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Monthly Tech Briefing SEPTEMBER 2024

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- [GitHub Universe – October 2024](#)
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Microsoft 365 update information



Product Lifecycles

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Acquisitions and Announcements

10 AI terms everyone should know

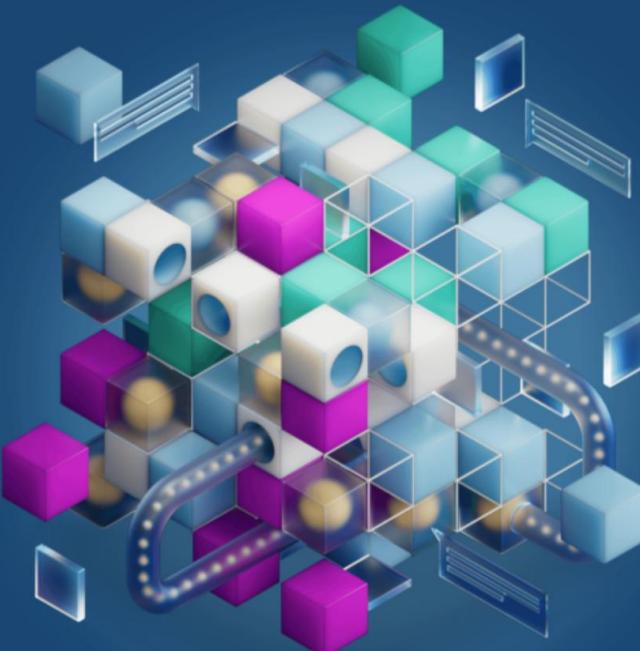
By Susanna Ray

The term "AI" has been used in computer science since the 1950s, but most people outside the industry didn't start talking about it until the end of 2022. That's because recent advances in machine learning led to big breakthroughs that are beginning to have a profound impact on nearly every aspect of our lives. We're here to help break down some of the buzzwords so you can better understand AI terms and be part of the global conversation.



3. Large language models

Large language models, or LLMs, use machine learning techniques to help them process language so they can mimic the way humans communicate. They're based on neural networks, or NNs, which are computing systems inspired by the human brain — sort of like a bunch of nodes and connections that simulate neurons and synapses. They are trained on a massive amount of text to learn patterns and relationships in language that help them use human words. Their problem-solving capabilities can be used to translate languages, answer questions in the form of a chatbot, summarize text and even write stories, poems and computer code. They don't have thoughts or feelings, but sometimes they sound like they do, because they've learned patterns that help them respond the way a human might. They're often fine-tuned by developers using a process called reinforcement learning from human feedback (RLHF) to help them sound more conversational.



4. Generative AI

Generative AI leverages the power of large language models to make new things, not just regurgitate or provide information about existing things. It learns patterns and structures and then generates something that's similar but new. It can make things like pictures, music, text, videos and code. It can be used to create art, write stories, design products and even help doctors with administrative tasks. But it can also be used by bad actors to create fake news or pictures that look like photographs but aren't real, so tech companies are working on ways to **clearly identify** AI-generated content.



1. Artificial intelligence

Artificial intelligence is basically a super-smart computer system that can imitate humans in some ways, like comprehending what people say, making decisions, translating between languages, analyzing if something is negative or positive, and even learning from experience. It's artificial in that its intellect was created by humans using technology. Sometimes people say AI systems have digital brains, but they're not physical machines or robots — they're programs that run on computers. They work by putting a vast collection of data through algorithms, which are sets of instructions, to create models that can automate tasks that typically require human intelligence and time. Sometimes people specifically engage with an AI system — like asking Bing Chat for help with something — but more often the AI is happening in the background all around us, suggesting words as we type, recommending songs in playlists and providing more relevant information based on our preferences.

2. Machine learning

If artificial intelligence is the goal, machine learning is how we get there. It's a field of computer science, under the umbrella of AI, where people teach a computer system how to do something by training it to identify patterns and make predictions based on them. Data is run through algorithms over and over, with different input and feedback each time to help the system learn and improve during the training process — like practicing piano scales 10 million times in order to sight-read music going forward. It's especially helpful with problems that would otherwise be difficult or impossible to solve using traditional programming techniques, such as recognizing images and translating languages. It takes a huge amount of data, and that's something we've only been able to harness in recent years as more information has been digitized and as computer hardware has become faster, smaller, more powerful and better able to process all that information. That's why large language models that use machine learning — such as Bing Chat and ChatGPT — have suddenly arrived on the scene.

5. Hallucinations

Generative AI systems can create stories, poems and songs, but sometimes we want results to be based in truth. Since these systems can't tell the difference between what's real and fake, they can give inaccurate responses that developers refer to as hallucinations or confabulations — much like if someone saw what looked like the outlines of a face on the moon and began saying there was an actual man in the moon. Developers try to resolve these issues through "grounding," which is when they provide an AI system with additional information from a trusted source to improve accuracy about a specific topic. Sometimes a system's predictions are wrong, too, if a model doesn't have current information after it's trained.

10 (more) AI terms everyone should know

by Susanna Ray

SLM/small language model

Small language models, or SLMs, are pocket-sized versions of [large language models](#), or LLMs. They both use machine learning techniques to help them recognize patterns and relationships so they can produce realistic, natural language responses. But while LLMs are enormous and need a hefty dose of computational power and memory, SLMs [such as Phi-3](#) are trained on smaller, curated datasets and have fewer parameters, so are more compact and can even be used offline, without an internet connection. That makes them great for apps on devices like a laptop or phone, where you might want to ask basic questions about pet care but don't need to dive into the detailed, multi-step reasoning of how to train seeing-eye dogs.

Training/inference

To create and use an AI system, there are two steps: training and inference. Training is sort of like an AI system's education, when it is fed a dataset and learns to perform tasks or make predictions based on that data. For example, it might be given a list of prices for homes recently sold in a neighborhood, along with the number of bedrooms and bathrooms in each and a multitude of other variables. During training, the system adjusts its internal parameters, which are values that determine how much weight to give each of those factors in influencing pricing. Inference is when it uses those learned patterns and parameters to come up with a price prediction for a new home about to go on the market.



Retrieval Augmented Generation (RAG)

When developers give an AI system access to a grounding source to help it be more accurate and current, they use a method called Retrieval Augmented Generation, or RAG. The RAG pattern saves time and resources by adding extra knowledge without having to retrain the AI program. It's as if you're Sherlock Holmes and you've read every book in the library but haven't cracked the case yet, so you go up to the attic, unroll some ancient scrolls, and voilà — you find the missing piece of the puzzle. Similarly, if you've got a clothing company and want to create a chatbot that can answer questions specific to your merchandise, you can use the RAG pattern over your product catalog to help customers find the perfect green sweater from your store.

Transformer models and diffusion models

People have been teaching AI systems to understand and generate language for decades, but one of the breakthroughs that accelerated recent progress was the transformer model. Among generative AI models, transformers are the ones that understand context and nuance the best and fastest. They're eloquent storytellers, paying attention to patterns in data and weighing the importance of different inputs to help them quickly predict what comes next, which enables them to generate text. A transformer's claim to fame is that it's the T in ChatGPT — Generative Pre-trained Transformer. Diffusion models, generally used for image creation, add a twist by taking a more gradual and methodical journey, diffusing pixels from random positions until they're distributed in a way that forms a picture asked for in a prompt. Diffusion models keep making small changes until they create



10th anniversary

UNIVERSE24

Global developer event

• San Francisco, CA

• October 29-30

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Mumbai

February 24, 2025

Coming soon >

Seoul

March 26, 2025

Coming soon >

Tokyo

March 27, 2025

Coming soon >



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In Chicago

November 19-22, 2024

Optional Pre-day: Afternoon of November 18, 2024

Online

November 19-21, 2024

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[Convince your manager ↓](#)

Microsoft Ignite

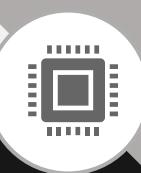
November 18-22, 2024

Our biggest event of the year is getting even bigger. Join us in Chicago to expand your AI knowledge, create connections, and more—mark your calendar. Sign up to be notified when registration opens.

[Learn more >](#)

Updates of Security and Compliance





[News](#) [Zero Trust](#) · Aug 6 · 5 min read

How Microsoft and NIST are collaborating to advance the Zero Trust Implementation >

Both Microsoft and the National Institute of Standards and Technology (NIST) National Cyber security Center of Excellence (NCCoE) have translated the Zero Trust Architecture (ZTA) and Security Model into practical and actionable deployment. In this blog post, we explore details of their collaboration on a Zero Trust (ZT) implementation and what this learning pathway means for your organization.

[Events](#) [AI and machine learning](#) · Sep 19 · 6 min read

Join us at Microsoft Ignite 2024 and learn to build a security-first culture with AI >

Join us in November 2024 in Chicago for Microsoft Ignite to connect with industry leaders and learn about our newest solutions and innovations.

[Events](#) · Aug 22 · 3 min read

Microsoft AI Tour: Hear the latest product innovations to elevate your security strategy >

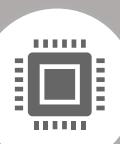
The Microsoft AI Tour is coming to a city near you. Join a free, one-day tour event to learn how we are making AI deployment more secure.

[Best practices](#) [Identity and access management](#) [Microsoft Entra ID](#) · Aug 26 · 9 min read

How Microsoft Entra ID supports US government agencies in meeting identity security requirements >

United States Government agencies are adopting Microsoft Entra ID to consolidate siloed identity solutions, reduce operational complexity, and improve control and visibility across all users.

Monitoring Global Threats: Microsoft :: Threat Intelligence Blog



Select a region ▾

Global threat activity

Countries or regions with the most malware encounters in the last 30 days

Most affected industries

Reported enterprise malware encounters in the last 30 days

Telecommunications

Show all industries >

Devices with encounters:

143,827 (2.25%)

[Best practices](#) [Security management](#) · Sep 18 · 4 min read

How comprehensive security simplifies the defense of your digital estate >

End-to-end security is a modern, comprehensive approach to data protection that aligns data protection and incident response across devices, systems, and users. Read the blog post to explore why it's an attractive option for organizations committed to strengthening their cybersecurity.

[Research](#) [Threat intelligence](#) [Microsoft Defender XDR](#) [Threat actors](#) · Aug 28 · 14 min read

Peach Sandstorm deploys new custom Tickler malware in long-running intelligence gathering operations >

Between April and July 2024, Microsoft observed Iranian state-sponsored threat actor Peach Sandstorm deploying a new custom multi-stage backdoor, which we named Tickler. Tickler has been used in attacks against targets in the satellite, communications equipment, oil and gas, as well as federal and state government sectors in the United States and the United Arab [...]

Microsoft Security Response Center

Telecommunications ▾

Top threats:

HackTool:Win32/AutoKMSlpz
HackTool:MSI/AutoKmslpz
HackTool:Win32/AutoKMS
HackTool:Win32/Keygen
Trojan:Win32/Wacatac.B!ml

Worldwide

72,182,730 devices with encounters

Top threats:

PUA:Win32/Softcnapp
Trojan:Win32/Wacatac.B!ml
HackTool:Win32/AutoKMS
HackTool:Win32/Keygen
Trojan:Win32/Wacatac.H!ml

[Research](#) [Threat intelligence](#) [Microsoft Defender](#) [Vulnerabilities and exploits](#) · Aug 30 · 9 min read

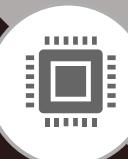
North Korean threat actor Citrine Sleet exploiting Chromium zero-day >

Microsoft identified a North Korean threat actor exploiting a zero-day vulnerability in Chromium (CVE-2024-7971) to gain remote code execution (RCE) in the Chromium renderer process. Our assessment of ongoing analysis and observed infrastructure attributes this activity to Citrine Sleet, a North Korean threat actor that commonly targets the cryptocurrency sector for financial gain.

Tracked activity

- Nation-state actors
- Ransomware groups
- Cyber mercenaries
- or private sector offensive actors
- Storm-#### designations refer to emerging or developing clusters of threat activity.

Microsoft :: Threat Intelligence Blog



Influence operations



Flood

Cyber mercenaries



Denim Tsunami
Carmine Tsunami

Financially motivated



Strawberry Tempest

Storm



Storm-0381 Storm-0835
Storm-0875 Storm-1101
Storm-0829 Storm-0558
Storm-0744 Storm-0257
Storm-0971 Storm-1099
Storm-0867 Storm-1133

Russia



Seashell Blizzard
Midnight Blizzard
Star Blizzard
Aqua Blizzard
Cadet Blizzard

China



Volt Typhoon
Raspberry Typhoon
Flax Typhoon
Circle Typhoon
Mulberry Typhoon

North Korea



Jade Sleet
Diamond Sleet
Citrine Sleet
Emerald Sleet
Sapphire Sleet
Ruby Sleet
Onyx Sleet
Opal Sleet

Lebanon



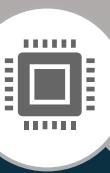
Plaid Rain

Iran



Mango Sandstorm
Cotton Sandstorm
Peach Sandstorm
Mint Sandstorm
Pumpkin Sandstorm

Microsoft Threat Monitor :: Security Insiders



Threat actor insights

Microsoft Threat Intelligence is actively tracking threat actors across observed nation state, ransomware, and criminal activities. These insights represent publicly published activity from Microsoft threat researchers and provide a centralized catalog of actor profiles from the referenced blogs.

Manatee Tempest

Manatee Tempest (formerly DEV-0243) is a threat actor that is a part of the ransomware as a service (RaaS) economy, partnering with other threat actors to provide custom Cobalt Strike loaders.

Forest Blizzard

Forest Blizzard (formerly STRONTIUM) uses a variety of initial access techniques including exploiting vulnerable to web facing applications and, to obtain credentials, spear phishing and the deployment of an automated password spray/brute force tool operating through TOR

Pistachio Tempest

Pistachio Tempest (formerly DEV-0237) is a group associated with impactful ransomware distribution. Microsoft has observed Pistachio Tempest use varied ransomware payloads over time as the group experiments with new ransomware as a service (RaaS) offerings, from Ryuk and Conti to Hive, Nokoyawa, and, most recently, Agenda and Mindware.

Wine tempest

Wine Tempest (formerly PARINACOTA) typically uses human-operated ransomware for attacks, mostly deploying the Wadhrama ransomware. They are resourceful, changing tactics to match their needs and have used compromised machines for various purposes, including cryptocurrency mining, sending spam emails, or proxying for other attacks.

Crimson Sandstorm

Crimson Sandstorm (formerly CURIUM) actors have been observed leveraging a network of fictitious social media accounts to build trust with targets and deliver malware to ultimately exfiltrate data.

Nylon Typhoon

Nylon Typhoon (formerly NICKEL) uses exploits against unpatched systems to compromise remote access services and appliances. Upon successful intrusion, they have used credential dumpers or stealers to obtain legitimate credentials, which they then used to gain access to victim accounts and to gain access to higher value systems.

Gray Sandstorm

Gray Sandstorm (formerly DEV-0343) conducts extensive password spraying emulating a Firefox browser and using IPs hosted on a Tor proxy network. They typically target dozens to hundreds of accounts within an organization, depending on the size, and enumerate each account from dozens to thousands of times.

Midnight Blizzard

The actor that Microsoft tracks as Midnight Blizzard (NOBELIUM) is a Russia-based threat actor attributed by the US and UK governments as the Foreign Intelligence Service of the Russian Federation, also known as the SVR.

Diamond Sleet

The actor Microsoft tracks as Diamond Sleet is a North Korea-based activity group known to target media, defense, and information technology (IT) industries globally. Diamond Sleet focuses on espionage, theft of personal and corporate data, financial gain, and corporate network destruction.

Hazel Sandstorm

Hazel Sandstorm (formerly EUROPiUM) has been publicly linked to Iran's Ministry of Intelligence and Security (MOIS). Microsoft assessed with high confidence that on July 15, 2022, actors sponsored by the Iranian government conducted a destructive cyberattack against the Albanian government, disrupting government websites and public services.

Volt Typhoon

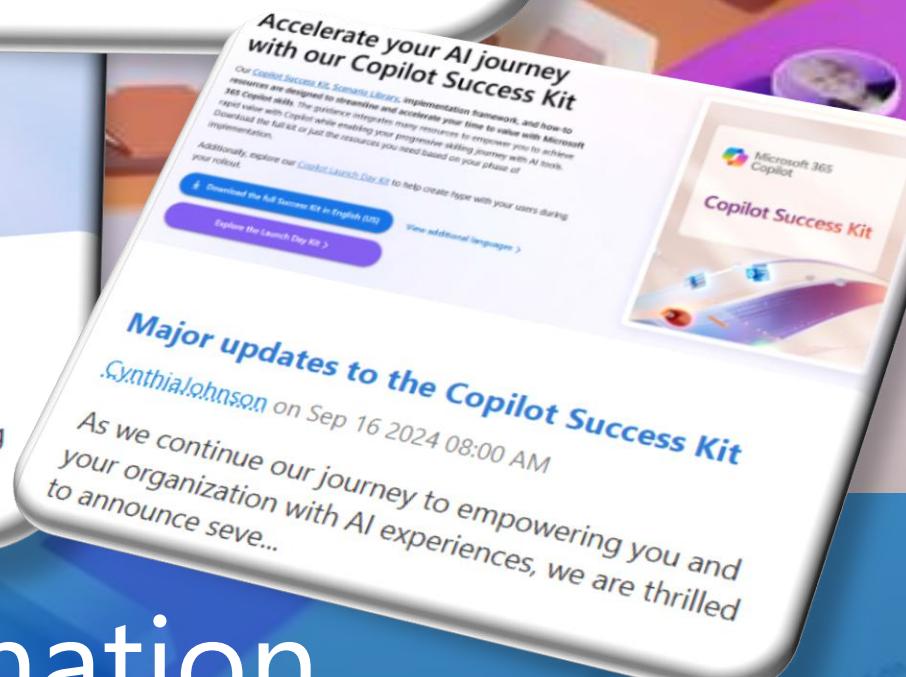
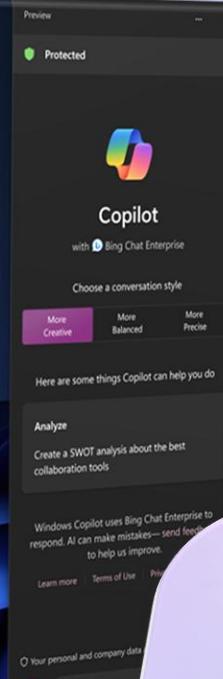
The actor that Microsoft tracks as Volt Typhoon is a nation-state activity group based out of China. Volt Typhoon focuses on espionage, data theft, and credential access.

Caramel Tsunami

Caramel Tsunami (formerly SOURGUM) generally sells cyberweapons, usually malware and zero-day exploits, as a part of a hacking-as-a-service package sold to government agencies and other malicious actors.

Cadet Blizzard

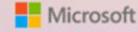
Microsoft tracks Cadet Blizzard (formerly DEV-0586) as a Russian GRU-sponsored threat group that Microsoft began tracking following disruptive and destructive events occurring at multiple government agencies in Ukraine in mid-January 2022.



Microsoft 365 update information



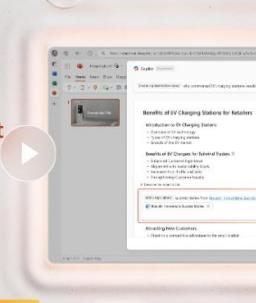
The next phase of Microsoft 365 Copilot innovation



Microsoft 365 Copilot: Wave 2



Microsoft 365 Copilot
Copilot in PowerPoint
Narrative builder



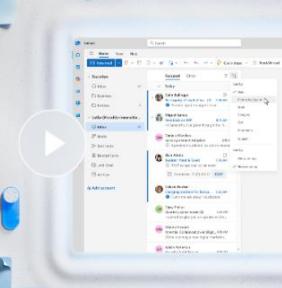
Microsoft 365 Copilot in PowerPoint | Narrative builder

Microsoft 365 Copilot
Copilot in Excel
with Python



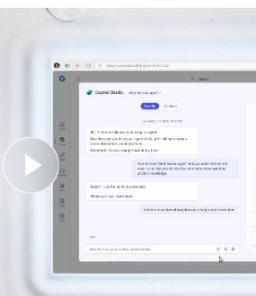
Microsoft 365 Copilot in Excel with Python

Microsoft 365 Copilot
Copilot in Outlook
Prioritize my inbox



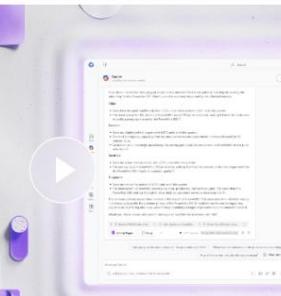
Microsoft 365 Copilot in Outlook | Prioritize my inbox

Microsoft 365 Copilot
Copilot Studio
agent builder



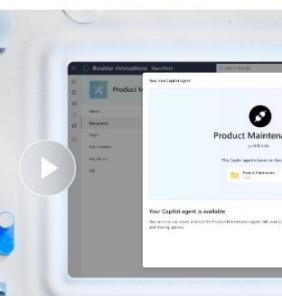
Microsoft 365 Copilot | Copilot Studio agent builder

Microsoft 365 Copilot
Copilot Pages



Microsoft 365 Copilot | Copilot Pages

Microsoft 365 Copilot
Copilot agents in
SharePoint



Microsoft 365 Copilot | Copilot agents in SharePoint

We're launching the next wave of Microsoft 365 Copilot, bringing together web + work + Pages as a new design system for knowledge work.

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- [Copilot in Excel](#)
- [Copilot in PowerPoint](#)
- [Copilot in Teams](#)
- [Copilot in Outlook](#)
- [Copilot in Word](#)
- [Copilot in OneDrive](#)
- **Copilot Agents**
- [Copilot Studio Agent Builder](#)
- [Copilot Agents in SharePoint](#)
- [Learning in Copilot Academy](#)



Microsoft Copilots empowering your business

Unlock Productivity across your organization

Persona	Copilot	Scenario	Availability	Blogs	Demo/Video
Knowledge Workers	Microsoft Copilot	I want to introduce my entire organization to generative AI without putting my company data at risk—allowing employees to get answers, summarize documents, or generate images and text in Windows, Edge, Bing, and the Copilot mobile app	Generally Available	LINK	LINK
	Copilot for Microsoft 365	I want to bring Copilot to my entire organization to use AI-powered chat with secure access to organizational graphs and access Copilot across all M365 apps.	Generally Available	LINK	LINK
	Copilot for Dynamics 365 Project Operations	I want to rapidly create new project plans for new engagements in minutes, instead of hours, simply by describing details of the project using natural language.	Generally Available	LINK	LINK
	Copilot for Dynamics 365 Finance	I want collections managers to have quick access to credit and payment history so they can prioritize and personalize customer communication, helping to increase successful collection rates and proactively keep customers in good standing.	Generally Available	LINK	LINK
	Copilot for Dynamics 365 Supply Chain	I want to efficiently handle changes to purchase orders at scale and assess the impact and risk to help optimize procurement decisions.	Generally Available	LINK	LINK
	Copilot in Microsoft Viva	I want to accelerate workforce insights and actionable OKR development, automate processes, and boost employee engagement with next-generation AI	Generally Available	LINK	LINK
Customer Service	Copilot in Dynamics 365 Business Central	I want to accelerate product launches by generating and publishing engaging product descriptions in my own voice with help from AI.	Generally Available	LINK	LINK
	Microsoft Copilot for Service	I want to modernize my contact center to enhance service experiences and boost agency productivity.	Generally Available	LINK	LINK
	Copilot in Dynamics 365 Customer Service	I want to level up my customer care by generating contextual responses to customer questions and quick access to case resolution expertise with AI assistance.	Generally Available	LINK	LINK
	Copilot in Dynamics 365 Field Service	I want to help frontline service workers spend less time on repetitive tasks and more time focused on customers by using AI to prepopulate data in work orders.	Generally Available	LINK; LINK	LINK; LINK
Sales	Copilot in Dynamics 365 Customer Insights	I want to use generative AI to generate insights about customers and curate highly personalized, targeted customer segments using natural language dialogue.	Generally Available	LINK	LINK; LINK
	Microsoft Copilot for Sales	I want to transform the way sellers work by automating and simplifying tasks, personalized customer interactions, and maintain selling focus.	Generally Available	LINK	LINK; Guided: LINK
	Copilot in Dynamics 365 Sales	I want to help sellers prioritize ROI-generating tasks by reducing mundane work with AI assistance for email replies, meeting prep, and information tracking.	Generally Available	LINK	LINK
Data Professionals	Copilot in Microsoft Fabric	I want an AI assistant to help my data professionals analyze and visualize data using natural language.	Generally Available	LINK	LINK
	Copilot in Power BI	I want to use AI to illuminate hidden patterns, opportunities, and anomalies in my data.	Generally Available	LINK	LINK

Safeguard your business

Persona	Copilot	Scenario	Availability	Blogs	Demo/Video
Security Analysts	Microsoft Copilot for Security	I want a generative AI-powered security solution that helps increase the efficiency and capabilities of defenders to improve security outcomes at machine speed and scale.	Generally Available	LINK	LINK

Build and extend your AI capabilities

Persona	Copilot	Scenario	Availability	Blogs	Demo/Video
IT Professionals	Microsoft Copilot for Azure	I want to use generative AI to help users gain new insights into their workloads, unlock untapped Azure functionality, and orchestrate tasks across cloud & edge.	Public Preview	LINK	LINK
	Copilot in Power Apps	I want to build enterprise-grade applications faster and more easily with generative AI.	Public Preview	LINK	LINK
	Copilot in Power Automate	I want to build, edit, and extend workflows using natural language and get help from AI powered chat.	Public Preview	LINK	LINK
	Copilot in Power Pages	I want to revolutionize my web development experience by leveraging AI to generate text, build detailed forms, and chatbots—all in a matter of minutes.	Private Preview	LINK	LINK
Developers	GitHub Copilot	I want to provide my developers contextualized assistance throughout the software development cycle in several languages.	Generally Available	LINK	LINK
	GitHub Copilot Enterprise	I want to enhance GitHub Copilot with a more personalized experience by bringing in chat and voice interfaces, pull request support, and the ability to get answers on documents.	General Available	LINK	LINK
	Microsoft Copilot Studio	I want to extend Copilot for Microsoft 365 with a plugin and/or create custom copilots and want to use a low-code tool.	Generally Available	LINK	LINK
	Teams Toolkit for Visual Studio Code	I want to extend Copilot for Microsoft 365 with a plugin or build my own copilot for Microsoft Teams using a pro-code tool.	Generally Available	LINK	LINK
	Build your own copilot with Azure AI Studio	I want to build, evaluate, and deploy my AI solutions securely and responsibly all within one space.	Generally Available	LINK	LINK

EU Artificial Intelligence Act

1-Aug-2024
EU AI Act into force

1-Aug-2025
Governance rules and obligations for general-purpose AI models become applicable¹

1-Feb-2025
Prohibitions on certain AI practices will take effect¹

1-Aug-2027
Rules for AI systems embedded into regulated products will apply¹

EU AI Act Principles

Categorization

Transparency

Accountability

Conformity assessments

four risk categories

High-risk AI systems must provide clear and comprehensive information about their capabilities and limitations.

High-risk AI systems must be designed to allow for effective human control and responsibility.

High-risk AI systems are subject to mandatory conformity assessments conducted by notified bodies.

Risk Categories

unacceptable risk

High Risk

Limited Risk

Minimal Risk

Microsoft AI



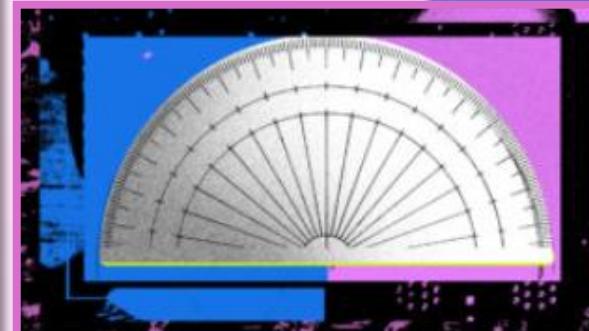
Microsoft's advancements in AI are grounded in our company's mission to help every person and organization on the planet to achieve more — from helping people be more productive to helping solve society's most pressing problems.



Sep 12 • 5 min read

Introducing o1: OpenAI's new reasoning model series for developers and enterprises on Azure ↗

We are excited to add OpenAI's newest models o1-preview and o1-mini to Azure OpenAI Service, Azure AI Studio, and GitHub Models.



Sep 9 • 4 min read

Measurement is the key to helping keep AI on track ↗

When Hanna Wallach first started testing machine learning models, the tasks were well-defined and easy to evaluate. Did the model correctly...



Sep 9 • 5 min read

Microsoft and Oracle enhance Oracle Database@Azure with data and AI integration ↗

Together with Oracle, we're announcing upgrades to Oracle Database@Azure.



Aug 29 • 10 min read

Smart ways students are using AI ↗

Category: AI Smart ways students are using AI By Susanna Ray August 29, 2024 Honors student James Evans often will ask Microsoft Copilot for "a...

Microsoft AI runs on Trust



Responsible AI

We are committed to the advancement of AI driven by ethical principles that put people first.



Your data is your data

A close-up photograph of a woman with voluminous, curly, reddish-brown hair. She is looking slightly upwards and to her left with a thoughtful expression. The background is a soft-focus indoor setting.

Your fine-tuning data is only used to train AI for your use

Putting principles into practice at Microsoft

We are committed to making sure AI systems are developed responsibly and in ways that warrant people's trust.

A close-up photograph of a person with short, dark hair, smiling broadly. The background is a warm, orange-toned gradient. There is a small white plus sign in the top right corner of the image frame.

News Secure Future Initiative (SFI) · 7 min read

Security above all else—expanding Microsoft's Secure Future Initiative

By Charlie Bell, Executive Vice President, Microsoft Security

Your data is protected at every step

What's New in Microsoft 365

[M365 Blog](#) and [Microsoft-365 Product Blog](#) :: Covering Office 365, Enterprise Mobility + Security and Windows

- ❖ [Office LTSC 2024](#) :: Generally Available
- ❖ [Microsoft-compliant Contact Editor](#)
- ❖ [OneNote's new Sticky Notes Features](#)
- ❖ New Microsoft-compliant Contact Editor now available on iOS and Android
- ❖ [Microsoft Loop | Live, Five-Part Learning Series](#)
- ❖ [Windows IT Pro Blog](#)
- ❖ [Microsoft Entra \(Azure AD+\) Blog](#)
- ❖ [Microsoft OneDrive Blog](#)
- ❖ [Microsoft SharePoint Blog](#)
- ❖ [M365 Technical Documentation](#)

News Microsoft 365 Enterprise · 9 min read

Microsoft 365 Copilot Wave 2: Pages, Python in Excel, and agents

By Jared Spataro, Corporate Vice President, AI at Work

Windows 365 Enterprise · Published August 1, 2024 · 7 min read

Windows 365 at three years: Customer-centric solutions for security, management and productivity >

You have navigated the complex and changing realities of the hybrid workplace, found new ways to move aspects of your business to the cloud, and kept employees and critical business operations connected and running in a challenging cyber security environment.

What's new in Windows Autopatch: September 2024

Diana Hoffman on Sep 05 2024 09:00 AM

Maintain policy health by ensuring that policies are configured and deployed correctly.

Enhanced data protection with Windows and Microsoft Copilot

Reanne Wong on Sep 16 2024 08:00 AM

Copilot experiences in Windows are changing. Explore the latest for managed PCs running Windows 11 Pro or Enterprise.

Feature Deep Dive: Export for OneDrive Sync Health Reports

kaylangan on Aug 20 2024 09:20 AM

We are excited to announce the Public Preview for exporting your Sync Health Reports data!

Introducing the new SharePoint start experience

Belle Podeanu on Sep 12 2024 04:36 AM

We are excited to introduce the new SharePoint start experience to make it easy for authors to create personal pages or ...

Microsoft 365 roadmap

Get the latest updates on our best-in-class productivity apps and intelligent cloud services. Rethink productivity, streamline business processes, and protect your business with Microsoft 365.

[Using this roadmap](#)

[Roadmap improvements](#)



■ Microsoft Teams: Teams admins in education will now be able to create and publish custom team templates	Rollout Start: September 2024
■ Microsoft Viva: Campaign Enhancements - Targeted campaigns and campaigns in the digest.	Rollout Start: September 2024
■ Microsoft Teams: Bidirectional support for Teams Live Interpretation	Rollout Start: September 2024
■ Microsoft Teams: Use Teams Q&A to collect attendee questions in GCC	Rollout Start: September 2024
> ■■■ Outlook: Outlook for Mac - Junk/Phishing Reporting Actions Integrated with Microsoft Defender	Rollout Start: September 2024
> ■■■ SharePoint: Introducing custom fonts for SharePoint	Preview Available: April 2024 Rollout Start: September 2024
> ■■■ Microsoft Copilot (Microsoft 365): Copilot in Teams Meetings will take the meeting chat into account	Rollout Start: September 2024
> ■■■ SharePoint: Copilot in SharePoint	Preview Available: July 2024 Rollout Start: August 2024
> ■■■ Microsoft Purview compliance portal: Data Loss Prevention - Enhancements to the device onboarding page	Preview Available: July 2024 Rollout Start: August 2024
> ■■■ Microsoft Teams: Administrative Units for Teams Administration	Rollout Start: August 2024
> ■■■ Outlook: Meeting recap and meeting artifacts available in Microsoft Outlook	Rollout Start: August 2024
> ■■■ Microsoft Teams: Rename general channel	Rollout Start: August 2024
> ■■■ Microsoft Teams: New expanded gallery view option for minimized meeting window	Rollout Start: August 2024
> ■■■ Outlook: Go to folder shortcut in the new Outlook for Windows and web	Rollout Start: August 2024
> ■■■ Outlook: Junk/Phishing reporting actions integrated with Microsoft Defender in classic Outlook for Windows	Rollout Start: August 2024
> ■■■ Microsoft Copilot (Microsoft 365): Copilot in Excel - Summarize text columns	Rollout Start: August 2024
> ■■■ Microsoft Teams: Custom background for Teams Rooms on Android	Rollout Start: August 2024
> ■■■ SharePoint: Microsoft Lists - Drag to order list items	Rollout Start: August 2024
> ■■■ Microsoft Viva: Viva Amplify - Video templates	Rollout Start: August 2024
> ■■■ Microsoft Viva: Viva Amplify - Improved authoring experience	Rollout Start: August 2024



Microsoft Teams Blog:

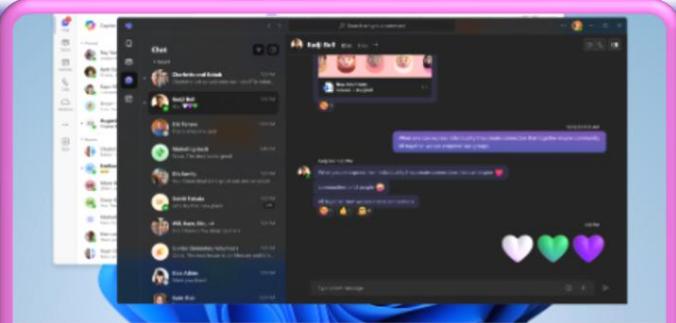


What's New in Microsoft Teams | August 2024

What's New in Microsoft Teams | August 2024

Pete Daderko on Aug 30 2024 08:30 AM

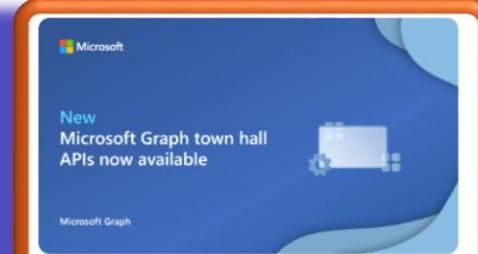
August is here, and so are some new features and enhancements that make Microsoft Teams even more powerful and easier to...



Unified Teams app for work, personal, and education...

amitfulay on Aug 20 2024 09:00 AM

Microsoft Teams has transformed the way we connect and collaborate at work and in our lives. To date, there have been tw...

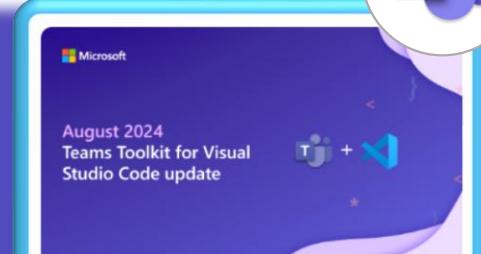


Annie, Sheri

Sep 6, 2024

Microsoft Graph APIs for Teams town hall now generally available

Learn more about the general availability of new Teams town hall APIs and discover what's new.

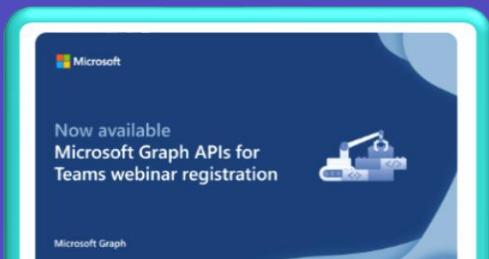


Junjie Li

Aug 15, 2024

Teams Toolkit for Visual Studio Code prerelease update – August 2024

Learn about the latest Teams Toolkit for Visual Studio Code updates including the capability to create declarative copilots.



Now available
Microsoft Graph APIs for
Teams webinar registration

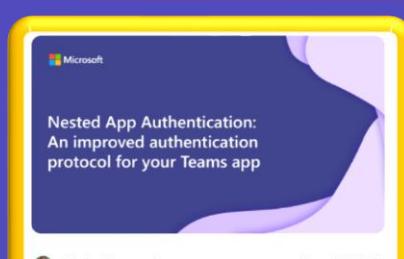


Annie, Sheri

Aug 30, 2024

Microsoft Graph APIs for Teams webinar registration now generally available

Explore how to use Microsoft Graph APIs to programmatically schedule online meetings with the appropriate meeting options.



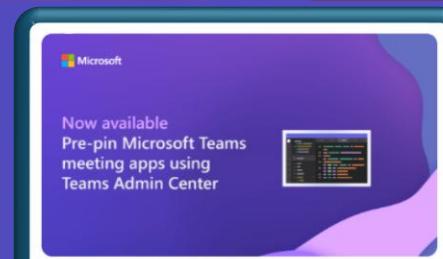
Nested App Authentication:
An improved authentication
protocol for your Teams app

Chris Yanasak

Sep 4, 2024

Introducing Nested App Authentication: An improved authentication protocol for your Teams app

Learn how Nested App Authentication simplifies the authentication process and enables single sign-on across supported Microsoft first-party applications.



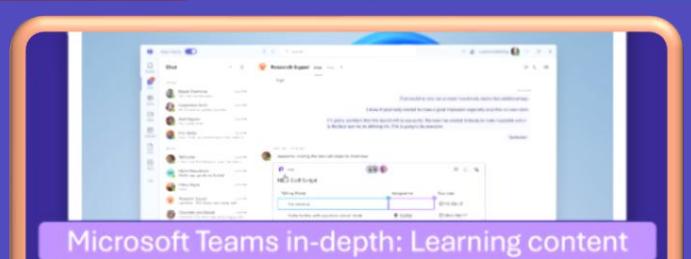
Now available
Pre-pin Microsoft Teams
meeting apps using
Teams Admin Center

Vikramjit Singh Chug

Aug 9, 2024

Pre-pin Microsoft Teams meeting apps using Teams Admin Center

We are thrilled to announce that tenant admins can now pin apps to Microsoft Teams meetings organized in their organization.



Microsoft Teams in-depth: Learning content



Microsoft Teams in-depth: Learning content on demand

Martin Roam on Aug 27 2024 08:00 AM

This article contains ten in-depth videos about Microsoft Teams – now on demand and embedded below. You'll discover Team...



Microsoft Viva: & Viva Blog: The employee experience platform for the new world of work



Microsoft Viva Connections



Microsoft Viva Engage



[Viva Amplify](#)



Microsoft Viva Insights



[Viva Pulse](#)



[Viva Glint](#)



Microsoft Viva Goals



Microsoft Viva Learning



Microsoft Viva Topics



Microsoft Viva Sales

Employee
Communication
& Communities

Organization's Social
Network

centralized communication
to the organization

Workplace Analytics
& Feedback

Short, more frequent surveys
from **smaller teams to their managers**

less frequent **Organization wide** surveys
for employee experience, onboarding, etc.

Goal Setting &
Management

Learning and
Knowledge Management

connecting employees to
knowledge and expertise

Customer &
Sales Insights



[Think like a People Scientist: How Microsoft used Viva...](#)

On September 11 we took a deep dive into the transformative power...

Action on Employee Signals
Viva Pulse Blog

Employee Listening

It's time to check-in with your team on actioning

We're excited to announce that you can now use our [Viva Pulse Employee Signals Follow-up template](#) designed to:

1. Regularly check-in on your team's progress on the focus areas you identified for action from the last Employee Signal survey cycle, and
2. Identify any adjustments to your team's actioning approach, as needed

As a manager you model, coach, and care to help environments Thrive. Take the next steps below & have fun!

[From Feedback to Action: How Viva Pulse Empowers Managers...](#)

In fall 2023, the Viva Pulse product team collaborated with Micro...



Viva Glint
Monthly
Newsletter

[News to Know: Volume 1, Edition 9](#)

Product updates, new guidance, training, and upcoming events

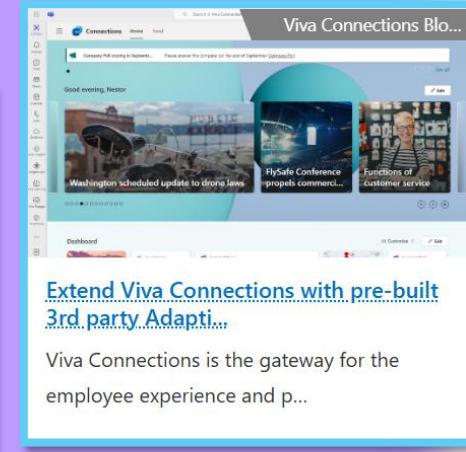
Viva Eng
Procurement

New Microsoft Copilot Dashboard
Features Now Available...

Introducing exciting new features to help you better understand a...

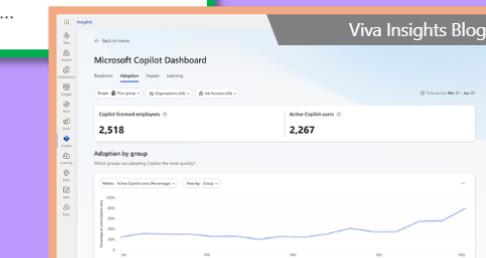
Large, Multi-Tenant Organizations find value with cross...

One of the key themes of customer feedback is the need for 'seam...



Extend Viva Connections with pre-built 3rd party Adapti...

Viva Connections is the gateway for the employee experience and p...



Viva Insights Blog

New Microsoft Copilot Dashboard
Features Now Available...

Introducing exciting new features to help you better understand a...

Navigating Copilot: Viva Glint's early learnings and best...

Aneeta_Solanki on Aug 22 2024 08:00 AM

On August 20, the Viva People Science team held the fifth webinar in its AI Empowerment series. This session was focused...

Microsoft Power Platform :: Power Platform Blog



Sep 16 • 4 min read

Unveiling agents built with Microsoft Copilot Studio to supercharge your business >

At Microsoft, we understand that every organization is unique, and to get the most out of AI, you will want to customize it for your business's specific needs and processes. Whether you're a user, developer, or IT professional, Microsoft Copilot Studio offers a comprehensive platform for creating, managing, and deploying AI agents.

Sep 3 • 4 min read

Reduce development times and increase ROI with Microsoft Power Platform >

To support investment decisions, Microsoft commissioned a 2024 Forrester Total Economic Impact study that quantified Microsoft Power Platform's impact.

Governance · September 16, 2024 · 5 min read

IT Governance Controls for Your Copilot agents >

In today's rapidly evolving digital landscape, organizations are constantly seeking innovative ways to enhance productivity and streamline operations. Microsoft 365 Copilot is at the forefront of this transformation, offering a suite of governance capabilities that empower organizations to harness the full potential of generative AI.

Sep 11 • 3 min read

Enable reusability and maintain best practices with the catalog in Microsoft Power Platform >

When building solutions in Microsoft Power Apps and Microsoft Power Automate, your organization may have company-specific needs and complex scenarios, such as custom mappings to various data sources, multi-faceted flows and triggers, and embedding various components with custom logic into apps. There is also repetitive work, such as implementing delicate design patterns, branding, and reusing links.

Visit our product blogs

Power BI

Power Automate

Microsoft Copilot Studio

Power Apps

Power Pages

Published August 29, 2024 · 1 min read

Introducing: Copilot Page in Power Platform Admin Center (Preview) >

As Copilots and generative AI features light up across Microsoft Power Platform, admins increasingly need help governing these features. To address these needs, we are introducing the preview of the Copilot page in the Power Platform Admin Center, a centralized location for readiness resources and documentation, Copilot user activity, and unified Copilot settings.

New Features Announcement · August 14, 2024 · 4 min read

Announcing public preview of expanded Single Sign-On authentication options for SAP Connectors >

We are pleased to announce the availability of Single Sign-On authentication support for the SAP enterprise resource planning software (ERP) and SAP OData Connectors in public preview.

Power BI August 2024 Feature Summary

August 20, 2024 by Jason Himmelstein

Welcome to the August 2024 update. Here are a few, select highlights of the many we have for Power BI. You can now ask Copilot questions against your semantic model. Updated Save and Upload to OneDrive Flow in Power BI and Narrative visual with Copilot is available in SaaS embed. There is much more to explore, please continue to read on!

Power Apps · September 9, 2024 · 4 min read

Millions of hours saved, 50% faster app development, and 206% ROI achieved with Microsoft Power Apps Premium >

Every month, 25 million users benefit from the solutions built with Microsoft Power Apps, a leading platform to build modern, intelligent, and high-performance applications.¹ To help customers better understand the overall business value of Power Apps Premium, Microsoft commissioned an independent study by Forrester Consulting, titled the Total Economic Impact of Power Apps.

September 10, 2024 · 7 min read

How the Microsoft Power Platform community is using low-code and AI to transform work and lives >

The Microsoft Power Platform community keeps showing us the next frontiers of innovation and creativity. These stories from our community below showcase some of the most innovative and inspiring work we've seen.

Dynamics and Business Applications

Roadmaps and Release plans:



IT Professionals News and product updates Dynamics 365 Field Service · Published September 16, 2024 · 3 min read

Announcing the General Availability of the New UX in Field Service Mobile >

We are thrilled to announce the General Availability (GA) of the new User Experience (UX) in our Field Service Mobile (FSM) application! We heard your feedback during the preview period and are excited to mark this milestone with key enhancements and changes!

IT Professionals News and product updates Dynamics 365 Commerce · Published August 30, 2024 · 4 min read

Copilot for Dynamics 365 Commerce revolutionizes retail with AI >

Discover how Copilot for Dynamics 365 Commerce can help you deliver personalized customer experiences, optimize product management, and streamline retail operations for store associates, managers, and back-office staff with AI.

Business Decision Makers

Thought leadership
Dynamics 365 Supply Chain Management

• Aug 29 • 5 min read

Transforming ERP, and the speed of business, with generative AI >

Enterprise resource planning (ERP) platforms were designed to help integrate the fragmented processes that comprise the operation of a large enterprise. But the way we do business keeps fundamentally changing. New business models disrupt the way companies sell products and services, blurring industry lines and transforming customer experiences.

IT Professionals

News and product updates
Dynamics 365 Field Service

• Aug 21 • 2 min read

Enable Spatial annotations for your frontline technicians using Dynamics 365 Field Service & Teams >

Access the new remote assistance capabilities in your mobile Teams app automatically upon release at no additional cost.

IT Professionals News and product updates Dynamics 365 Customer Service · Published September 3, 2024 · 2 min read

Try the first-party WhatsApp channel in Dynamics 365 Contact Center >

In today's digital landscape, the success of customer service on social media hinges on the quality of care provided to customers. It's essential for communications from agents to be timely, accurate, sensitive, brief, and friendly to enhance customer satisfaction and foster brand loyalty.

Business Decision Makers

Thought leadership
Dynamics 365 Customer Insights

• Aug 29 • 6 min read

Elevating experiences with AI, from productivity to personalization >

In this blog post, we're going to focus on the third item: elevating customer and employee experiences by showing how AI-enabled CRM platforms help increase productivity and provide unprecedented levels of personalized service across three key business functions: marketing, sales, and customer service.

Business Decision Makers Customer stories Dynamics 365 Field Service

6 min read

G&J Pepsi profit rises by \$30 million with Microsoft Dynamics 365 >

In 2021, facing an uncertain post-pandemic economy, G&J Pepsi embarked on a transformation journey to maximize customer service, revenue, and cost savings by implementing solutions including Microsoft Dynamics 365 Field Service, Microsoft Dynamics 365 Remote Assist, Microsoft Dynamics 365 Sales, and other Microsoft technologies.

Business Decision Makers · Aug 27 · 7 min read

Experience the new generation of financial analytics and reporting in Microsoft Dynamics 365 Business Central >

Amid the growing demand on CFOs to catalyze growth, maintaining a holistic view of business performance has never been more crucial.



Request manager approval for a selected file

By Microsoft

Instant

21375



Send an email to responder when response submitted in Microsoft Forms

By Microsoft Power Automate Community

Automated

408171



Save Office 365 email attachments to specified OneDrive for Business folder

By Microsoft Power Automate Community

Automated

245326

Developer and GitHub



News & insights

Enhancing the GitHub Copilot ecosystem with Copilot Extensions, now in public beta

Whether you're an individual developer looking to streamline your workflow or an organization aiming to integrate proprietary tools, GitHub Copilot Extensions now offers a platform to make that happen and to share your creations on the GitHub Marketplace.

 Shuyin Zhao · September 17, 2024

Developer skills

Beginner's guide to GitHub: Setting up and securing your profile

As part of the GitHub for Beginners guide, learn how to improve the security of your profile and create a profile README. This will let you give your GitHub account a little more personality.

Kedasha Kerr · September 9, 2024

Company

First Look: Exploring OpenAI o1 in GitHub Copilot

We've tested integrating OpenAI o1-preview with GitHub Copilot. Here's a first look at where we think it can add value to your day to day.

Mario Rodriguez · September 12, 2024

The ultimate guide to developer happiness

Five actionable tips and strategies to supercharge developer happiness—and a more innovative workplace.

 Jeimy Ruiz · August 13, 2024

Maintainers

How to build an open source metrics dashboard

How GitHub volunteers built an open source metrics dashboard for the World Health Organization and some best practices they picked up along the way.

Ian Candy, Liliana Torres & Andrew Henry · September 3, 2024

Found means fixed: Secure code more than three times faster with Copilot Autofix

With Copilot Autofix, developers and security teams can keep new vulnerabilities out of code and confidently remediate their backlog security debt.

Mike Hanley · August 14, 2024

Streamlining your MLOps pipeline with GitHub Actions and Arm64 runners

Explore how Arm's optimized performance and cost-efficient architecture, coupled with PyTorch, can enhance machine learning operations, from model training to deployment and learn how to leverage CI/CD for machine learning workflows, while reducing time, cost, and errors in the process.

 Scott Arbeit · September 11, 2024

GitHub Blog and Changelog

- [GitHub Copilot Enterprise on GPT-4o](#)
- [OpenAI O1 in GitHub Copilot](#)
- [New Contribution Widget for Android](#)
- [GitHub Copilot Extensions :: Public Beta](#)
- [CSV exports for the CodeQL pull request alerts report](#)
- [What's New in Mobile, September Update](#)
- [GitHub security advisories support CVSS 4.0](#)
- [GitHub CLI renews GPG signing key for Linux packages](#)
- [Copilot Chat in GitHub.com is now aware of common support scenarios and GitHub's documentation](#)
- [GitHub Desktop 3.4.4 – Introducing Custom Editor and Shell Integration](#)
- [Larger context window, improved test generation, and more in VS Code's Copilot Chat](#)
- [Copilot Chat in GitHub.com is now contextually aware of GitHub Advanced Security alerts](#)

Microsoft Developer Blogs:

- [GitHub Copilot Extensions for C++ developers and beyond now available in VS Code](#)
- [Performance Improvements in .NET 9](#)
- [Observability in Semantic Kernel](#)
- [Microsoft Entra External ID Extension for Visual Studio Code :: Generally Available](#)
- [How to run .NET apps natively on Arm64 devices](#)
- [Boosting Azure DevOps Security with GHAS Code Scanning](#)
- [Java on Visual Studio Code Update – August 2024 Updates](#)
- [Introducing new Ollama Connector for Local Models](#)
- [Microsoft 365 Certification control spotlight : Network Security Controls](#)
- [Increase your Microsoft Teams app's visibility and adoption with asynchronous link unfurling](#)

What are AI agents and why do they matter?

Learn how AI agents and agentic AI systems use generative AI models and large language models to autonomously perform tasks on behalf of end users.

Aaron Winston · August 13, 2024

How to level up your Git game with GitHub CLI

Using Git in the CLI can improve your development speed and power. Here are our top eight commands for using GitHub via your command line.

Michelle Duke · August 15, 2024



Office Developer Blogs and Microsoft 365 Dev Center



Mingjia Liu Sep 9, 2024

Announcing the Office Add-ins Development Kit for Visual Studio Code (public preview)

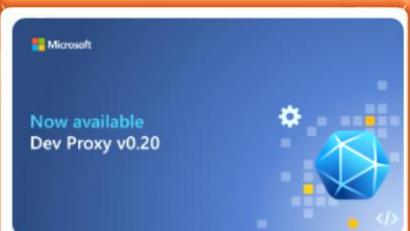
The Office Add-ins Development Kit is a new development tool to help you set up your environment, create Office Add-ins, and debug the code with a streamlined developer experience in Visual Studio Code.

Microsoft Graph APIs for Teams town hall now generally available

Learn more about the general availability of new Teams town hall APIs and discover what's new.

Streamline your workflow: Embracing Adaptive Cards Templating

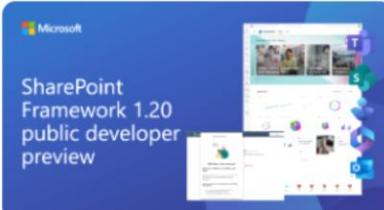
We're excited to continue our journey with the adaptivecards-templating package, a more robust and streamlined approach to creating Adaptive Cards.



Waldek, Garry Aug 28, 2024

Dev Proxy v0.20 with improved simulating API errors and a new API for building integrations

Discover what's new in the latest version of Dev Proxy to help you build robust apps connected to APIs.



Vesa Juvonen Aug 20, 2024

Public preview of SharePoint Framework 1.20 – First release of upcoming features

We are excited to announce the first preview of the upcoming SharePoint Framework 1.20. This time focus is primarily on the Microsoft Viva platform capabilities.

Optimizing large payloads in Fluid Framework

Learn about three Fluid Framework features which can be used to work around large payload scenarios: Grouped Batching, Batch Compression, and Compressed Batch Chunking.

Global Developer Updates and Bootcamps :: M365 Developer Blog :: Office Developer :: DevBlog

- [Integrate an Azure Function with your Excel custom function](#)
- [Join the Microsoft 365 Developer Program](#)
- [Microsoft Graph APIs for Teams Webinar registration :: Generally Available](#)
- [Deprecating legacy Exchange Online tokens for Outlook Add-ins :: Updates](#)
- [Nested App Authentication: An improved authentication protocol for your Teams app](#)
- [Microsoft 365 Certification control spotlight: Patch management](#)
- [Deprecation of the isPasscodeRequired property on the Microsoft Graph online meeting API](#)
- [Learn to Build Your First Blazor Hybrid App!](#)
- [Why is F# code so robust and reliable?](#)



Build immersive experiences for the workplace with Microsoft Mesh

Mesh lets you create new customized, multi-user experiences to help virtual meetings and events feel more like face-to-face connections. Now, you can bring your 3D world-building skills to the global workforce, helping connect like never before.

[Learn more about Mesh >](#)

[Start your journey with Mesh >](#)



Use Microsoft Graph to power your app with data and insights from Microsoft 365

Access rich, people-centric data in the Microsoft Cloud via a single endpoint with the Microsoft Graph REST APIs and SDKs.

[Learn more about the Microsoft Graph REST API >](#)

[Try the API with Graph Explorer >](#)

Trends with Microsoft Industry Solutions

```
1    PUBLIC CLASS OSXFACTORY  
2    @OVERRIDE  
3    PUBLIC IBUTTON CREATE()  
4    {  
5        RETURN NEW BUTTON();  
6    }  
7  
8    PUBLIC CLASS WINBUTTON  
9    @OVERRIDE  
10   PUBLIC VOID PAINT()  
11   {  
12       SYSTEM.OUT.PRINTLN("WIN");  
13   }  
14  
15   PUBLIC CLASS OSXBUTTON  
16   @OVERRIDE  
17   PUBLIC VOID PAINT()  
18   {  
19       SYSTEM.OUT.PRINTLN("OSX");  
20   }  
21  
22   PUBLIC CLASS MAIN  
23   {  
24       PUBLIC STATIC VOID MAIN()  
25       {  
26           IGUIFACTORY FACTORY =  
27           GUIFACTORYFACTORY();  
28           FINAL STRING APPEARANCE =  
29           FACTORY.APPEARANCE();  
30           IF (APPEARANCE.EQUALS("OSX"))  
31           FACTORY = NEW OSXFACTORY();  
32           ELSE IF (APPEARANCE.EQUALS("WIN"))  
33           FACTORY = NEW WINFACTORY();  
34           ELSE  
35           THROW NEW EXCEPTION();  
36       }  
37   }  
38  
39   FINAL IBUTTON BUTTON =  
40   FACTORY.BUTTON();  
41  
42   THIS IS JUST FOR THE  
43   WITH ABSTRACT FACTORY  
44   DESIGN PATTERN
```

Updates from Microsoft Industry Blogs



Sep 12 • 4 min read

Sustainable by design: Innovating for energy efficiency in AI, part 1 >

Read some examples of how we're advancing the power and energy efficiency of AI.

Aug 21 • 5 min read

Enabling carbon reduction in the energy industry >

Led by the European Union (EU), the new global push toward improved industrial carbon management (ICM) requires sophisticated new support mechanisms, including the development of technologies capable of orchestrating the carbon capture and storage (CCS) process from early planning to operations.

August 29, 2024 • 4 min read

Optimize supply chain resiliency by integrating diverse AI-powered solutions >

How do you build resiliency in your supply chain? In a world where constant change is the norm, AI is emerging as a powerful differentiator that is helping organizations sustain operations on a global scale.

Manufacturing and mobility •

Aug 14 • 5 min read

Accelerating the automotive sector with mobility copilots >

Generative AI is revolutionizing the way that people interact with their applications. Microsoft is at the forefront of this by integrating Microsoft Copilot into its products and empowering customers and partners to build their own copilot experiences.

Media and entertainment • Aug 22

• 4 min read

Microsoft at IBC2024: Reimagining media with AI >

IBC2024 brings together the creative, technology, and business communities to collaborate, learn, and unlock new opportunities.

AI in the fields: Copilot powers smarter farming >

Microsoft is endeavoring to empower the 600 million smallholder farmers around the world by providing access to crucial technologies. With tools like Azure Data Manager for Agriculture and generative AI, Microsoft is helping farmers adopt smarter, more sustainable farming practices.

Energy and resources • Aug 29 •

5 min read

How energy firms power the world with secure Microsoft technologies >

With AI advancements analyzing trillions of security signals daily, together we can build a safer, more resilient digital energy ecosystem.

August 15, 2024 • 4 min read

Transforming the nursing workflow with ambient voice and AI >

We placed the voice of nurses at the center of our ongoing work to design and develop a solution that augments nurses' daily workflows and is now in the hands of nurses across multiple provider organizations.



Microsoft Cloud for Sustainability

Record, report, and reduce your organization's environmental impact.

Emissions Impact Dashboard

Estimate your carbon emissions related to using Microsoft cloud services—including Azure and Microsoft 365—and make more data-driven decisions about cloud usage.

Emissions Impact Dashboard

Understand and help reduce your organization's environmental impact with the Emissions Impact Dashboard.

[Explore the dashboard >](#)

GHG emissions reporting training

Explore learning modules to measure and report greenhouse gas (GHG) emissions.

[Get started >](#)

Renewable energy procurement training

Find out how to build a roadmap to support your shift to renewable energy.

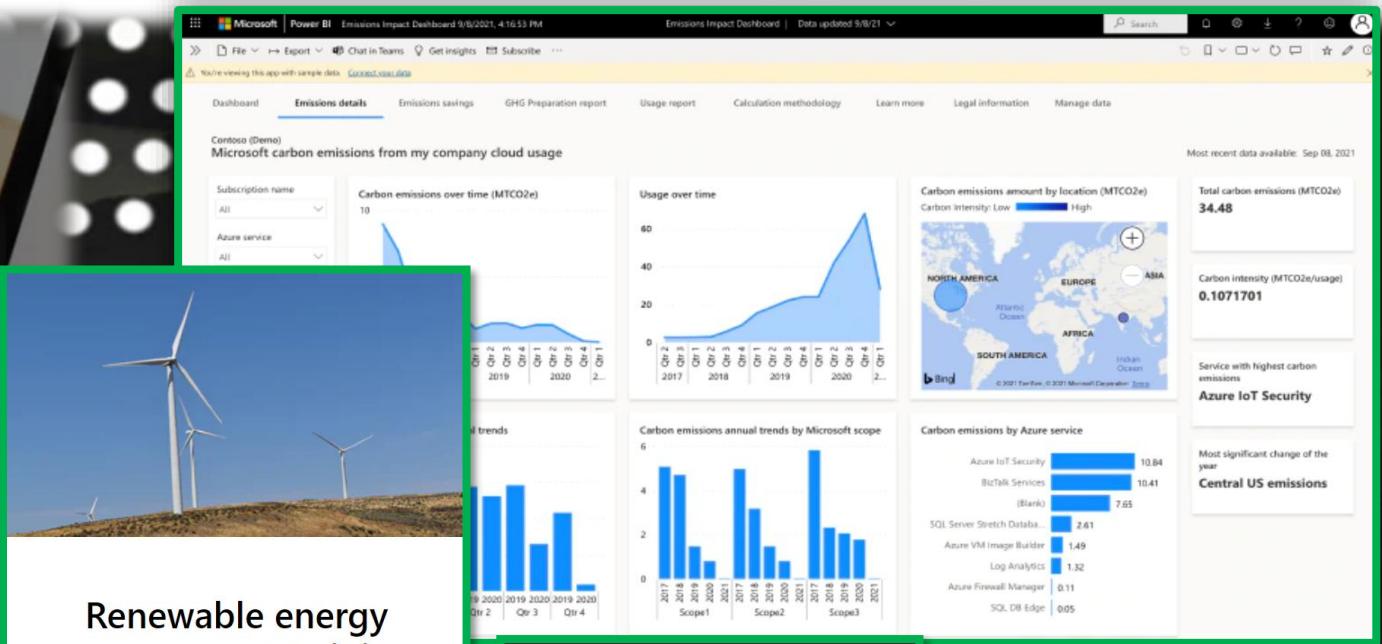
[Get started >](#)

Cloud carbon tracking for your path to net zero

Using Power BI template apps and consistent, third party-validated carbon accounting, the Emissions Impact Dashboard for Azure and the Emissions Impact Dashboard for Microsoft 365 (now in preview) help you measure your Microsoft Cloud-based emissions and carbon savings potential.

[App for Azure >](#)

[App for Microsoft 365 >](#)



[Energy and resources • Aug 21 • 5 min read](#)

Enabling carbon reduction in the energy industry >

Led by the European Union (EU), the new global push toward improved industrial carbon management (ICM) requires sophisticated new support mechanisms, including the development of technologies capable of orchestrating the carbon capture and storage (CCS) process from early planning to operations.

[Sustainability • Sep 12 • 4 min read](#)

Sustainable by design: Innovating for energy efficiency in AI, part 1 >

Read some examples of how we're advancing the power and energy efficiency of AI.

How can we advance sustainability?

2024 Environmental Sustainability Report

Reporting on our 2023 fiscal year

2023 highlights

Carbon

Total renewable electricity use in FY23

23.6 million MWh

This would be enough to power Paris with renewable electricity for about two years.



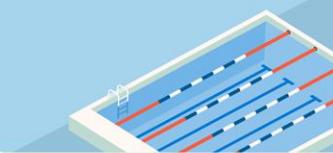
- ✓ 19.8 gigawatts (GW) of renewable energy assets were contracted, including projects in 21 countries around the world.
- ✓ We contracted 5,015,019 metric tons of carbon removal in FY23, and continue to build a portfolio of projects, balanced across low, medium, and high durability solutions.

Water

Total contracted water replenishment since 2020

61.7 million m³

This is enough water to fill over 24,000 Olympic sized swimming pools.



- ✓ We met our water access target by providing more than 1.5 million people with access to clean water and sanitation solutions.
- ✓ Our new datacenters are designed and optimized to support AI workloads and will consume zero water for cooling.

Waste

Total amount of solid waste diverted from landfills and incinerators FY23

18,537 metric tons

This is equivalent to the weight of over 45 commercial passenger jets.



- ✓ 18,537 metric tons of solid waste were diverted from landfills and incinerators across our owned datacenters and campuses.
- ✓ Our reuse and recycle rates of servers and components across all cloud hardware reached 89.4% in FY23.
- ✓ We reduced single-use plastics in our Microsoft product packaging to 2.7% in FY23.

Ecosystems

Total amount of land protected in FY23

15,849 acres

This is equivalent to over 9,000 soccer pitches.



- ✓ 15,849 acres were designated as permanently protected. We exceeded our land protection target of 11,000 by more than 40%.
- ✓ Through the Microsoft Datacenter Community Environmental Sustainability program we are responding to local needs in the communities that host Microsoft datacenters and where our employees live and work.



How we work

Our sustainability journey starts with getting our own house in order. In 2020, we set bold targets to be a carbon-negative, water-positive, zero-waste company that protects ecosystems by 2030. We are committed to sharing our progress, challenges, and learnings through our annual Environmental Sustainability Report to help accelerate global progress toward net zero.

We recognize that our actions alone will not solve the climate crisis. As a global technology provider, we also believe we have a role to play in supporting the thousands of customers and partners who put their trust in Microsoft. We think about Microsoft's role in sustainability through three spheres of influence: Microsoft sustainability, customer sustainability, and global sustainability.



Microsoft sustainability:

Taking care of our own environmental footprint

Our sustainability work starts with taking accountability for our operational footprint. This means taking accountability for our operational footprint across our campuses, datacenters, devices, software, and value chain. We look at our operations across the entire life cycle of assets and products, from design to building, usage, and end of life. We are committed to sharing our learnings, accelerating markets, scaling solutions across our value chain, and being transparent about our progress.



Customer sustainability:

Delivering digital technology for net zero

Microsoft is committed to providing innovative digital technology to help build a more sustainable world. From managing environmental footprints with Microsoft Cloud for Sustainability to accelerating innovation for new climate technologies, we're working to empower our customers and partners across industries. We are advancing greener software and reducing carbon intensity to improve device sustainability, and helping organizations measure and manage the health of the planet's natural ecosystems with the Microsoft Planetary Computer.



Global sustainability:

Enabling a more sustainable world

Microsoft's actions alone cannot solve the climate crisis. As a global technology leader, we are also committed to helping build the enabling societal conditions that will support a net zero economy. We're focused on accelerating the availability of new climate technologies, strengthening our climate policy agenda, helping to develop a more reliable and interoperable carbon accounting system, advocating for skills programs to expand the green workforce, and working to help enable a just energy transition.



Azure

Azure Updates

Azure Blog



[Announcements](#) · Sep 12 · 5 min read

Introducing o1: OpenAI's new reasoning model series for developers and enterprises on Azure >

By [Steve Sweetman](#), Azure OpenAI Service Product Lead

We are excited to add OpenAI's newest models o1-preview and o1-mini to Azure OpenAI Service, Azure AI Studio, and GitHub Models.

[Announcements](#) · Sep 9 · 5 min read

Microsoft and Oracle enhance Oracle Database@Azure with data and AI integration >

By [Brett Tanzer](#), Vice President, Product Management for the Azure Solutions & Ecosystem Team

Together with Oracle, we're announcing upgrades to Oracle Database@Azure, giving customers the ability to run or build new cloud applications that combine Oracle Database services with native Microsoft Azure services and benefit from extremely low latency and high performance.

[Announcements](#) · Aug 22 · 9 min read

Boost your AI with Azure's new Phi model, streamlined RAG, and custom generative AI models >

By [Eric Boyd](#), Corporate Vice President, Azure AI Platform, Microsoft

We're excited to announce several updates to help developers quickly create AI solutions with greater choice and flexibility leveraging the Azure AI toolchain.

[Announcements](#) · Aug 13 · 6 min read

GitHub scales on demand with Azure Functions >

By [Scott Hunter](#), Vice President, Product Management, Azure DevEx

Flex Consumption delivers fast and large scale-out features on a serverless model and supports long function execution times, private networking, instance size selection, and concurrency control.

Azure OpenAI now authorized as a service at DoD IL4 and IL5

[wesand](#) on Sep 03 2024 08:00 AM

Explore Azure OpenAI's latest DoD approvals and their impact



[Announcements](#) · Sep 10 · 4 min read

Advanced Container Networking Services: Enhancing security and observability in AKS >

By [Chandan Aggarwal](#), Partner Group Engineering Manager, Microsoft Azure; [Deepak Bansal](#), Corporate Vice President and Technical Fellow, Microsoft Azure

Advanced Container Networking Services is a new product offering, designed to address the observability and security challenges of modern containerized applications.

[Announcements](#) · Aug 28 · 3 min read

Check out what's new in Azure VMware Solution >

By [Brett Tanzer](#), Vice President, Product Management for the Azure Solutions & Ecosystem Team

I'm writing to you today from VMware Explore in Las Vegas, where my team and I are thrilled to present the latest updates for Azure VMware Solution (AVS).

[Announcements](#) · Aug 14 · 3 min read

Elevate your AI deployments more efficiently with new deployment and cost management solutions for Azure OpenAI Service including self-service Provisioned >

By [Zia Mansoor](#), Vice President, Data and AI

We're excited to announce significant updates for Azure OpenAI Service, designed to help our 60,000+ customers manage AI deployments more efficiently and cost-effectively beyond current pricing.

[Announcements](#) · Aug 7 · 3 min read

Announcing a new OpenAI feature for developers on Azure >

By [Steve Sweetman](#), Azure OpenAI Service Product Lead

We are thrilled to announce the launch of OpenAI's latest model, GPT-4o Next.

Azure OpenAI Service is FedRAMP High and Copilot for...

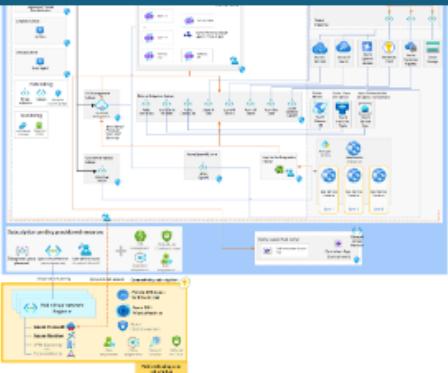
[DanNarloch](#) on Aug 20 2024 09:00 AM

Azure OpenAI Service is FedRAMP High, Microsoft Copilot for Microsoft 365 GCC High and DOD targeting Summer 2025

Updates & Announcements

- ❖ [Support on Apple Silicon Macs :: Generally Available](#)
- ❖ [Access-based enumeration and non-browsable shares for SMB and dual-protocol Azure NetApp Files volumes](#)
- ❖ [Azure NetApp Files Reserved Capacity](#)
- ❖ [Force detach zone redundant data disks during zone outage](#)
- ❖ [Advanced Container Networking Services: Enhancing security and observability in AKS :: Public Preview](#)
- ❖ [Automated Patching retirement and replacement with Azure Update Manager](#)
- ❖ [Microsoft Genomics Service :: Retirement](#)
- ❖ [Java on Azure Container Apps](#)
- ❖ [Low-Code RAG ingestion with built-in document parsing and chunking in Logic Apps Standard :: Public Preview](#)
- ❖ [Azure Site Recovery support for Azure Trusted Launch VMs \(Linux OS\) :: Private Preview](#)
- ❖ [DNAT on Azure Firewall Private IP address](#)
- ❖ [Azure Web PubSub – MQTT support now available :: Public Preview](#)
- ❖ [Live Resize for Azure Premium SSD v2 and Ultra Disks :: Public Preview](#)
- ❖ [Azure SQL Database Hyperscale elastic pools](#)
- ❖ [Azure IoT Edge now supports new version releases of Ubuntu Server, Debian, and Yocto](#)
- ❖ [Auto-renewal of certificates for on-premises to Azure Site Recovery](#)
- ❖ [Expanded GenAI Gateway capabilities in Azure API Management :: Public Preview](#)
- ❖ [Azure Storage Mover with Bandwidth Management](#)
- ❖ [VMSS Automatic Instance Repairs – Reimage, Restart Repair Actions](#)
- ❖ [Out of box monitoring dashboards for Logic Apps Standard](#)

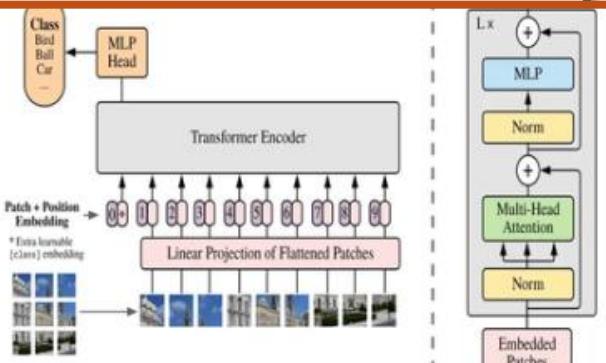
Azure AI Machine Learning Blog:



Baseline Agentic AI Systems Architecture

JorgeGX on Aug 20 2024 02:31 AM

Step into the future with Agentic AI Systems, designed to tackle complex challenges with minimal human intervention. The...



Train Vision Transformer model and run Inference

xinyuwei on Sep 11 2024 01:56 AM



Practical Guide to Azure Custom Neural Voice: Essential...

alibekjakupov on Aug 26 2024 10:52 AM

Recently, I worked on a project involving the generation of a custom voice, and I encountered some features and hidden i...

Common Crawl May/June 2023 Crawl Archive (CC-MAIN-2023-23)

The May/June 2023 crawl archive contains 3.10 billion pages, see the [announcement](#) for details.

Data Size and File Listings

Data Type	File List	#Files	Total Size Compressed (TiB)
Segments	segment.paths.gz	100	
WARC	warc.paths.gz	80000	86.77
WAT	wat.paths.gz	80000	21.11
WET	wet.paths.gz	80000	8.69
Robots.txt files	robots.txt.paths.gz	80000	0.14
Non-200 responses	non200responses.paths.gz	80000	2.34
URL index files	cc-index.paths.gz	302	0.23
Columnar URL index files	cc-index-table.paths.gz	900	0.26

Make High Quality Dataset from WARC for Pre-training

xinyuwei on Aug 31 2024 05:06 AM



LLM Load Test on Azure (Serverless & Managed-Compute)

maljazaery on Sep 09 2024 03:41 PM

In the ever-evolving landscape of artificial intelligence, the ability to efficiently load test large language models (L...



Fine-tune FLUX.1 LORA with your own images and Deploy...

mrajguru on Sep 03 2024 09:01 AM

The landscape of artificial intelligence and machine learning continues to evolve rapidly, with significant advancements...

Azure Services Directory



Azure Update Manager

Centrally govern and manage software updates at scale

Azure Update Manager

- ❖ Manage software updates to Azure, on-premises, and multi-cloud machines
- ❖ Oversee update compliance for your entire fleet of Windows and Linux machines, including Azure machines and Azure Arc-enabled servers on a single dashboard
- ❖ Use the service globally in all Azure and Azure Arc regions.
- ❖ Apply security and critical patches with access controls
- ❖ Implement patch assessment and deployment schedules with Azure Policy and dynamic scoping.
- ❖ Get Extended Security Updates
- ❖ Dynamic scoping, an advanced capability of schedule patching, to group machines based on criteria and apply updates at scale
- ❖ Flexible patching options such as automatic virtual machine (VM) guest patching, maintenance schedules, and on-demand updates



Azure Migrate

Simplify Azure migration and modernization with a unified platform

Azure Migrate

- ❖ Start your migration by discovering and assessing on-premises resources using the free Azure Migrate tool.
- ❖ Easily identify and gather details on your infrastructure, databases, applications, and virtual desktop interfaces (VDI).
- ❖ Create a plan with a phased approach, where all connected resources migrate together for ideal performance.
- ❖ Track and manage your cloud migration progress using a central dashboard for ease of management.
- ❖ Review example Migration plans and scenarios
- ❖ Assess VMware VM's for migration to Azure



Azure Stack HCI

Deploy and manage virtual machines and containers at the edge with cloud-native HCI Infrastructure

Azure Stack HCI

- ❖ Deploy cloud-native apps wherever you need them with distributed hybrid infrastructure.
- ❖ Run any applications, virtual machines, or container-based workloads anywhere with a consistent Azure experience.
- ❖ Choose right-sized turnkey, node, and integrated solutions from Microsoft and partners including Dell, HP, and Lenovo.
- ❖ Securely store and process customer data at the edge to stay compliant with HIPAA, FedRAMP, and other regulations.
- ❖ GPU Partitioning: Share a GPU device with multiple virtual machines to reduce total cost of ownership and simplify AI deployment at the edge.
- ❖ Monitor, update, and secure Azure Stack HCI infrastructure, including fleets of locations, directly from the Azure portal.

Azure Services Directory

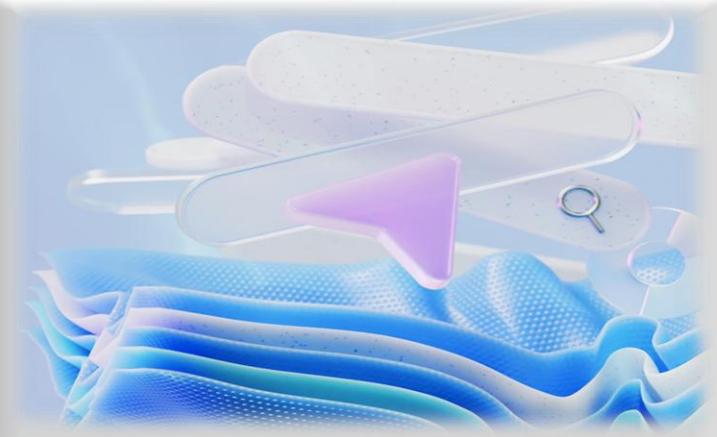


Azure AI Content Safety

Use AI to monitor text and image content for safety.

Azure AI Content Safety

- ❖ Monitor content with advanced AI-powered language and vision models
- ❖ [Detect offensive or inappropriate content in text and images](#) quickly and efficiently.
- ❖ [Multilingual capabilities in Azure AI Content Safety](#) enable content moderation in English, German, Spanish, French, Portuguese, Italian, and Chinese.
- ❖ [Establish responsible AI practices](#) by monitoring both user-and AI-generated content
- ❖ [Get Started with AI content Safety](#) :: Documentation and samples
- ❖ [Content Safety Studio not only contains out-of-the-box AI models but also includes Microsoft's built-in terms blocklists](#) to flag profanities and stay up to date with new trends.



Azure AI Studio

Simplify Generative AI application development

Azure AI Studio

- ❖ [Build your own Copilot](#)
- ❖ [Infuse your solution with AI capabilities](#) : Speech, Vision, Language
- ❖ Developers can ground models on their enterprise data and seamlessly integrate structured, unstructured, and real-time data using [Microsoft Fabric](#).
- ❖ [Built on Responsible AI](#): developers integrate responsible AI principles into the development process and evaluate AI applications for quality and safety.
- ❖ [New methods of creating AI solutions](#)
- ❖ [Built-in Retrieval augmented generation](#) and indexes capabilities
- ❖ [Azure AI Studio online training](#)



Azure Pipelines

Continuously build, test, and deploy to any platform and cloud

Azure Pipelines

- ❖ [Build, test, and deploy Node.js, Python, Java, PHP, Ruby, C/C++, .NET, Android, and iOS apps](#). Run in parallel on Linux, macOS, and Windows.
- ❖ Implement continuous delivery (CD) of your software to any cloud, including Azure, AWS, and GCP. Visualize deployment to any number of interdependent stages.
- ❖ Powerful workflows with native container support
- ❖ Deploy to Kubernetes, VMs, Azure Functions, Azure Web Apps, or any cloud.
- ❖ [See how the .NET infrastructure team at Microsoft](#) relies on Azure Pipelines to run millions of automated tests a day
- ❖ [Build, test, and deploy everything you create on GitHub](#)



Azure Services Directory

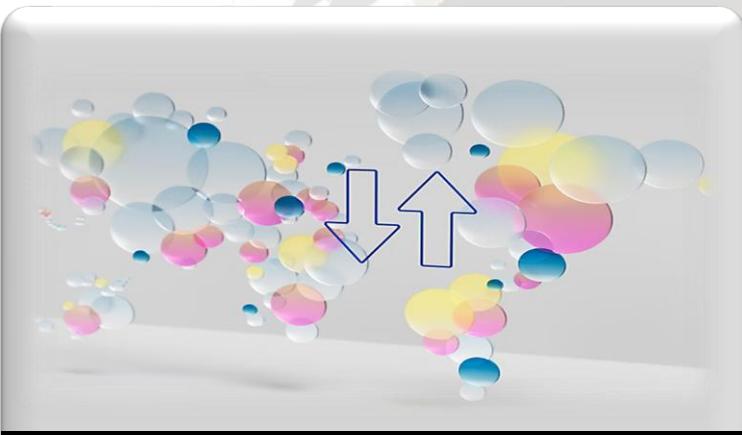


Azure AI Model Catalog

Discover, evaluate, customize, and deploy AI models

Azure AI Model Catalog

- ❖ [Innovate faster using foundation models packed for out-of-the-box-usage](#) and shared compute resources.
- ❖ [Easily integrate AI models into your applications without having to provision or manage infrastructure](#).
- ❖ [Analyze model metrics with standard datasets](#) and find the right models to meet your needs.
- ❖ [OpenAI, Phi-3, Meta, Mistral AI, Cohere, Hugging Face, Stability AI, Core42](#) (A G42 Company), [Nixta](#) available in the catalog, with more to come
- ❖ [Built-in Security and Compliance](#)
- ❖ [Explore AI models by task and use the playground](#) to experiment with sample queries.
- ❖ [Accelerate AI projects with ready-to-use fine-tuning pipelines](#)—no setup needed.

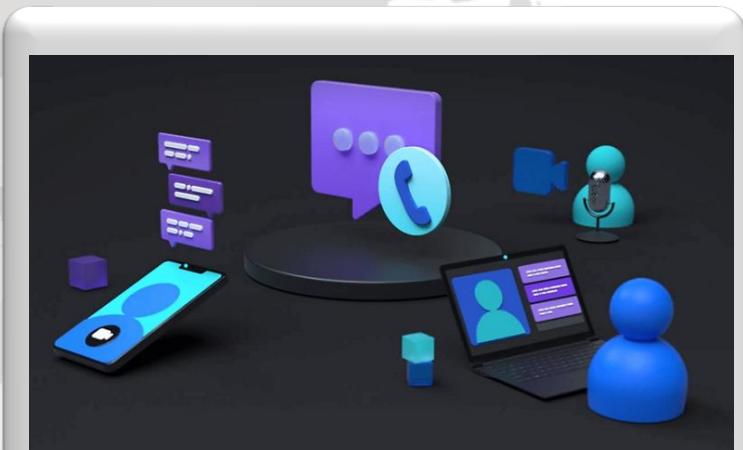


Phi-3 Open Models

A family of powerful, small language models (SLMs) with groundbreaking performance at low cost and low latency

Phi-3 Open Models

- ❖ Redefining what's possible with SLMs (Small Language Models)
- ❖ Lower resource use – designed for local deployments
- ❖ Deploy at edge to deliver fastest response in Latency-Bound scenarios
- ❖ Operate effectively in offline environments where data privacy is critical, or connectivity is limited.
- ❖ Fine-tuning SLM models with domain-specific data
- ❖ Phi-3 models were developed in accordance with Microsoft AI principles: accountability, transparency, fairness, reliability and safety, privacy and security, and inclusiveness.
- ❖ Phi-3 models are available for free for real-time deployment through the Azure AI model catalog. They're also available on Hugging Face and Ollama.



Azure Communication Services

Build multichannel communication experiences

Azure Communication Services

- ❖ Azure Communication Services offers multichannel communication APIs for adding voice, video, chat, text messaging/SMS, email, and more to all your applications.
- ❖ Certified compliant communication platform to meet your business needs, including HIPAA, GDPR, and SOC 2 standards
- ❖ Open-source SDKs to create engaging experiences, and seamless communication interoperability with Microsoft Teams
- ❖ [Build custom app experiences connected to Microsoft Teams](#)
- ❖ [Build a sample virtual appointment app in minutes](#)
- ❖ [Deliver reliable enterprise-grade calling, chat, and messaging capabilities from a global, low-latency network](#)
- ❖ Automatically scale to meet your demands.

Microsoft Fabric :: Blog

Next Generation Analytics

Data Control end-to-end

Microsoft Fabric—an end-to-end analytics platform that brings together all the data and analytics tools that organizations need:

Data Factory (Data Integration)

Synapse Data Engineering

Synapse Data Warehouse

Synapse Data Science

Synapse Real-Time Analytics

Power BI (Business Intelligence)

Data Activator (*coming soon*)

The screenshot shows the Microsoft Fabric data management interface. On the left, there's a navigation sidebar with various icons for Home, Data, Workbooks, Datasets, and more. The main area displays several dashboards:

- Data engineering:** Shows a bar chart of endorsed items by type (e.g., 16 Workspaces, 332 Datasets) and a table of endorsed items by workspace.
- Data science:** Shows a bar chart of certified vs promoted items.
- Data warehouse:** Shows a bar chart of certified vs promoted items.
- Real-time analytics:** Shows a bar chart of certified vs promoted items.
- Data monitoring and action:** Shows a bar chart of certified vs promoted items.
- Business intelligence:** Shows a bar chart of certified vs promoted items.

DIFFERENTIATORS

Experience the next generation in analytics

Complete data platform

Lake-centric and open

Built for a data culture

Powered by AI

Overview ▾

Single experience ▾

Governance and security ▾

Unified capacity ▾

Simplify billing and help reduce costs with a single pool of capacity and storage that can be used for every workload.

Microsoft Fabric Achieves HITRUST CSF Certification

September 12, 2024 by Rick Xu

Announcements

Microsoft Fabric

Uncategorized

15,742 Views

We are excited to announce that Microsoft Fabric, which includes healthcare data solutions in Microsoft Fabric, is now certified for the HITRUST Common Security Framework (CSF) v11.0.1. The HITRUST CSF certification, one of the most widely adopted and recognized frameworks for information protection in the healthcare industry, provides customers with the assurance that Microsoft Fabric ... Continue reading "Microsoft Fabric Achieves HITRUST CSF Certification"



Showcase Blog



Microsoft Showcase Series

Inside Track



Discover the inside story of how Microsoft Digital is powering, protecting and transforming Microsoft, helping you learn from our experiences and accelerate your own transformation.

September 18, 2024 | Lukas Velush

Doing more with less: Optimizing shadow IT through Microsoft Azure best practices

You don't know what you don't know. In the world of IT, illuminating those hidden areas helps stave off nasty surprises. When elements of IT infrastructure are shrouded in mystery, it can lead to security vulnerabilities, non-compliance, and poor budget...

September 6, 2024 | Inside Track staff

Verifying device health at Microsoft with Zero Trust

Here at Microsoft, we're using our Zero Trust security model to help us transform the way we verify device health across all devices that access company resources. Zero Trust supplies an integrated security philosophy and end-to-end strategy that informs how...

September 4, 2024 | Inside Track staff

Monitoring Microsoft's SAP Workload with Microsoft Azure

At Microsoft, our Microsoft Digital Employee Experience (MDEE) team is using Microsoft Azure telemetry tools to get key insights on our business processes that flow through our SAP instance, one of the largest in the world. Our new platform provides our...

August 30, 2024 | Lukas Velush

Redesigning how we work at Microsoft with generative AI

Copilot for Microsoft 365 Deployment and Adoption Guide Read our step-by-step guide on deploying Copilot for Microsoft 365 at your company. It's based on our experience deploying it here at Microsoft: Full version eBook version Version for executives eBook version...

August 29, 2024 | Jason Kellington

Rethinking device management internally at Microsoft with AI

At Microsoft, we're leaning on AI to enhance our internal device management strategy. AI is helping us to simplify and improve the experience our employees have with their devices by predicting and auto-remediating issues, supporting proactive solutions, and enhancing the...

September 5, 2024 | Idunn Wolfe

Showcasing how our product managers are using Microsoft Copilot

Editor's note: Follow our ongoing video series that showcases our in-house experts using real-world scenarios to explore the transformative capabilities of Microsoft Copilot. For product managers, staying on top of things means embracing cutting-edge tools that maximize productivity. Figuring out...

September 12, 2024 | Idunn Wolfe

Using Microsoft Copilot as a trusted advisor for your Six Sigma projects

Editor's note: Follow our ongoing video series that showcases our in-house experts using real-world scenarios to explore the transformative capabilities of Microsoft Copilot. You can use Microsoft Copilot as your trusted advisor throughout continuous improvement projects like those that use...

Microsoft Research Blog



[Eureka: Evaluating and understanding progress in AI >](#)

September 17, 2024

How can we rigorously evaluate and understand state-of-the-art progress in AI? Eureka is an open-source framework for standardizing evaluations of large foundation models, beyond single-score reporting and rankings. Learn more about the extended findings.

RESEARCH FOCUS
SEPTEMBER 9, 2024

[Research Focus: Week of September 9, 2024 >](#)

September 12, 2024

Investigating vulnerabilities in LLMs; A novel total-duration-aware (TDA) duration model for text-to-speech (TTS); Generative expert metric system through iterative prompt priming; Integrity protection in 5G fronthaul networks;

A diagram illustrating four types of neural connections: Feedforward (horizontal), Mutual (between two nodes), Lateral (within a group of nodes), and Feedback (circular). Below the diagram, text reads: "Innovations in AI: Brain-inspired design for more capable and sustainable technology >"

August 29, 2024 | [Dongsheng Li](#), [Dongqi Han](#), and [Yansen Wang](#)

Researchers and their collaborators are drawing inspiration from the brain to develop more sustainable AI models. Projects like CircuitNet and CPG-PE improve performance and energy efficiency by mimicking the brain's neural patterns.

A diagram showing a complex network of interconnected nodes. Below it, text reads: "GraphRAG auto-tuning provides rapid adaptation to new domains >"

September 9, 2024

GraphRAG uses LLM-generated knowledge graphs to substantially improve complex Q&A over retrieval-augmented generation (RAG). Discover automatic tuning of GraphRAG for new datasets, making it more accurate and relevant.

[MedFuzz: Exploring the robustness of LLMs on medical challenge problems >](#)

September 10, 2024 | [Robert Osazuwa Ness](#)

Medfuzz tests LLMs by breaking benchmark assumptions, exposing vulnerabilities to bolster real-world accuracy.

Microsoft Quantum Blog :: Innovation News



News · Sep 10 · 6 min read

Microsoft and Quantinuum create 12 logical qubits and demonstrate a hybrid, end-to-end chemistry simulation >

by Krysta Svore, Technical Fellow, Advanced Quantum Development, Quantum at Microsoft

Microsoft and Quantinuum have partnered to continue progress toward scientific quantum advantage and create 12 highly accurate logical qubits.

Microsoft and Quantinuum applied Azure Quantum's qubit-virtualization system to Quantinuum's H2 trapped-ion quantum computer to create 12 highly reliable logical qubits. Additionally, the teams demonstrated the emerging capabilities of reliable quantum computing by using two logical qubits, integrated with an AI model and cloud high-performance computing (HPC), to accurately estimate the ground state energy of the active space of an important catalytic intermediate. These achievements demonstrate continued progress toward scientific quantum advantage, a milestone that will be reached when a hybrid quantum-classical supercomputer can solve scientific problems too complex for classical computers alone.

+ Technical docs

Explore the Azure Quantum technical documentation including quick starts, tutorials, and API references.

+ Quantum katas

Learn quantum computing and Q# programming with self-paced tutorials and exercises on GitHub.

Prompting the Copilot

- In the code window, select Explain code to prompt the Copilot in Azure Quantum to generate an analysis of the code sample.

You can prompt the Copilot in Azure Quantum for almost anything quantum related, for example:

- "Explain the MResetZ operation"
- "Write Q# code that entangles two qubits"
- "Explain quantum interference"



Quantum coding

Learn quantum coding with help from Copilot in Azure Quantum. Write and run quantum code right from your browser, or ask Copilot for a sample then copy, run, and explore.

[Try now >](#)



Quantum tutorials

Try the Azure Quantum "katas": free, self-paced quantum programming exercises that teach the elements of quantum computing and the Q# programming language.

[Try now >](#)



Quantum Chemistry

Learn about quantum chemistry with Azure Quantum's 3D interactive viewer. Ask copilot to show you a molecule and orbital visualization, or select one of the prompts to get started.

[Try now >](#)



Quantum & crypto

Grow your understanding of the intersection of quantum computing and cryptography with the Azure Quantum Resource Estimator and Copilot in Azure Quantum.

[Try now >](#)

Learning and Training



Microsoft Events and Training: Updates



Microsoft Virtual Training Days

Gain new skills by attending a free technical skilling event with Microsoft

[Register now >](#)

Browse all courses, learning paths, and modules

Learn new skills and discover the power of Microsoft products with step-by-step guidance. Start your journey today by exploring our learning paths and modules.

Further your goals with Microsoft events

Whether you're a developer, IT professional, partner, educator, or business professional, we have plenty of Microsoft events specifically created with your growth in mind. Explore special events and learning opportunities created to help you expand your expertise, learn new skills, and build community.

[All events](#) [Azure](#) [Microsoft 365](#) [Dynamics 365](#) [Power Platform](#) [Surface](#)

Azure

Microsoft Azure Virtual Training Day: Migrate and Secure Windows Server and SQL Server Workloads

Discover how Azure provides a comprehensive and flexible environment for migrating your workloads to the cloud.

Date & Time: Mon 23 Sep 2024, 12:00 PM
- Tue 24 Sep 2024, 12:00 PM

Timezone: EDT

Country: United States

Skill Level: Intermediate

Multicloud Security Across the Entire Cloud Application Lifecycle

[10/16/2024 | 12:00 - 13:00 \(AEST\)](#)

Digital

English (United...

Briefing

As more industries adopt multicloud and hybrid cloud infrastructures, they face the...

Microsoft Security Virtual Training Day: Implement Data Security with Microsoft Purview

[10/16/2024 | 12:00 - 15:00 \(AST\)](#)

Digital

Training

Fabric Analyst in a Day - Cegeka - Sweden

[10/17/2024 | 08:00 - 16:00 \(WEST\)](#)

Digital

Swedish

Training

Microsoft Copilot for Microsoft 365 Training for Marketing Professionals (Digital Simulive)

[10/15/2024 | 13:00 - 14:00 \(CST\)](#)

Digital

English (United...

Training

Join us for the Microsoft Copilot for Microsoft 365 Training for Marketing Professionals, where yo...

Microsoft 365 Virtual Training Day: Prepare Your Organization for Microsoft Copilot for Microsoft 365

[10/16/2024 | 10:00 - 12:00 \(CST\)](#)

Digital

Training



New Training Initiative – Digital Skills for the Future

help professionals gain and demonstrate their skill

Build the skills you need for the digital economy

LinkedIn and Microsoft have teamed up to provide free courses to help you keep your skills relevant

LinkedIn Learning

Microsoft



Career Essentials in Generative AI

Learn the core concepts of Artificial Intelligence and generative AI functionality. This learning path will introduce currently available generative AI tools, explore their impacts, and discuss the importance of ethical considerations when using them.

Skills you'll learn:

- Develop an understanding of generative AI models
- Learn the ethical considerations of using generative AI
- Explore the impact of generative AI tools
- Basics of Microsoft 365 Copilot

[Earn your Career Essentials in Generative AI Professional Certificate](#)



Career Essentials in Cybersecurity

Discover the foundational skills needed for a career in cybersecurity. Gain a solid understanding of commonly used cybersecurity terms. Explore the current threat landscape and learn the core concepts of cybersecurity.

Skills you'll learn:

- Fundamental cybersecurity concepts
- Fluency in cybersecurity terminology
- Navigating the cybersecurity threat landscape

[Earn your Career Essentials in Cybersecurity Professional Certificate](#)



Career Essentials in Business analyst

Explore foundational business analysis concepts and understand key processes. Practice using software tools for common business analysis tasks.

Skills you'll learn:

- Agile principles
- Requirements for gathering and analysis
- Data science basics

[Earn a Career Essentials in Business Analysis Professional Certificate](#)



Career Essentials in Sustainable Tech

Harness the power of technology to foster sustainable change. This learning path will equip you with an understanding of sustainability concepts vital to businesses, ways sustainability can drive innovation, and tech solutions that can help companies meet strategic sustainability goals.

Skills you'll learn:

- Foundational sustainability concepts
- Opportunities for sustainable innovation
- Why sustainability is key to a cloud solution
- Sustainable solutions using Microsoft Cloud

[Earn your Career Essentials in Sustainable Tech Professional Certificate](#)



ESI Training Journey

PDF documents outlining the right journey to your training needs: <https://aka.ms/pathways>

Microsoft Azure Training Journey

Find the most recent version at aka.ms/ESIAzureTrainingJourney
Last updated March 2023

© Microsoft Corporation. All rights reserved.

<https://aka.ms/ESIAzureTrainingJourney>

Microsoft Security Operations Analyst
www.aka.ms/pathways

September 2023

Getting started

- New to the Cloud or Azure? Start with Azure Fundamentals
- New to Security? Continue with Microsoft Security, Compliance, and Identity Fundamentals

Cloud-native Security Operations with Microsoft Sentinel

Explore basic architecture, core capabilities, and primary use cases of its products.

- Introduction to Microsoft Sentinel
- Deploy Sentinel and connect data sources
- Threat detection with Sentinel analytics
- Security incident management
- Threat hunting with Microsoft Sentinel
- Threat response with Sentinel playbooks
- Query, visualize, and monitor data

Mitigate threats using Microsoft 365 Defender:

- Learn about common threats
- Micro 365 Defender Suite
- Introduction to Microsoft Defender for Office 365
- Automate, investigate, and remediate
- Configure, protect, and detect
- Describe data loss prevention alerts
- Investigate data loss prevention alerts in Microsoft 365 compliance
- Investigate data loss prevention alerts in Microsoft Cloud App Security
- Insider risk management overview
- Introduction to managing insider risk policies
- Explain security operations in Microsoft 365
- Understand attack surface reduction
- Enable attack surface reduction rules
- Configure advanced features
- Configure alert notifications
- Manage custom detections
- Manage and investigate incidents

Additional Study

- Manage and investigate alerts
- Configure automated investigation and remediation capabilities
- Explore threat hunting on your devices
- Understand threat intelligence concepts
- Track emerging threats with threat analytics
- Azure AD Identity Protection overview
- Detect risks with Azure AD Identity Protection policies
- Building a Conditional Access policy
- Investigate and remediate risks detected by Azure AD Identity Protection
- Micro 365 Secure Score
- Create an understanding of Azure AD roles in Privileged Identity Management
- Azure Active Directory Identity Protection notifications
- Introduction to Microsoft Defender for Identity
- Review compromised accounts or data
- Understand the Cloud App Security Framework
- Classify and protect sensitive information
- Configure alerts
- Microsoft 365 Defender
- Manage incidents
- Use the action centre
- Hunt for threats across dev apps, and identities

Mitigate threats using Azure Sentinel:

- Define threat concepts of SIEM, SOAR, XDR
- Describe how Sentinel provides integrated threat protection
- Plan for the Microsoft Sentinel workspace
- Permissions in Microsoft Sentinel
- Archive data from Log Analytics workspace to Azure storage using Logic App
- Log Analytics workspace data export in Azure Monitor
- Azure threat baseline for Microsoft Sentinel
- Connect data to Microsoft Sentinel using data connectors
- Collect SIS data sources with Log Analytics agent
- Collect data from Linux-based sources

Role Based Certification

Security Operations Analyst

Exam SC-200: Microsoft Security Operations Analyst

Skills Measured:

- Mitigate threats using 365 Defender
- Mitigate threats using Defender for Cloud
- Mitigate threats using Microsoft Sentinel

Microsoft Learn

- Mitigate threats using 365 Defender
- Mitigate threats using Microsoft Purview
- Mitigate threats using Defender for Endpoint
- Mitigate threats using Defender for Cloud
- Create queries for Sentinel using Kusto Query

Microsoft Security, Compliance, and Identity Training Journey

Find the most recent version at aka.ms/ESISecurityTrainingJourney
Last updated March 2023

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ENTERPRISE SKILLS INITIATIVE

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<https://aka.ms/ESISecurityTrainingJourney>

Azure AI Engineer Learning Pathway
www.aka.ms/pathways

March 2023

Getting started

Cognitive Services

- What are Azure Cognitive Services?
- Quickstart: Create a Cognitive Services resource using the Azure portal
- Provision and manage Azure Cognitive Services
- Azure Cognitive Services - Privacy Policy
- Manage Cognitive Services keys
- Authenticate requests to Azure Cognitive Services
- Cognitive Vision**

 - What is Computer Vision?
 - Optical Character Recognition (OCR)
 - What is the Ink Recognizer API?
 - Custom Vision Services
 - Process and classify images with the Azure Cognitive Vision Services
 - Quickstart: Build a classifier with the Custom Vision website
 - Quickstart: Build an object detector with the Custom Vision website
 - Deploy a model to Azure Container Instances
 - Cognitive AI**

 - Create conversational AI solutions
 - QnA Maker - Overview
 - Create a new QnA Maker service
 - Plan your QnA Maker app
 - Migrate a knowledge base using import/export
 - Create a bot with Azure Bot Service
 - Dialogs library
 - Create your own prompts to gather user input
 - Bot Troubleshooting | Logging
 - User authentication

 - Sentiment analysis and Opinion Mining Tutorial: Extract structured data from user utterance with machine learning engines in Language Understanding (LUIS)
 - Train your active version of the LUIS app
 - Test your LUIS app in the LUIS portal

Natural Language

 - Process natural language with Azure Cognitive Language Services
 - Process and Translate speech with the Azure Speech Services
 - What is the Translator service?
 - How to extract key phrases using Text Analytics
 - Sentiment analysis and Opinion Mining Tutorial: Extract structured data from user utterance with machine learning engines in Language Understanding (LUIS)
 - Train your active version of the LUIS app
 - Test your LUIS app in the LUIS portal

Microsoft Learn

 - Get started with artificial intelligence on Azure
 - Get started with artificial intelligence on Azure
 - Microsoft AI Business School
 - Microsoft Cognitive Services Blog
 - Azure Developer Guide
 - Responsible AI Principles
 - Choose a bot-building tool

Zero to hero in 4 weeks with Azure AI

A guide to achieving artificial intelligence expertise on Azure

DOWNLOAD

Experience Profile

Software engineers concerned with building, managing and deploying AI solutions that leverage Azure Cognitive Services, Azure Cognitive Search, and Microsoft Bot Framework. They are familiar with C# or Python and have knowledge on using REST-based APIs to build computer vision, language analysis, knowledge mining, intelligent search, and conversational AI solutions on Azure.

Getting Started:

 - New to the Cloud or Azure? Start with Azure Fundamentals
 - New to AI on Azure? Check out our Azure AI Fundamentals certification
 - Watch the Azure AI Essentials video series to get familiar with Azure AI products and services and learn how to bring these components together to build AI applications > [HERE](#)

Microsoft Learn:

 - Build your Tech Resilience
 - Get started with artificial intelligence on Azure
 - Microsoft AI Business School
 - Microsoft Cognitive Services Blog
 - Azure Developer Guide
 - Responsible AI Principles
 - Choose a bot-building tool

Additional Study

Skills Measured (AI-102)

Plan and manage an Azure AI solution (25-30%)
Implement image and video processing solutions (15-20%)
Implement natural language processing solutions (25-30%)
Implement knowledge mining solutions (5-10%)
Implement conversational AI solutions (15-20%)

Microsoft Learn:

 - Prepare for AI engineering
 - Provision and manage Azure Cognitive Services
 - Process and translate text with Azure Cognitive Services
 - Process and Translate speech with Azure Cognitive Speech Services (REST API)
 - Articulate and Suggestions
 - Sentiment analysis with Azure Cognitive Search
 - Custom Vision Services
 - Scale for performance on Azure Cognitive Search
 - Data import overview - Azure Cognitive Services
 - Custom AI

 - Create conversational AI solutions
 - QnA Maker - Overview
 - Create a new QnA Maker service
 - Plan your QnA Maker app
 - Migrate a knowledge base using import/export
 - Create a bot with Azure Bot Service
 - Dialogs library
 - Create your own prompts to gather user input
 - Bot Troubleshooting | Logging
 - User authentication

 - Sentiment analysis and Opinion Mining Tutorial: Extract structured data from user utterance with machine learning engines in Language Understanding (LUIS)
 - Train your active version of the LUIS app
 - Test your LUIS app in the LUIS portal

Azure Connected Learning Experience

Microsoft Azure Connected Learning Experience (CLX) is an experimental training program that sets a trajectory for aspiring learners and working professionals to be Azure experts. The CLX program offers a personalized journey that aims to optimize learning experience while maximizing return on time invested.

Click Here

Microsoft Virtual Training Days

Build the technical skills you need with free Virtual Training Days.

Click Here

Cognitive Services

Azure OpenAI Service

Fabric Learning Companion
www.aka.ms/pathways

September 2023

Getting started with Microsoft Fabric

Microsoft Fabric Documentation

Get Started

Power BI

OneLake

Data Factory

Synapse Data Engineering

Synapse Data Science

Synapse Data Warehouse

Synapse Real-Time Analytics

Implement a Lakehouse with Microsoft Fabric

Admin and Governance

Developer Experience

Troubleshooting

Training Modules

Organise a Fabric lakehouse using medallion architecture design

Other Fabric Resources

Fabric, a unified software-as-a-service (SaaS) offering, reshapes how you use data. Data is now stored in a single open format in OneLake, accessible by all the analytics engines in the platform. Fabric offers scalability, cost-effectiveness, accessibility from anywhere with an internet connection, and continuous updates and maintenance provided by Microsoft.

- Fabric website
- Microsoft Fabric Documentation
- End-to-end tutorials in Microsoft Fabric
- Get the free e-book on getting started with Fabric
- Join the Fabric Community

Microsoft

ENTERPRISE SKILLS INITIATIVE

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Microsoft Learning and Training :: Learning Blog



CAREER PATHS

Find your career path



Learn more about career paths that intrigue you, follow the guided training paths to help you get certified, and get connected to help reach your career goals.

Explore career paths

MODULE

Introduction to the Microsoft Azure Well-Architected Framework



⌚ 1 hr 4 min

Beginner • Solution Architect • Azure

MODULE

Build natural language solutions with Azure OpenAI Service



⌚ 57 min

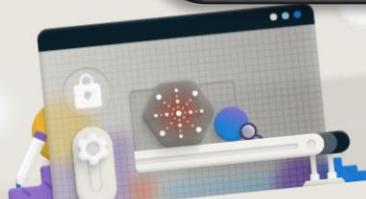
Azure • AI Engineer • Intermediate

⊕ Add

MICROSOFT LEARN

AI learning hub

Microsoft Learn is your trusted source to help you get skilled up and ready to power AI transformation with the Microsoft Cloud.



Security Operations Analyst

Protect your organization for security threats.



AI Engineer

Define and implement cutting-edge AI solutions.

MODULE

Automate development tasks by using GitHub Actions



⌚ 49 min

Beginner • DevOps Engineer • GitHub

⊕ Save



LEARNING PATH

Develop Generative AI solutions with Azure OpenAI Service

⌚ 5 hr 34 min

Azure • AI Engineer • Intermediate

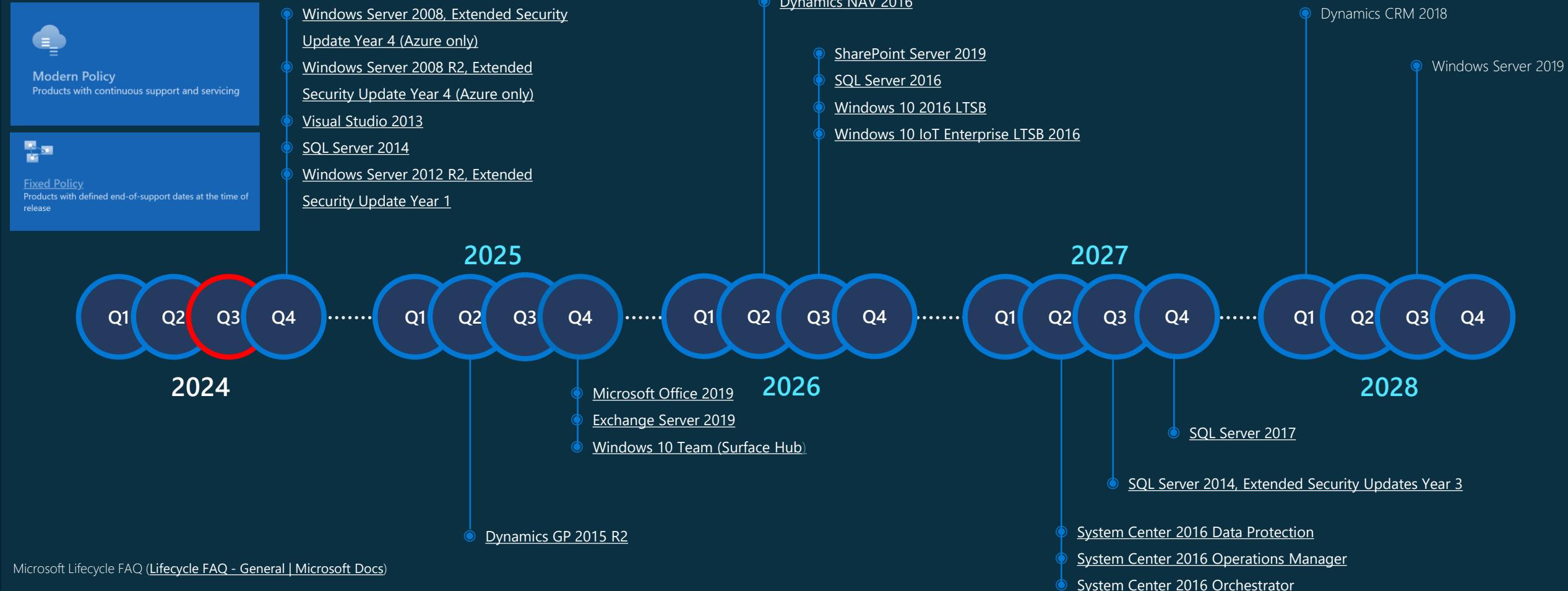
⊕ Add

Product Lifecycles





End of Service Roadmap to 2028



Microsoft Lifecycle FAQ ([Lifecycle FAQ - General | Microsoft Docs](#))

Microsoft Lifecycle Policy Details (<https://support.microsoft.com/en-us/lifecycle>)

** IE11 support ends for connection to Microsoft 365 (<https://docs.microsoft.com/en-us/lifecycle/announcements/m365-ie11-microsoft-edge-legacy>)

^ Microsoft 365 Apps, Office 2016, Office 2019 supported as clients for Microsoft 365 (<https://docs.microsoft.com/en-us/deployoffice/endofsupport/office-365-services-connectivity>)

~ TLS 1.0/1.1 Deprecated (<https://docs.microsoft.com/en-us/microsoft-365/compliance/tls-1-0-and-1-1-deprecation-for-office-365?view=o365-worldwide>)

Microsoft Product Lifecycle: Modern Policy Products that will Retire



Products under Modern Policy that will Retire in 2024

Products Moving to End of Servicing (Modern Policy)	Retirement Date
Azure Data Lake Storage Gen1	February 29, 2024
Xamarin Community Toolkit Xamarin.Android Xamarin.Essentials Xamarin.Forms Xamarin.iOS Xamarin.Mac	May 1, 2024
Virtual WAN hubs running on Cloud Services	July 1, 2024
Azure Kinect SDK	August 16, 2024
API Management stv1 App Service Environment version 1 and 2 Azure Cache for Redis on Cloud Services (Classic) Azure Classic Administrator Roles Azure Cloud Services (classic) Classic Application Gateway Classic ExpressRoute Gateway Classic Reserved IP Addresses Classic Storage Accounts Classic Virtual Network Classic VPN Gateway HPC Pack burst to Cloud Services Integration Services Environment Machine Learning Studio (classic) Visual Studio for Mac	August 31, 2024
Azure Database for MySQL Single Server	September 16, 2024

Products under Modern Policy that will Retire in 2025

Products Moving to End of Servicing (Modern Policy)	Retirement Date
Azure Basic Load Balancer Azure Unmanaged Disks	September 30, 2025
Windows 10 Enterprise and Education Windows 10 Home and Pro Windows 10 IoT Enterprise	October 14, 2025

Lifecycle data export

Export all products

Export lifecycle data for all products by clicking below:

[Export All Products](#)

Announcements

- ➡ Windows 11, version 22H2 end of updates (Home, Pro)
- ➡ Windows 11, version 21H2 end of updates (Enterprise, Education)
- ➡ Azure Service Manager products retiring on August 31, 2024
- ➡ Support for TLS 1.0 and TLS 1.1 will end by October 31, 2024
- ➡ Update: Teams Live Events no longer retiring September 30, 2024
- ➡ Windows 10, version 21H2 end of updates (Enterprise, Education)

- ➡ Power BI Windows app to be retired December 31, 2023
- ➡ Visual Studio for Mac to be retired August 31, 2024
- ➡ Windows 11, version 21H2 end of servicing (Home & Pro)
- ➡ Power BI Windows app for Surface Hub reaching retirement
- ➡ Windows 10, version 22H2 end of support date updated
- ➡ Windows 10, version 21H2 end of servicing (Home & Pro)

[See more >](#)

Microsoft Product Lifecycle: Modern Policy Reaching End of Servicing



Products Release End of Servicing for 2024

Products Moving to End of Servicing (Modern Policy)	End of Servicing Date
Microsoft Configuration Manager, Version 2207	February 12, 2024
FSLogix, Version 2210 Hotfix 2	February 13, 2024
Dynamics 365 Business Central on-premises (Modern Policy), 2022 release wave 2, version 21.x	April 14, 2024
FSLogix, Version 2210 Hotfix 3 .NET 7	May 14, 2024
Microsoft Configuration Manager, Version 2211	June 5, 2024
Windows 10 Enterprise and Education, Version 21H2 Windows 10 IoT Enterprise, Version 21H2	June 11, 2024
Microsoft Teams, Classic Teams Client	July 1, 2024
Dynamics 365 Business Central on-premises (Modern Policy), 2023 release wave 1, version 22.x Windows 11 Enterprise and Education, Version 21H2 Windows 11 Home and Pro, Version 22H2 Windows 11 IoT Enterprise, Version 21H2	October 8, 2024
Microsoft Configuration Manager, Version 2303	October 10, 2024
PowerShell, PowerShell 7.2 (LTS-current)	November 8, 2024
Azure IoT Edge, Version 1.4 (LTS) .NET 6.0 (LTS)	November 12, 2024

Products Release End of Servicing for 2025

Products Moving to End of Servicing (Modern Policy)	End of Servicing Date
Dynamics 365 Business Central on-premises (Modern Policy), 2023 release wave 2, version 23.x	April 2, 2025
Microsoft Configuration Manager, Version 2309	April 9, 2025
Dynamics 365 Business Central on-premises (Modern Policy), 2024 release wave 1, version 24.x	October 7, 2025
Windows 11 Enterprise and Education, Version 22H2 Windows 11 IoT Enterprise, Version 22H2	October 14, 2025
Microsoft Configuration Manager, Version 2403	October 22, 2025
Windows Server Annual Channel, Version 23H2	October 24, 2025
Windows 11 Home and Pro, Version 23H2	November 11, 2025

Microsoft Product Lifecycle: Fixed Policy Reaching End of Support 2024



Products Reaching End of Support for 2024

Products Moving to End of Support (Fixed Policy)	End of Support Date
Dynamics CRM 2013 Microsoft Host Integration Server 2013 Visual Studio 2022 , Version 17.2 (LTSC channel) Windows Server 2008, Extended Security Update Year 4 (Azure only) Windows Server 2008 R2, Extended Security Update Year 4 (Azure only)	January 9, 2024
Microsoft Deployment Agent 2013 Microsoft Diagnostics and Recovery Toolset 8.1 Test Agent, Controller User Experience Virtualization (UE-V) 2.0 Visual Studio 2013 Visual Studio Team Foundation Server 2013	April 9, 2024
Microsoft SQL Server 2012, Extended Security Update Year 2 SQL Server 2014 Visual Studio 2022 , Version 17.4 (LTSC channel)	July 9, 2024
Windows Embedded POSReady 7, Extended Security Update Year 3* Windows Server 2012, Extended Security Update Year 1 Windows Server 2012 R2, Extended Security Update Year 1	October 8, 2024
Project 2024 (LTSC)	October 9, 2024

Microsoft Product Lifecycle: Fixed Policy Reaching End of Support 2025



Products Release End of Support for 2025

Products Moving to End of Support (Fixed Policy)	End of Servicing Date
Visual Studio 2022 , Version 17.6 (LTSC channel)	January 9, 2025
Dynamics C5 2015 Dynamics CRM 2015 Dynamics NAV 2015 Dynamics SL 2015	January 14, 2025
Dynamics GP 2015 Dynamics GP 2015 R2	April 8, 2025
Microsoft SQL Server 2012, Extended Security Update Year 3 SQL Server 2014, Extended Security Updates Year 1 Visual Studio 2022 , Version 17.8 (LTSC channel)	July 8, 2025

Products Moving to End of Support (Fixed Policy)	End of Servicing Date
Access 2016 Access 2019 Dynamics 365 Business Central on-premises (Fixed Policy) Excel 2016 Excel 2019 Exchange Server 2016 Exchange Server 2019 Microsoft Office 2016 Microsoft Office 2019 Microsoft Report Viewer 2015 Runtime OneNote 2016 Outlook 2016 Outlook 2019 PowerPoint 2016 PowerPoint 2019 Project 2016 Project 2019 Publisher 2016 Publisher 2019 Skype for Business 2016 Skype for Business 2019 Skype for Business Server 2015 Skype for Business Server 2019 Visio 2016 Visio 2019 Visual Studio 2015 Visual Studio Team Foundation Server 2015 Windows 10 2015 LTSB Windows 10 IoT Enterprise LTSB 2015 Windows 10 Team (Surface Hub) Windows Defender Exploit Guard Windows Defender for Windows 10 Windows Server 2012, Extended Security Update Year 2 Windows Server 2012 R2, Extended Security Update Year 2 Word 2016 Word 2019	October 14, 2025

Microsoft Product Lifecycle: Products moving to Extended Support



Products Moving to Extended Support for 2024

Products Moving to Extended Support (Fixed Policy)	End of Support Date
Dynamics SL 2018	
Exchange Server 2019	
Hyper-V Server 2019	
Project Server 2019	
SharePoint Server 2019	
Skype for Business 2019	
Skype for Business Server 2019	
Windows 10 Enterprise LTSC 2019	
Windows 10 IoT Core LTSC	
Windows 10 IoT Enterprise LTSC 2019	
Windows Server 2019	
Windows Server IoT 2019	
Windows Server IoT 2019 for Storage	
	January 9, 2024
Azure DevOps Server 2019	
System Center 2019 Data Protection Manager	
System Center 2019 Operations Manager	
System Center 2019 Orchestrator	
System Center 2019 Service Manager	
System Center 2019 Virtual Machine Manager	
Visual Studio 2019	
	April 9, 2024

Products Moving to Extended Support for 2025

Products Moving to Extended Support (Fixed Policy)	End of Support Date
SQL Server 2019	February 28, 2025
Azure DevOps Server 2020 Microsoft Robotics	October 14, 2025

Microsoft Product Lifecycle: Azure Changes 2024



Azure Item	Retirement	Azure Item	Retirement	Azure Item	Retirement
Select Batch images	January 9, 2024	Built-in Qualys vulnerability assessment solution for Defender for Containers	May 1, 2024	Azure Storage for Go blob Track 1 SDK	September 13, 2024
Azure Active Directory Connect version retirement (2021)	February 29, 2024	Built-in Qualys vulnerability assessment solution for Defender for Servers		Azure Storage for Go file Track 1 SDK	
Azure Application Gateway analytics solution		consumption.azure.com API retirement		Azure Storage for Go queue Track 1 SDK	
Azure Batch rendering VM images & licensing		.NET 7 on App Service	May 13, 2024	Microsoft Azure Storage Track 1 SDK for Java	
Azure Batch Transcription and Customization Rest API v2		Azure Functions - .NET 7 community EOS	May 14, 2024	Retirement of Azure Storage Android Track 1 SDK	
Azure Data Lake Analytics		Azure Object Anchors	May 20, 2024	Retirement of Azure Storage Ruby Track 1 SDK	
Azure Data Lake Storage Gen 1		FCM legacy migration to FCM v1 in Azure Notification Hub	June 20, 2024	Azure database for MySQL Single Server	September 16, 2024
Azure Media Services v2 API		Azure Functions for Node 14	June 30, 2024	Azure Maps Data V1 & Data V2 API	
Azure Network Watcher Connection Monitor (classic)		Azure Functions for Node 16		.NET Standard user-defined functions	September 30, 2024
Azure Stack Edge Pro FPGA		Azure Media Services		Automatic configuration of LVM for CycleCloud	
AzureRM Powershell modules		Azure Video Indexer adjustments due to Azure Media Services retirement		Volume mounts	
Classic alerts in Azure Monitor for Gov cloud		Azure OpenAI Service 7.5.24 model retirements	July 5, 2024	Azure Monitor Application Insights Python	
Classic alerts in Azure Monitor for Mooncake		Azure Time Series Insights	July 7, 2024	OpenCensus SDK	
Classic Application Insights		Azure Synapse Runtime for Apache Spark 3.2	July 8, 2024	Azure Sphere CLI V1	
Classic Azure Migrate		Azure HDInsight A Series	August 30, 2024	Batch CLI extensions	
Cognitive Services Text Analytics v2.x		ADF Data Flows Compute Optimized SKU	August 31, 2024	BeeGFS filesystem cluster type	
Jenkins plug-ins for Azure		Azure Automation Agent-based user Hybrid Runbook Worker		C# custom deserializer for Azure Stream Analytics	
Legacy Azure Kubernetes Services AAD integration		Azure Automation Update Management		Grafana 9 End of Support for Azure Grafana Services	
Standard version of Custom Voice	March 6, 2024	Azure Functions Azure Cosmos DB V3 Extension		HTCondor scheduler cluster type	
Virtual Machines NC Series		Azure Monitor Log Analytics Agent		MFA Server Retirement	
Virtual Machines NCv2 Series		Azure Monitor Multi Step WebTest		Pool list usage metrics API	
Virtual Machines ND Series		Azure Monitor Release Annotations using API keys		Task authentication token	
Virtual Machines NVv1 Series		Azure Site Recovery (Hard coded IP addresses)		Python 3.8 on App Service	October 1, 2024
Azure Container Apps preview API version 2023-04-01-preview	March 6, 2024	Basic and Standard A-series VM families support		Azure Cache for Redis TLS 1.0/1.1	October 31, 2024
Azure Farmbeats	March 14, 2024	Change Tracking with LA (Log Analytics) Agent		Azure-wide TLS 1.0/1.1 support announcement	
Custom metric alerts in Azure monitor for container insights		Classic Resource Providers		Flexible Server PostgreSQL 11 retirement	November 9, 2024
Internet Analyzer Decom	March 15, 2024	Cognitive Search Skills for Text Analytics v2		Single Server PostgreSQL 11	
Retirement of Azure Storage PHP SDK	March 17, 2024	RDFF networking resources (classic)		.NET 6 LTS on App Service	November 12, 2024
Azure Cosmos DB's built-in Jupyter notebooks	March 30, 2024	Retirement of Azure Cosmos DB .NET SDK (Cosmos DB)		Azure Functions - .NET 6 community EOS	
Azure AI Content safety (preview)		Retirement of Java ASync v2.x (Cosmos DB)		Azure Spatial Anchors	November 20, 2024
Azure RTOS transition to open source under Eclipse Foundation	March 31, 2024	Retirement of Java V3 SDK (Cosmos DB)		PHP 8.1 on App Service	November 25, 2024
Changes to My Groups admin controls		Synapse Analytics Data Flows Compute Optimized SKU			
IoT Edge on K8s on Azure Stack Edge		Text To Speech (Standard Voice)			
Select Batch Pool Autoscale Statistics		Virtual Machines Basic and Standard A-series AV1			
Traversal Using Relays Around NAT (TURN)		Virtual Machines HB Series			
Trouble Shooting Guides Retirement					

Microsoft Product Lifecycle: Azure Changes 2025



Azure Item	Retirement
HTTP Application Routing add-on for AKS	March 3, 2025
Azure pod identity v1 (public preview) Explainability and Fairness Dashboard	March 14, 2025
“Global ingestion endpoints” (resulting in Instrumentation Key deprecation) Every-write AOF on Redis Enterprise Git Repository - API Management 2	March 15, 2025
Azure Database for PostgreSQL - Single Server	March 28, 2025
Azure HDInsight 4.0 Azure HDInsight 5.0	March 30, 2025
Application Insights ‘instrumentation key’ based global ingestion Azure Functions Service Bus Extension v4 Azure Maps Creator Feature State APIs Azure Maps Native SDK Azure portal templates Chef Run_lists and Cookbooks in Azure CycleCloud Cluster-Init Projects Container Monitoring solution Cost Management - Connector for AWS Direct Management API Microsoft Azure Storage Track 1 SDK for C++ QnAMaker Service V1 Retirement of Platform Enabled DR for App Service Web Apps SQL's connector v1 operations Standard_NC24rs_v3 VM size Visual Studio App Center	March 31, 2025
Ubuntu 20.04 LTS support	April 23, 2025
Node 18 LTS on App Service	April 30, 2025

Azure Item	Retirement
Cluster Configuration Flux v1	May 24, 2025
SAP HLI SKU Retirement	June 30, 2025
Azure Database for MariaDB	September 19, 2025
App Insights API Key Retirement Application Insights Java 2.X SDK Retirement Azure Database for MySQL v5.7 end of support Azure Functions proxy support retirement Azure HPC Cache Azure ML CLI v1 retirement Azure vFXT Basic IP Basic Load Balancer Batch Low Priority VMs Default Outbound Access Default outbound access for Simplified node communication pool without public IP addresses Legacy MFA and SSPR policies - authentication methods Microsoft Defender for Cloud - Microsoft Actions and Compliance Offerings components Microsoft.SQL 2014-04-01 stable APIs retirement ServiceMap Standard_NC6s_v3, Standard_NC12s_v3, and Standard_NC24s_v3 VM sizes Unmanaged Disks VPN Gateway Standard and High-Performance SKUs	September 30, 2025
Azure Monitor legacy Log Analytics API for log alerts Language Understandings (LUIS) v1	October 1, 2025



Acquisitions and Announcements

Microsoft Acquisitions - 2024



Company	Date	Description
		No Acquisitions Yet for 2024

Microsoft Acquisitions - 2023



Company	Date	Description
Fungible	01-09-2023	<p>Fungible Inc., a provider of composable infrastructure aimed at accelerating networking and storage performance in datacenters with high-efficiency, low-power data processing units (DPUs).</p> <p>Fungible's technologies help enable high-performance, scalable, disaggregated, scaled-out datacenter infrastructure with reliability and security.</p> <p>The Fungible team will join Microsoft's datacenter infrastructure engineering teams and will focus on delivering multiple DPU solutions, network innovation and hardware systems advancements.</p>

Microsoft Acquisitions - 2022



Company	Date	Description
<u>Lumenisity</u>	12-09-2022	Lumenisity® Limited , a leader in next-generation hollow core fiber (HCF) solutions. Lumenisity's innovative and industry-leading HCF product can enable fast, reliable and secure networking for global, enterprise and large-scale organizations. The acquisition will expand Microsoft's ability to further optimize its global cloud infrastructure and serve Microsoft's Cloud Platform and Services customers with strict latency and security requirements .
<u>Miburo</u>	06-14-2022	Miburo will enhance Microsoft's Cybersecurity and Threat Analysis capabilities. The addition of Miburo will enable Microsoft to expand its threat detection and analysis capabilities to address new cyber-attacks and shed light on the ways in which foreign actors use information operations in conjunction with other cyber-attacks to achieve their objectives. Miburo is a leading expert in the identification of foreign information operations . Miburo's research teams detect and attribute malign and extremist influence campaigns across 16 languages . The combination of Microsoft and Miburo will help to stop foreign adversaries from threatening public and private sector customers and, in fact, the very foundations of our democracy.
<u>Minit</u>	03-31-2022	Minit currently enables businesses to transform the way they analyze, monitor and optimize their processes . Minit's solutions have helped businesses gain deep insights into how processes run , uncover root causes of operational challenges and help mitigate undesired process outcomes. This acquisition will further empower Microsoft to help our customers digitally transform and drive operational excellence by creating a complete picture of their business processes, enabling every process to be easily and automatically analyzed and improved. Customers will be able to better understand their process data, uncover what operations look like in reality and drive process standardization and improvement across the entire organization to ensure compliance at every step .
<u>Oribi</u>	02-28-2022	Microsoft's LinkedIn will acquire Oribi , an Israel based marketing analytics company , to further help customers, from marketers to recruiters, gain actionable insights, make smarter decisions and drive business results . The integration of LinkedIn and Oribi will accelerate Microsoft's marketing attribution and codeless analytics capabilities .
<u>Activision Blizzard</u>	01-18-2022	Microsoft announced plans to acquire Activision Blizzard Inc. (Nasdaq: ATVI), a leader in game development and interactive entertainment content publisher. This acquisition will accelerate the growth in Microsoft's gaming business across mobile, PC, console and cloud and will provide building blocks for the metaverse . "The combination of Activision Blizzard's world-class talent and extraordinary franchises with Microsoft's technology, distribution, access to talent, ambitious vision and shared commitment to gaming and inclusion will help ensure our continued success in an increasingly competitive industry."

My Dashboard and Connect me portal <https://aka.ms/abbas>

Pages MSFT_ESA Abbas_MSFT Link + Bookmarks

Bing

Know & Reach Abbas:

- [My LinkedIn](#)
- [Abbas Kudrati \(@askudrati\) / Twitter](#)
- [My YouTube Channel \(new\)](#)
- [Abbas Kudrati: books, biography, latest update](#)
- [Abbas Kudrati, Author at Microsoft Security Blog](#)
- [My conference's slides collection](#)
- [My monthly newsletter archive.](#)
- [GitHub Repo Collection](#)

Online meeting booking portal for Abbas Kudrati

Online meeting booking portal

Event speaker request form for Abbas Kudrati

Event speaker request form

Microsoft Threat Intel Collection

- [Global Threat Activity](#)
- [Defender for Threat Intelligence](#)
- [Microsoft Threat Intelligence Blog](#)
- [Microsoft Security Intelligence \(@MsftSecIntel\)](#)
- [Threat Briefs](#)
- [Threat Actor Insights and Profiles](#)
- [Security Insider Reports \(Cyber signals, Nations St...\)](#)
- [Microsoft Digital Defense Report and Security Int...](#)
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Incident and Crisis Management related info... Shared

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- [Incident response Insights](#)
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- [How the Microsoft Incident Response team helps ...](#)
- [NIST Guide for Cybersecurity Event Recovery](#)
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Microsoft Product Ninja Trainings

- [Security 101 Training](#)
- [Become a Microsoft Sentinel Ninja: The complete...](#)
- [Become a Microsoft Defender for Cloud Ninja](#)
- [Microsoft-Defender-for-Cloud/Labs at main · Azu...](#)
- [Microsoft Defender External Attack Surface Mana...](#)
- [Become a Microsoft Defender for Endpoint Ninja](#)
- [Become a Microsoft 365 Defender Ninja](#)
- [Become a Microsoft Defender for Office 365 Ninja!](#)
- [Microsoft Defender for Cloud Apps Ninja Training](#)
- [Microsoft Defender for Identity Ninja Training](#)
- [Microsoft Defender for IoT Ninja Training](#)
- [Microsoft Purview Compliance Manager \(MSPCM...](#)
- [Azure Network Security Ninja Training](#)
- [Chief Information Security Officer \(CISO\) Workshop](#)
- [Microsoft Learn: Build skills that open doors in yo...](#)
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My Short Bio / Profile

List of cool collections of interesting portals and links

- [The History of Microsoft Azure](#)
- [Chief Information Security Officer \(CISO\) Workshop](#)
- [Mark Simos's List](#)
- [Microsoft 365 Licensing](#)
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Www.microsoft.com/en-us/security/blog (Live feed)

AgentSmith HIDS – Host Based Intrusion Detection

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padre – Padding Oracle Attack Exploiter Tool

6 months ago – padre is an advanced exploiter and Padding Oracle attack tool that can be deployed against CBC mode encryption.

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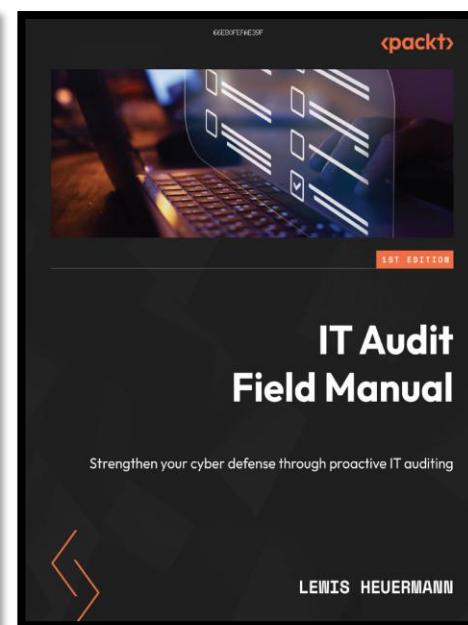
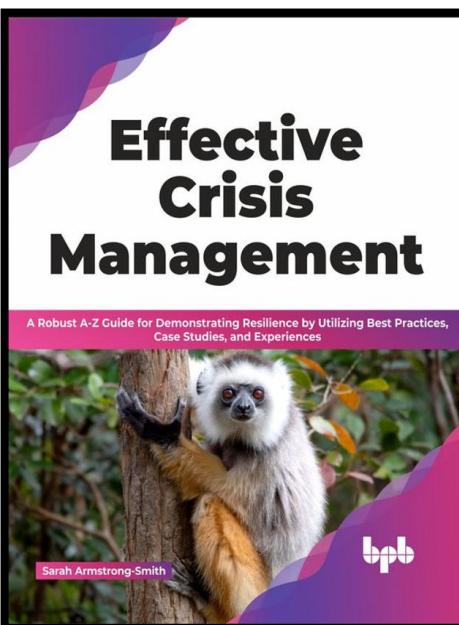
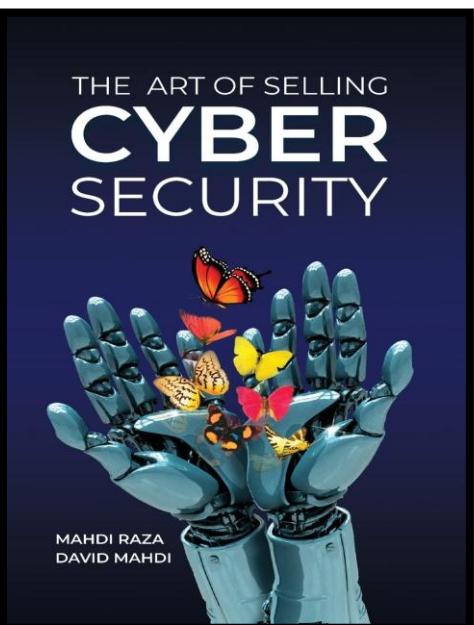
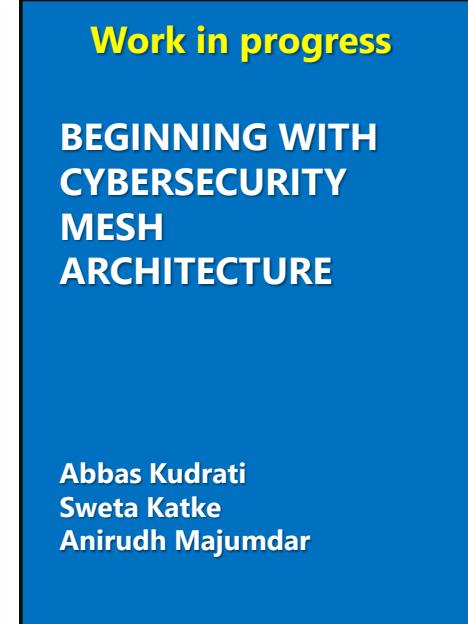
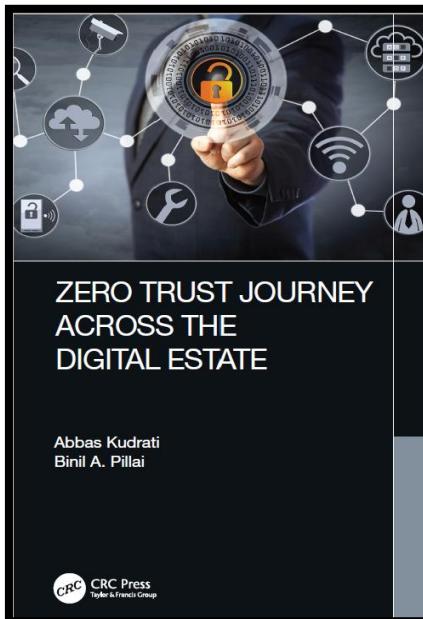
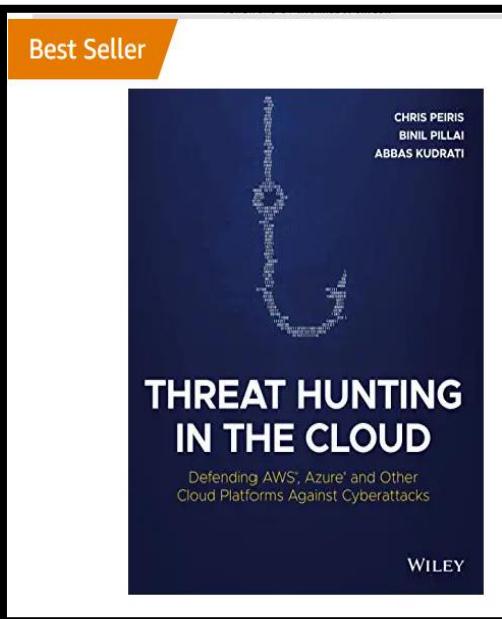
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