

Global Microsoft Outage: Impact and Causes of July 2024 Cloud Service Disruption

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What's in today's article?

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Why in News?

On July 19, a significant outage in Microsoft's cloud services affected businesses globally, impacting sectors such as airlines, financial services, media, and healthcare.

The disruption caused widespread IT system failures, with many Windows PC users experiencing the "blue screen of death," a common indicator of a system crash.

What is Blue screen of death?

- **About**

- A Windows device may display blue screen errors when the operating system encounters a serious issue, forcing an unexpected shutdown or restart, as per Microsoft.
- The crash screen typically features white text on a blue background, informing users that “Windows has been shut down to prevent damage to your computer.”
 - Interestingly, the text for the first Windows blue screen was reportedly written by Microsoft cofounder Steve Ballmer.
- Blue screens are triggered when the operating system calls the KeBugCheck **API**, acting like a fire alarm that halts the system to prevent damage.
 - The KeBugCheck routine brings down the system in a controlled manner when the caller discovers an unrecoverable inconsistency that would corrupt the system if the caller continued to run.
- While no data loss occurs, any unsaved work may be unrecoverable. Various hardware and software issues can lead to blue screen errors.

- **How do you get rid of the blue screen of death?**

- According to Microsoft, the official resolution process for blue screen errors involves shutting down the system, removing any newly installed hardware, and restarting it.
- If the issue persists, users can try starting the system in Safe Mode, a basic version of Windows.
- If problems continue, Microsoft advises using the Get Help app, typing “Troubleshoot BSOD error,” and following the instructions provided.

What is Global Microsoft outage?

- Late on July 18, users in the Central US region experienced issues with Microsoft’s Azure services and its Microsoft 365 apps, mainly involving service management and connectivity problems.
- By July 19, people worldwide couldn’t log into their computers, with Windows machines showing a “blue screen error”.
- The aviation industry was the most affected by the outage, causing major disruptions from Europe to Asia to the Americas.
- Notably, the London Stock Exchange was hit by the outage as well.

Factor responsible for the outage

- **Configuration change in part of its Azure backend workloads**

- Microsoft reported that the disruption was caused by a configuration change in part of its Azure backend workloads, leading to connectivity failures affecting Microsoft 365 services.
- Azure is Microsoft’s cloud computing platform.

- **Root cause**

- At the heart of the issue was a software update issued by US cybersecurity firm **CrowdStrike** for Windows systems, which ended up malfunctioning and caused system downtimes.

- CrowdStrike is a cybersecurity company which produces anti-virus software.
- The issue was specific to Falcon, one of the company's main software products, which is deeply embedded with the Windows operating system.
 - Falcon, an endpoint detection and response (EDR) software.
 - It is a complex software, but its basic job is to monitor activity on computers on which it is installed, and constantly scan them for any potential threats such as malware.
- Because many major corporations, including several Fortune 500 companies, use Falcon, the malfunctioning update led to widespread system downtimes.
- Falcon's integration allows it to access detailed system information, such as internet communications, running programs, and opened files, which is why the faulty update significantly impacted Windows PCs worldwide.

Impact in India and steps taken by the govt

• Impact in India

- In India, the impact of the outage was most pronounced in the aviation sector.
 - Hundreds of flights were delayed, and several cancelled, as airline operators found their systems inoperational, forcing them to switch to manual processes.
- As per the **RBI**, at least ten banks and NBFCs faced minor disruptions, which have either been resolved or are being resolved.
 - Overall, the financial sector in India remained insulated from the global outage since critical systems of most banks were not in the cloud, and only a few banks are using the CrowdStrike tool.
- Unlike the London Stock Exchange, the BSE was not impacted due to the Microsoft issue.

• Response from the govt

- Union IT Minister said that the Ministry of Electronics and IT (MeitY) was in touch with Microsoft, which in turn was working with impacted entities.
 - India's nodal cyber agency, Indian **Computer Emergency Response Team (Cert-In)** also issued an advisory regarding workarounds to the issue.
 - The govt clarified that the National Informatics Centre's (NIC's) operations were not impacted.
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Q.1. What is Azure?

Azure is a cloud computing platform and service created by Microsoft that provides a wide range of cloud services, including those for computing, analytics, storage, and networking. Users can choose and configure these services to meet their needs, allowing them to develop, deploy, and manage applications through Microsoft-managed data centers.

Q.2. What is CrowdStrike?

CrowdStrike is a cybersecurity company specializing in endpoint security, threat intelligence, and cyberattack response. Its flagship product, Falcon, provides cloud-based protection against malware and cyber threats by

monitoring and analyzing device activity to detect and respond to security incidents in real-time.

Source: [Windows outage: how a faulty software update hit businesses worldwide](#) | [NBC News](#) | [Indian Express](#)

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