

Guide to Cyber Recovery Preparedness in Higher Education

LEARN HOW TO REMAIN RESILIENT IN
THE FACE OF CHALLENGES

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HIGHER LEARNING, HIGHER RISK

When it comes to data, few environments are as complicated to protect as a university. Thousands – sometimes tens or hundreds of thousands – of students, faculty, and staff, all with personal devices connecting to different systems, creating an ever-increasing attack surface.

Campuses large and small are home to siloed, disparate departments implementing their own applications and solutions. Staffing shortages and budget shortfalls have resulted in legacy systems chugging along with little support for needed upgrades. And at some institutions, the commitment to academic freedom and openness comes in direct conflict with the need to beef up security.

On top of that, student data privacy is in the spotlight. Universities house intellectual property as well as personal and financial records of faculty, staff, alumni, students, parents, applicants, and donors. Payment systems, student health records, transcripts; the list of data and inherent compliance challenges goes on and on.

Given all that valuable data and the potential vulnerabilities, colleges and universities are an attractive target for hackers. Findings from Sophos' State of Ransomware in Education 2024,¹ which surveyed a global audience, bear this out:

- Sixty-six percent of Higher Education institutions reported suffering a ransomware attack in 2024, down from 79% in 2023.
- That decline was tempered by dramatically increasing recovery costs: The mean cost to recover in Higher Ed jumped from \$1.06M in 2023 to \$4.02M in 2024.
- The average ransomware payment from Higher Ed respondents was \$4.4M.
- About two-thirds (67%) paid more than the original ransomware demand.
- Higher Ed is the sector most likely to pay more than the original demand.

BUILDING A CYBER RECOVERY CURRICULUM

These challenges have put the focus on cybersecurity for Higher Education. In Higher Ed and beyond, many organizations' security, IT, and operations teams have considered cyber recovery and disaster recovery to be the same – but a one-size-fits-all approach isn't the answer. Cyber recovery, especially in a sector governed by so many data and privacy regulations, is more complicated than regular disaster recovery. The variability in attacks have shown that cyber recovery plans need to consider:

- **Unpredictability and evolving threats:** Unlike a natural disaster, cyberattacks are malicious and attackers have gone to great lengths to try to hide their actions and movement. Because of this, it can be hard to pinpoint exactly when the attack began, what systems are affected, or the full extent of the damage.
- **Secondary attacks:** Attackers have been seen planting code to launch secondary attacks during the recovery process or creating persistent backdoors that are automatically opened upon a restore action.
- **Compromised backups:** Ninety-five percent of educational organizations (comprising K–12 and Higher Ed) hit by ransomware reported that their backups were targeted.² Attackers are also known to attack backups specifically to make recovery efforts ineffective. This makes the need to pay a ransom to recover production data more real.
- **Time constraints:** Universities often face immense pressure to get back online quickly after a cyberattack. Downtime has been shown to cost organizations across all industries an average of \$14,056 a minute, rising to \$23,750 for large organizations of more than 10,000 employees.³ And to make things worse, rushing recovery can lead to restoring already-compromised systems, further amplifying the damage.
- **Resource drain:** Cyber recovery at colleges and universities can be a resource-intensive process, requiring expertise from IT, security, legal, compliance, and potentially even law enforcement teams. This can strain already-stretched resources, and can distract security and operations teams from other possible cyber threats and limit their ability to focus on key development initiatives.

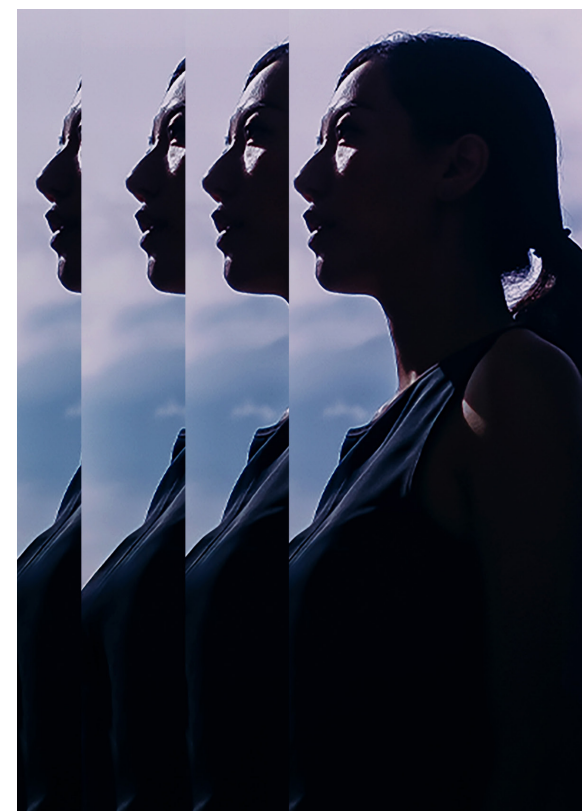
By understanding these challenges, educational institutions can use some foundational elements of disaster recovery to build a cyber recovery plan that anticipates these difficulties and helps them bounce back more effectively from an attack.

NIST CYBERSECURITY FRAMEWORK AS A GUIDE

The Cybersecurity Framework from the National Institute of Standards and Technology (NIST CSF) has long been a guiding light for security teams to build and align their security programs and defend against new and evolving cyber threats. It provides a helpful starting point for addressing the complicated issues of cybersecurity in Higher Education.

Use the Identify, Detect, Protect, Respond, and Recover framework to explain how to build on each for a successful cyber recovery.

1. **Identify.** Understand your data, including sensitive/critical data, where it is, and who's responsible for it.
2. **Detect.** Utilize security controls and technology to observe what's happening to your environment and data.
3. **Protect.** Implement mechanisms to lock down your sensitive or critical data and prepare it for recovery.
4. **Respond.** Remove the attacker from your environment and remove or protect the attack vector used to infiltrate your organization. If this cannot be done quickly, prepare a new, untouched, uncompromised workspace to restore and use to continue operations.
5. **Recover.** Rebuild an uncompromised version of your entire environment, including the data, applications, and infrastructure.



PREPARING FOR THE UNEXPECTED

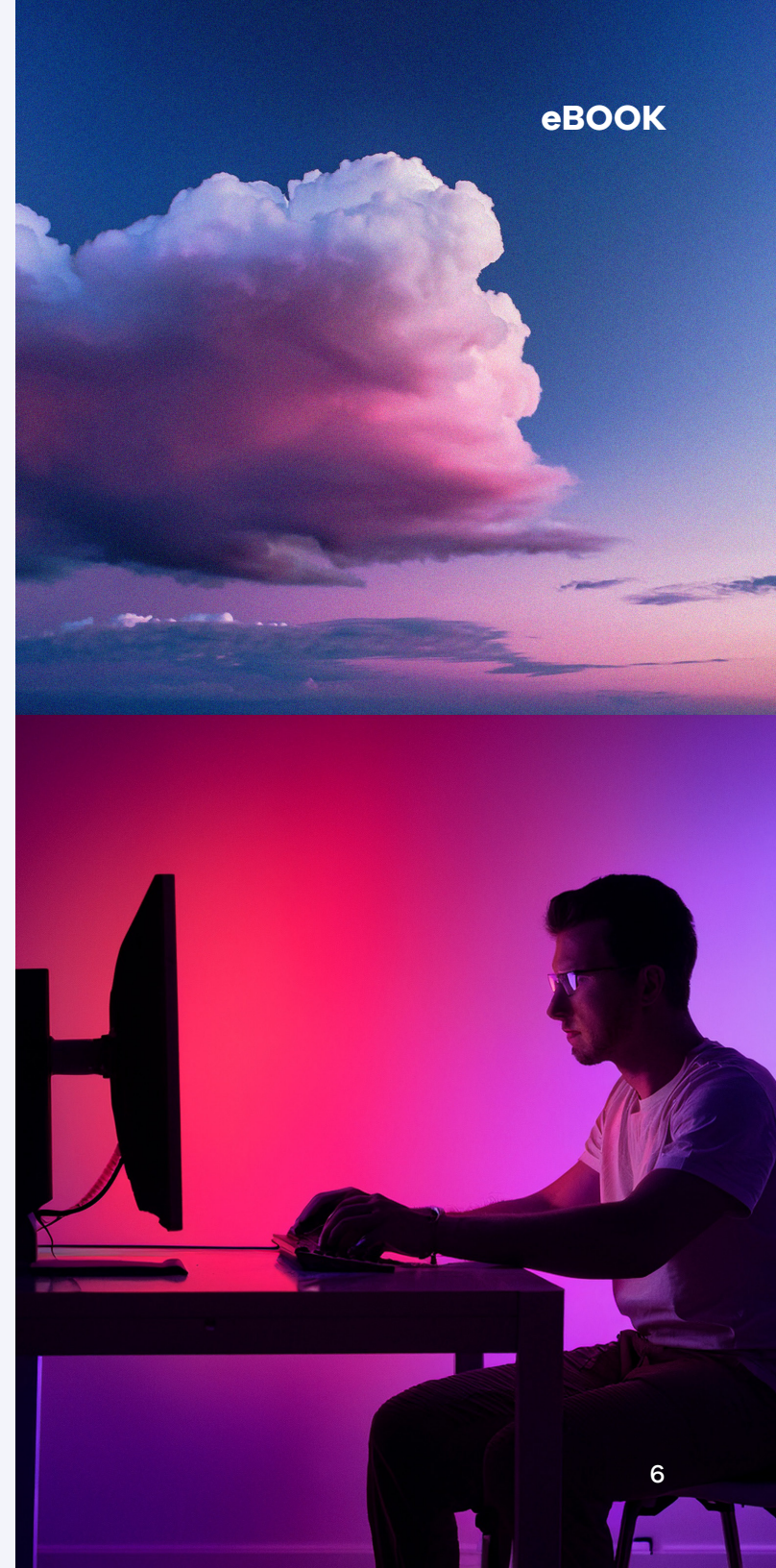
By their very nature, cyber incidents are often covert attacks orchestrated behind the scenes for days or weeks before destruction or havoc takes place.

194 days, or more than 6 months

the average dwell time – the amount of time an attacker has actually been inside an organization during an attack⁴

Organizations have long conducted penetration tests to highlight areas where their defenses are weak and tabletop exercises to test disaster recovery. But with the variability in cyberattacks, the practice needs to take into account that almost nothing can be implicitly trusted in a true cyber recovery scenario. Additionally, cyber recovery testing has been time-consuming, costly, and complex – making it difficult for institutions to identify vulnerabilities and validate recovery plans effectively.

Backups need to be scanned for persistent malware. Infrastructure must be cleaned to confirm only authorized users are present. And applications and data need to be checked for back doors and restored to a pre-attack (or pre-infiltration) state.



MINIMUM VIABILITY: THE FIRST STEP TO CYBER RECOVERY

Once your institution has been hit by a cyberattack, you're under immense pressure to return to normal as soon as possible. The best way to resume operations quickly? Just restore to minimum viability – the most critical assets you need to maintain continuous business. That way, you can continue to carry on the most vital aspects of your organization while a full restoration is underway.

Once you identify your most critical systems, processes, and data that will enable you to return to minimum viability, you'll need to make a plan for how you will restore them in the event of an incident. You need to understand the impact of downtime, and you must test and update your plan as needed.

Read [The Ultimate Guide to Minimum Viability](#) to learn more about the steps to restore your regular operations and our recommended practices.

THE FASTEST, MOST COMPLETE CYBER RECOVERY

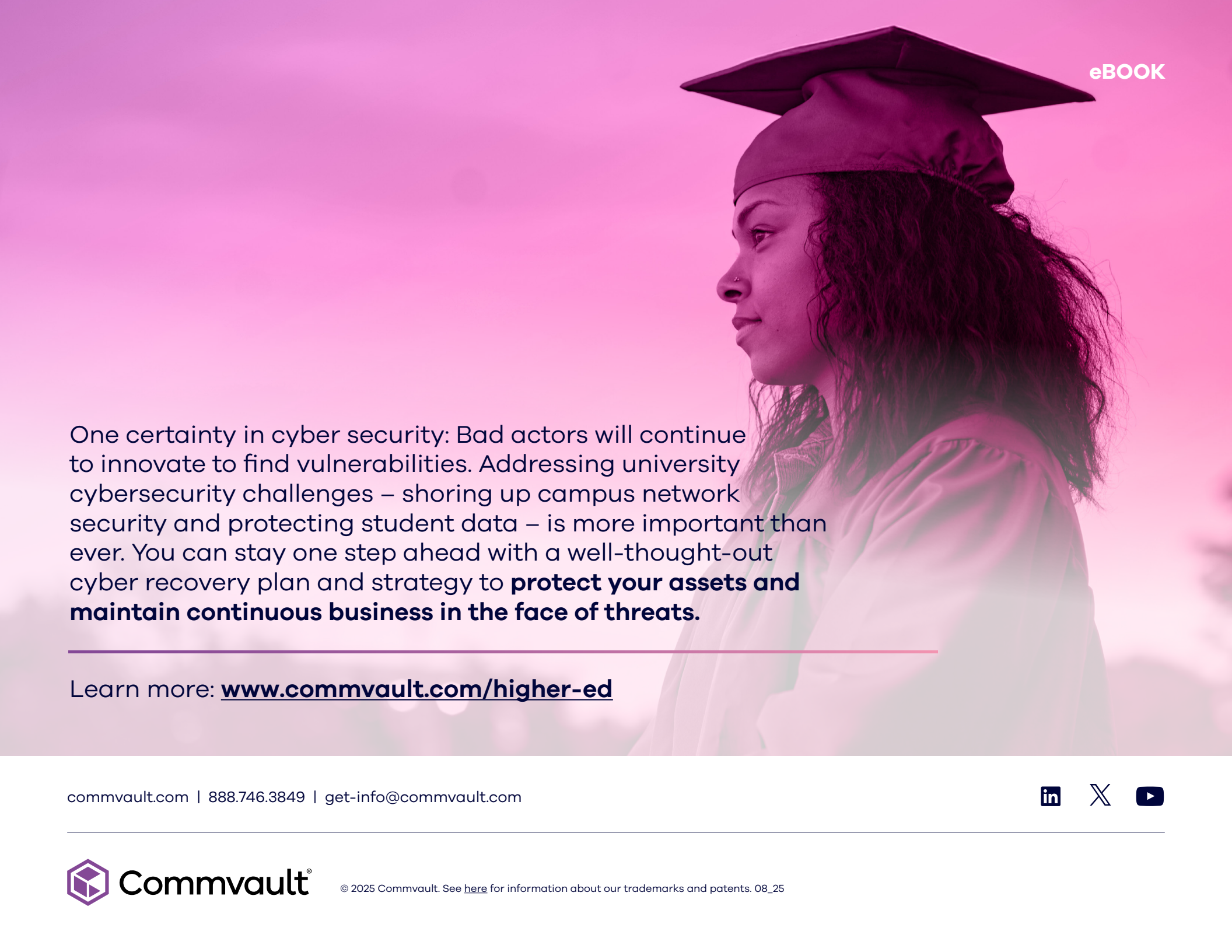
Commvault provides solutions to protect, test, and recover your data, apps, and workloads – delivering comprehensive recovery and true cyber resilience.

Commvault® Cloud Cleanroom™ Recovery lets you test and recover in a safe, on-demand, cloud-based environment. You can easily recover applications and data, and conduct forensics after an event. You'll have an isolated recovery environment for business continuity in the event of an attack.

Commvault Cloud Rewind™ enables near-instant recovery and automatically writes code to recover data and rebuild applications so you can be back in business within minutes of a failure – all without the need for manual intervention.

Commvault Cloud for Active Directory Enterprise Edition delivers rapid recovery for AD and Entra ID environments. It helps automate and orchestrate the recovery of forest-level ADs after an incident, enabling you to get back to minimum viability quickly.





One certainty in cyber security: Bad actors will continue to innovate to find vulnerabilities. Addressing university cybersecurity challenges – shoring up campus network security and protecting student data – is more important than ever. You can stay one step ahead with a well-thought-out cyber recovery plan and strategy to **protect your assets and maintain continuous business in the face of threats.**

Learn more: www.commvault.com/higher-ed