistently

How Writing Coach can help

- Copilot Writing Coach can assist users by providing personalized feedback on their writing, helping to improve clarity, grammar, and overall effectiveness. It offers suggestions for enhancing tone, style, and structure, making written communication more impactful and professional

Areas of impact

- Saves time
- Improves quality of written communications
- Speeds decision-making

Idea Coach

Business Challenge – Improve creativity

Creativity fuels innovation, which is essential for businesses to grow and stay competitive. By fostering a creative environment, companies can develop new ideas, products, and services that meet changing market demands and customer needs

How Idea Coach can help

- Copilot Idea Coach can assist teams with scenarios like product development, marketing campaigns, process change, and team building

Areas of impact

- Improve creativity
- Generate more ideas for evaluation
- Improve marketing
- Improve product designs

💡 Idea Coach

Brainstorm a topic	Plan brainstorming Session
Hey Idea Coach, help me brainstorm about a specific topic.	Hey Idea Coach, I need help planning a Brainstorming session.
Brainstorming Exercises	Organize Ideas
Hey Idea Coach, Can you help me find fun exercises for my Brainstorming session?	Hey Idea Coach, Can you help me find tools to organize ideas?
Feedback and Improvement	Training and Development
Hey Idea Coach, Can you give me some feedback on my session?	Hey Idea Coach, Can you help me improve my skills for Brainstorming sessions?

View prompt

Prompt Coach

Business Challenge – Improve prompting

Copilot works best when it gets very detailed prompts that are similar to the instructions you would give to a person. But most people are not used to interacting with a computer that way. Prompt coach can help speed the process of interacting with LLMs

How Prompt Coach can help

- Prompt coach can help to improve the success rate of receiving valuable responses from Copilot. It can also help users get more value from Copilot suggesting use cases

Areas of impact

- Improve Copilot usage
- Speed time to value of Copilot
- Improve business processes

Career Coach

Business Challenge – Improve prompting

The purpose of the Copilot Career Coach is to provide personalized guidance and support to individuals in their career development journey. By leveraging AI, the Copilot Career Coach can help users reflect on their achievements, identify challenges, and set actionable goals for growth and development

How Career Coach can help

- **Self-Assessment:** The Copilot Career Coach assists users in crafting meaningful self-assessments for performance reviews
- **Goal Setting:** It helps users set specific, actionable goals for their career development
- **Personalized Guidance:** The Copilot Career Coach provides tailored advice and recommendations based on the user's unique career path and aspirations
- **Continuous Improvement**: By encouraging regular reflection and goal setting, the Copilot Career Coach promotes a growth mindset and continuous improvement

Areas of impact

- Improve employee satisfaction
- Reduce turnover

Career Coach

Career transition advice
I am considering a career transition. How can I make this change successfully?

Networking strategies
How can I leverage my professional network to help?

Performance improvement
How can I improve my performance in my current role to prepare for future opportunities?

Career development plan
Help me create a detailed career development plan based on my current role and future goals.

Skill gap analysis
Analyze my current skills and identify any gaps that I need to fill to advance in my career.

Learning opportunities
What courses, certifications, or workshops would you recommend for someone in my role to grow professionally?

View prompts

0 / 16000

Learning Coach

Business Challenge – Improve prompting

The purpose of the Copilot Learning Coach is to provide personalized guidance and support to individuals in their learning and development journey. By leveraging AI, the Copilot Learning Coach helps users enhance their skills, stay updated with relevant knowledge, and achieve their learning goals

How Learning Coach can help

- **Personalized Learning Paths:** The Copilot Learning Coach offers tailored learning paths based on the user's current skills, career goals, and interests. This ensures that the learning experience is relevant and effective
- **Skill Development:** It helps users identify areas for improvement and provides resources and recommendations to develop new skills
- **Continuous Learning:** The Copilot Learning Coach encourages a culture of continuous learning by regularly suggesting new learning opportunities and keeping users updated with the latest industry trends and best practices
- **Goal Setting and Tracking:** It assists users in setting specific learning goals and tracking their progress

Areas of impact

- Improve employee satisfaction
- Reduce turnover

📙 Learning Coach

Learn about a topic	Learn a new language
Please help me learn about a specific topic.	Please guide me in learning and practicing a new language.

Practice a skill	Prepare for a test
Please help me practice by doing exercises for the skill I have.	Please help me prepare for a test on a subject I choose.

Create a learning plan	Suggest a learning method
Please help me create a learning plan for a topic.	Please help me identify the most effective learning approach for me.

View prompts

0 / 16000

Visual Creator

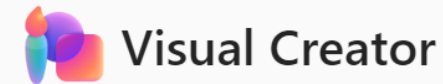## Business Challenge – Speed content creation

The purpose of the Copilot Visual Creator is to help users generate high-quality visual content quickly and easily using AI. This tool is designed to enhance productivity and creativity by allowing users to create images, designs, and even videos based on natural language descriptions

How Visual Creator can help

- **Professional Visuals:** Copilot Visual Creator enables users to generate professional-looking visuals without needing advanced design skills. This can be particularly useful for creating images for documents, reports, presentations, and websites
- **Efficiency:** By using natural language to describe the desired visual content, users can save time and effort. Copilot Visual Creator can generate multiple images based on the description, allowing users to choose the one that best fits their needs
- **Accessibility:** This tool makes it easier for users who may not have access to a designer to create visually appealing content. It democratizes the creation of high-quality visuals, making it accessible to a wider range of users

Areas of impact

- Improve creativity
- Speed content creation
- Reduce spend on marketing agencies
- Improve accessibility

Examples of agents that can be created in Copilot Chat

These agents can be easily built using the agent builder in Copilot Chat. Once shared, users with access can add the agent by selecting **Get Copilot Agents** in Copilot Chat in the right-side pane.

Agent Name	Description
Onboarding Buddy	Assists new hires with onboarding processes, provides training, answers questions, and sets up meetings
Resume Reviewer	Evaluates resumes against job descriptions, scores candidates based on qualifications
Contract/Legal Review	Automates review and analysis of legal documents, identifies key clauses and assesses compliance
Research Assistant	Retrieves research materials from company databases, enhances productivity by providing relevant information
Policy Search	Offers comprehensive policy lookup capabilities, answers inquiries about company policies

Onboarding Buddy

An Onboarding Buddy Agent is dedicated to ensuring new hires have a seamless and welcoming start. It can greet new team members, assist with technical issues, answer questions, provide essential company resources, and explain the company culture. Additionally, list mandatory training courses and guide new hires through HR processes.

Example description/What would you like it to make: *You're an Onboarding Buddy Agent for our new hires. You know everything about the onboarding process from the documents we've shared with you and are happy to help new team members get the information they need. You can assist with recommending resources, explaining company culture, listing mandatory training, and guiding them through their first few weeks. Your goal is to ensure new employees feel welcomed and supported as they integrate into the company*

Naming confirmation: *Onboarding Buddy*

To be emphasized/avoided: *Please be clear and concise and avoid long answers. Where possible, refer primarily to the knowledge shared with you. If you don't know the answer, please refer them to an HR manager*

How to communicate: *Friendly and professional*

Move to configure

Starter prompts: *Leave as is*

Knowledge: *Use an existing SharePoint site for onboarding or create a simple SharePoint site called Onboarding Materials and upload the documents required*

Example questions to ask:
- *What mandatory training sessions do I need to complete in my first few weeks?*
- *How do I register for these training sessions?*
- *What resources are available to help get me started?*
- *Can you tell me more about the company culture and values?*
- *Who do I contact if I have technical issues?*
- *How do I submit my timesheet?*
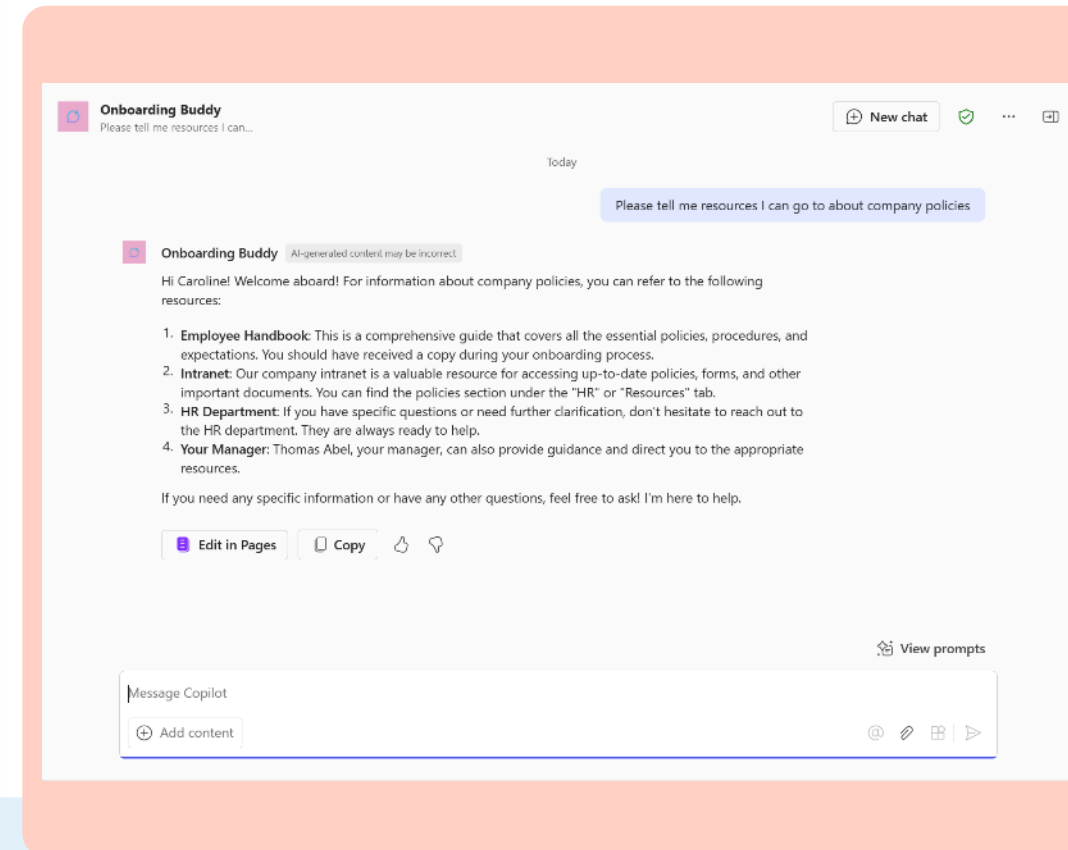
Resume Reviewer

A Resume Reviewer Agent can be designed to streamline the recruitment process by evaluating resumes against job descriptions. This agent can automatically analyze resumes stored in a SharePoint library, compare them with predefined job criteria, and score candidates based on their qualifications. It can also answer queries about specific candidates, providing insights into their suitability for the role.

Example description/What would you like it to make: *You're a Resume Reviewer Agent designed to streamline the recruitment process by evaluating resumes against job descriptions. You know everything about the recruitment process from the documents we've shared with you and are happy to help recruiters get the information they need. You can assist with tasks such as analyzing resumes stored in a SharePoint library, comparing them with predefined job criteria, and scoring candidates based on their qualifications. You can also answer queries about specific candidates, providing insights into their suitability for the role. Your goal is to ensure recruiters can efficiently identify the most suitable candidates for open positions*

Naming confirmation: *Resume Reviewer*

To be emphasized/avoided: *Resume Reviewer Please be clear and concise and avoid long answers. Where possible, refer primarily to the knowledge shared with you. If you don't know the answer, please refer them to the HR Team*

How to communicate: *Friendly and professional*

Move to configure

Starter prompts: *Leave as is*

Knowledge: *Use a SharePoint site with resumes and job descriptions*

Example questions to ask:
- *Can you analyze the resumes stored in the SharePoint library and provide a summary of the top candidates?*
- *What score do you assign to the candidate James Kelly, and what factors influenced their score based on the job description?*
- *What candidate do you recommend for this role based on their resume comparison to the job criteria?*

New chat

Resume Reviewer
An agent that reviews resumes against job descriptions to select the best candidate.

Review Resume
Please review this resume against the job description and provide your assessment.

Compare Candidates
Compare these resumes and tell me which candidate is the best fit for the job description.

Top Candidates
Who are the top candidates for this job based on the resumes provided?

Candidate Summary
Provide a summary of the top candidates and why they are the best fit for the job.

Resume Analysis
Analyze this resume and tell me how well it matches the job description.

Job Fit
Which candidate is the best fit for this job based on their resume?

Type your message

0/2000

Contract Review

The Contract Review Agent is designed to assist legal teams and contract managers by automating the review and analysis of legal documents. This agent can quickly identify key clauses, ensure compliance with legal standards, assess potential risks, explain specific clauses, and provide summaries of lengthy contracts, ensuring that nothing is overlooked.

Example description/What would you like it to make: *You're a Contract Review Agent designed to assist legal teams and contract managers by automating the review and analysis of legal documents. You know everything about the contract review process from the documents we've shared with you and are happy to help legal teams get the information they need. You can assist with tasks such as quickly identifying key clauses, ensuring compliance with legal standards, assessing potential risks, explaining specific clauses, and providing summaries of lengthy contracts. Your goal is to ensure that nothing is overlooked and that the contract review process is efficient and thorough*

Naming confirmation: *Contract Review*

To be emphasized/avoided: *Please be clear and concise and avoid long answers. Where possible, refer primarily to the knowledge shared with you. If you don't know the answer, please refer users to the Legal Team*
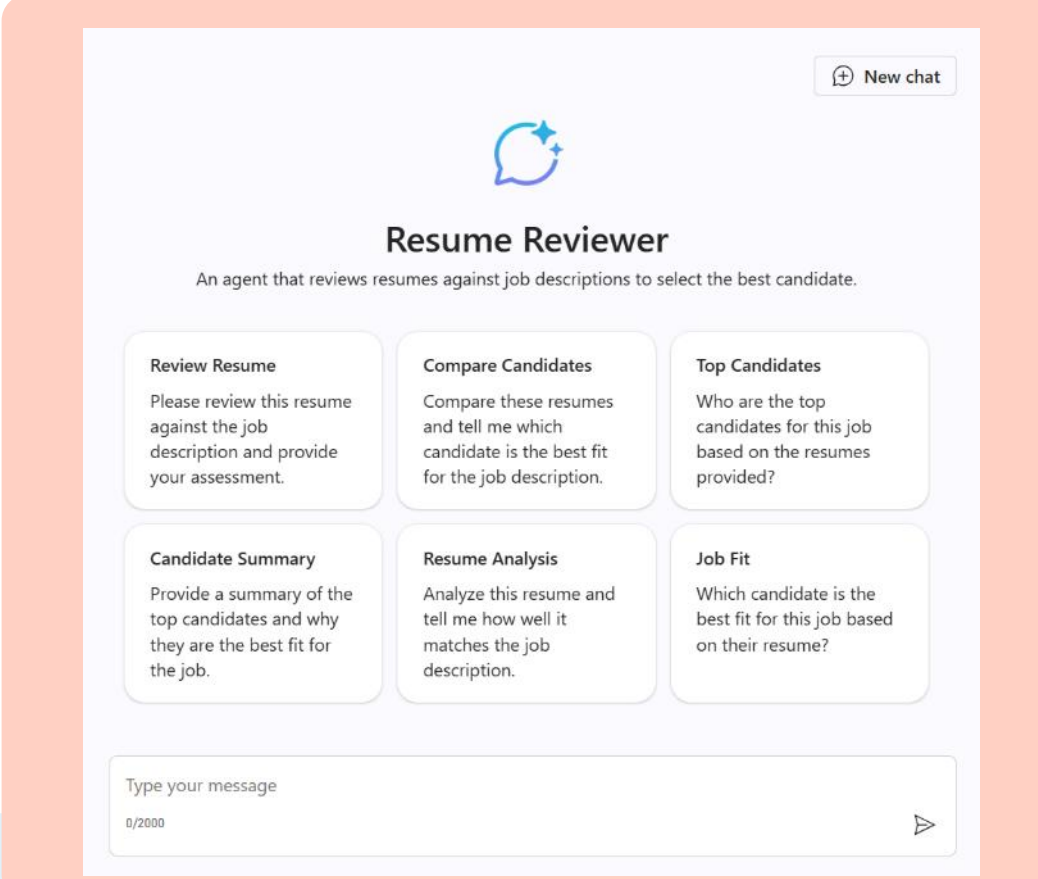
**How to communicate:** *Friendly and professional*

Move to configure

Starter prompts: *Leave as is*

Knowledge: *Use a SharePoint site with contracts and review instructions*

Example questions to ask:
- *Can you identify the key clauses in the XyZ solutions contract?*
- *Can you summarize the XyZ solutions contract?*
- *Does the XyZ contract comply with our legal standards and regulations?*
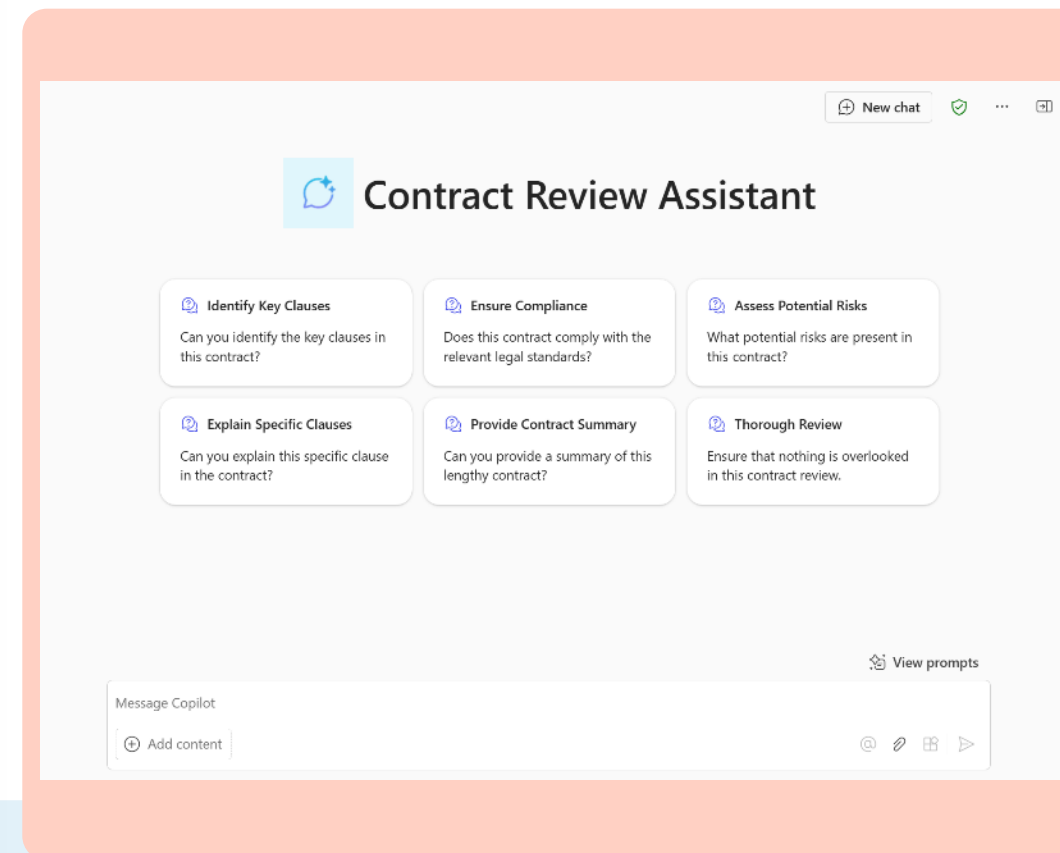
Research Assistant

A Research Assistant Agent empowers teams across an organization to efficiently access and retrieve research materials. This agent connects to a SharePoint link or company link that houses all research documents, enabling users to quickly find relevant information based on their specific topics of interest. This streamlined process enhances productivity and ensures that teams have the insights they need at their fingertips.

Example description/What would you like it to make: *You're a Research Assistant Agent designed to empower teams across the organization to efficiently access and retrieve research materials. You know everything about the research process from the documents we've shared with you and are happy to help team members get the information they need. You can assist with tasks such as connecting to a SharePoint link that houses all research documents, enabling users to quickly find relevant information based on their specific topics of interest. Your goal is to streamline the research process, enhance productivity, and ensure that teams have the insights they need at their fingertips*

Naming confirmation: *Research Assistant*

To be emphasized/avoided: *Please be clear and concise and avoid long answers. Where possible, refer primarily to the knowledge shared with you. If you don't know the answer, please refer users to the Research Team*

How to communicate: *Friendly and professional*

Move to configure

Starter prompts: *Leave as is*

Knowledge: *SharePoint site with relevant research information*

Example questions to ask:
- *Can you help me find research documents related to [specific topic]?*
- *Can you provide a summary of the latest research on [specific topic]?*
- *Are there any recent updates or new additions to our research documents?*
- *What research do we have that was conducting by [specific researcher]*
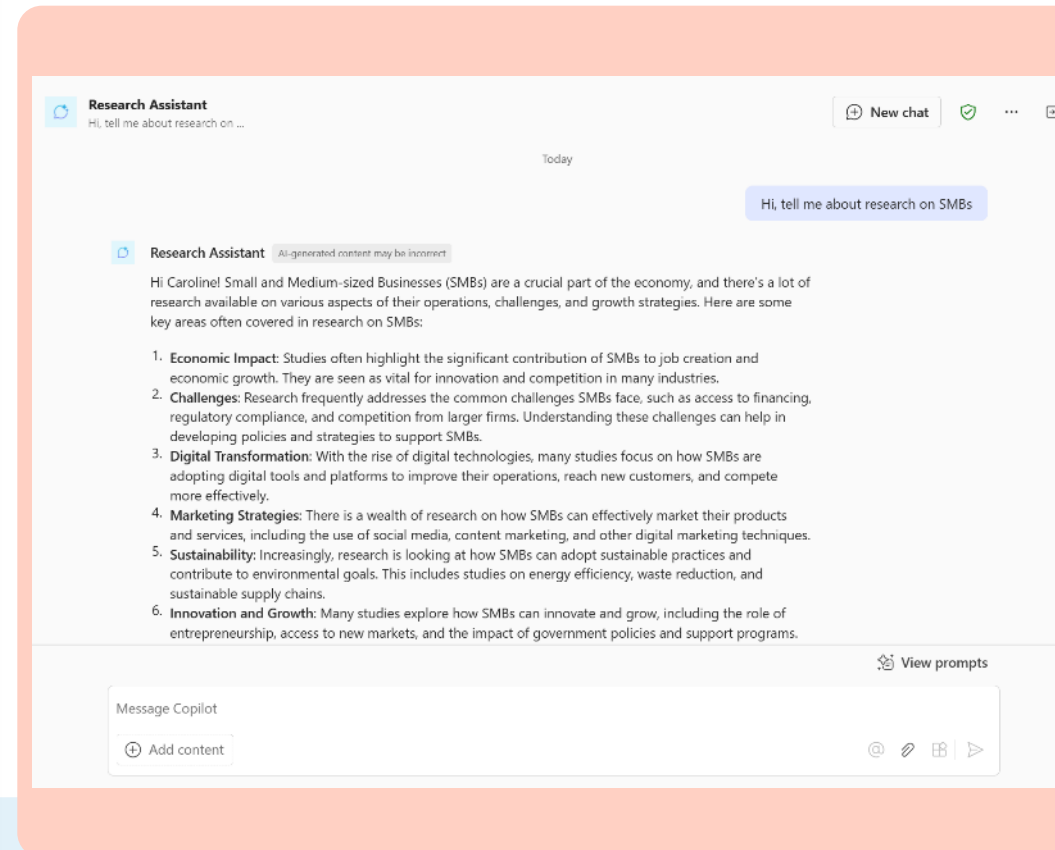
Policy Searcher

A Policy Search Agent offers comprehensive policy lookup capabilities, allowing users to inquire about various company policies such as time off, remote work, benefits, workplace conduct, health and safety, and other HR-related topics. This ensures employees have quick access to the information they need to stay informed and compliant.

Example description/What would you like it to make: *You're a Policy Search Agent designed to offer comprehensive policy lookup capabilities. You know everything about the company's policies from the documents we've shared with you and are happy to help employees get the information they need. You can assist with tasks such as inquiring about various company policies, including time off, remote work, benefits, workplace conduct, health and safety, and other HR-related topics. Your goal is to ensure employees have quick access to the information they need to stay informed and compliant*

Naming confirmation: *Policy Searcher*

To be emphasized/avoided: *Please be clear and concise and avoid long answers. Where possible, refer primarily to the knowledge shared with you. If you don't know the answer, please refer users to the HR Team*

How to communicate: *Friendly and professional*

Move to configure

Starter prompts: *Leave as is*

Knowledge: *Use a SharePoint site that stores company policies*

Example questions to ask:
- *What is the company's policy on remote work?*
- *How many vacation days am I entitled to each year?*
- *Can you explain the company's health and safety guidelines?*
- *How do I request time off?*
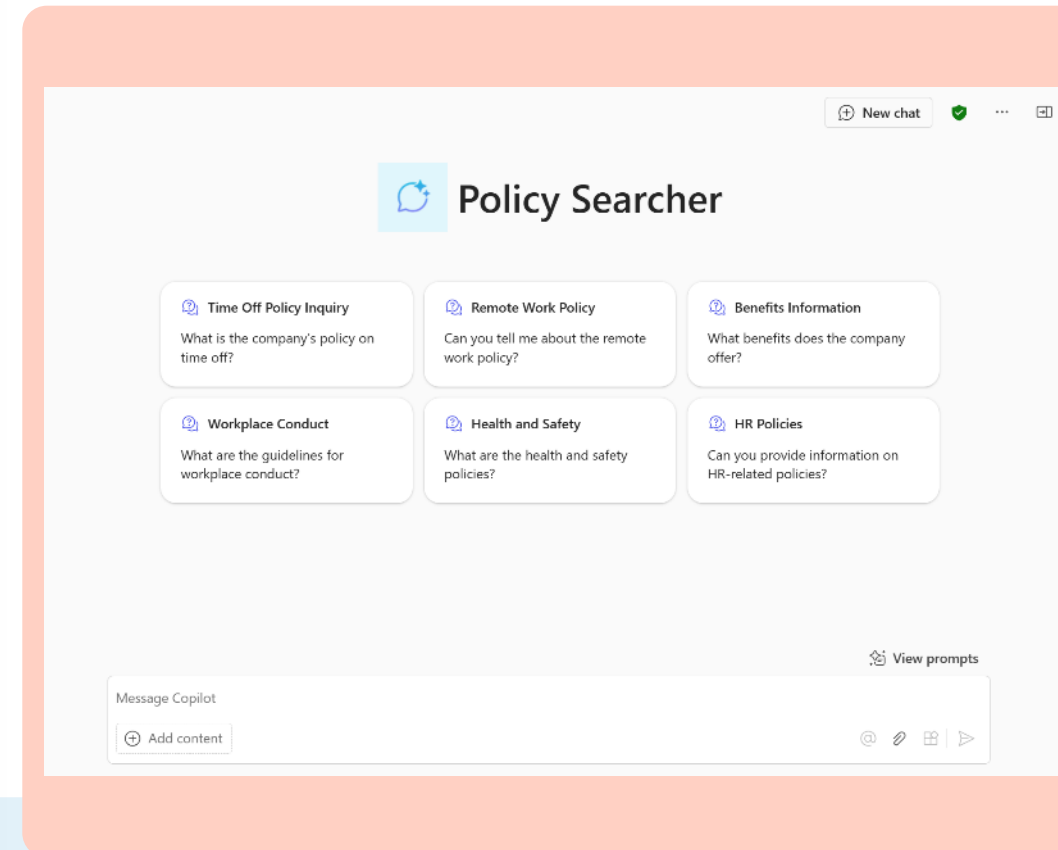
Agent Activity

Find an Agent Template

1. From your browser, go to https://m365copilot.com
2. Click "Get agents"
3. Familiarize yourself with the Featured Agents
4. Find "Writing Coach", click on it. Read info, then close window.
5. Find "Ideas Coach", click on it. Read info, then close window.
6. Find "Prompt Coach", click on it. Read info, then close window.
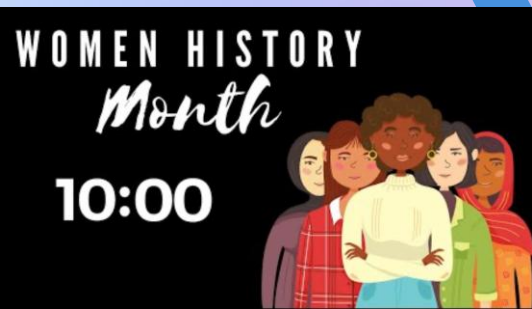
Copilot Pages

- Quickly pull a Copilot Chat response into a sharable canvas built for real-time multiplayer collaboration with AI; use Copilot to improve and expand upon subject matter, build visualizations, and bring in additional content.
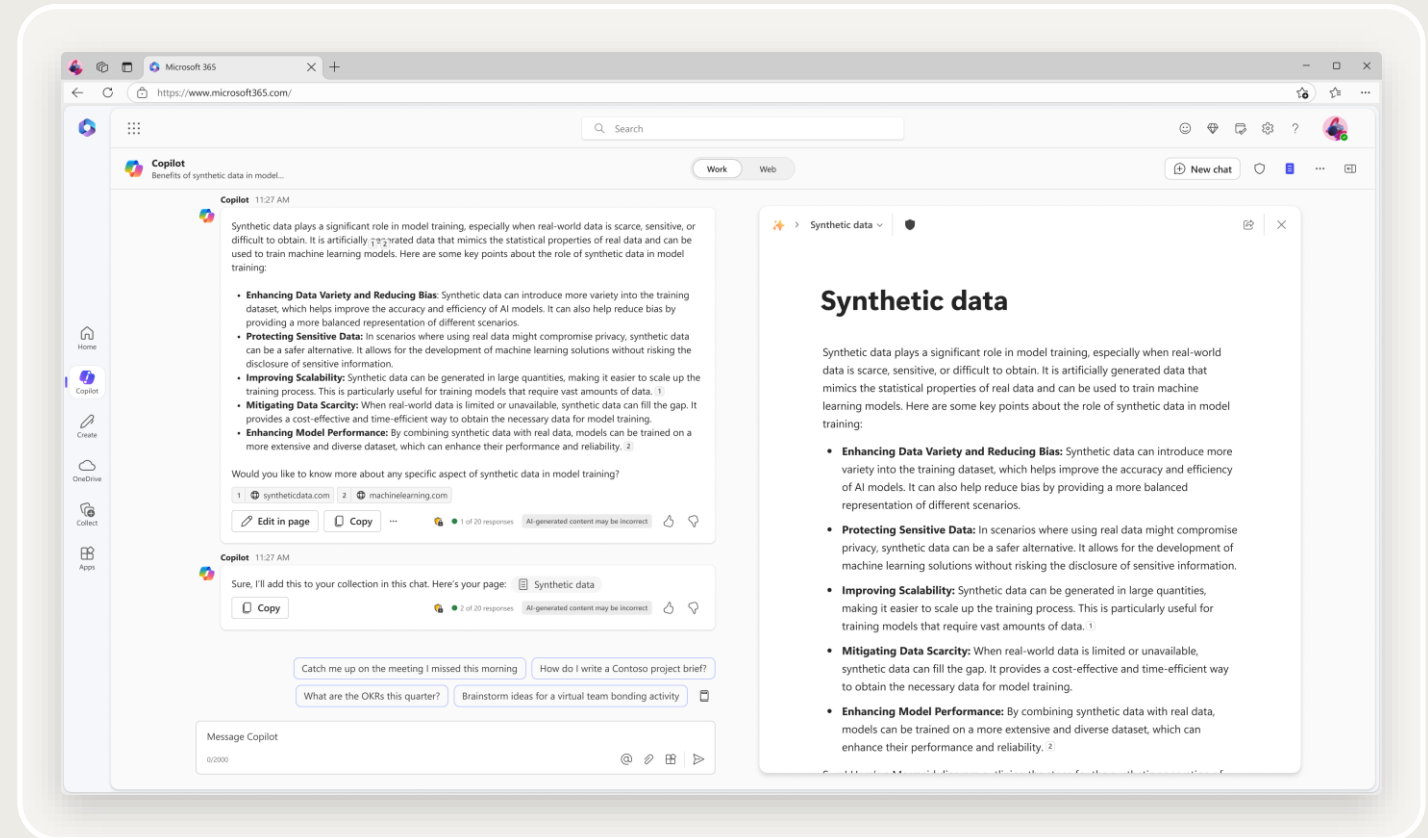
Pages Activity

Page Builder

Here is the activity:

Start a Prompt, and add it to your Pages, continue to build it.

Copilot Chat

Free, secure AI chat

Chat
Web-grounded

Agents

IT controls

		Microsoft 365 Copilot Chat **Free + Consumption**	Microsoft 365 Copilot **$30 pupm**
Legend	● Included ▲ Included — Metered		
Chat	Copilot Chat – Web grounded (powered by GPT-4o)	●	●
	Copilot Chat – Work grounded (work data in your tenant's Microsoft Graph and 3rd party data via Graph connectors)		●
	Copilot Pages	●	●
	File upload[1]	●	●
	Code Interpreter[1]	●	●
	Image generation[1]	●	●
Agents[2]	Create agents using Copilot Studio[3], including SharePoint agents	●	●
	Discover and pin agents	●	●
	Use agents grounded in Web data	●	●
	Use agents grounded in work data (work data in your tenant's Microsoft Graph and 3rd party data via Graph connectors)	▲	●
	Use agents that act independently using autonomous actions	▲	▲
Personal assistant	Copilot reasons over personal work data (e.g. Outlook, OneDrive, meeting transcripts)		●
	Copilot in Teams (Copilot in Meetings and Meeting Recap, insights from screen-shared content coming soon)		●
	Copilot in Outlook (Prioritize my inbox, schedule focus time and 1:1 meetings, draft agendas, summarize message threads)		●
	Copilot in Word (Suggestions for structure, flow, and tone, draft and summarize documents)		●
	Copilot in Excel (Python, getting started experience, create formulas and visualizations using natural language)		●
	Copilot in PowerPoint (Narrative builder, presentation translation, generate slides or images aligned to company branding)		●
	Copilot Actions		In preview
	Pre-built M365 agents (Interpreter, Facilitator, Project Manager, Employee Self-Service)		In preview
Copilot Control System	Enterprise Data Protection (EDP)	●	●
	IT management controls	●	●
	Agent management	●	●
	SharePoint Advanced Management		●
	Copilot Analytics to measure usage and adoption[4]		●
	Pre-built reports and advanced analytics to measure ROI		●

1. Limits apply. 2. Applies to employee-facing agents only. 3. Learn more about the full capabilities of Copilot Studio: aka.ms/CopilotStudioCapabilities 4. Basic reporting in Microsoft Admin Center available for Copilot Chat.

Accelerate your AI journey with our Copilot Success Kit

Our implementation framework and how-to resources are designed to streamline and accelerate your time to value with Microsoft 365 Copilot skills. The guidance integrates many resources to empower you to achieve rapid value with Copilot while enabling your progressive skilling journey with AI tools.

Download the resources you need based on your phase of implementation.

< View the full Microsoft 365 Copilot Hub

Microsoft 365 Copilot

Copilot Success Kit

Start here

☆

Implementation overview

👥

User Enablement Guide

⚙

Technical Readiness Guide

https://adoption.Microsoft.com

Use case | District-wide reporting and communication

1. Data assimilation

The Evergreen School District Superintendent wants to improve its performance reports (e.g., faster, visually appealing reports) and unify stakeholder communication across school boards and parents for superior clarity

Microsoft 365 Chat

Collate data from various district sources such as student information systems, financial databases, and academic performance trackers for further analysis (e.g., student enrollment numbers, standardized test scores, budget and staff reports)

2. Report definition

Analyze the district-wide data and identify the specific KPIs and reporting needs for each audience group

Microsoft 365 Chat
Copilot in Excel

Extrapolate specific needs and KPIs of different audiences such as school boards, parents, and the community (e.g., graduation rates for the board, student progress for parents, teacher effectiveness)

3. Report generation

Prepare customized reports tailored to different stakeholders' needs, highlighting district performance, challenges, and proposed strategies for improvement

Microsoft 365 Chat
Copilot in Excel
Copilot in Word

Generate custom visuals to present data in an easily digestible manner and are accessible to all (e.g., a graduation rate graph over time for the board, student progress chart by grade level for parents, various formats)

6. Continual improvement

Gather feedback and engagement data to continuously refine the report format, content, and communication channels used for socialization

Microsoft 365 Chat
Copilot in Word

Compile improvement areas to optimize engagement effectiveness

5. Insights dissemination

Organize discussion forums to disseminate key findings, best practices, and address key concerns / clarifications real-time

Copilot in Outlook

Schedule personalized calendar invites and document key discussion points, decisions made, follow-ups, and next steps to share with a wider audience

4. Communication plan development

Develop a comprehensive communication strategy to determine communication channels, timelines, and messaging for effective engagement

Copilot in Word
Copilot in PPT

Draft district-wide communication rollout plan

District-wide reporting and communication stages

Note: All assumptions are based on secondary research. Should some assumptions change for the prospect, please update the assumptions and the total time savings will correspondingly change.

Next steps

Continue using Copilot

Practice prompting and share the results with your peers.

Resources

- Educator Course: aka.ms/CopilotforEducators
- Course: Enhance Teaching and Learning with Bing Chat
- Course: Exploring Generative AI with Copilot in Bing
- Documentation: aka.ms/Copilot/Docs
- New Features: aka.ms/Copilot/FeaturesList
- Video for educators: aka.ms/Copilot/EDUVideo
- Website: aka.ms/Copilot/Website
- Announcement blog: aka.ms/CopilotExpansionEDU
- 5 ways to use Copilot in Education: 5 ways to use Copilot in education #shorts

Copilot

Get AI-ready with Microsoft & Copilot+PC's

Surface brings software and hardware together—from device to cloud—to build an end-to-end AI experience that supports educators, IT, staff and students.

Reach out:
Melanie Bennetts (melanie.bennetts@microsoft.com)
Sr Surface Specialist, EDU

Cloud

Apps

OS

AI on device

Surface lets you engage with AI in a way that's most effortless to you.

AI models will scale on the edge

As the cost of running AI increases, running smaller, specialized models locally on a device helps organizations realize economic scalability.

"We're literally going to have lots and lots of applications which will have local models and we'll have hybrid models, and I think that's the future of AI going forward."

-Satya Nadella

Leon Mallett · 2nd   2h ···
Chief Operating Officer at IAM Cloud

Why? LLMs have a fundamentally similar problem to proof of

"...Efficiency matters...the obvious solution to this is using appropriately-scaled AI for whatever problems you want it to help solve."

Clem Delangue 🤗 · 2nd   + Follow ···
Co-founder & CEO at Hugging Face
23h · 🌐

"...most companies will realize that smaller, cheaper, more specialized models make more sense for 99% of AI use-cases..."

AI_Skeptic ✓   ···
@The_AI_Skeptic

The cost of running AI is becoming an issue, even in domains where people are prepared to pay for it:

AI across the enterprise

Cloud

AI in the cloud:
- Best suited for large, abstract data
- Data mining and analytics
- Highly scalable, access from any device
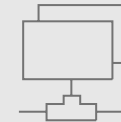- Resource and expense-intensive

Ex: Microsoft Copilot

Hybrid

AI that utilizes available technology:
- Scale through cloud when needed
- Gain efficiencies when AI-accelerating hardware is available

Ex: On-device image processing, Cloud analysis against large database
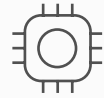
Hardware

AI on the device:
- Best suited for smaller, specialized workloads
- Offers potential offline, security, cost, and efficiency benefits
- NPU offers specialized processing

Ex: Windows Studio Effects
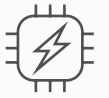
What is an NPU?

	CPU ⚙ Central Processing Unit	GPU 🖥 Graphics Processing Unit	NPU ⚡ Neural Processing Unit
History	• Foundational to computing • Iterative updates in recent years	• Provided significant boosts in graphical and data processing • Similar iterative trajectory now turning interest towards AI	• New frontier in processing innovation • Exponential improvements in just a few years
Purpose	• Brain of the computer • Performs basic operations from software instructions, loaded from memory	• Specialized to render 2D and 3D objects • Can perform operations in parallel, processing vectors of data simultaneously	• Specific architecture for deep learning • Integrated as an element of the SoC • Hardwired matrix without need for memory access, reduced precision • Trained specifics, Inference operations
Pros	Can execute any line of software	Efficient for repeatable calculations	Audio, Video, Data inspection
Neg	Not efficient at specific operations	Floating Point, not needed for AI	Generic code execution

Surface Pro

Deliver AI innovation where work happens with tablet versatility and laptop performance. Surface Pro 2-in-1s maximize productivity through intuitive interactions and premium design that adapt to almost any setting.

These Surface Pro 2-in-1s feature:

- Enterprise-grade security with TPM 2.0 and BitLocker support
- Windows 11 Secured-core PC
- Windows Hello for Business with facial recognition and Enhanced Sign-In Security
- Integrated NFC authentication[45]
- 1440p Quad HD front-facing camera with ultrawide field of view and AI-driven Windows Studio Effects[11]
- Dual Studio Mics with AI-enhanced voice focus[13]
- 2W stereo speakers with Dolby Atmos®[14]
- PixelSense™ Flow touchscreen with adaptive color and dynamic refresh rate up to 120Hz
- Compatible with Surface Pro Keyboards[6] and Surface Slim Pen[7]
- Built-in kickstand with 165-degree full-friction hinge
- Replaceable components and simplified repairs using instructional QR codes built into the device[23]
- Surface Management Portal centralizes management and monitoring[50]

Copilot+PC — Snapdragon

Surface Pro for Business
Snapdragon® X Elite or Plus processor

- Qualcomm® Hexagon™ NPU with 45 TOPS
- Optional OLED display
- Optional 5G[41]

- Up to 14 hours of battery life[18] with local video playback for Wi-Fi only models
- Two USB-C® with USB4® ports
- Connect up to three 4K monitors at 60Hz[44]
- Fast charging with minimum 65W charger via Surface Connect or USB-C®[47]
- Wi-Fi 7[4] and Bluetooth® Core 5.4
- Up to 32GB of RAM and up to 1TB additional storage[27]
- 10 MP Ultra HD rear-facing camera
- Microsoft Pluton technology

Copilot+PC — Intel Core Ultra

Surface Pro for Business
Intel® Core™ Ultra processor (Series 2)

- Intel® AI Boost NPU with 40 or 48 TOPS[5]
- Anti-reflective display technology and optional OLED display

- Up to 14 hours of battery life[18] with local video playback
- Two USB-C® with USB4® / Thunderbolt™ 4 ports
- Connect up to two 4K monitors at 60Hz[17]
- Fast charging with minimum 60W charger via Surface Connect or USB-C®[20]
- Wi-Fi 7[4] and Bluetooth® Core 5.4
- Up to 32GB of RAM and up to 1TB additional storage[27]
- 10 MP Ultra HD rear-facing camera
- Microsoft Pluton technology

Surface Laptop

Elevate possibility with sleek design and premium features. Surface Laptops for Business empower employees to drive innovation and move at the speed of opportunity.

These Surface Laptops feature:

- Enterprise-grade security with TPM 2.0 and BitLocker support
- Windows 11 Secured-core PC
- Windows Hello for Business with facial recognition and Enhanced Sign-In Security
- 1080p Full HD front-facing Surface Studio Camera with AI-driven Windows Studio Effects[11]
- Touchscreen display with expansive 3:2 screen ratio
- Signature Surface typing experience, backlit keys, and Copilot key for one-touch Copilot access[9]
- Dual Studio Mics with AI-enhanced voice focus[13]
- Omnisonic® Speakers with Dolby Atmos®[14]
- 3.5 mm headphone jack and Surface Connect port
- Removable SSDs simplify data retention for transfer or decommissioning[22]
- Replaceable components and simplified repairs using instructional QR codes built into the device[23]
- Surface Management Portal centralizes management and monitoring[50]

Copilot+PC

Surface Laptop for Business
Snapdragon® X Elite or Plus processor
13.8-inch and 15-inch

- Qualcomm® Hexagon™ NPU with 45 TOPS
- MicroSDXC Express card reader[15]

- Up to 22 hours of battery life with local video playback[18] (15")
- Two USB-C® with USB4® ports
- One USB-A 3.1 port
- Connect up to three 4K monitors at 60Hz[44]
- Fast charging with minimum 65W power supply via Surface Connect or USB-C®[43]
- Wi-Fi 7[4] and Bluetooth® Core 5.4
- PixelSense™ Flow display with adaptive color, adaptive contrast, HDR,[3] and up to 120Hz refresh rate
- Up to 32GB of RAM and up to 1TB additional storage[27]
- Customizable precision haptic touchpad
- Microsoft Pluton technology

Copilot+PC

Surface Laptop for Business
Intel® Core™ Ultra processor (Series 2)
13.8-inch and 15-inch

- Intel® AI Boost NPU with 40 or 48 TOPS[5]
- Anti-reflective display technology
- Optional integrated smart card reader[16] and MicroSDXC Express card reader[15]
- Inquire about optional 5G

- Up to 22 hours of battery life with local video playback[18] (15")
- Two USB-C® with USB4® / Thunderbolt™ 4 ports
- One USB-A 3.1 port
- Connect up to two 4K monitors at 60Hz[17]
- Fast charging with minimum 60W power supply via Surface Connect or USB-C®[21]
- Wi-Fi 7[4] and Bluetooth® Core 5.4
- PixelSense™ Flow display with adaptive color, HDR,[3] and up to 120Hz refresh rate
- Up to 32GB of RAM and up to 1TB additional storage[27]
- Customizable precision haptic touchpad
- Microsoft Pluton technology

Basic differences between on-premises and cloud
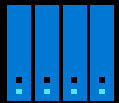
On-premises

You buy servers typically for worst case / highest levels of usage

Cloud

Cloud shifts model towards dynamic allocation of capacity

Infrastructure-as-a-Service

- Virtual machines
- Storage offerings – managed disks, blob storage

Platforms-as-a-Service
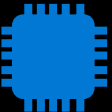
- Containerization and workload portability
- Databases
- Analytics

Software-as-a-Service

- Can even shift on-premises infrastructure over to direct SaaS offerings like O365 or other cloud SaaS offerings

Microsoft Azure

Scalability and time to deploy in the cloud meaningfully improve

		Traditional IT	Cloud supported
	Time to provision	Weeks/months to provision resources	Minutes/hours to provision resources via self-service access
	Hardware usage	1 CPU for 100 hours	100 CPUs for 1 hour
	Location	Location dependent	Accessible everywhere

Technical benefits

Microsoft Azure
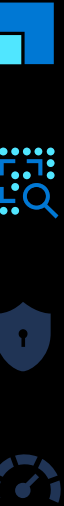
End-to-end aim of cloud is to help you do more in your environment, whether that is on-premises or in cloud
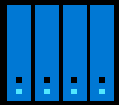
Private cloud: on-premises

Workloads

Monetize existing gear
Retaining non-end of life or under depreciated gear

Public cloud: off-premises

Existing

IaaS

Azure Virtual Machines, Azure VMware Solution, etc.

Modern apps

PaaS

Azure App Service, Azure SQL

Commodity

SaaS

Dynamics, Office, Power BI, etc.

Achieving more with every $ invested

Technical benefits

Microsoft Azure

How does cloud pricing work?

On-premises spend results in a fixed cost structure

On-premises

On-premises IT costs are often upfront and require

Regardless of underlying demand, you are committed to your initial fixed capacity

Due to expectations for growth you have to pre-buy for expected demand and growth

Cloud

Cloud costs allow you to take advantage of a variable cost model

Elastic workloads can spin pay-for-what you use

For more fixed workloads cloud also has reserved instance pricing to take advantage of lower price points for static workloads

Financial benefits

Microsoft Azure
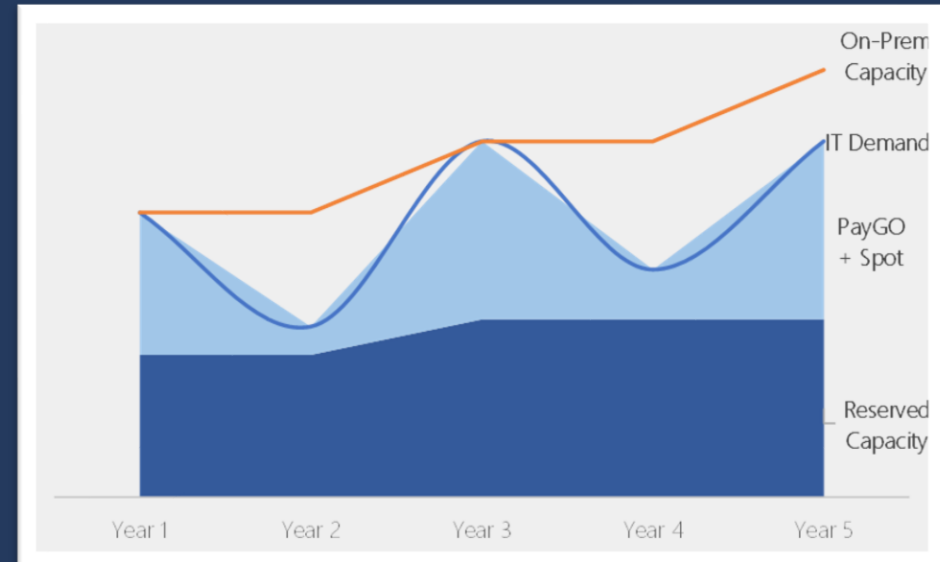
Have cost concerns?

59% of the customers have cost optimization as their top cloud initiative.

Top Cloud initiatives of 2022   **% of all respondents**

Initiative	%
Optimize existing use of cloud (cost savings)	59%
Migrating more workloads to cloud	57%
Move from on-premises software to SaaS	42%
Progressing on a cloud-first strategy	40%
Better financial reporting on cloud costs	38%
Automated policies for governance	36%
Expand use of containers	35%
Manage software licenses in the cloud	33%
Expanding public clouds we use	33%
Expand use of public cloud IaaS/PaaS services	31%
Continuous Integration and Deployment (CI/CD)	29%
Enabling IT to broker cloud services	15%
Expand use of cloud MSPs	12%
Expand use of cloud marketplaces	7%

Flexera: 2022 State of the Cloud Report

Helping you navigate market uncertainty and accelerate growth

Do more with less on Azure

Migrate and Save

Save on cloud costs and gain efficiencies when you migrate to Azure

Avoid **escalating energy costs** while also reducing your energy usage and carbon emissions

Save on IT infrastructure costs and improve operational efficiency, while maintaining agility

Achieve **up to 85% savings when migrating Windows & SQL Server** Virtual Machines with Azure Hybrid Benefit

Optimize Cloud Costs

Reduce costs and increase efficiency of your existing cloud investments

Save up to 34% in year 1 when you use Microsoft Cost Management to monitor and reduce financial costs

Use Azure Advisor to **ensure your technical workloads become well-architected**; reducing costs, increasing security, and improving reliability

Implement Azure Arc to **replace costly 3rd party tools** on-premise, edge, and multicloud

Reinvest to Grow
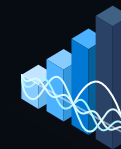
Become more **resilient and drive innovation** in your business

Develop **sustainable, innovative solutions** that reduce your carbon footprint and create new business value

Minimize downtime and data loss by securing your hybrid and multi-cloud, focusing on backup and disaster recovery

Modernize your applications with Azure App Service

1. Azure vs. AWS cost savings
2. The Total Economic Impact Of Microsoft Azure Cost Management And Billing, Forrester

Azure benefits and offers

Azure Hybrid Benefit for Windows Server and SQL Server

Save 50% versus other cloud providers

Extended Security Updates (ESU), free only on Azure

Three years of security updates after support on-premises ends 75% of the license cost to buy standalone

Pay less with Azure. AWS is 5x more expensive
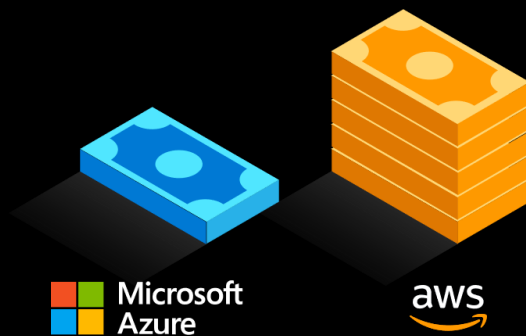
Windows Server savings illustration

Azure Hybrid Benefit Savings   ESU Savings

Azure

AWS

■ Windows VM   ■ Extended security updates
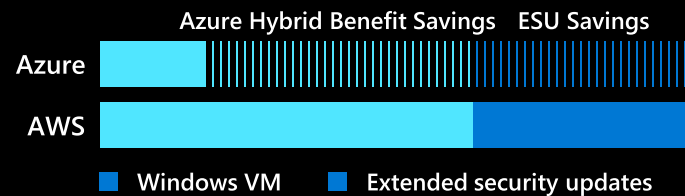
SQL Server savings illustration (PaaS)

Azure Hybrid Benefit Savings

Azure

AWS

■ Azure SQL Database   ■ AWS RDS for SQL EE
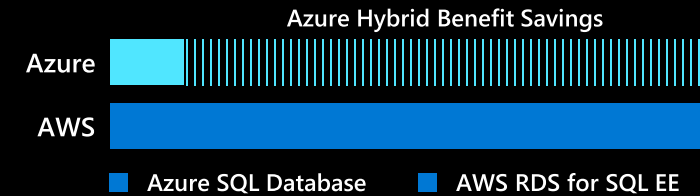
Learn more: aka.ms/why5xmore

Microsoft Azure

aws

Save big on Azure with Azure Hybrid Benefit

By leveraging your existing on-premises licensing investment with the purchase of Software Assurance.

AWS is up

5x

more expensive **Azure for Windows Server and SQL Server**

Save up to

85%

over standard pay-as-you-go rate leveraging the **Windows Server and SQL Server licenses**

Save up to

55%

over standard pay-as-you-go rate for **Azure SQL Database**

Save up to

80%

over standard pay-as-you-go rate for **Windows Server**

Learn more:
1. Azure vs. AWS cost savings
2. SQL Server 2019 pricing

Save up to 85% with Azure Hybrid Benefit

VS

Azure standard pay-as-you-go rate with existing Windows Server and SQL Server licenses

Review savings examples:
Why Azure Hybrid Benefit

SQL Enterprise Edition Savings Example

$3.972/Hour

SQL Server Enterprise Edition — $3.00/Hour

85% savings

Windows Server — $0.972/Hour

$0.598/Hour

$0.598/Hour — Azure Hybrid Benefit Price

SQL VM List Prices on Azure

SQL Prices with Hybrid Benefits
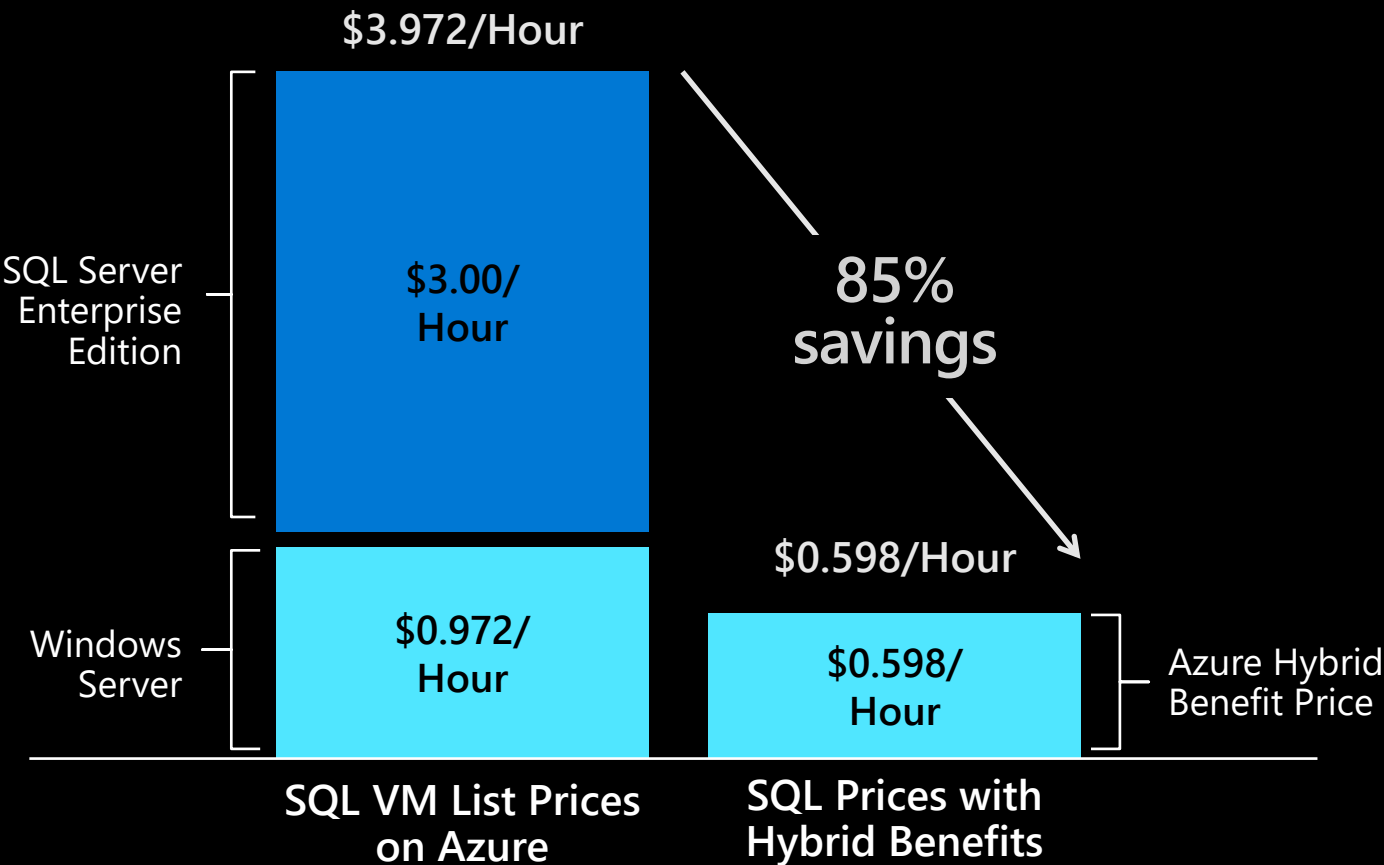
Azure Pricing Calculator- Pay as You Go Pricing

| West US 2 | ⌄ | Windows | ⌄ | (OS Only) | ⌄ | Standard | ⌄ |

Category:

| All | ⌄ |

Instance Series:

| All | ⌄ |

INSTANCE: (Need help finding the right VM?)

🔍 D2 v3: 2 vCPUs, 8 GB RAM, 50 GB Temporary storage, $0.188/hour | ⌄ |

| 1 | ✖ | 730 | Hours ⌄ |

Virtual machines

Savings Options

Explore pricing models to help optimize your Azure costs.   Learn more

Compute (D2 v3)

◉ Pay as you go

Savings plan ⓘ

◯ 1 year savings plan (~31% discount)
◯ 3 year savings plan (~53% discount)

Reservations ⓘ

◯ 1 year reserved (~40% discount)
◯ 3 year reserved (~62% discount)

OS (Windows)

◉ License included
◯ Azure Hybrid Benefit

$70.08
Average per month
($0.00 charged upfront)

$67.16
Average per month
($0.00 charged upfront)

= $137.24

Average per month
($0.00 charged upfront)

Azure Pricing Calculator- Pay as You Go Pricing w/ AHB

West US 2 ▾	Windows ▾	(OS Only) ▾	Standard ▾

Category:
All ▾

Instance Series:
All ▾

INSTANCE: (Need help finding the right VM?)

🔍 D2 v3: 2 vCPUs, 8 GB RAM, 50 GB Temporary storage, $0.096/hour ▾

[1] ✕ [730] [Hours ▾]

Virtual machines

Savings Options

Explore pricing models to help optimize your Azure costs.   [Learn more]

Compute (D2 v3)
- ⦿ Pay as you go

Savings plan ⓘ
- ○ 1 year savings plan (~31% discount)
- ○ 3 year savings plan (~53% discount)

Reservations ⓘ
- ○ 1 year reserved (~40% discount)
- ○ 3 year reserved (~62% discount)

OS (Windows)
- ○ License included
- ⦿ Azure Hybrid Benefit

$70.08
Average per month
($0.00 charged upfront)

$0.00
Average per month
($0.00 charged upfront)

= $70.08
Average per month
($0.00 charged upfront)

Azure Pricing Calculator- 1 Year RI Pricing w/ AHB

Category:

| All | ▼ |

Instance Series:

| All | ▼ |

| 🔍 D2 v3: 2 vCPUs, 8 GB RAM, 50 GB Temporary storage, $0.057/hour | ▼ |

| 1 |

Virtual machines

Savings Options

Explore pricing models to help optimize your Azure costs. | Learn more |

Compute (D2 v3)

○ Pay as you go

Savings plan ⓘ

○ 1 year savings plan (~31% discount)

○ 3 year savings plan (~53% discount)

Reservations ⓘ

◉ 1 year reserved (~40% discount)

○ 3 year reserved (~62% discount)

Compute payment options:

| Monthly | ▼ |

OS (Windows)

○ License included

◉ Azure Hybrid Benefit

$41.75 $0.00   ═ $41.75

Average per month   Average per month   Average per month
($0.00 charged upfront)   ($0.00 charged upfront)   ($0.00 charged upfront)

Azure Arc

Microsoft

Hybrid Cloud: The More Moving Parts, The More Complex
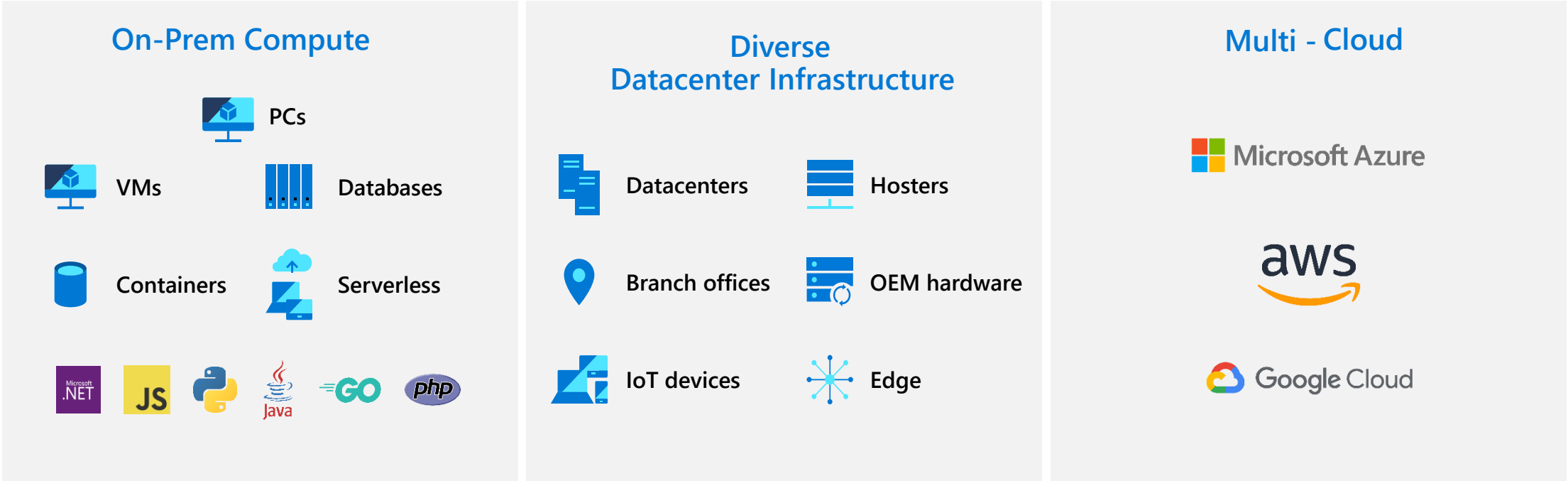
On-Prem Compute

PCs

VMs

Databases

Containers

Serverless

Diverse Datacenter Infrastructure

Datacenters

Hosters

Branch offices

OEM hardware

IoT devices

Edge

Multi - Cloud

Microsoft Azure

aws

Google Cloud

Azure Arc-enabled servers

Azure Arc-enabled servers are supported with additional Azure services

Additional services

Azure Policy

Azure Defender

Azure Sentinel

Azure Monitor

Change and inventory tracking

Update management

Azure Security Center

Just turn them on when you want to use them

Azure Arc pricing model

Additional services ($)*

Azure Arc-enabled services ($)*

No additional cost

Customers' servers and clusters
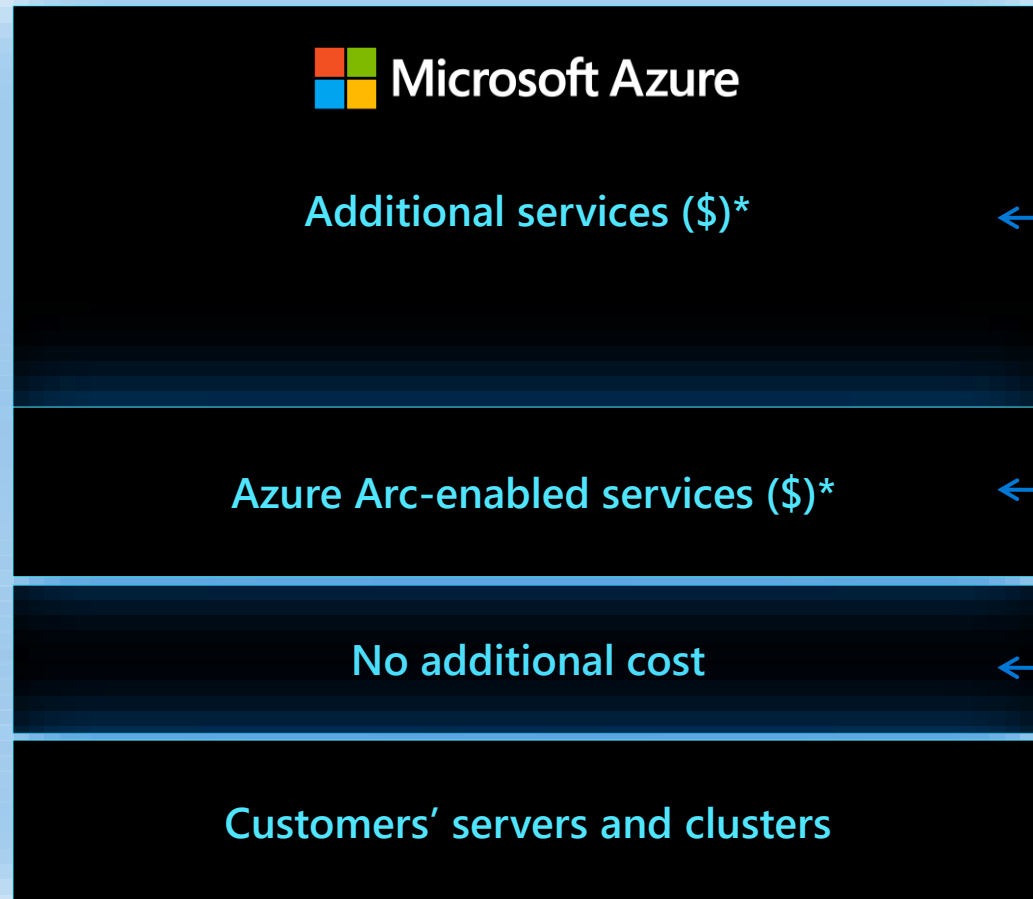
Azure Policy—guest configuration
Azure Monitor
Azure Defender
Azure Sentinel
Backup
Log Analytics
GitOps management for Kubernetes
Application Insights
Config and Change Management

SQL Managed Instance
PostgreSQL Hyperscale
Azure Machine Learning (preview)
App Service, Functions, Logic Apps, APIM, Event Grid (preview)

Control plane functionality:

Tagging, management groups, activity logs, templates, Resource Graph, RBAC

*Pricing for Azure Arc-enabled services and additional management services is consistent with Azure pricing. Services are available at no cost during preview.

Cost Involved

Azure Arc is free to install. Basic management services like inventory, tagging, server organization, RBAC, and querying with Azure Resource Graph are free as previously demonstrated. However, once Azure Arc is enabled, you can take advantage of the services available in Azure. The costs of these services may vary depending on the needs and scale of your infrastructure. Here are some examples of the components with associated costs:"

Azure Arc-enabled Servers pricing
Premium Capabilities:

Microsoft Defender for Cloud $5/server/month (Plan 1) **or $15/server/month** (Plan 2)
Free for the first 30 days, with 500MB/server included data. $0.02/server/hr.

Azure Monitor $2.30/GB [pay-as-you-go]
Billed for log analytics, tests, metrics, alerts, and notifications. 5GB per billing account/month is included

Microsoft Sentinel $2/GB-ingested [pay-as-you-go]
Billed for volume of data ingested for analysis in Microsoft Sentinel, stored in the Azure Monitor Log Analytics workspace

Azure Update Manager $5/server/month [pay-as-you-go]
Charged at a daily prorated value of $0.16/server/day. Only charged for days when Arc servers are connected and managed

Azure Policy Guest Configuration $6/server/month
Policies assigned by Defender for Cloud, of any other category, or on Azure Stack HCI resources are exempt

Microsoft Defender for Cloud: Defender for SQL $0.015/vCore/hour
Microsoft Defender for SQL has separate pricing for on and outside of Azure.

Note: Public Price listed as a reference, contact Microsoft representative for your final cost.

ESUs enabled by Azure Arc

Flexible PAYGO monthly billing and savings

Monthly billing model centralized in Azure to run end-of-support operating systems

Visibility and reliability

Ensure consistent Windows Server 2012/R2 and SQL Server 2012 performance with high availability and visibility over your entire data and server estate. Keyless delivery

Security and compliance

Seamlessly extend Azure security and governance to your environment and stay compliant with supported software

Microsoft Defender for Cloud

Azure Update Manager

Microsoft Sentinel

Azure Policy

Azure Monitor

For Windows Server 2012/2012 R2,
SQL Server 2012 and SQL Server 2014 (July 2024)
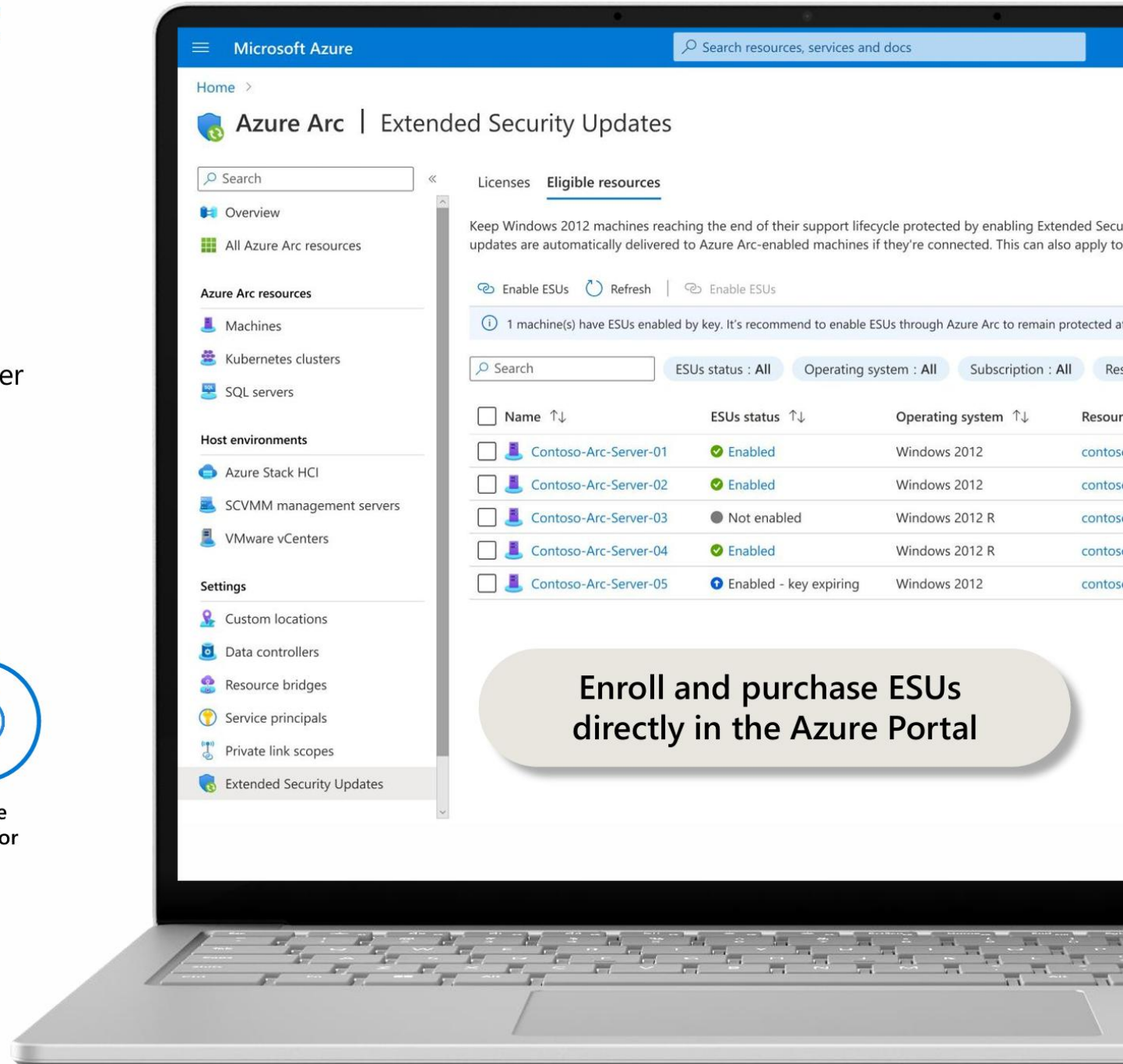
Enroll and purchase ESUs directly in the Azure Portal

Thank You

Microsoft

Agenda

Security Trends

Insurance Requirements

FCC Schools Pilot Program

Ignite Announcements

Q&A

Ransomware

Landscape and trends

Ransomware remains one of the most serious cybersecurity concerns. And for valid reasons.

Among our customers, Microsoft observed a 2.75x increase year over year in human-operated ransomware-linked encounters (defined as having at least one device targeted for a ransomware attack in a network).

Meanwhile, the percentage of attacks reaching actual encryption phase has decreased over the past two years by threefold. Automatic attack disruption contributed to this positive trend in decreasing successful attacks. In more than 90% of cases where attacks progressed to ransom stage, the attacker had leveraged unmanaged devices in the network, either to gain initial access or to remotely encrypt assets at the impact stage.

↓3x
threefold decrease in ransom attacks reaching encryption stage over the past two years

Top human-operated ransomware groups

	Sector	Percentage
1	Akira	17%
2	Lockbit	15%
3	Play	7%
4	Blackcat	6%
5	Basta	6%
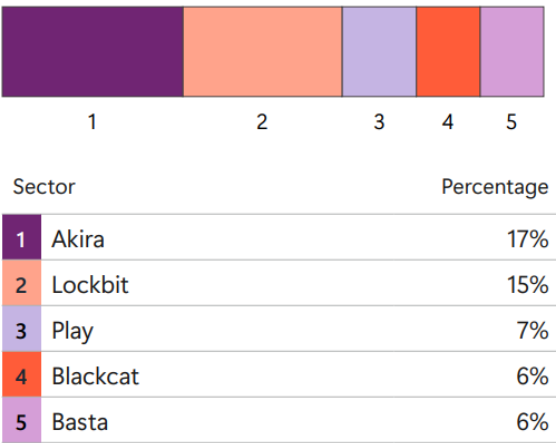
The top five ransomware families accounted for 51% of attacks. These families continue to use longstanding techniques, showing their effectiveness even against rising cybersecurity awareness globally.

Source: Microsoft Defender for Endpoint

Organizations with ransom-linked encounters continues to increase while the percentage of those ransomed is decreasing (July 2022–June 2024)

| 1 | Number of organizations with ransomware-linked encounters | 2 | Percentage of organizations ransomed |
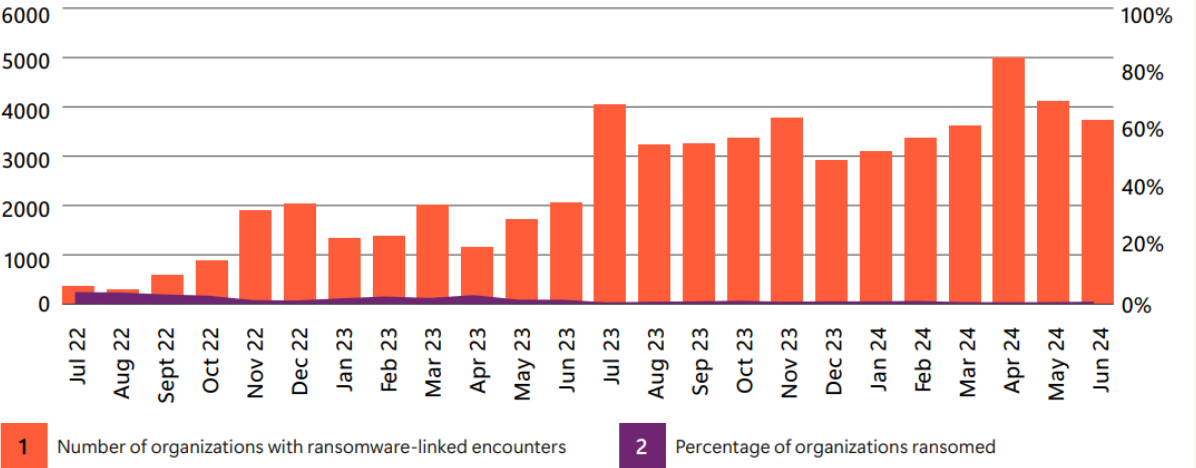
Although organizations with ransom-linked encounters continues to increase, the percentage that are ultimately ransomed (reaching encryption stage) decreased more than threefold over the past two years.

Source: Microsoft Defender for Endpoint

The most prevalent initial access techniques continue to be social engineering—specifically email phishing, SMS phishing, and voice phishing—identity compromise, and exploiting vulnerabilities in public facing applications or unpatched operating systems. Attackers continue to take advantage of newly identified common vulnerabilities and exposures (CVE) with Common Vulnerability Scoring System (CVSS) scores above 8. Once the attacker is in the network, they tamper with security products or install remote monitoring and management tools (RMMs) to disable or evade detections and persist in the network.

We observed remote encryption in 70% of successful attacks, with 92% originating from unmanaged devices in the network, underscoring the need for organizations to enroll devices into management, or exclude unmanaged devices from the network.

The Education and Research sector became the second most targeted by nation-state threat actors

In 2024, Education and Research became the second most targeted sector by nation-state threat actors.

In addition to offering intelligence such as research and policy discussions, education and research institutions are often used as testing grounds by threat actors before they pursue their actual targets.

For example, QR code phishing, a technique now used widely to compromise user accounts at scale and create an entry point for business email compromise (BEC) attacks discussed later in this chapter, became widely used in targeted attacks against this sector as early as August 2023.

Top 10 targeted sectors worldwide
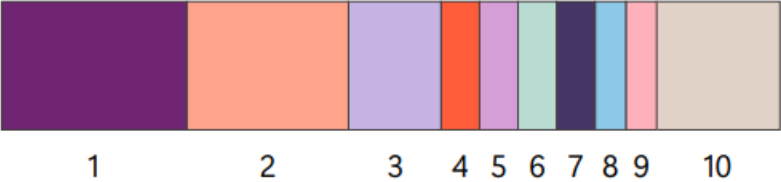
Sector	Percentage
1 IT	24%
2 Education and Research	21%
3 Government	12%
4 Think tanks and NGOs	5%
5 Transportation	5%
6 Consumer Retail	5%
7 Finance	5%
8 Manufacturing	4%
9 Communications	4%
10 All others	16%

Threat actors from Russia, China, Iran, and North Korea pursued access to IT products and services, in part to conduct supply chain attacks against government and other sensitive organizations.

Source: Microsoft Threat Intelligence, nation-state notification data

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Introduction · Nation-state threats · Ransomware · Fraud · Identity and social engineering · DDoS attacks

Phishing

Phishing remains a perennial cybersecurity threat. According to TrendMicro, phishing attacks increased by 58% in 2023, with an estimated financial impact of $3.5 billion US in 2024.[30]

Threat actors continue to use longstanding and new TTPs to access targets, but a growing concern this year is the misuse of legitimate web services and tools for phishing deployment.

Software-as-a-Service (SaaS)-based email, developer tools, captcha services, cloud storage, click tracking, marketing platforms, customer survey platforms, lesser known email clients, and backup and mass emailing tools have all been weaponized for a range of malicious activities. One of the key advantages of using these services is that they can evade detection systems because they are less likely to be preemptively blocked due to their established levels of trust and legitimate usage. Additionally, many phishing campaigns combine the use of multiple legitimate services simultaneously, complicating the detection process for both human analysts and automated systems.

775 million
email messages contained malware (July 2023-June 2024)

Source: Microsoft Defender for Office 365

Top email phishing types

- 1 Phishing URL/link (56%)
- 2 QR code phishing (25%)
- 3 Phishing attachment (19%)
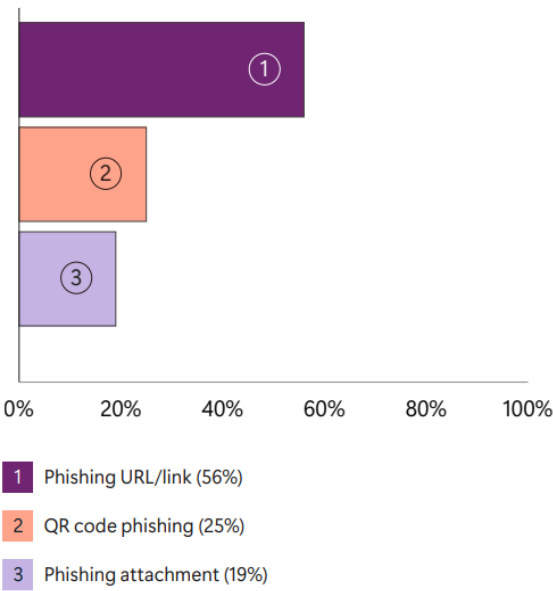
Source: Microsoft Defender Threat Experts notifications

QR code phishing

QR codes have become much more prevalent since the pandemic and therefore more trusted by users. By their nature, QR codes obscure the destination from the user. Around mid-September 2023, Microsoft analysts observed a significant increase in phishing attempts using these codes, which presents a unique challenge for security providers as they appear as an image during mail flow and are unreadable until rendered.

In QR code phishing, threat actors send phishing messages containing a code encoded with a URL. The message prompts the recipient to scan the QR code with their device, redirecting them to a fake sign-in page where they are prompted to input their credentials. This page may include AiTM capabilities that circumvent some forms of MFA.

Of note, Microsoft Defender for Office 365 image detection technology significantly disrupted QR code phishing attacks, causing a 94% decrease in phishing emails using this attack technique between October 2023-March 2024. Threat actors continually adapt their attacks in response to effective detection and blocking, returning to older, more well-known tactics or spending time and effort to innovate new techniques. Disruption of effective techniques such as QR code phishing is an important part of network and data protection. While QR codes that are plain and square with a black and white barcode persist in phishing attacks, since more effective detection and blocking has successfully reduced their efficacy, threat actors have resorted to experimenting with different QR code visualizations. For example, QR codes comprised of a blue barcode on a red background became commonplace in phishing attacks until that variation, too, was rendered ineffective.

Other attempts to confuse image processing include placing a black border around the QR code or putting the QR code in an attachment. Although effective detection and blocking measures greatly reduced the volume of QR code phishing attacks from the millions of messages observed in 2023, actors continued to test new techniques and innovate old ones throughout 2024 to find ways to evade protections and impact organizations.

During April and May 2024, there was a surge in phishing attempts targeting Microsoft Teams users. The attackers created a new tenant and registered a domain specifically for this attack. These attacks often included QR codes within the messages, which, upon scanning, directed users to AiTM phishing sites. Common themes in these phishing campaigns involved impersonating Office, Microsoft, or Security services.

Links

To scan or not to scan: The shady side of QR codes – Microsoft 365 | May 2023

Expanding our Content Integrity tools global elections - Microsoft On the Issues | Apr 2024

Content Credentials

Build trust with content credentials in Microsoft Designer | Learn at Microsoft Create | Dec 2023

Overview - C2PA

By their nature, QR codes obscure the destination from the user, which creates a challenge for security teams.

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Phishing continued

Introduction   Nation-state threats   Ransomware   Fraud   Identity and social engineering   DDoS attacks

Business email compromise (BEC)

BEC attacks remain a prevalent threat, with inbox rule manipulation the favored method.

Inbox rule manipulation: A new variation has emerged involving manipulation through API/App usage. Instead of using the usual "New-InboxRule" or "Set-InboxRule" commands, the attackers now use "UpdateInboxRules". This allows them to redirect emails with keywords related to credentials or financial matters to less monitored folders like Spam, Conversation History, or Deleted Items, hiding their fraudulent activity from the user's immediate view.

BEC lateral phishing: After compromising an account, attackers aim to move laterally within the organization, targeting multiple users to either gain access to high-privilege accounts or trick users into paying fake invoices. This is achieved by sending phishing emails to other users within the organization.

Conversation hijacking: The attacker compromises the sender's email account and injects themselves into an existing email thread using a similar-looking account, keeping the sender's display name unchanged. The hijacked account domain is usually newly created for financially motivated scams to lure users.

MFA tampering post AiTM attack: After compromising a user account, the attacker attempts to add an additional device for MFA, such as a phone number to approve two-factor authorization or registering a new device with an authenticator, to maintain ongoing access.

Other noteworthy post-compromise behaviors observed

Legitimate applications abuse: We observed three new legitimate tools being abused by adversaries for mailbox exfiltration and BEC.

- PerfectData Software: An application integrated with Microsoft 365/Azure to provide a mailbox and backup services. Threat actors used it to secretly access and steal mailboxes from compromised users.

- Newsletter Software Supermailer: Legitimate software used to create and send personalized bulk emails and newsletters. Adversaries exploited it to conduct lateral phishing attacks from compromised user accounts.

- eMClient: A desktop email client for Windows and macOS. Adversaries used this to exfiltrate mailboxes from compromised users.

Low and slow BEC: Attackers discreetly read a small number of emails (between two to five) daily, and sparingly accessed OneDrive/SharePoint files, all in an effort to evade detection. These low-profile attacks challenged detection systems, which could identify them only by correlating with unusual sign-in activities.

Targeted BEC: Personalized phishing campaigns are crafted using local languages, targeting IT, finance, and legal departments with specific topics such as "software updates" or "tax submissions." This tailored strategy significantly boosts compromise success rates.

Top post-compromise BEC behaviors

1 Inbox rule manipulation (40%)
2 BEC lateral phishing (25%)
3 Conversation hijacking (25%)
4 MFA tampering (10%)
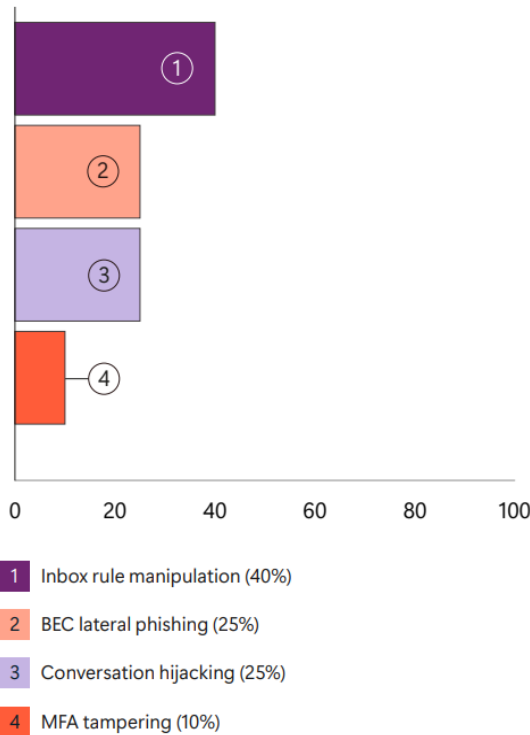
Source: Defender Threat Experts notifications

Actionable Insights

1. Even if a tool seems familiar, don't assume it is safe. In the past year, Microsoft identified a new trend where adversaries were misusing three legitimate tools for malicious activities.

2. Attacks are more sophisticated. Another notable trend is the personalization of phishing campaigns and outbound communications using local languages.

3. QR code phishing is on the rise but effective detection and blocking measures can greatly reduce the volume of attacks.

4. Shadow IT, or pieces of hardware or software that users install without the approval of the IT department, are a threat to the organizations and make them vulnerable to phishing and post-compromise activities. IT teams should periodically scan the infrastructure to detect unauthorized software or hardware and take remedial actions.

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Impersonation continued   Introduction   Nation-state threats   Ransomware   **Fraud**   Identity and social engineering   DDoS attacks

Account takeovers (ATOs)

In the business-to-consumer world there has been a steady pace of account hacking, identity theft, and payment instrument abuse in context of ATOs.

Threat actors prey on the least protected accounts and the most vulnerable individuals, so consistently raising the bar on account protection is important. While the best practice for consumers is to have and keep current MFA while being vigilant about account monitoring, a whole industry has developed to help mitigate the impacts of successful compromises.

In recent years, industry reports have indicated an increasing threat in the business-to-business world and the arena of managed online services. Because compromise of the latter may impact the downstream customers of client businesses, this adds another layer of complexity and risk.

Confirmed ATOs in Azure Small Business segment

Jul 23: 247
Aug 23: 289
Sep 23: 223
Oct 23: 314
Nov 23: 619
Dec 23: 972
Jan 24: 692
Feb 24: 607
Mar 24: 427
Apr 24: 345
May 24: 398
Jun 24: 373

Confirmed ATOs in Azure Small Business rose during the holiday season, then declined. Further and steady decline is expected as enhanced security requirements are implemented, such as multifactor authentication and verified credentials.
Source: Microsoft Central Fraud and Abuse Risk Team

Actionable Insights

1. Keeping account security up to the latest standards is critical to protecting yourself from ATO risk.

2. Hackers look for weak security and seasonal opportunities when account owners are not focused on monitoring, to scale their attacks.

3. Consider moving your user base to an authentication app to enable an easy upgrade to new standards for MFA as they release.

Links

Threat actors misusing Quick Assist in social engineering attacks leading to ransomware | Microsoft Security Blog | May 2024

According to one study, 29% of internet users have now experienced ATO, up from 22% in 2021.[32] Business account takeovers rose from 13% to 21% in the same period.

According to Microsoft's trend monitoring, many Microsoft accounts that were taken over last year did not follow basic account security best practices, like using MFA. Despite the emergence of more advanced hacking techniques, most ATOs still happen through simple methods like password spraying, phishing, keylogging, and using passwords from previous attacks found on the web.

Recently, Microsoft has experienced a surge in attacks on "generic," "group," or "multiuser" accounts. These accounts typically have outdated passwords, and the original user may no longer be monitoring them. Generic accounts are commonly used by administrators for ease of maintenance but are harder to secure. Implementing effective multi-factor authentication is challenging, and identifying compromises through pattern recognition becomes difficult when multiple users have access. Additionally, account recovery for service providers is problematic, making it challenging to restore hacked accounts to their rightful owners.

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Insights on identity attacks and trends continued | Introduction | Nation-state threats | Ransomware | Fraud | **Identity and social engineering** | DDoS attacks

Identity attacks in perspective

Password-based attacks continue to dominate, but can be thwarted by using strong authentication methods.

Less than 1% combined

More than 99% of identity attacks are password attacks

Breach replay

Password spray

Phishing

Rely on predictable human behaviors such as selecting easy-to-guess passwords, reusing them on multiple websites, and falling prey to phishing attacks.

<1% of attacks

MFA attacks

SIM swapping

MFA fatigue

AitM

End-run MFA protection by intercepting security codes using stolen phone numbers, barraging users with MFA notifications until they approve, and capturing first and second factor credentials using fake replicas of legitimate websites.

Post-authentication attacks

Token theft

Consent phishing

Infiltrate a user's account after they authenticate by stealing a legitimate token created on their device and moving it to a device under the attacker's control, by searching source code repositories for Open Authorization (OAuth) tokens and other non-human credentials, or by tricking the authenticated user into granting permissions to malicious apps.

Infrastructure compromise

Often silently executed by professional groups or nation-state-backed threat actors with sophisticated operations, making them very hard to detect. Threat actors may compromise an on-premises federation server and copy its private signing key to forge tokens, compromise a privileged cloud user and add new federation contracts, or compromise a non-human workload identity and create new credentials with elevated privileges.

Source: Microsoft Threat Intelligence

Hierarchy of cybersecurity needs

Drawing inspiration from Maslow's hierarchy of needs, this graphic illustrates a prioritization of cybersecurity, starting with the most basic need: protecting identities. AI has a role at each tier, underscoring its potential to enhance security measures. Cultivating a robust security culture within the organization, helps ensure the technological defenses and human practices evolve in concert to mitigate threats effectively.

→ **AUTOMATE SECURITY OPERATIONS**
Automating security operations is the holistic approach to building on perspectives and insights across all layers in the pyramid.

→ **IMPACT…**
Automating processes at scale creates new opportunities for insights as well as relief for stressed defenders.

→ **DETECT AND REMEDIATE THREATS**
Monitoring your ecosystem to identify anomalous activity and contain threats.

→ **IMPACT…**
The ability to identify and respond quickly can limit lateral movement, contain damage to assets and deny persistence.

→ **SECURE DIGITAL ASSETS**
Digital assets, whether code, traditional data stores, and now generative AI models are all key components of modern workloads.

→ **IMPACT…**
Modern workloads deliver the value-add to end users who increasingly rely on their integrity and availability.

→ **PROTECT ENDPOINTS**
Protected endpoints include the multiple dimensions of devices in use today – from PCs and mobile devices, to network and operational technology (OT), and servers in datacenters.

→ **IMPACT…**
Effective endpoint protection can limit the repercussions of unauthorized access.

→ **PROTECT IDENTITIES**
"Attackers don't break in, they log in." Credentials for both individuals and machines are the perimeter of the modern attack surface.

→ **IMPACT…**
Strong identity security can greatly reduce risk exposure—particularly for ransomware attacks.

Generative AI integration

Healthy security culture

FCC Schools Pilot Program

Advanced/Next-Generation Firewalls

Equipment and services that implement advanced/next-generation firewalls, including software-defined firewalls and Firewall as a Service, are eligible. Specifically, equipment, services, or a combination of equipment and services that limits access between networks, excluding basic firewalls that are funded through the Commission's E-Rate program, are eligible.

Eligible equipment and services may include the following features, substantially similar features, or their equivalents:

- Advanced Threat Detection and Prevention
- AI/ML Threat Detection and Response
- Application Awareness & Control
- Cloud-Delivered Threat Intelligence
- Comprehensive Network Visibility Software-defined Firewalls
- Deep Packet Inspection (DPI)
- Distributed-Denial-of-Service (DDoS) Protection
- Firewall as a Service (FWaaS)
- Integrated Intrusion Prevention Systems (IPS)
- Internet of Things (IoT) Security
- Intrusion Prevention/Detection
- Malware Detection
- Network Segmentation
- Patch Management Systems
- VPN

Endpoint Protection

Equipment and services that implement endpoint protection are eligible. Specifically, equipment, services, or a combination of equipment and services that implements safeguards to protect school- and library-owned end-user devices, including desktops, laptops, and mobile devices, against cyber threats and attacks are eligible.

Eligible equipment and services may include the following features, substantially similar features or their equivalents:

- Anti-Malware
- Anti-Ransomware
- Anti-Spam
- Anti-Virus
- Endpoint Detection & Response (EDR)
- Extended Detection & Response (XDR)
- Insider and Privilege Misuse
- Privileged Access Management
- Secure Sockets Layer (SSL) Inspections
- Target Intrusions
- Web Application Hacking

Identity Protection and Authentication

Equipment and services that implement identity protection and authentication are eligible. Specifically, equipment, services, or a combination of equipment and services that implements safeguards to protect a user's network identity from theft or misuse and/or provide assurance about the network identity of an entity interacting with a system are eligible.

Eligible equipment and services may include the following features, substantially similar features, or their equivalents:

- Active Countermeasure Tools
- Cloud Application Protection
- Cloud Services
- Credential Stuffing
- Content Blocking and Filtering/URL Filtering
- Content Caching Systems and Service
- Customer Portal Services
- Digital Identity Tools
- Distributed-Denial-of-Service (DDoS) Protection
- DNS/DNS-Layer Security, Blocking, and Filtering
- Email and Web Security
- Identity Governance & Technologies

- Logging Practices / Event Logging
- Network Access Control
- Offsite/Immutable back-ups
- MFA/Phishing-Resistant MFA
- Patching
- Password Spraying
- Privileged Identity Management
- Products with TPM Chips
- Secure Access Service Edge (SASE)
- Secure-By-Design Equipment and Services
- Security Information and Event Management (SIEM)
- Security Updates
- Single Sign-On (SSO)
- Trusted Platform Module (TPM)
- Web Content Controls
- Wireless Access Controllers
- Zero Trust Architecture

Monitoring, Detection, and Response

Equipment and services that implement monitoring, detection and response are eligible. Specifically, equipment, services, or a combination of equipment and services that monitor and/or detect threats to a network and that take responsive action to remediate or otherwise address those threats is eligible.

Eligible equipment and services may include the following features, substantially similar features, or their equivalents:

- Advanced Attack Surface Management and Asset Management Solutions
- Bug Bounty Solutions & Services
- Compliance Assessment
- Dark Web Scanning
- Data Loss Prevention
- Internal/External Vulnerability Scanning
- Network/Device Monitoring & Response
- Network Security Audit
- Network Traffic Analysis
- Managed Detection & Response (MDR)
- Managed Service Providers
- Maturity Models
- Network Detection Response (NDR)
- Penetration Testing
- Security Operations Center (SOC) for Around the Clock (24/7/365) Monitoring, Detection, and Response
- Threat Hunting/Updates and Threat Intelligence
- Vulnerability Management

Ignite Updates

Purview DLP

Extended file type coverage for endpoint DLP in public preview: We are greatly expanding the breadth of scannable file types (110+) and extraction limits for endpoint DLP on Windows devices. This improvement will begin rolling out to customers this month and continue worldwide in the coming weeks.

Blanket protections for non-supported file types in public preview: Enforce blanket-level protections for file types that Purview endpoint DLP does not currently; EG:prevent copying to USB for all CAD files, regardless of their contents.

Additional MacOS Support: Just in Time Protection for files that have not been previously interacted with. Also additional support for web-based activities.

Enhanced filtering for DLP alerts in Defender XDR

Defender XDR

🔒 **Microsoft Defender for Office 365:** we are now using purpose-built Large Language Models (LLM) at scale. MDO parses language to understand and identify attacker intent and classifies threats at machine speed – keeping malicious emails out of your inbox and insight into adversary techniques

📹 **Threat Intelligence Tracking via Adaptive Networks (TITAN):** combines Microsoft Threat Intelligence and Microsoft Defender XDR to automatically detect and block emerging attacker infrastructure before it can be used in large-scale attacks.

⌨️ **Unified Agent for MDE, MDI, and DLP:** simplifies agent management and deployment of the XDR stack.

🔲 **Native integration of Microsoft Entra Privileged Identity Management (PIM) with Defender for Identity, allows any 3rd party PAM provider to integrate with Defender for Identity, starting with BeyondTrust, CyberArk and Delinea.**