



# Monthly Technical Update

## January 2022

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**<https://aka.ms/abbas>**



- [Microsoft BlueHat 2022](#)
- [SAP on Azure Airlift](#)
- [Microsoft Inspire](#)
- [Microsoft Official Blog](#)



## Announcements and Tips



## New trends with Microsoft Technology

- [Azure Updates](#)
- [Industry Blogs](#)
- [Industry Cloud Announcements](#)
- [Microsoft Research Blog](#)
- [Microsoft Quantum Computing](#)



## Security and Compliance

- [Microsoft Security Blog](#)
- [Microsoft Global Threat Monitor](#)
- [Microsoft Security Response Center](#)
- [Zero Trust through Data lifecycle](#)



## Showcase of the month

- [Teams Updates](#)
- [Office Updates](#)
- [Power Platform and Dynamics](#)
- [Power Platform Templates](#)
- [GitHub Updates](#)
- [Developer Blogs and Showcase](#)
- [Office Developer Blog](#)



## Microsoft 365 update information



## Product Lifecycles

- [Products Reaching End of Support in 2021 and 2022](#)
- [Companies and Technologies Acquired Since 2018](#)

## Acquisitions and Announcements



# BLUEHAT

# IL 2022

MARCH 02-03

## BLUEHAT BACKSTAGE BLOG

BlueHat BackStage offers in-depth examinations of vulnerability research; giving you a peak behind closed doors. The first BackStage Blog on Adversarial Emulation is now available!

[VIEW BLOG](#)



# Secure SAP on Microsoft Azure Airlift

[Register Here](#)

## Welcome to the Secure SAP on Azure Airlift event registration page.

In this virtual airlift, Microsoft partners will learn how Microsoft can help secure SAP on cloud migration and modernization journey by leveraging the native Azure security controls including Microsoft Sentinel threat monitoring for SAP.

We're offering the event in 3 regions:

Region	Date	Time
Americas	12 January 2022	08:00 – 11:00 PST (UTC-8:00)
EMEA	19 January 2022	09:00 – 12:00 GMT (UTC±0:00)
ASIA	20 January 2022	10:00 – 13:00 KUL (UTC+8:00)

### Agenda

#### Secure SAP on Azure – Partner Opportunity (30 minutes)

**Binil Pillai**, Director of Partner Strategy & Development

**Yoav Daniely**, Group PM, Product Engineering

This session provides an overview of 'Secure SAP on Azure' partner motion that includes Azure Security landscape for SAP, partner opportunity and how partners can build services and accelerate GTM and sell-with activities.

#### Secure SAP on Azure with native Azure security controls (45 minutes)

**Richard Diver**, Senior Technical Business Development Manager

**Evren Buyruk**, Senior Cloud Solution Architect

In this session, we will explore a layered approach for end-to-end security of any SAP deployment and explore the native security controls available from Microsoft.

#### Introduction of Azure Sentinel & SAP threat monitoring product demo (90 minutes)

**Takayuki Hoshino**, Principal Program Manager

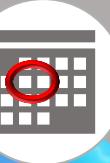
**Sarah Young**, Senior Program Manager

In this session, we will cover the basics of SAP threat protection and give an overview of how you can use Azure Sentinel's new SAP module to monitor the security of an SAP system. The demo will also cover docker set up and configuration to connect Sentinel with SAP log sources.

#### Closing and Q&A (15 minutes)

We will provide resources and potential next steps for partners to leverage, and an open attendee Q&A session with all presenters.

# Microsoft Inspire



Discover new possibilities at Microsoft Inspire. It's our largest partner event of the year, focused on Microsoft Cloud and the opportunities it provides for partners.

The collage features a large central photo of several speakers on stage, all holding up glasses of champagne in a toast. Below this are three smaller video thumbnail cards:

- Inspire Opening** 41 minutes: A video of Satya Nadella speaking, with a diagram of the Microsoft Cloud architecture layers (Sustainability, Business, Infrastructure, Data & AI, Security) overlaid.
- Windows 365 - Hybrid Windows for a Hybrid World** 30 minutes: A video of two people, one in a floral dress and one in a dark sweater, standing in front of a bookshelf.
- Innovate from cloud to edge on your terms** 30 minutes: A video of two people, one in a dark top and the other in a black t-shirt, standing side-by-side.

## That's a wrap

Microsoft Inspire 2021 was a success! Thanks for joining us. Revisit your favorite moments or catch up on what you missed with on-demand content from the event.

# Updates of Security and Compliance



December 11, 2021

## Guidance for preventing, detecting, and hunting for exploitation of the Log4j 2 vulnerability

Microsoft is tracking threats taking advantage of the CVE-2021-44228 remote code execution (RCE) vulnerability in Apache Log4j 2. Get technical info and guidance for using Microsoft security solutions to protect against attacks.

[Read more >](#)

January 12, 2022

### Microsoft Zero Trust solutions deliver 92 percent return on investment, says new Forrester study

Total Economic Impact™ study conducted by Forrester Consulting and commissioned by Microsoft reveals cost savings and business benefits enabled by Zero Trust.

January 10, 2022

### Align your security and network teams to Zero Trust security demands

Get expert advice on how to bridge gaps between your SOC and NOC and enable Zero Trust security in today's rapidly evolving threat landscape.

### Coming Soon: New Security Update Guide Notification System

MSRC / By Lisa Olson / January 11, 2022

Sharing information through the Security Update Guide is an important part of our ongoing effort to help customers manage security risks and keep systems protected. Based on your feedback we have been working to make signing up for and receiving Security Update Guide notifications easier. We are excited to share that starting today, you can ...



### Azure App Service Linux source repository exposure

MSRC / By msrc / December 22, 2021

MSRC was informed by Wiz.io, a cloud security vendor, under Coordinated Vulnerability Disclosure (CVD) of an issue where customers can unintentionally configure the .git folder to be created in the content root, which would put them at risk for information disclosure. This, when combined with an application configured to serve static content, makes it possible ...

December 14, 2021

### Your guide to mobile digital forensics

Cellebrite Senior Director of Digital Intelligence Heather Mahalik offers an inside look at mobile forensics and shares how to think about the function in your organization.

January 4, 2022

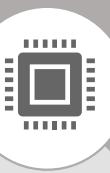
### What you need to know about how cryptography impacts your security strategy

Taurus SA Co-founder and Chief Security Officer Jean-Philippe "JP" Aumasson shares how the discipline of cryptography will impact cybersecurity strategy.



# Monitoring Global Threats: Microsoft

Microsoft Security Response Center



## 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

#### Education

Show all industries >  
Devices with encounters:  
**7,633,565 (62.17%)**



Most affected industries

Reported enterprise malware encounters in the last 30 days

Education

Business and professional services

Retail and consumer goods

Financial services and insurance

December 15, 2021

### The final report on NOBELIUM's unprecedented nation-state attack

In the final post of a four-part series on the NOBELIUM nation-state attack, we explore key findings from the after-action report on the attack.



December 11, 2021

### Guidance for preventing, detecting, and hunting for CVE-2021-44228 Log4j 2 exploitation

Get technical information about attacks that Microsoft has observed taking advantage of CVE-2021-44228, a remote code execution (RCE) vulnerability in Apache Log4j 2 referred to as "Log4Shell", and guidance for detecting and investigating attacks.

## Worldwide

**90,845,931 devices with encounters**

### Top threats:

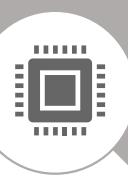
HackTool:Win32/AutoKMS  
HackTool:Win64/AutoKMS  
Trojan:Win32/Wacatac.B!ml  
HackTool:Win32/Keygen  
HackTool:MSIL/AutoKms

January 10, 2022

### New macOS vulnerability, "powerdir," could lead to unauthorized user data access

A new macOS vulnerability, "powerdir," could allow an attacker to bypass the operating system's TCC technology and gain unauthorized access to a user's protected data. We shared our findings with Apple through Coordinated Vulnerability Disclosure (CVD) and Apple released a fix.

# Microsoft Digital Defense Report



## Microsoft Digital Defense Report

Knowledge is powerful. This report encompasses learnings from security experts, practitioners, and defenders at Microsoft to empower people everywhere to defend against cyberthreats.

[Read the report](#)

### The cybersecurity bell curve:

Basic security hygiene still protects against 98% of attacks



#### Enable multifactor authentication

Make it harder for bad actors to utilize stolen or phished credentials by enabling multifactor authentication. Always authenticate and authorize based on all available data points, including user identity, location, device health, service or workload, data classification, and anomalies.

#### Apply least privilege access

Prevent attackers from spreading across the network by applying least privilege access principles, which limits user access with just-in-time and just-enough-access (JIT/JEA), risk-based adaptive policies, and data protection to help secure both data and productivity.

#### Keep up to date

Mitigate the risk of software vulnerabilities by ensuring your organization's devices, infrastructure, and applications are kept up to date and correctly configured. Endpoint management solutions allow policies to be pushed to machines for correct configuration and ensure systems are running the latest versions.

#### Utilize antimalware

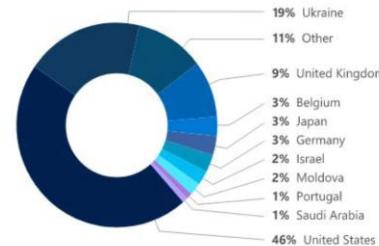
Stop malware attacks from executing by installing and enabling antimalware solutions on endpoints and devices. Utilize cloud-connected antimalware services for the most current and accurate detection capabilities.

#### Protect data

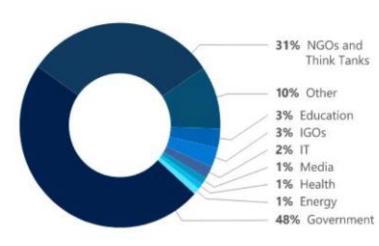
Know where your sensitive data is stored and who has access. Implement information protection best practices such as applying sensitivity labels and data loss prevention policies. If a breach does occur, it's critical that security teams know where the most sensitive data is stored and accessed.

### As observed by Microsoft

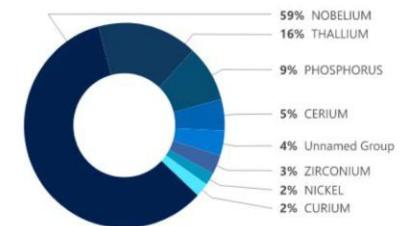
Most targeted countries (July 2020-June 2021)



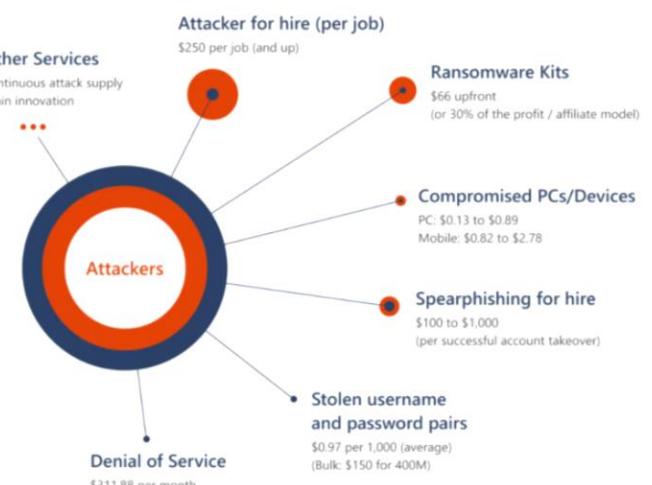
Most targeted sectors (July 2020-June 2021)



Most active nation state activity groups



### Average prices of cybercrime services for sale





# Microsoft 365 update information

# Microsoft Teams Blog:



What's New in Microsoft Teams | December 2021

## What's New in Microsoft Teams | December 2021

Microsoft\_Teams\_team on Jan 03 2022 03:00 AM

Welcome to the December edition of the What's New in Teams blog. We have a lot of exciting news for you, including new u...

### New for This Month

- Number Order for Raised Hands
- Meeting Recordings updates
- Operator Connect for Conferencing
- Android Teams App update
- Improved Search Results experience
- New updates for Frontline Workers

### Teams Phone

- Dynamic E-911 for US-based Users
- SIP Gateway: Enable and Manage

### Devices:

- Meeting Room capacity notifications
- Split video layout across multiple screens for Teams Rooms on Windows
- Hot Desking on Teams Display
- Jabra PanaCast 20
- Poly Room Kit for Teams Rooms



Recording & transcription

Recording and transcription settings let you control how these features are used in a Teams meeting. Learn more.

Transcription  Off

Cloud recording  On

Meetings automatically expire  On

Default expiration time 45

Store recordings outside of your country or region  Off

## How to Manage Microsoft Teams Meeting Recording...

BradGussin on Jan 06 2022 08:00 AM

As part of the evolution of the new Stream (built on SharePoint) and due to overwhelming customer requests, we are intro...

### Chat and Collaboration:

- Add descriptions to images in chat
- Walkie-Talkie App on Zebra devices and Reflexis

### Security and Compliance

- End-to-End Encryption (E2EE) for 1:1 Teams calls
- Enriching Device Management filtering capabilities
- Configure Anonymous user-join policy

### Development & Power Platform

- Tab actions are moving - into tab dropdown
- Share specific parts of the App to meeting stage - Leverage new APIs within the Teams Client SDK
- Microsoft Teams Connect support for third-party and custom tab app configurations



### Walkie Talkie app in Teams on Zebra devices and Reflexis...

Microsoft\_Teams\_team on Jan 12 2022 06:00 AM

We are excited to announce the general availability of Walkie Talkie app in Teams on a wide range of Zebra mobile device...

### Government Cloud Updates : GCC-High and DoD Clouds

- Breakout Room managers' support
- Integrated CART Captioning in Meetings
- Presenter mode in desktop or window-sharing
- Anonymous User Join Policy
- New assignment experience in separate windows for breakout rooms
- Download attendance report
- Isolated audio feed capabilities – create high-quality, clean audio mix
- Up to 25,000 members per team in GCCH

# What's New in Microsoft 365

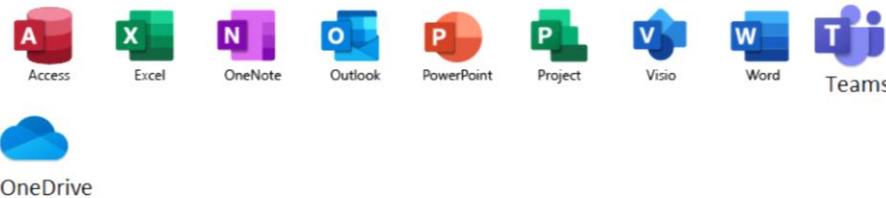
[M365 Blogs](#) and [Administrative Blogs](#) covering Office 365, Enterprise Mobility and Security and Windows ::



## Microsoft 365 Updates:

- [New Single Sign-On Service for Office Add-ins : Office on the web](#)
- [Office 365 receives Multi-Tier Cloud Security \(MTCS\) Level-3 Certification](#)
- [Org Chart creation in Visio Web App : Generally Available](#)
- [Accessibility Awareness App for M365 : Generally Available](#)
- [OneDrive: New Files On-Demand for MacOS](#)
- [OneDrive sync for native ARM devices : Public Preview](#)
- [OneDrive LTI for Canvas : Generally Available](#)
- [Excel : Searchable data validation list](#)
- [Most used SharePoint Framework Solutions in 2021](#)

What's new in your favorite Office app

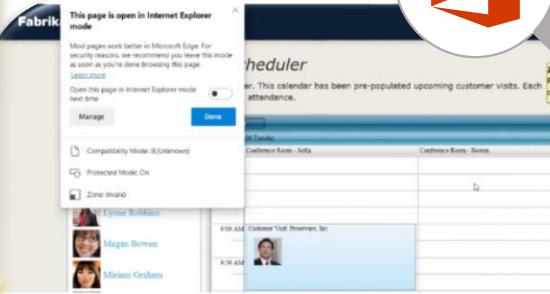


## Microsoft 365 roadmap

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](#)



### How to Keep Internet Explorer Sites Working

Zachary Cavanell on Dec 07 2021 03:16 PM

Continue using your Internet Explorer dependent sites and web apps, as an individual user or at scale, using IE mode wit...



### Using Adaptive Policy Scopes to Apply M365 Retention to...

Brendon Lee on Jan 11 2022 10:49 AM

In this blog we'll explain how you can now use adaptive policy scopes to include or exclude shared, resource, and inacti...

# Power Platform and Dynamics



Convert data into 3D assets using Dynamics 365 Guides, AI Builder, and Power Automate >

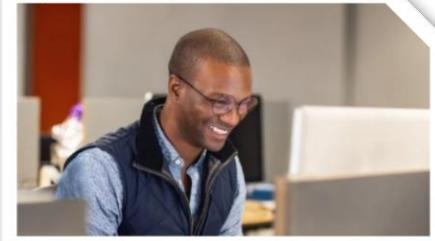
January 13, 2022

By [Alexis Goodrich](#), Product Marketing Manager, Mixed Reality

As digital transformation drives innovation and transforms the way we work, we see business operations and traditional internal processes being disrupted daily. To adapt and scale changes across their business, many organizations are overwhelmed and faced with digitizing thousands of manual checklists, paper forms, documents, and more.

The good news is today's Microsoft solutions make...

[Read more](#)



Finance insights is now generally available in Dynamics 365 Finance >

January 10, 2022

By [Georg Glantschnig](#), General Manager, Dynamics 365 Finance, Project Operations, and Human Resources

Today we are excited to announce the general availability of finance insights, a set of AI-powered capabilities that help customers of Microsoft Dynamics 365 Finance improve the efficiency and quality of financial processes by leveraging intelligent automation. This embed requires accepting cookies from the embed's site to view the embed. Activate the link to accept...[Read more](#)



Dynamics 365 Marketing approaches responsible AI with intention >

January 11, 2022

By [Lori Lamkin](#), Vice President, Dynamics 365 Marketing

At Microsoft Ignite, Microsoft Dynamics 365 Marketing announced a range of new AI features. We strongly believe in the power of AI to help businesses and their customers grow. We also recognize that these new technologies have the potential for misuse and harm. That's why in Dynamics 365 Marketing, we are taking an intentional and...[Read more](#)

Roadmaps and Release plans:



## Power BI Blog

- [On-Demand Loading for Large Models](#) : Announced
- [Asynchronous refresh in Power BI](#): Public Preview
- [Hybrid Tables in Power BI Premium](#): Public Preview
- [On-Premises data gateway update](#): Generally Available
- [Power BI Data Protection – MIP Label Features and More](#)
- [Updated Power BI Virtual Workshops](#)
- [CustomData Feature](#) : Generally Available
- [Power Apps and Dynamics 365 data visualization](#): Preview

## PowerApps Blog: Power Automate Blog: Power Virtual Agents Blog

- [Power Apps New Enhancements and Capabilities](#)
- [Power apps Portal Search powered by Microsoft Dataverse Search API](#) : Preview
- [Power Platform Developer Tools](#): December Updates
- [Extract sentiment from text with AI Builder](#)
- [Ending 2021 with the release of twenty-seven new and updated connectors](#)
- [Administer and govern a low-code intelligent automation platform whitepaper: Enterprise deployment for RPA and more in Power Automate](#)
- [Collaborative comments in Power Automate](#)



Create a to-do whenever you are @mentioned in an email

By Microsoft

Automated  
59327



Form processing to email and SharePoint

By Microsoft

Automated  
14205

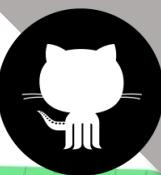


Save Outlook.com email attachments to your OneDrive

By Microsoft Power Automate Community

Automated  
157865

# Developer and GitHub

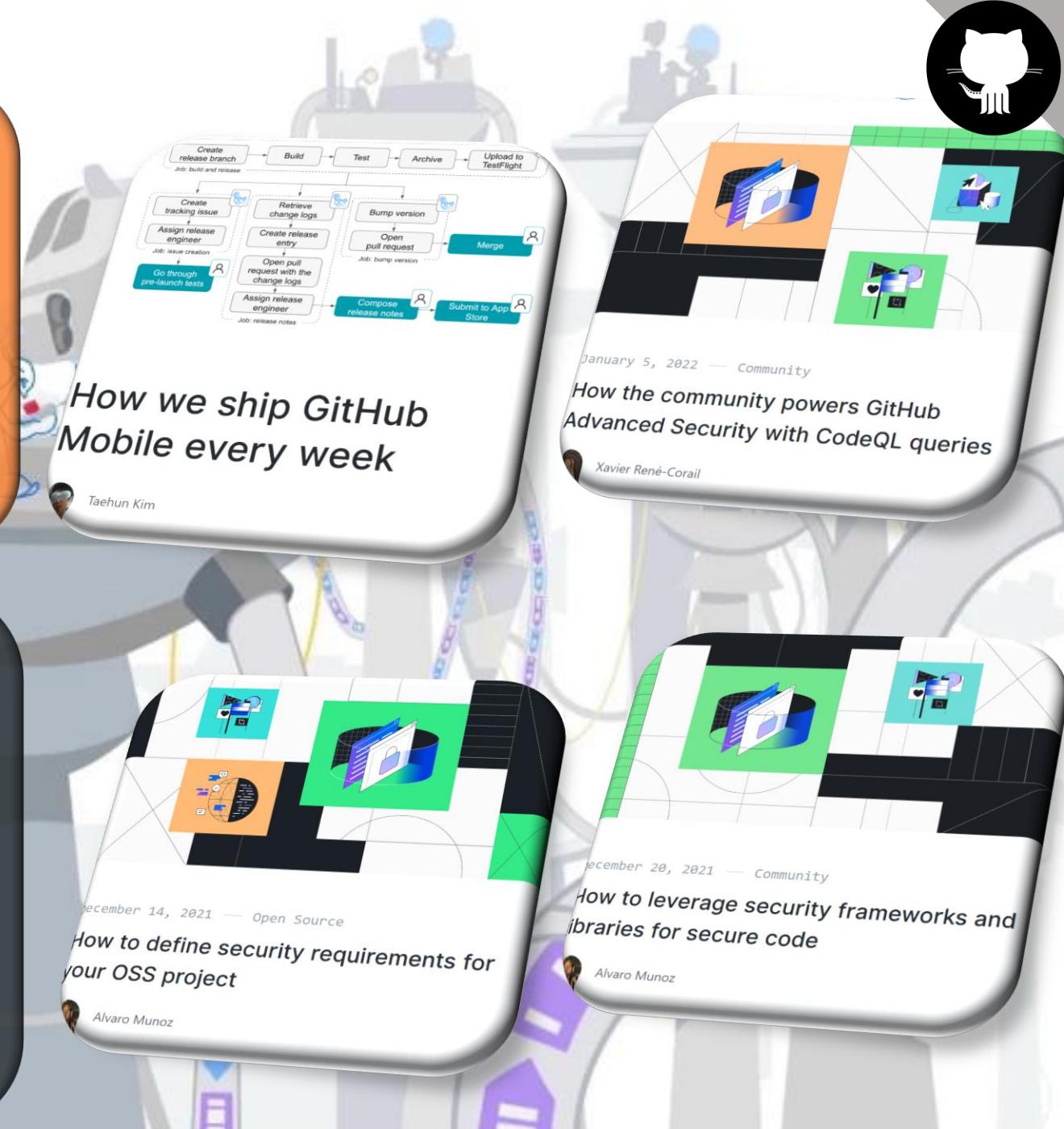


## GitHub ChangeLog

- [Using GitHub's security features to help identify Log4j exposure in your codebase](#)
- [The Open-Source Software Security Summit: securing the world's code together](#)
- [How the community powers GitHub Advanced Security with CodeQL queries](#)
- [How to leverage security frameworks and libraries for secure code](#)
- [Getting started with GitHub Actions just got easier!](#)
- [What's new from GitHub Changelog? November 2021 recap](#)
- [How GitHub contributed to the Santa Clara Principles update](#)
- [GitHub Enterprise Server 3.3 is generally available](#)
- [A brief history of code search at GitHub](#)
- [Introducing stack graphs](#)
- [GitHub's top 10 blog posts of 2021](#)

## Microsoft Developer Blogs:

- [.NET Framework January 2022 Security and Quality Rollup Updates](#)
- [Microsoft Build of OpenJDK on Azure Platform Services](#)
- [Code Cleanup on Save To Visual Studio 2022 : Preview 2](#)
- [New Git Features : Visual Studio 2022](#)
- [Test tools for .NET and cross-platform apps](#)
- [What's new in .NET Productivity with Visual Studio 2022](#)
- [.NET MAUI : Preview 11](#)
- [How to Preview PowerShell Scripts In PowerShell](#)
- [Dual-screen reference app](#)
- [Q# Formatter : Introduction](#)
- [Hybrid Quantum Applications with Azure Functions](#)
- [Machine Learning in Xamarin.Forms with ONNX Runtime](#)
- [What's New in Xamarin and Visual Studio 2022](#)
- [Top Stories from the Microsoft DevOps Community – 2021.12.31](#)



# Office Developer Blogs and Microsoft 365 Dev Center



## Develop for the Microsoft 365 platform

Build rich solutions that integrate apps and business processes to enhance productivity in the modern workplace.

### Global Developer Updates and Bootcamps :: M365 Developer Blog :: Office Developer :: DevBlogs

- New Single Sign-on service for Office Add-ins rolling out in Office on the web
- LargeFileUploadTask : Microsoft Graph SDKs
- Enhanced booking infrastructure: Microsoft Graph Bookings APIs
- Graph Data Connect : User Scopes Demystified
- Teams JS SDK v2 : Public Preview
- Connecting networks of information with Microsoft Graph connector partners
- To Do Tasks API : Public Preview
- Delta Query Support : Microsoft Graph Assignments API
- SharePoint Framework 1.14 Viva Connections : Public Preview



New Single Sign-on service for Office Add-ins...

[View blog >](#)



Microsoft Graph Mailbag - Using LargeFileUploadTa...

In today's Microsoft Graph Mailbag post, we'll use LargeFileUploadTask from the Microsoft Graph SDKs to...

[View blog >](#)



New features in Microsoft Graph Bookings APIs...

We have launched some key new features to continue providing a booking infrastructure through the...

[View blog >](#)



## Office Scripts

Easily automate your day-to-day tasks with **Office Scripts in Excel on the web**. Get started automating today!

[Learn more >](#)

[Try sample scripts >](#)



Teams JS SDK v2 public preview update: Teams...

We are excited to announce that starting today, developers using the new SDK can now extend and...

[View blog >](#)



Microsoft Graph Data Connect: Demystifying...

Microsoft Graph Data Connect allows you to extract data in bulk from your Microsoft 365 environments...

[View blog >](#)



Stay in sync with Microsoft Loop

Microsoft Loop is a new app that offers flexible, portable, interactive Loop components that can operate in real time...

[View blog >](#)



Announcing the public preview of To Do Tasks API

At Microsoft Ignite 2021, we announced our private preview for the new Tasks API in Microsoft Graph. Today,...

[View blog >](#)

# Azure



# Azure Updates



## Azure Announcements : Azure Blog

- [Improving the cloud for telcos: Updates of Microsoft's acquisition of AT&T's Network Cloud](#)
- [Azure Sphere OS v22.01](#) : Generally Available
- [Azure Static Web Apps Enterprise-Grade Edge](#) : Public Preview
- [Semantic Search Updates](#) : Public Preview
- [In-Vehicle digital experience with Azure Cognitive Services](#)
- [Azure Percept DK software update](#) : Public Preview
- [UI Library for Azure Communication Services](#) : Generally Available

## Data, AI, Security, & Availability

- [Multiple custom BGP APIPA addresses for active VPN gateways](#) : Generally Available
- [Load Balancer SKU upgrade through PowerShell script](#) : Generally Available
- [Azure Backup](#) : Automation Updates
- [Azure Policy support for Azure Site Recovery](#) : Generally Available
- [Updates to Azure Files: NFS v4.1, higher performance limits, and reserved instance pricing](#)
- [Snowflake connector for Azure Purview](#) : Public Preview
- [Soft delete for blobs capability for Azure Data Lake Storage](#) : Generally Available
- [Automated Key Rotation in Azure Key Vault](#) : Public Preview

## Operations & Benefits

- [Introducing the new Azure SDK management libraries for JavaScript/TypeScript](#)
- [Using custom models with Azure Cognitive Service for Language](#)
- [Copying dashboards added to Azure IoT Central](#) : Generally Available
- [Placement policies for Azure VMware Solution](#) : Generally Available
- [Windows Server guest licensing for Azure Stack HCI](#) : Public Preview

## Learning Microsoft Azure

The screenshot shows the Microsoft Learn homepage with a large 'i' icon and the title 'Learning Microsoft Azure'. It features sections for 'LEARN', 'VIDEOS', 'COMMUNITY', and 'EVENTS', each with a call-to-action button. At the bottom, there's a section titled 'Your path to get started' with three learning paths.

**LEARN**

**VIDEOS** Build Sessions

View on demand sessions from Build across various solutions and technologies.

Browse sessions

**COMMUNITY** Microsoft Tech Community

Connect and discuss the latest news, product updates, and best practices with Microsoft professionals and peers.

Join our community

**EVENTS** Virtual Training Days

These 1 and 2 day virtual events will give you the opportunity to expand your skillset and connect with Microsoft experts.

Browse training events

**Your path to get started**

- LEARNING PATH Azure Fundamentals part 1: Describe core Azure concepts
- LEARNING PATH Manage resources in Azure
- LEARNING PATH Manage identity and access in Azure Active Directory

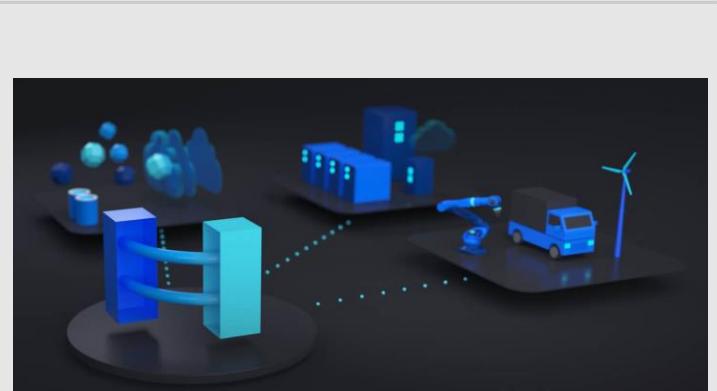
# Azure Updates



## **Azure Chaos Studio**

### **An experimentation platform for improving app resiliency**

Improve application resilience with chaos testing by deliberately introducing faults that simulate real-world outages. Azure Chaos Studio Preview is a fully managed chaos engineering experimentation platform for accelerating discovery of hard-to-find problems



## **Azure Arc**

Unify on-prem, hybrid, and cross-cloud infrastructure



## **Azure Percept : Preview**

Accelerate edge intelligence from silicon to service:

Azure Percept is a comprehensive, easy-to-use platform with added security for creating edge AI solutions.

## **Azure Chaos Studio**

- Subject your Azure applications to **real or simulated faults**
- Observe how your applications **respond to real-world disruptions**
- **Integrate chaos experiments into any phase** of quality validation
- Use the same tools as Microsoft engineers to **build resilience of cloud services**

## **Azure Arc**

[Data Services](#) and [Infrastructure](#) management :

- Centrally manage a wide range of resources including [Windows](#) and [Linux](#) servers, SQL server, [Kubernetes](#) clusters, and [Azure services](#).
- Azure Arc-enabled PostgreSQL Hyperscale : Preview
- [Enable Multi-Environment Search](#) with Azure Resource Graph
- [Delegate access and manage security policies](#)

## **Azure Percept (preview)**

- Accelerators built to integrate seamlessly with [Azure AI](#) and [Azure IoT services](#).
- Works out of the box with [Azure Cognitive Services](#), [Azure Machine Learning](#), and other Azure services to **deliver vision and audio insights in real time**.
- Included library of [pre-built AI models](#) for **vision** including **object detection, shelf analytics, vehicle analytics, and audio capabilities** like voice control and anomaly detection.

# Azure Chaos Studio

Improve application resilience by simulating outages

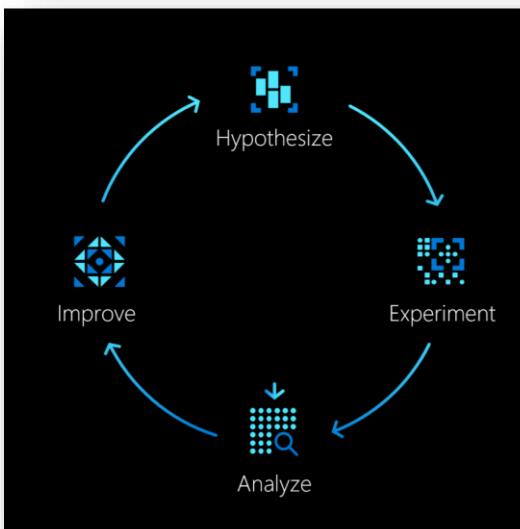
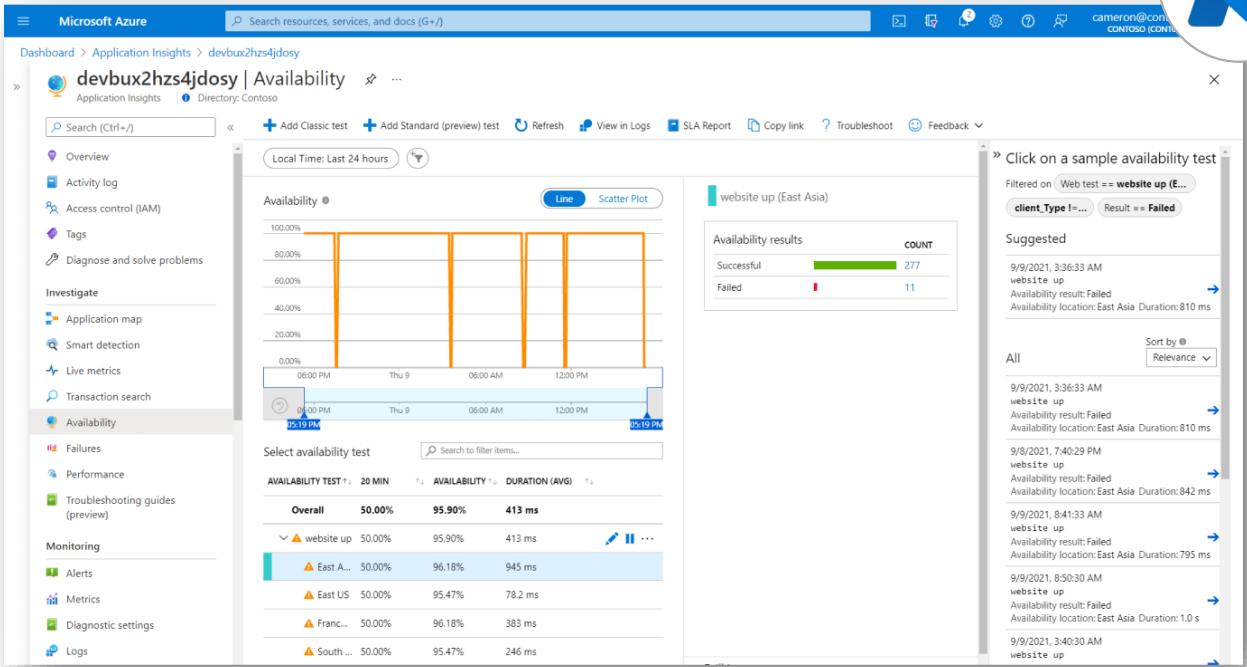
## Benefits of Azure Chaos Studio

- Subject your Azure applications to real or simulated faults
- Observe how your applications respond to real-world disruptions
- Integrate chaos experiments into any phase of quality validation
- Use the same tools as Microsoft engineers to build resilience of cloud services

## Chaos Studio fault and action library

- Includes simulated faults like: Time delay, Pressures (CPU, Memory, Disk I/O, etc)
- Full list: [Chaos Studio fault and action library](#)

Chaos engineering is the practice of subjecting applications and services to real-world stresses and failures to build and validate resilience to unreliable conditions and missing dependencies.



The screenshot shows the Microsoft Azure Chaos Studio 'Create an experiment' blade. It includes sections for 'Resource Stress' (with 'Step 1: Resource Stress' and 'Branch: Kubernetes stressors'), 'Fault' (with 'AKS Chaos Mesh Stress Faults' and 'AKS Chaos Network Faults'), and 'Parameter' (with 'duration: 15 minutes' and 'duration: 10 minutes'). At the bottom, there are buttons for 'Add fault', 'Add branch', and 'Add step'.

# New trends with Microsoft Technology



# Microsoft Industry Vertical Clouds

delivering capabilities that are unique to specific industries



## Microsoft Industry Clouds



### Microsoft Cloud for Healthcare

Deliver better experiences, better insights, and better care.

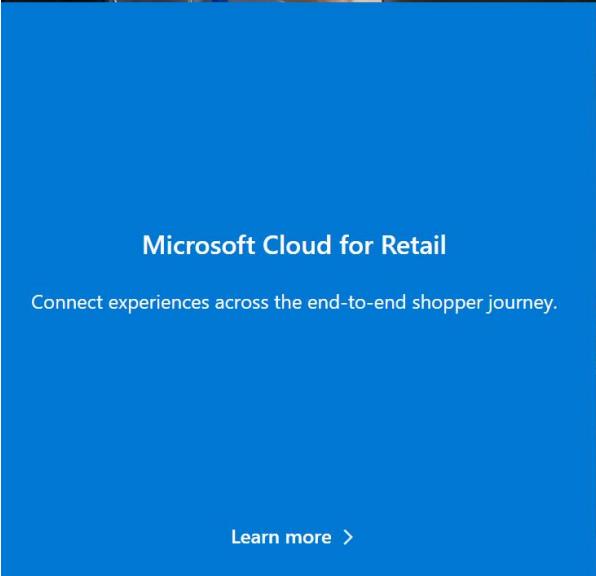
[Learn more >](#)



### Microsoft Cloud for Manufacturing

Manufacture a more resilient and sustainable future.

[Learn more >](#)



### Microsoft Cloud for Retail

Connect experiences across the end-to-end shopper journey.

[Learn more >](#)



### Microsoft Cloud for Financial Services

Accelerate innovation and achieve sustainable growth.

[Learn more >](#)



### Microsoft Cloud for Nonprofit

Create scalable and transformative impact.

[Learn more >](#)



# Microsoft Cloud for Sustainability

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

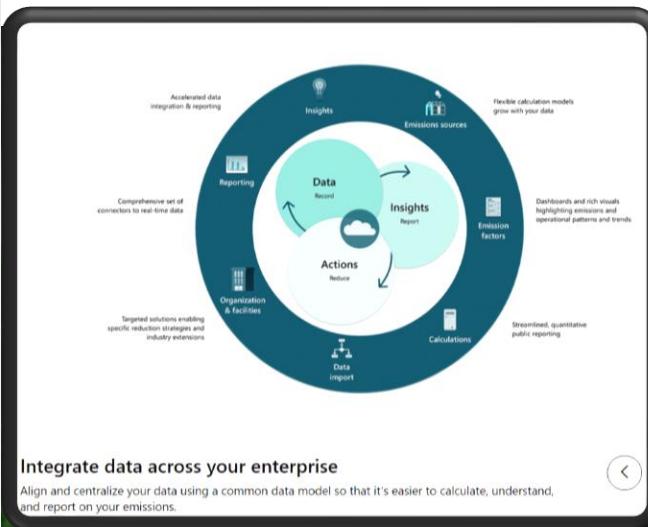
## Accelerate your sustainability journey

Microsoft Cloud for Sustainability is an extensible software-as-a-service solution that helps you record, report, and reduce your organization's environmental impact through automated data connections and actionable insights.



### Record

Connect data to more accurately represent the emissions footprint of your operation and value chain.



### Report

Visualize and report your environmental impact and sustainability progress in near real time.

SCOPE: Scope 1, 2, 3 Greenhouse Gas Emissions (GHG) measurement

**GHG Emissions**

**Scope 1** Direct emissions: company facilities, company vehicles

**Scope 2** Indirect emissions from purchasing electricity, heat, steam

**Scope 3** Other indirect emissions, supply chain emissions  
15 categories

**Initial 3 Categories \***  
Purchased Goods & Services  
Capital Goods  
Business Travel

**KEY CAPABILITIES**

- Data ingestion**
  - Sustainability Common Data Model support for Scopes 1, 2, and 3 emissions
  - Automate the capture of operational data using customer or pre-built connectors (facilities, assets, sales, procurement, logistics, manufacturing, etc.)
- Calculation & Reporting**
  - GHG emissions calculations for Scopes 1, 2, and 3 (Categories 1, 2, & 6)
  - Preparation reports to support statutory requirements
  - Operational and executive dashboards
  - Analytical insights
- Insights & Recommendations**
  - Data driven scorecards and goal tracking
- Extensibility**
  - Key ISVs or industry extensions



### Reduce

Learn how to advance your efforts to reduce emissions, gain efficiencies, and make lasting changes.

Dashboard

Reporting year: 2020 Accounting method: Location-based Emission scope: Multiple selection

372 60.4 3.72

Total emissions (netCO<sub>2</sub>)

Emissions by country (netCO<sub>2</sub>)

Visualize emissions trends and opportunities

Get rich visuals and insights that let you see your data with granularity so that you can take precise action.

# Updates from Microsoft Industry Blogs



## Microsoft Cloud for Retail is now generally available >

January 12, 2022

By [Shelley Bransten](#), Corporate Vice President, WW Retail & Consumer Goods Industry

If the past two years have taught us anything, it's that it will take all of us working together to ensure the future of retail is meeting today's consumer needs. The world of retail has been forever shaped by new behaviors, and many are here to stay. Business-as-usual will no longer meet these expectations. With... [Read more](#)



## Pave the way for a sustainable future with data and smart mobility solutions >

January 4, 2022

By [Sanjay Ravi](#), General Manager, Automotive, Mobility & Transportation Industry

For businesses across the automotive, mobility, and transportation industry, sustainability is no longer a business priority—it is a responsibility. A World Business Council for Sustainable Development (WBCSD) publication noted that while 75 percent of all global CO<sub>2</sub> emissions are generated by cities, up to 40 percent of these emissions come from urban freight—a key target... [Read more](#)



## Microsoft Cloud for Manufacturing: Partnering to manufacture a more resilient and sustainable future >

January 3, 2022

By [Colin Masson](#), Global Industry Marketing Director, Manufacturing

A few months ago I laid out the 5 manufacturing trends driving the need for an industry cloud including my passionate and research-substantiated belief that partnerships and ecosystems are more critical than ever to manufacturing a resilient and sustainable future. As observed by Catherine Kniker, Chief Strategy Officer, PTC: "Manufacturing edge environments, are remarkably complex... [Read more](#)



## Tackling digital overload in the modern defense workplace >

December 16, 2021

By [Kate Maxwell](#), Chief Technology Officer, Defense and Intelligence, Worldwide Public Sector

In our "A digital workplace for a modern defense ecosystem" blog, I shared some thoughts about hybrid workplaces, changing talent expectations, and what this means for Defense and Intelligence organizations around the world. The hybrid work environments initiated in response to COVID-19 have given us important lessons about reinventing the modern defense workplace. Now, it's... [Read more](#)



## Microsoft brings leading automotive, mobility, and transportation solutions to CES >

December 16, 2021

By [Aaron Lee](#), Product Marketing Lead – Automotive, Mobility, & Transportation, Global Industry Product Marketing Group

There is an abundance of transformation taking place across the automotive ecosystem. By 2030, fully 50 percent of the automotive industry's projected \$6.6 trillion in revenue will come from disruptive technology or business models<sup>1</sup>. Traditional industry players are being disrupted, fueling the shift to electric and digital. The industry shared goals of innovation are being... [Read more](#)

# Microsoft Research Blog



## Research at Microsoft 2021: Collaborating for real-world change >

Over the past 30 years, Microsoft Research has undergone a shift in how it approaches innovation, broadening its mission to include not only advancing the state of computing but also using technology to tackle some of the world's most pressing challenges. That evolution has never...

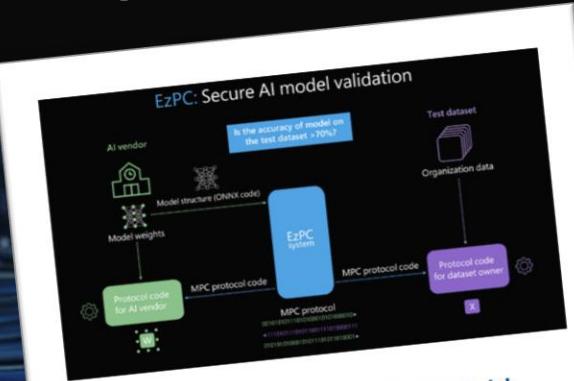
December 15, 2021



## Azure AI milestone: New foundation model Florence v1.0 advances state of the art, topping popular computer vision leaderboards >

The Project Florence Team With the new computer vision foundation model Florence v1.0, the Project Florence team set the new state of the art on the popular leaderboards TextCaps Challenge 2021, nocaps, Kinetics-400/Kinetics-600 action classification, and OK-VQA Leaderboard. Florence v1.0—along with recent milestones in Neural...

December 14, 2021 by [Project Florence Team](#)



## EzPC: Increased data security in the AI model validation process >

From manufacturing and logistics to agriculture and transportation, the expansion of artificial intelligence (AI) in the last decade has revolutionized a multitude of industries—examples include enhancing predictive analytics on the manufacturing floor and making microclimate predictions so that farmers can respond and save their crops...

January 12, 2022 by [Nishanth Chandran](#), [Divya Gupta](#), [Aseem Rastogi](#), and [Rahul Sharma](#)

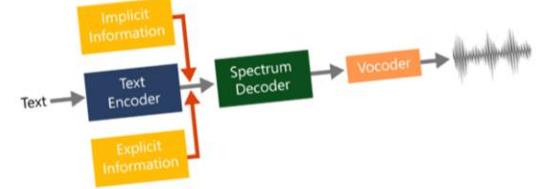


## Azure AI milestone: Microsoft KEAR surpasses human performance on CommonsenseQA benchmark >

KEAR (Knowledgeable External Attention for commonsense Reasoning)—along with recent milestones in computer vision and neural text-to-speech—is part of a larger Azure AI mission to provide relevant, meaningful AI solutions and services that work better for people because they better capture how people learn and work—with improved vision, knowledge understanding,...

December 20, 2021

Azure Neural TTS model Uni-TTSv4 shows no significant difference in quality from sentence-level natural speech recordings



## Azure AI milestone: New Neural Text-to-Speech models more closely mirror natural speech >

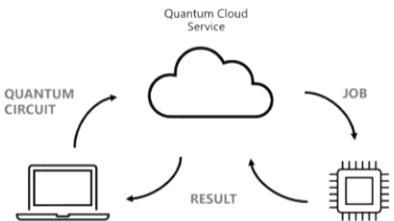
Neural Text-to-Speech—along with recent milestones in computer vision and question answering—is part of a larger Azure AI mission to provide relevant, meaningful AI solutions and services that work better for people because they better capture how people learn and work—with improved vision, knowledge understanding, and...

December 17, 2021 by [Sheng Zhao](#)



# Microsoft Quantum

Get to know the world's first full-stack, open cloud quantum computing ecosystem

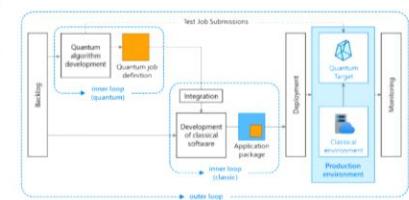


## Hybrid Quantum-Classical Computing Models



Guen Prawiroatmodjo December 1, 2021

This post is written as part of the Q# Advent Calendar 2021. Happy Holidays! If you've taken a stab at quantum programming, you'll probably have heard of "hybrid quantum-classical computing". Not to be confused with hybrid cloud or hybrid computers, hybrid quantum-classical computing is a popular topic among quantum computing ...

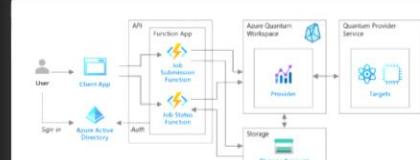


## DevOps for Quantum Computing



Holger Sirtl December 3, 2021

This blog post shows how DevOps practices need to adapt when software includes both classical and quantum components, resulting in a repeatable, high-quality process for building, deploying, and monitoring hybrid quantum software.



## Hybrid Quantum Applications with Azure Functions



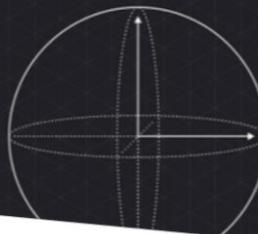
Holger Sirtl December 13, 2021

Quantum applications are typically of hybrid nature: there is always a classical component that submits and monitors the quantum jobs at runtime. This blog shows how Azure Functions can be used to integrate quantum components written in Q# via APIs into classical applications in a serverless model.

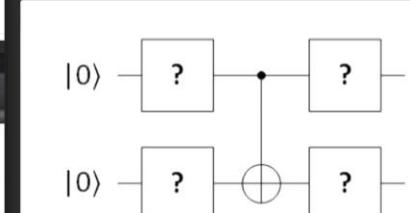
[Overview](#) / What is quantum computing?

## What is quantum computing?

It's the use of quantum mechanics to run calculations on specialized hardware.



**Myth vs. reality: A practical perspective on quantum computing**  
Read the article discussing the practicality of quantum computers.



## A quantum circuit logical puzzle



Mariia Mykhailova December 15, 2021

This blog offers you a quantum logical puzzle: you are given the outline of a simple quantum circuit and a set of clues about it, and you have to complete the circuit based on the clues.

## Introducing the Q# Formatter



Scott Carda December 16, 2021

Here we introduce the Q# Formatter, a tool to help keep your Q# code up to date with the latest Q# syntax.



# Microsoft Quantum

Get to know the world's first full-stack, open cloud quantum computing ecosystem

## Azure Quantum PREVIEW

The most innovative quantum computing and optimization solutions converge in a single marketplace quantum service



```
/// # Summary
/// This operation applies Grover's algorithm to an input qubit to find a particular
operation SearchForMarkedInput (nQubits : INT) :
    using (qubits = Qubit [nQubits]) {
        // Initialize a uniform superposition over all states.
        PrepareUniform(qubits);
        // The search itself consists of repeatedly
        // marked state and our start state, which we
        // do this by using a for loop.
        for (idxIteration in 0...NIterations (nQubits))
            ReflectAboutMarked(qubits);
            ReflectAboutUniform(qubits);
    }
    // Measure and return the answer.
    return ForEach(MResetZ, qubits);
}
```

### Grow your quantum skills

Join the growing global community of experts, enthusiasts, and quantum computing companies by learning the fundamentals of quantum computing concepts, operations, and Q# programming. Get started with a wide variety of learning resources for developers, researchers, and students, including free, self-paced Microsoft Learn courses and open-source GitHub katas.

[Start learning](#)

### Optimization

Optimization solvers that run on classical hardware.

LEARN

Code Samples

MS Learn

CODE

Visual Studio

VS Code

Jupyter Notebooks

Python IDE

USE

Python SDK

Optimization API

SOLVE

Optimization solvers

RUN

CPU, FPGAs, GPUs

Optimization solvers

RUN

CPU, FPGAs, GPUs

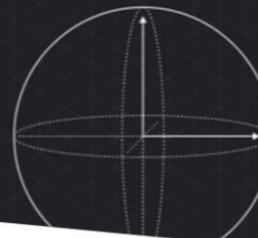


### Optimization

Solve optimization problems on classical hardware faster and better using algorithms inspired by physical processes.

## What is quantum computing?

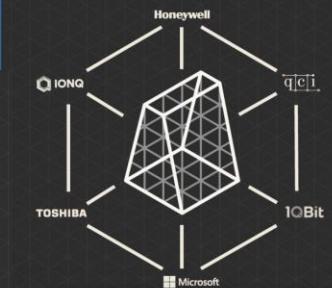
It's the use of quantum mechanics to run calculations on specialized hardware.



**Myth vs. reality: A practical perspective on quantum computing**  
Read the article discussing the practicality of quantum computers.

## Building a scalable quantum system

Learn how Microsoft is leading the way to scalable, accessible quantum computing with worldwide research teams and partnerships



### Unified development interface

With Azure Quantum and its [quantum development kit](#), what could be a heterogeneous hardware and software set of solutions is unified. Your development investments are protected in a rapidly evolving technological landscape.

Microsoft and its Partners ensure hardware and software innovations are brought to you with minimal to no change to your code base.

## Microsoft Quantum Network

The Microsoft Quantum Network is a community of pioneering individuals and organizations working together to develop practical solutions, grow talent through education, and build a worldwide quantum partner ecosystem.



# Showcase of the Month





# 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.

### Best of Inside Track: Securing Microsoft with Zero Trust in 2021

Microsoft's internal security team uses a Zero Trust security model to keep the company safe. Guided by its Zero Trust security model, in 2021 the internal security team focused on protecting its employees and the company while providing employees appropriate access on the devices they needed to do their work. Foundation of Zero Trust Microsoft's... [Read more](#)



### Best of Inside Track: Driving Microsoft's internal transformation in 2021 with Microsoft Azure

More than 93 percent of Microsoft's internal processes are now operating in the cloud on Microsoft Azure. This is part of an ongoing digital transformation at the company fueled by Microsoft Digital, the organization that powers, protects, and transforms the company. Microsoft drove many cloud-based internal projects during 2021, including bids to expand its use... [Read more](#)



### Best of Inside Track: Deploying inclusive and accessible experiences at Microsoft in 2021



Microsoft Digital, the organization that powers, protects, and transforms the company, continued its focus on building inclusive and accessible experiences internally at Microsoft in 2021. Employees in Microsoft Digital identified potential challenges to inclusive and accessible experiences that the company employees were having working in a remote and hybrid environment and quickly responded with practical... [Read more](#)



January 11, 2022

### Creating the digital workplace at Microsoft

[READ ARTICLE >](#)

Dec 14, 2021 | Aleenah Ansari

### Transforming Microsoft buildings with IoT technology and indoor mapping

Editor's note: We've republished this blog with a new companion video. Sphoorti Patil is using Microsoft Azure indoor mapping and IoT technology that helps Microsoft employees find their way around the company's campuses—and she hasn't...

# Microsoft Events and Training: Updates



## Microsoft Virtual Training Days

## Events Catalog

### 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.

#### Microsoft 365 Virtual Training Day: Managing Windows and Surface Devices



#### Microsoft Azure Virtual Training Day: Modernize .NET Apps



#### Microsoft Security Virtual Training Day: Protect Data and Manage Risk



01/26/2022 | 17:00 (CST) - 01/27/2022 | 19:40 (CST)

Digital

Training

Registration and details



Registration and details



Registration and details



# Learning and Training : New Sessions



## Virtual workshops and training

Our interactive virtual workshops and training sessions are taught live by Microsoft Store associates for an in-person experience—wherever you are.

Learn to be cyber smart with Microsoft security foundations



[See 2 sessions >](#)



Get Started with Power BI service

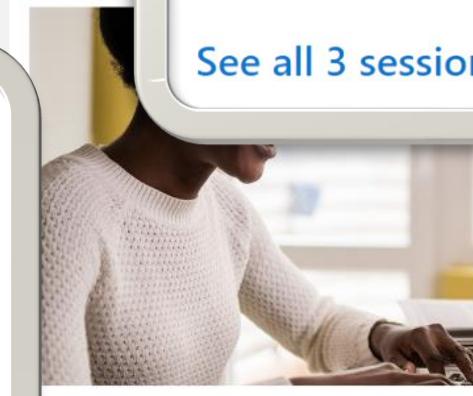


[See all 5 sessions >](#)



Work less, do more with Microsoft Power Automate

[See all 3 sessions >](#)



Microsoft Virtual Training Days

# Microsoft Enterprise Skills Initiative (ESI)

self-paced learning, virtual training, instructor-led training, certifications



## Enterprise Skills Initiative (ESI) continues\*

- We have increased capacity and number of offerings.
- ESI covers training and certification for Azure technology.
- New: now also covers Security technology for eligible customers.
- ESI has options for different learning styles and stages:
  - Training is available as self-paced, instructor-led, Event.
  - Other training formats (e.g. Open Hack, GitHub, Cloud Skills Challenge) planned. ETA to be announced later.
  - Free exam vouchers available for eligible customers.
  - Free practice tests available for eligible customers.

\*Eligibility required; trainings and free offers are limited in numbers/availability.

Try it: <https://esi.microsoft.com>

1. Microsoft enables your organization for the Customer Experience Portal (CxP)
2. Login with your work account
  - *Authentication is federated, meaning you may see Multi-Factor Authentication from your organization if this has been configured by your administrator.*
3. Create your learning profile
4. Start your skilling

### Discover & Explore

Uncover the latest technologies and imagine new ways to create solutions



### Learn skills

Choose the way you want to learn and grow your expertise



### Prove skills

Demonstrate your knowledge and abilities



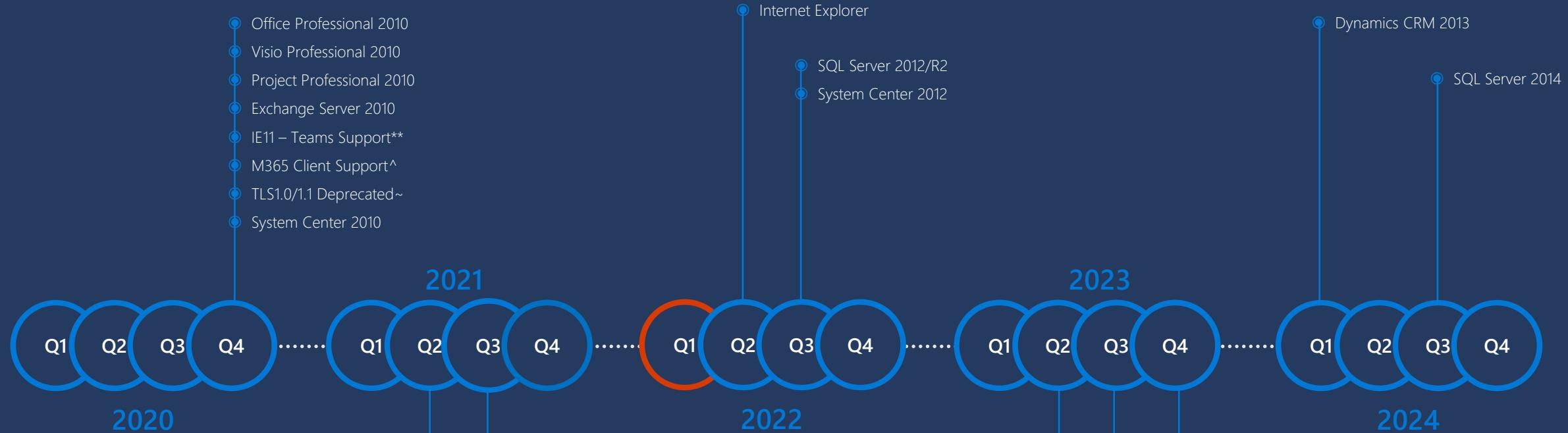
Login not working? Your organization may need to be onboarded to ESI. Please talk to your Microsoft Account Team.

# Product Lifecycles





# End of Service Roadmap to 2024



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 2022

<b>Products that will Retire in 2022 (Modern Policy)</b>	<b>End of Support Date</b>
Dynamics 365 for Talent	February 2, 2022
Microsoft Machine Learning Server (Microsoft R Server)	July 1, 2022
Windows Server 20H2	August 11, 2022
PowerShell 7.x	December 3, 2022

## Products under Modern Policy that will Retire in 2023

<b>Products that will Retire in 2023 (Modern Policy)</b>	<b>End of Support Date</b>
Microsoft Azure Virtual Machine (classic)	March 1, 2023
Windows 11 Home and Pro (Version 21H2)	October 10, 2023

### Lifecycle data export

#### Export all products

Export lifecycle data for all products by clicking below:

[Export All Products](#)

### Announcements

- ✖ Office 2013 and Skype for Business 2015 end of support on April 11, 2023
- ✖ UPDATE: Skype for Business Online retirement on July 31, 2021
- ✖ UPDATED: Support extended for Visio Services in SharePoint Online (aka Visio Web Access)
- ✖ Windows 10, version 2004 end of servicing (all editions)
- ✖ Windows Server, version 2004 end of servicing (Datacenter, Standard)
- ✖ Microsoft Store for Business and Education retiring in early 2023

- ✖ New options for SQL Server 2012 and Windows Server 2012 End of Support
- ✖ Microsoft Machine Learning Server (R Server) retirement on July 1, 2022
- ✖ Internet Explorer 11 desktop application ending support for certain operating systems
- ✖ UPDATE: Transport Layer Security 1.0 and 1.1 disablement
- ✖ UPDATE: Adobe Flash Player end of support on December 31, 2020

[See more >](#)

# Microsoft Product Lifecycle: Modern Policy Reaching End of Servicing



## Products Release End of Servicing for 2022

<b>Products Moving to End of Servicing (Modern Policy)</b>	<b>End of Servicing Date</b>
<a href="#">Microsoft Endpoint Configuration Manager, Version 2006</a>	<b>February 11, 2022</b>
<a href="#">Dynamics 365 Business Central on-premises (Modern Policy), 2020 release wave 2, version 17.x</a>	April 12, 2022
<a href="#">.NET 5.0</a>	May 8, 2022
<a href="#">Windows 10 Enterprise and Education, Version 1909</a> <a href="#">Windows 10 Home and Pro, Version 20H2</a> <a href="#">Windows 10 IoT Enterprise, Version 1909</a>	May 10, 2022
<a href="#">Microsoft Endpoint Configuration Manager, Version 2010</a>	May 30, 2022
<a href="#">Azure Active Directory (AD) Connect, Version 1.x</a>	August 31, 2022
<a href="#">Microsoft Endpoint Configuration Manager, Version 2103</a>	October 5, 2022
<a href="#">Dynamics 365 Business Central on-premises (Modern Policy), 2021 release wave 1, version 18.x</a>	October 11, 2022
<a href="#">.NET Core 3.1 (LTS)</a>	December 3, 2022
<a href="#">Windows 10 Enterprise and Education, Version 21H1</a> <a href="#">Windows 10 Home and Pro, Version 21H1</a> <a href="#">Windows 10 IoT Enterprise, Version 21H1</a>	December 13, 2022

## Products Release End of Servicing for 2023

<b>Products Moving to End of Servicing (Modern Policy)</b>	<b>End of Servicing Date</b>
<a href="#">Microsoft Endpoint Configuration Manager, Version 2107</a>	February 2, 2023
<a href="#">Dynamics 365 Business Central on-premises (Modern Policy), 2021 release wave 2, version 19.x</a>	April 12, 2023
<a href="#">Windows 10 Enterprise and Education, Version 20H2</a> <a href="#">Windows 10 IoT Enterprise, Version 20H2</a>	May 9, 2023
<a href="#">Windows 10 Home and Pro, Version 21H2</a>	June 13, 2023
<a href="#">Azure Dev Spaces</a>	October 31, 2023

# Microsoft Product Lifecycle: Fixed Policy Reaching End of Support 2022



## Products Reaching End of Support for 2022

Products Moving to End of Support (Modern Policy)	End of Servicing Date	Products Moving to End of Support (Modern Policy)	End of Servicing Date
<a href="#">Visual Studio LightSwitch 2011</a> <a href="#">Windows 7, Extended Security Update Year 2*</a> <a href="#">Windows Server 2008, Extended Security Update Year 2</a> <a href="#">Windows Server 2008 R2, Extended Security Update Year 2</a>	January 11, 2022	<a href="#">Windows Embedded POSReady 7, Extended Security Update Year 1*</a>	October 8, 2022
<a href="#">AppFabric 1.1 for Windows Server</a> <a href="#">Dynamics AX 2009</a> <a href="#">Dynamics AX 2012</a> <a href="#">Dynamics AX 2012 R2</a> <a href="#">Visual Studio 2019, Version 16.7</a>	April 12, 2022	<a href="#">Microsoft Forefront Identity Manager 2010</a> <a href="#">Microsoft Forefront Identity Manager 2010 R2</a> <a href="#">SQL Server 2016, Service Pack 2</a> <a href="#">Visual Studio 2019, Version 16.9</a> <a href="#">Windows Embedded Standard 7, Extended Security Update Year 2*</a>	October 11, 2022
<a href="#">Microsoft .NET Framework, .NET Framework 4.5.2</a> <a href="#">Microsoft .NET Framework, .NET Framework 4.6</a> <a href="#">Microsoft .NET Framework, .NET Framework 4.6.1</a>	April 26, 2022	<a href="#">Azure StorSimple 1200 Series</a> <a href="#">Azure StorSimple 8000 Series</a> <a href="#">StorSimple Data Manager</a>	December 31, 2022
<a href="#">Cloud Platform System</a> <a href="#">Microsoft Report Viewer 2012 Runtime</a> <a href="#">Microsoft Report Viewer Redistributable 2012</a> <a href="#">Microsoft SQL Server 2008, Extended Security Update Year 3</a> <a href="#">Microsoft SQL Server 2008 R2, Extended Security Update Year 3</a> <a href="#">Microsoft SQL Server 2012</a> <a href="#">Microsoft System Center 2012 App Controller</a> <a href="#">Microsoft System Center 2012 Configuration Manager</a> <a href="#">Microsoft System Center 2012 Data Protection Manager</a> <a href="#">Microsoft System Center 2012 Endpoint Protection</a> <a href="#">Microsoft System Center 2012 Operations Manager</a> <a href="#">Microsoft System Center 2012 Orchestrator</a> <a href="#">Microsoft System Center 2012 R2 App Controller</a> <a href="#">Microsoft System Center 2012 R2 Configuration Manager</a> <a href="#">Microsoft System Center 2012 R2 Data Protection Manager</a> <a href="#">Microsoft System Center 2012 R2 Endpoint Protection</a> <a href="#">Microsoft System Center 2012 R2 Operations Manager</a> <a href="#">Microsoft System Center 2012 R2 Orchestrator</a> <a href="#">Microsoft System Center 2012 R2 Service Manager</a> <a href="#">Microsoft System Center 2012 R2 Virtual Machine Manager</a> <a href="#">Microsoft System Center 2012 Service Manager</a> <a href="#">Microsoft System Center 2012 Virtual Machine Manager</a> <a href="#">Windows Azure Pack (on Windows Server 2012 R2)</a>	July 12, 2022		

# Microsoft Product Lifecycle: Fixed Policy Reaching End of Support 2023



## Products Reaching End of Support for 2023

Products Moving to End of Support (Modern Policy)	End of Servicing Date	Products Moving to End of Support (Modern Policy)	End of Servicing Date
<a href="#">Dynamics AX 2012 R3</a> <a href="#">Dynamics NAV 2013</a> <a href="#">Dynamics NAV 2013 R2</a> <a href="#">Hyper-V Server 2012</a> <a href="#">Hyper-V Server 2012 R2</a> <a href="#">Internet Information Services (IIS), IIS 8.5 on Windows 8.1</a> <a href="#">Microsoft Diagnostics and Recovery Toolset 8.0</a> <a href="#">Service Bus for Windows Server</a> <a href="#">User Experience Virtualization (UE-V) 1.0</a> <a href="#">Visual Studio 2012</a> <a href="#">Visual Studio Team Foundation Server 2012</a> <a href="#">Windows 7, Extended Security Update Year 3*</a> <a href="#">Windows 8.1</a> <a href="#">Windows Defender For Windows 8 and 8.1</a> <a href="#">Windows Embedded 8.1 Pro</a> <a href="#">Windows RT</a> <a href="#">Windows Server 2008, Extended Security Update Year 3</a> <a href="#">Windows Server 2008 R2, Extended Security Update Year 3</a> <a href="#">Workflow Manager 1.0</a>	January 10, 2023	<a href="#">BizTalk Server 2013</a> <a href="#">BizTalk Server 2013 R2</a> <a href="#">Dynamics 365 for Customer Engagement Apps, version 9 (on-premises update), Original Release (ver 9.0)</a> <a href="#">Microsoft BitLocker Administration and Monitoring 2.0</a> <a href="#">Microsoft SQL Server 2008, Extended Security Update Year 4 (Azure only)</a> <a href="#">Microsoft SQL Server 2008 R2, Extended Security Update Year 4 (Azure only)</a> <a href="#">Microsoft SQL Server 2012, Extended Security Update Year 1</a> <a href="#">Visual Studio 2022 , Version 17.0 (LTSC channel)</a> <a href="#">Windows Embedded 8 Standard</a> <a href="#">Windows Embedded 8.1 Industry</a>	July 11, 2023
<a href="#">Access 2013</a> <a href="#">Dynamics GP 2013</a> <a href="#">Dynamics GP 2013 R2</a> <a href="#">Excel 2013</a> <a href="#">Exchange Server 2013</a> <a href="#">HPC Pack 2012</a> <a href="#">HPC Pack 2012 R2</a> <a href="#">Lync 2013</a> <a href="#">Microsoft Lync Phone Edition</a> <a href="#">Microsoft Lync Server 2013</a> <a href="#">Microsoft Office 2013</a> <a href="#">Microsoft OneNote 2013</a> <a href="#">Outlook 2013</a> <a href="#">PowerPoint 2013</a> <a href="#">Project 2013</a> <a href="#">Project Server 2013</a> <a href="#">Publisher 2013</a> <a href="#">SharePoint Foundation 2013</a> <a href="#">SharePoint Server 2013</a> <a href="#">Skype for Business 2015</a> <a href="#">Visio 2013</a> <a href="#">Word 2013</a>	April 11, 2023	<a href="#">Excel 2019 for Mac</a> <a href="#">Internet Explorer 7</a> <a href="#">Internet Information Services (IIS), IIS 8 on Windows Server 2012</a> <a href="#">Internet Information Services (IIS), IIS 8.5 on Windows Server 2012 R2</a> <a href="#">Microsoft Office 2019 for Mac</a> <a href="#">Microsoft Office Audit and Control Management Server 2013</a> <a href="#">Outlook 2019 for Mac</a> <a href="#">PowerPoint 2019 for Mac</a> <a href="#">Windows Embedded Compact 2013</a> <a href="#">Windows Embedded POSReady 7, Extended Security Update Year 2*</a> <a href="#">Windows Embedded Standard 7, Extended Security Update Year 3*</a> <a href="#">Windows MultiPoint Server 2012</a> <a href="#">Windows Server 2012</a> <a href="#">Windows Server 2012 R2</a> <a href="#">Windows Server Update Services for Windows Server 2012</a> <a href="#">Windows Server Update Services for Windows Server 2012 R2</a> <a href="#">Windows Storage Server 2012</a> <a href="#">Windows Storage Server 2012 R2</a> <a href="#">Word 2019 for Mac</a>	October 10, 2023

# Microsoft Product Lifecycle: Products moving to Extended Support



## Products Moving to Extended Support for 2022

<b>Products Moving to Extended Support (Fixed Policy)</b>	<b>End of Support Date</b>
<a href="#">BizTalk Server 2016</a>	<b>January 11, 2022</b>
<a href="#">Dynamics NAV 2017</a>	
<a href="#">HPC Pack 2016</a>	
<a href="#">Hyper-V Server 2016</a>	
<a href="#">Microsoft Host Integration Server 2016</a>	
<a href="#">System Center 2016 Data Protection</a>	
<a href="#">System Center 2016 Operations Manager</a>	
<a href="#">System Center 2016 Orchestrator</a>	
<a href="#">System Center 2016 Service Manager</a>	
<a href="#">System Center 2016 Virtual Machine Manager</a>	
<a href="#">Visual Studio Team Foundation Server 2017</a>	
<a href="#">Windows Azure Pack (on Windows Server 2016)</a>	
<a href="#">Windows Server 2016</a>	
<a href="#">Windows Storage Server 2016</a>	
<a href="#">Visual Studio 2017</a>	April 12, 2022
<a href="#">SQL Server 2017</a>	October 11, 2022

## Products Moving to Extended Support for 2023

<b>Products Moving to Extended Support (Fixed Policy)</b>	<b>End of Support Date</b>
<a href="#">Dynamics GP 2018</a>	January 10, 2023
<a href="#">Dynamics GP 2018 R2</a>	
<a href="#">Dynamics NAV 2018</a>	
<a href="#">Visual Studio Team Foundation Server 2018</a>	
<a href="#">Dynamics SL 2018</a>	July 11, 2023
<a href="#">Access 2019</a>	October 10, 2023
<a href="#">Dynamics 365 Business Central on-premises (Fixed Policy)</a>	
<a href="#">Excel 2019</a>	
<a href="#">Microsoft Office 2019</a>	
<a href="#">OneNote 2016</a>	
<a href="#">Outlook 2019</a>	
<a href="#">PowerPoint 2019</a>	
<a href="#">Project 2019</a>	
<a href="#">Publisher 2019</a>	
<a href="#">Visio 2019</a>	
<a href="#">Word 2019</a>	



# Acquisitions and Announcements

# Microsoft Acquisitions - 2021



Company	Date	Description
<a href="#">Xandr</a>	12-21-2021	Microsoft will <b>acquire Xandr from AT&amp;T</b> . Xandr provides a <b>data-enabled technology platform with tools</b> that help power a diverse ecosystem <b>connecting marketers and media owners through first-party, data-led advertising solutions</b> across its network. With Xandr, <b>Microsoft can accelerate the delivery of digital advertising solutions for the open web</b> by combining Microsoft's audience understanding, technology and global advertising customer base with Xandr's large-scale, data-driven platforms for advertising.
<a href="#">Two Hat</a>	10-29-2021	<b>Two Hat</b> , a leading content moderation solution provider offering protection measures for online communities. Two Hat's technology has helped to make global communities in Xbox, Minecraft and MSN safer for users.
<a href="#">Clear Software</a>	10-22-2021	<b>Clear Software</b> provides iPaaS and business process solutions with <b>strong connectivity into SAP and Oracle</b> . <b>Clear Software's API access and system knowledge will strengthen Microsoft Power Platform's integration with outside systems and accelerate how customers leverage data and processes</b> that reside beyond Microsoft first-party services.
<a href="#">Ally.IO</a>	10-07-2021	<b>Ally.io</b> , a leading OKR (objectives and key results) company, will <b>join the Microsoft Viva family as part of our employee experience platform (EXP)</b> designed to help companies embrace the new digital work life. <b>Ally.io will power a new Microsoft Viva module</b> . Viva is an employee experience platform that brings together communications, knowledge, learning, resources and insights – from anywhere you work. <b>Powered by Microsoft 365 and Microsoft Teams</b> , Viva helps organizations foster a culture of human connection, growth, well-being and success.
<a href="#">TakeLessons</a>	09-08-2021	We're so excited to announce that <b>TakeLessons has been acquired by Microsoft</b> . We believe this will further support TakeLessons' mission: <b>to empower people to learn, connect, grow, and live more meaningful lives through education</b> .
<a href="#">Clipchamp</a>	09-07-2021	<b>Clipchamp</b> is a natural fit to extend the cloud-powered productivity experiences in <b>Microsoft 365</b> for individuals, families, schools, and businesses. It's also a great fit for Microsoft Windows, which is a platform for boundless creativity. Clipchamp's <b>template-driven, task-focused user experience</b> gives everyone the confidence that they can create. Its <b>rich library of filters, styles, transitions, and stock media combined with the power of a multi-track audio and video compositing editor</b> gives everyone the fine control they need, and artistic help if they need it, to <b>create exactly what they want, quickly and with confidence</b> .
<a href="#">Peer5</a>	08-10-2021	<b>Peer5</b> expands Microsoft's ability for delivering <b>secure, high-quality, large-scale live video streaming with optimized network performance in Teams</b> . Peer5 offers a WebRTC-based eCDN solution that runs in-browser to optimize bandwidth usage helping mitigate impacts to network and line of business (LOB) applications. Its <b>mesh networks are self-balancing and automatically scale</b> as the number of viewers increase.

# Microsoft Acquisitions - 2021



Company	Date	Description
<a href="#">Suplari</a>	07-28-2021	<a href="#">Suplari</a> , a leading provider of <b>supplier spend insights</b> . Suplari enables <b>companies to proactively manage supplier spend by transforming data from multiple sources</b> , such as contracts, purchase orders, invoices, expenses, and supplier risk, into valuable insight. By bringing Suplari's spend intelligence insights together with the existing <a href="#">Microsoft Dynamics 365</a> capabilities, Microsoft is <b>further helping organizations become insight-driven</b> and enabling business leaders to take strategic action.
<a href="#">CloudKnox</a>	07-21-2021	Enhanced Zero-Trust controls. The acquisition of <a href="#">CloudKnox</a> further enables <a href="#">Microsoft Azure Active Directory</a> customers with <b>granular visibility, continuous monitoring and automated remediation for hybrid and multi-cloud permissions</b> . Microsoft is committed to providing our customers with unified privileged access management, identity governance and entitlement management. With this Cloudknox, Microsoft is uniquely positioned to <b>empower and defend the future of hybrid work and multi-cloud environments, providing essential visibility, control and monitoring Zero Trust demands</b> .
<a href="#">RiskIQ</a>	07-12-2021	A <b>leader in global threat intelligence and attack surface management</b> , to help our shared customers build a more comprehensive view of the global threats to their businesses, better understand vulnerable internet-facing assets, and build world-class threat intelligence. <a href="#">RiskIQ</a> offers global threat intelligence collected from across the internet, <b>crowd-sourced through its PassiveTotal community of security researchers and analyzed using machine learning</b> . The combination of RiskIQ's attack surface management and threat intelligence empowers security teams to assemble, graph, and identify connections between their digital attack surface and attacker infrastructure and activities, to help <b>provide increased protection and faster response</b> .
<a href="#">ReFirm Labs</a>	06-02-2021	<a href="#">ReFirm Labs</a> is joining Microsoft to <b>enrich our firmware analysis and security capabilities across devices that form the intelligent edge, from servers to IoT</b> . This acquisition marks the <b>next step in our journey and ability to help secure customers from the chip to the cloud</b> , backed by more than 3,500 defenders at Microsoft and the >8 trillion security signals we process every day. <a href="#">ReFirm</a> are the authors of the well-respected <a href="#">Binwalk open-source software</a> , which has been used to <b>analyze thousands of device types for firmware security issues</b> , uncovering unpatched common vulnerabilities and exposures (CVEs), insecure secrets, and a multitude of other security problems in plugin IoT devices and embedded firmware. <a href="#">Microsoft acquires ReFirm Labs to enhance IoT security - Microsoft Security</a>
<a href="#">Kinvolk</a>	04-29-2021	<a href="#">Kinvolk</a> has a rich, innovative history in open source cloud-native distributed computing, including Kubernetes, eBPF, community building, and <b>container-optimized Linux</b> . Kinvolk will be key contributors to the engineering development of <a href="#">Azure Kubernetes Service (AKS)</a> , <a href="#">Azure Arc</a> , and future projects that <b>will expand Azure's hybrid container platform capabilities</b> and <b>increase Microsoft's upstream open source contributions</b> in the Kubernetes and container space.
<a href="#">Nuance</a>	04-12-2021	<a href="#">Nuance</a> is a cloud software pioneer and a leading provider of conversational AI and ambient clinical intelligence. Nuance provides <b>AI expertise and intelligent customer engagement across Interactive Voice Response (IVR), virtual assistants, and digital and biometric solutions</b> to some of the largest organizations in the world. Nuance's global customer and partner base spans nearly every industry, and <b>together we are well-positioned to advance our AI capabilities with high-value solutions and a platform to support our customers' and partners' future innovation</b> .
<a href="#">The Marsden Group</a>	03-16-2021	<a href="#">The Marsden Group</a> is a leader in industrial technology innovation and rapid prototyping. The Marsden Group has earned a unique reputation as a powerful and trusted partner among industry leaders who seek to <b>quickly identify business needs, ideate technology solutions and build high-quality prototypes tailored to individual customer needs</b> . The Marsden Group has helped its enterprise customers rapidly envision, prototype and implement solutions that <b>drive meaningful value to their businesses, employees and customers</b> .



## Microsoft Acquisitions - 2020

Company	Date	Description
<a href="#">ZeniMax Media</a>	09-21-2020	<b>ZeniMax Media, the parent company of Bethesda Softworks</b> , one of the <b>largest privately held game developers and publishers in the world</b> . Creators of critically acclaimed and <b>best-selling gaming franchises including The Elder Scrolls, Fallout and many others</b> , Bethesda brings an <b>impressive portfolio of games, technology and talent</b> — as well as a track record of blockbuster commercial success — to Xbox.
<a href="#">Orions Systems</a>	07-07-2020	Orions Systems, a pioneer in the development <b>of large-scale, hybrid, smart vision systems focused on “human-in-the-loop” machine teaching</b> combined with <b>services that can adapt to running on a single device or scale to address large scale edge-to-cloud network topologies</b> . The Power Platform and Orions Systems is enabling intelligent retail spaces by leveraging observational data to unlock the full potential of customers, employees, and assets.
<a href="#">CyberX</a>	06-22-2020	CyberX will complement the existing <a href="#">Azure IoT security</a> capabilities and <b>extends to existing devices including those used in industrial IoT, Operational Technology and infrastructure scenarios</b> . With CyberX, customers can <b>discover their existing IoT assets, and both manage and improve the security posture of those devices</b> . CyberX, customers can see a digital map of thousands of devices across a factory floor or within a building and gather information about their asset profile and vulnerabilities,
<a href="#">ADRM Software</a>	06-18-2020	ADRM Software is a <b>leading provider of large-scale industry data models</b> , which are used by large companies worldwide as information blueprints. ADRM's robust industry data models have been built and refined over decades for business-critical analytics. <b>Together with Microsoft Azure, these capabilities will be delivered at scale</b> , enabling our customers to accelerate digital progress, and reduce risk in a variety of major initiatives.
<a href="#">Softomotive</a>	05-19-2020	<a href="#">Softomotive</a> currently helps more than 9,000 global customers seamlessly <b>automate business processes across legacy and modern desktop applications</b> . Together <b>with Power Automate, WinAutomation will provide customers additional options for RPA desktop authoring</b> so anyone can build a bot and automate Windows-based tasks.
<a href="#">Metaswitch Networks</a>	05-14-2020	<a href="#">Metaswitch Networks</a> , a leading provider of <b>virtualized network software and voice, data and communications solutions for 5G operators</b> .
<a href="#">Corp.Com</a>	04-07-2020	"To help in keeping systems protected we encourage customers to practice safe security habits when planning for internal domain and network names. We released a security advisory in June of 2009 and a security update that helps keep customers safe. In our ongoing commitment to customer security, we also acquired the Corp.com domain."
<a href="#">Affirmed Networks</a>	03-26-2020	<b>Affirmed Networks with its leadership in virtualized 5G mobile networks</b> . Affirmed Networks and Microsoft will play an important role in helping advance 5G and deliver new network solutions that offer step-change advancements in speed, cost and security. This combination of technology leaders will enable a host of new opportunities for businesses and society, <b>including autonomous vehicles, smart cities, virtual reality and a range of other smart industry use cases and services</b> .

# Microsoft Acquisitions - 2019



Company	Date	Description
Movere	10-21-2019	Movere accelerates cloud migrations. It increases business intelligence by accurately <b>presenting entire IT environments within a single day</b> , providing enterprises with the confidence they need to have <b>visibility and control of their environments regardless of platform, application or geography as organizations grow, change and digitally optimize</b> .
Semmle	09-18-2019	Semmle's revolutionary <b>semantic code analysis engine allows developers to write queries that identify code patterns in large codebases and search for vulnerabilities and their variants</b> . Semmle is <b>trusted by security teams at Uber, NASA, Microsoft, Google</b> , and has <b>helped find thousands of vulnerabilities in some of the largest codebases in the world</b> , as well as over 100 CVEs in open source projects to date.
JClarity	08-19-2019	The <b>leading contributor to the AdoptOpenJDK project</b> , to support their continued contributions to open source while <b>driving increased performance for Java workloads on Azure</b> . The team, formed by Java champions and data scientists with proven <b>expertise in data driven Java Virtual Machine (JVM) optimizations</b> , will help teams at Microsoft to leverage advancements in the Java platform.
PromotelQ	08-05-2019	The <b>leading provider of vendor marketing technology to online retailers and brands</b> . PromotelQ has pioneered the private marketplace approach to digital vendor marketing. PromotelQ's technology strategically complements Microsoft's current retail advertising offerings, and can enable retailers with a portfolio of technology solutions to modernize their e-commerce platforms and maximize their monetization opportunity. Retailers such as Kroger, Kohl's and Overstock.com — will continue to benefit from the PromotelQ platform and team.
BlueTalon	07-29-2019	A leading provider of <b>Unified Data Access Control solutions for modern data platforms</b> . BlueTalon works with leading Fortune 100 companies to eliminate data security blind spots and gain visibility and control of data. BlueTalon provides a customer-proven, data-centric solution for data access management and auditing across the diverse systems resident in modern data estates.
PullPanda^	06-17-2019	PullPanda^ <b>helps teams create more efficient and effective code review workflows on GitHub</b> . Better code reviews mean better code for software teams of all sizes, whether you work in open source or on a Fortune 500 team. PullPanda^ <b>gives teams a better way to manage reviews, reduce turnaround times, and ship code faster</b> .
Double Fine Productions	06-09-2019	Double Fine is <b>a beacon of creativity and spirit in game development for almost 20 years with classic games like Pyschonauts, Brütal Legend and Broken Age</b> . At the root of every game is an emphasis on creating crazy worlds with originality, story and fun. That commitment to creating a unique, player-centric experience is what drew us to the studio, and I'm looking forward to seeing what we create together.
Drawbridge Solutions	05-28-2019	LinkedIn will integrate Drawbridge's technology into our marketing solutions portfolio to help our customers better reach and understand their professional audiences and measure the ROI of their campaigns.
Dependabot	05-23-2019	Dependabot is integrated directly into GitHub and will monitor your dependencies for known security vulnerabilities and automatically open pull requests to update them to the minimum required version. We are rolling out automated pull requests to all accounts with security alerts enabled along with other enhancements in the coming months.



## Microsoft Acquisitions – 2019 & late 2018

Company	Date	Description
Express Logic	04-18-2019	a leader in <b>real time operating systems (RTOS) for IoT and edge devices powered by microcontroller units (MCUs)</b> . Express Logic's ThreadX RTOS has over 6.2 billion deployments, making it one of the most deployed RTOS in the world per <a href="#">VDC Research</a> . This widespread popularity is driven by demand for technology to support resource constrained environments, especially those that require safety and security.
DataSense	02-04-2019	The <b>integration of DataSense into Microsoft's suite of products, we will help educational institutions – and school and district IT leaders in particular – better collect, manage and explicitly control access to their data</b> within Azure to help drive the best possible learning outcomes for their students. Read more at <a href="https://educationblog.microsoft.com/en-us/2019/02/introducing-datasense-to-microsoft-educations-family-of-products/#E6CKQEBUjS35TOH4.99">https://educationblog.microsoft.com/en-us/2019/02/introducing-datasense-to-microsoft-educations-family-of-products/#E6CKQEBUjS35TOH4.99</a>
Citus Data	01-24-2019	a leader in the PostgreSQL community. Citus is an <b>innovative open source extension to PostgreSQL that transforms PostgreSQL into a distributed database, dramatically increasing performance and scale for application developers</b> . Because Citus is an extension to open source PostgreSQL, it <b>gives enterprises the performance advantages of a horizontally scalable database while staying current with all the latest innovations in PostgreSQL</b> . Citus is available as a fully-managed database as a service, as enterprise software, and as a free open source download.
FSLogix	11-19-2018	FSLogix is a <b>next-generation app-provisioning platform that reduces the resources, time and labor required to support virtualization</b> . From small businesses to very large global enterprises across numerous industries, FSLogix solutions enhance customer experience and productivity, while reducing support requirements for IT departments.
XOXCO	11-14-2018	A <b>software product design and development studio known for its conversational AI and bot development capabilities</b> . The company has been paving the way in conversational AI since 2013 and was responsible for the creation of <a href="#">Howdy</a> , the first commercially available bot for Slack that <b>helps schedule meetings, and Botkit, which provides the development tools used by hundreds of thousands of developers on GitHub</b> . Over the years, we have partnered with XOXCO and have been inspired by this work.
Obsidian	11-10-2018	<b>The studio quickly made a name for itself with the Xbox exclusive Star Wars: Knights of the Old Republic II: The Sith Lords</b> . Over the last fifteen years, they have delivered genre-defining RPGs to players on both console and PC through titles including <i>Fallout: New Vegas</i> , <i>South Park: The Stick of Truth</i> , and <i>Pillars of Eternity</i> . Read more at <a href="https://news.xbox.com/en-us/2018/11/10/obsidian-inxile-join-microsoft-studios/#P4ARqRq505qOpmfU.99">https://news.xbox.com/en-us/2018/11/10/obsidian-inxile-join-microsoft-studios/#P4ARqRq505qOpmfU.99</a>
InXile	11-10-2018	<b>Like Obsidian, InXile excels at creating vast worlds for players to explore with titles such as Wasteland 2, Torment: Tides of Numenera, Bard's Tale IV and the upcoming Wasteland 3</b> . Read more at <a href="https://news.xbox.com/en-us/2018/11/10/obsidian-inxile-join-microsoft-studios/#P4ARqRq505qOpmfU.99">https://news.xbox.com/en-us/2018/11/10/obsidian-inxile-join-microsoft-studios/#P4ARqRq505qOpmfU.99</a>
Lobe	09-13-2018	Lobe makes deep learning simple, understandable and accessible to everyone. Lobe's <b>simple visual interface empowers anyone to develop and apply deep learning and AI models quickly, without writing code</b> .



Microsoft

Thank YOU!