Beyond the Moat:
How Hybrid Ecosystems Increase Mainframe Security Risk

Mainframes were once considered impenetrable. They were essentially protected by a "moat," physically secured and with limited to no connectivity to external networks. Today mainframes are increasingly connected and delivering value through web services, cloud platforms, and third-party software, all of which provide countless access points with the potential to be exploited.

Insider Threats

Shared Vulnerabilities

Cloud-Specific Risks

Threat Actors Could be Just One Step Away from Accessing Your Mainframe

The following statistics demonstrate how easily a threat actor could gain access to the mainframe unless proper security measures are taken.

Insider Threats

68% of breaches

can be attributed to **non-malicious human error**[1] such as credential misuse or software misconfigurations.

In 2023, **4,893** organizations

experienced ransomware attacks — nearly double the total from 2022.
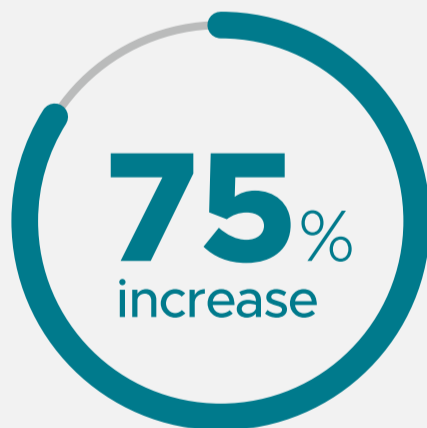
Shared Vulnerabilities

15% of breaches

are caused by **supply chain attacks**[1] — when an attacker gains access through a compromised third-party vendor.

Over **53**%

of third-party cyberattacks[4] were caused by **unauthorized network access** in 2023.

Cloud-Specific Risks

75% increase

in cloud environment intrusions[4] in 2023.

1 in 3 breaches involved shadow data[5] such as forgotten backups, files duplicated to cloud, and sensitive information shared via messaging.

ACHIEVING CYBER RESILIENCY THROUGH IMPROVED CYBERSECURITY

These cybersecurity risks are particularly concerning as organizations in finance, healthcare, government, and other industries rely on the mainframe to house their most vital operations. Any disruptions to mainframe operations could have catastrophic consequences, making cyber resiliency a high priority.

With **security incidents being the leading cause of downtime**,[6] strengthening cybersecurity practices around the mainframe is not just a best practice, but a necessity for ensuring operational continuity and safeguarding crucial data.

ACHIEVE CYBER RESILIENCY NOW

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1. https://www.verizon.com/business/resources/reports/dbir/
2. https://blackkite.com/whitepaper/state-of-ransomware-2024/
3. https://blackkite.com/whitepaper/black-kite-third-party-breach-report-2024/
4. https://go.crowdstrike.com/global-threat-report-2024.html
5. https://www.ibm.com/reports/data-breach
6. https://itic-corp.com/itic-2023-reliability-survey-ibm-z-results/