Proctoring Services Suite: Maintaining the Integrity of Online Exams

welcome to brighter

Contents

Introduction

Global trends suggest that a long-term tailwind buoys the higher education market. Individual reports attest to its meteorological rise – since 2000, the sector has grown by 900%, and the size will only triple between 2020 to 2025. Interestingly, the trajectory projects the market's cumulative worth to reach USD 1.96 billion by 2021, with close to 9.5 million users.

The sector's astounding rise is being catalyzed by easy access to the internet, which is steadily revolutionizing the scope and expanse of higher education. New players are entering the fray, accelerating the adoption and integrated use of educational technologies to promote an active learning environment. The drive to stay relevant in the market, and not get outpaced by competitors, has substantially expedited the pace at which the online medium is being embraced. Our way of taking exams is one such instance where the distinction between offline and online is blurring fast.

Technological innovations have led to a surge in exam portals and assessment platforms that are altering the way we take exams. Be it entrance examinations, semester examinations, or course certifications, various advantages associated with the medium are redefining our approach toward understanding the examination ecosystem. A large number of people have moved out of their comfort zones and taken to the online mode. Besides a lighter workload, and significant savings on resources, financial and otherwise, logistical challenges, bottlenecks such as zeroing in on physical centers and hiring competent invigilators, are also being adequately addressed.

A report issued by ZDNet claims that the Monash University of Australia conducted 360,000 exams, which would have been equivalent to consuming 8.5 million sheets of A4 paper or 1,000 trees. The process is expected to save up to AU\$ 7 million each year, as 80% of all students move to online exams by 2021.

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Various colleges and institutions can achieve greater scalability when conducting large-scale, high-stakes exams for multiple candidates at different locations simultaneously. Moreover, online exams are now fully automated, providing faster results in much less time.

Whereas, students have the advantage of taking the exam anywhere, anytime.

However, the growth of the sector remains considerably below its true potential, with educationists maintaining skepticism on embracing the medium. Despite easy accessibility of exam portals, swift setting up of LMS accounts, statistical software, and various other essential dashboards, the traction remains low. The idea of online invigilators preserving the integrity of the examination, when they are thousands of miles away from the test-takers, seems far-fetched to educationalists. They don't seem to exhibit the same levels of credibility in online tests as in physically-invigilated examinations. Ensuring strict supervision and curtailing attempts of malpractice are yet unaddressed challenges for many.

But, technological progress and a need to embrace the change have found a focussed solution in proctoring. Universities and colleges can supervise students even in the remotest of locations by proctoring candidates from their distantly-located centers. Online proctored exams provide similar levels of accountability as an in-person class for the students. Invigilation is possible via a combination of advanced technologies such as monitoring software, video images, and recording of sessions, to prevent candidates from indulging in any aberrant behavior.

Four common ways students indulge in online cheating

Impersonation

Students find creative means of cheating. Some of them include finding a proxy or an impersonator posing as them to appear for the exam. It occurs more during the high-stakes entrance and recruitment exams. It is a challenge for institutes that are bereft of means to ascertain the identity of the test-taker appearing for the exam from a remote location. Often, students even alter the identity proof and admit card to legitimize the test-taker.

Suspicious Behaviour

The remote nature of the exam creates an opportunity for test-takers to seek help from friends and family. These helpers are stationed away from the webcam or behind the screen, with answers on a placard. Students indulging in unfair means often hide their face, disappear from the screen, look around the room, or make suspicious gestures while communicating with the helper to know the desired answer. Some, at times, even stick post-it notes on the computer or place chits with solutions on the walls.

Use of External Help

Students can use devices like mobile phones and Bluetooth earphones, among others, to cheat in online exams. These are used to store answers and search on the web. *A study conducted by McAfee found that one in three students in the USA uses mobile phones or other connected devices such as a smartwatch to cheat in exams.* Sometimes they even log onto different search engines (Google, Bing), social media (Facebook), etc. or switch between windows to copy and paste answers.
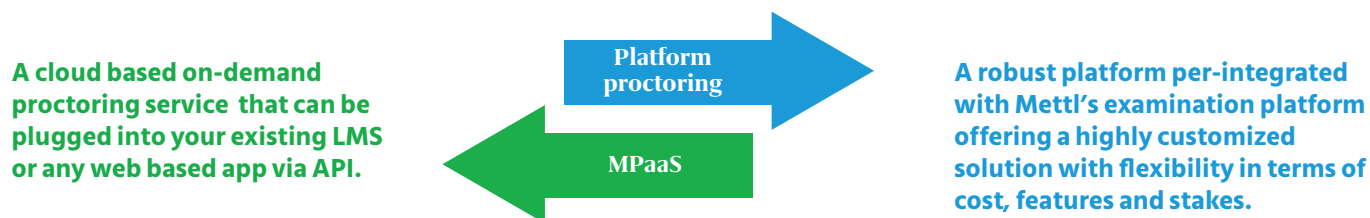
Navigation Privileges

The device for taking the exam is also susceptible to being used for cheating. Students have often misused easy access to the internet and social media tools. They can copy-paste answers from docs or notepads kept ready on a separate window before the commencement of the test.

How institutes can prevent cheating?

Introducing Mercer | Mettl's Suite of online proctoring technologies that enable you to conduct extremely secure online examinations with high integrity. With its robust features and a combination of Artificial Intelligence (AI)-proctored supervision platform and stand-alone services, these new-age solutions address all your proctoring related concerns. *Unique offerings such as 95% accuracy in preventing cheating, integration within minutes, live proctoring options, and no change in the students' experience provides a seamless experience, coupled with our one-of-a-kind Proctoring Technology.* Our services aid e-learning, complement the future, and maintain academic integrity. Our technology assures the flagging of any illicit activity during the examination process. It offers a more credible structure for educators to conduct exams that are imbued with their rules, requirements, and policies.

The two ways in which various institutes and universities are partnering with us to get the best in online proctoring services and platforms are:

A cloud based on-demand proctoring service that can be plugged into your existing LMS or any web based app via API.

Platform proctoring

MPaaS

A robust platform per-integrated with Mettl's examination platform offering a highly customized solution with flexibility in terms of cost, features and stakes.

Mettl Examination Platform

A scalable and easy-to-use examination platform that lets you create and host exams and certifications. It comes with a complete suite of Mercer | Mettl's pre-configured proctoring technologies, including a robust security mechanism. It offers you an end-to-end secure examination solution.

Mettl Proctoring as a Service (MPaaS)

Mettl Proctoring Service can be added easily onto any client platform through API. You can use it if you have an existing examination or LMS and need a seamless layer of proctoring technology to create a highly secure and well-invigilated examination experience.

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What is MPaaS?

> *MPaaS – Mettl Proctoring as a Service is a state-of-the-art, cloud-based proctoring service. It helps institutes and universities conduct exams online in an extremely secure environment with credible anti-cheating features and insightful analysis, among others.*

AI is the product's core differentiator. After extrapolating information from vast amounts of data and analyzing students' behavior across exams, our AI can detect and predict cheating. It ensures the authenticity of the test-taker, identifies other faces in a testing environment, raises flags on detecting objects such as smartphones, and reads distracted eye movement across the room. MPaaS is a much-needed layer of security for exams with a suite of powerful features. It lends fairness, ethics, and progressiveness to assessments. Students cannot view the examination unless they accept to share their screen, video, and audio, and establish proctoring and authentication.

Our efficient and time-saving proctoring management solution allows the admins the flexibility to administer exams based on their preferences while maintaining the integrity of the process. More universities and educational institutes must embrace this concept readily.

Our Offering:

3-Point Candidate Authentication

As mentioned earlier, there are a growing number of cases of impersonation by students globally. It raises valid concerns among examiners on the real identity of the exam-taker. MPaas' 3-point candidate authentication ensures the utmost reliability and authenticity of the candidate. Live authentication begins after the candidate clicks on the exam link. The webcam will first ask students to click their photo and show their ID proof. They are also needed to send across customizable registration details. Our proctors, available round the clock, who needn't be slotted in advance, verify the photo ID against registration details and attest to the legitimacy of the candidate.
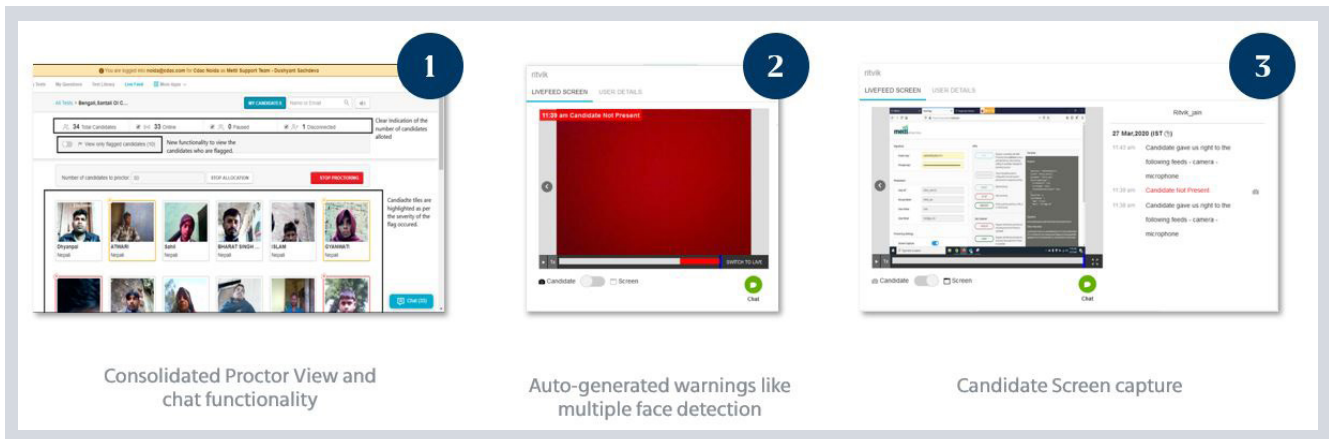
AI Proctoring and Credibility Index

The core of our proctoring technology is based on these below mentioned three differentiators. They remotely invigilate candidates' actions and behavior and analyze them by using our proprietary algorithm. Both these technologies can be easily used separately or in combination.

Reports with the candidate's view
and
AI-based flags for cheating detection

The candidate's screen view

Test logs and details

Consolidated Proctor View and chat functionality

Auto-generated warnings like multiple face detection

Candidate Screen capture

Mercer | Mettl's AI proctoring is incredibly futuristic with cheating predictions and accuracy. After mining and analyzing hoards of data on patterns and trends in test-takers' behavior, our technology is hands-on at identifying any suspicious behavior. It auto-flags a variety of suspicious cases with 95%+ accuracy, including non-visibility of face or presence, detection of mobile phone, and additional person, thereby, negating any possibility of malpractice during an online proctored exam. An access time feature also enables examiners to add a limited time frame that students can spend on a particular section or the overall exam. This feature is often leveraged using our proprietary algorithm 'the Credibility Index.' This excellent predictor provides the most relevant results to administrators. With valuations such as high, medium, and low, one can quickly identify and filter out candidates who might have resorted to cheating during the test. Calculations are based on the combined insights from AI flags, recorded details of live/manual proctoring sessions, and test finish status. An auto-generated report then provides the candidate's integrity score for a proctored session. Credibility Index can be customized to any institution's needs.

Mettl Secure Browser (MSB)

Mettl Secure Browser (MSB) is another upcoming attribute of our proctoring technology. Certainly, students would wish to run other applications on their computers. But a secure browser feature allows academicians to host the exam/test in a safe environment without worrying about on-screen cheating. They can pre-define the apps and websites that need to be blocked or whitelisted. The browser lockdown feature will then restrict candidates from opening any unwanted software & apps (e.g., screen-sharing programs) simultaneously. It disables screen recording, screen projection, desktop or web-based application/page (unless whitelisted). This feature goes a long way in preventing the candidate from surfing the web for answers on Google.

Going beyond browsers, Geofencing, a soon-to-be-launched feature, will restrict test-taking from specified IP address ranges, meaning the college can allow remote examination. It must, however, be taken from designated spaces within the college, e.g., libraries, hostels, etc.

(MSB and Geofencing are already a part of our proctoring platform and will soon be available on MPaaS as well.)

Select the Appropriate Level Based on Your Needs

Right from recording the complete proctored test, to receiving a time-stamped activity log of events and alerts that allows one to navigate to the specified recording quickly, our proctoring service provides auto-generated reports in real-time. Our seamless proctor testing raised flags can be reviewed by examiners well after the exam is over as the duration of the video recording storage is unlimited.

How Does MPaaS Work?

Online exams on any platform which are not secured

Online Exams	Exam Platforms
Semester Examinations	Learning Management System (LMS)
Entrance Exams (SAT, GMAT)	Examination Platform
Trainings	Certification Platform
Learning Initiatives	HRMS

Prone to Cheating

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Mercer I Mettl Proctoring as a Service

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Highly Secure Online Exams On Your Local Platform

Online Exams	Exam Platforms
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AI-powered technology designed to detect cheating and use of unfair means

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How do we integrate mpaas with your LMS?

Your LMS gets linked with MPaaS in no time using either of the following two ways:

LMS is an LTI compliant proctoring technology. LTI stands for Learning Tool Interoperability. This compliance enables Mercer | Mettl to integrate its proctoring services with over 250 LTI compliant systems instantaneously, including four most substantial LMSs that account for over 91% market share – Canvas, Moodle, D2L, and Blackboard.
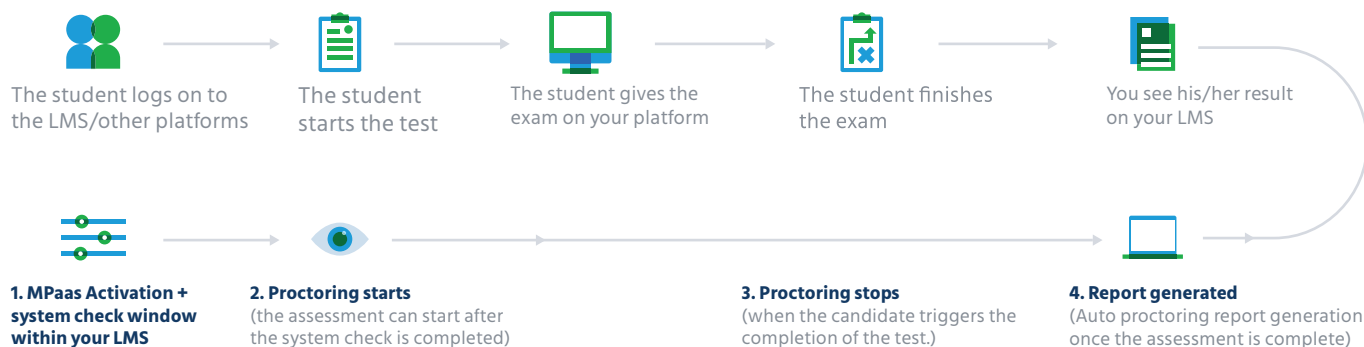
With a single protocol, any platform can have our standard MPaaS software within minutes. LTI compliance is the only prerequisite for a client to use this method. For the user, this service is a part of their LMS, and it doesn't seem like an external integration.

Click here and search the name of your LMS to check if your LMS is LTI compliant.

In case your LMS is not LTI compliant, you can integrate MPaaS via Deep Integration.

This means if you have a personal LMS, Mercer | Mettl will expose its REST APIs to integrate with your system and enable our proctoring services. It takes up to a week or more for its set up as several customizable elements and codes supported by MPaaS need to be integrated for smooth functioning. Also, prior technical knowledge is a must for setting up and configuring. We can link MPaaS with any web-based service or any non-LTI compliant LMS using API-based linking.

How Exams on MPaaS Work When Integrated with Renowned LMSs?

The student logs on to the LMS/other platforms

The student starts the test

The student gives the exam on your platform

The student finishes the exam

You see his/her result on your LMS

1. MPaas Activation + system check window within your LMS

2. Proctoring starts
(the assessment can start after the system check is completed)

3. Proctoring stops
(when the candidate triggers the completion of the test.)

4. Report generated
(Auto proctoring report generation once the assessment is complete)

How is Mercer | Mettl's MPaaS class apart?

Today, innovation and technology are the principle pivots to the growth of online education. Our societal progress is often defined by our acceptance and application of new tools available to us – engaging with them will provide you a competitive edge. MPaaS is shaping the world of examination with its high-tech mechanisms such as compatibility with leading browsers like FF, Chrome, Safari. Mercer | Mettl's suite of Proctoring Technologies are also specifically designed considering three things:

Scale

Our proctoring technology is designed considering large-scale and high-stakes exams. Mercer | Mettl, to date, has conducted more than 20 million online tests, and the number continues to grow. Our robust technology has a proven track record of delivering results at all levels. We recently accomplished the feat of conducting over 100,000 proctored assessments in one day. Established remotely, the performance, support, and integration with a large number of students were seamless. Proctoring experts ensured a smooth experience for the test-takers too.

Security

Data breach, security hazards, and privacy risk are global concerns. Such issues prompt a sharper focus on regulations like Europe's General Data Protection Regulation (GDPR) and ISO certification to strengthen data privacy, to name a few.

MPaaS follows a stringent security protocol to safeguard both candidates' & clients' data. We are hosted on Amazon Web Services (AWS), a highly secure cloud platform for storage and computation. We use HTTPS (256 bit SSL encryption) for secure data transmission. We also ensure webcam proctored tests can run on a client's systems without the need for software download. Our management ensures the safety and encryption of all data available with us.

1. AWS Hosting

Amazon Web Services (AWS) a highly secure cloud platform for storage and computation of data. It ensures all candidate and client information, including Personal Information, resides are encrypted and safe.

2. Data in Transit

Data exchanged is secured & encrypted via HTTPS (256 bit SSL encryption). TLS1.2 version and latest ciphers are enabled to support secure transmission.

3. MFA

Multi Factor Authentication adds an extra level security to the login mechanism. It ensures that only correct and authorized users are able to login into the Mettl account.

4. Access Rights Management

We support creation of various roles with defined access rights, log reports and audit trail. Access are allocated with least privilege rule to avoid any unauthorized data disclosure.

5. GDPR

Our policies & processes ensure adherence to GDPR principles of Data Minimization, Data Subject Rights & Data Management (Storage and Security, Retention, Breach Management). Review of the policies & processes is done at least once a year or if there is a change required as per regulation.

6. ISO 27001

We are compliant to ISO27001:2013, along with AWS CloudWatch and a In-house ELK program. For vulnerability assessment, we have device and network level threat assessment program along with Web Application Penetration testing.

Data Encryption in transit and at rest

Student Personal Data

Exam Results

Question Bank
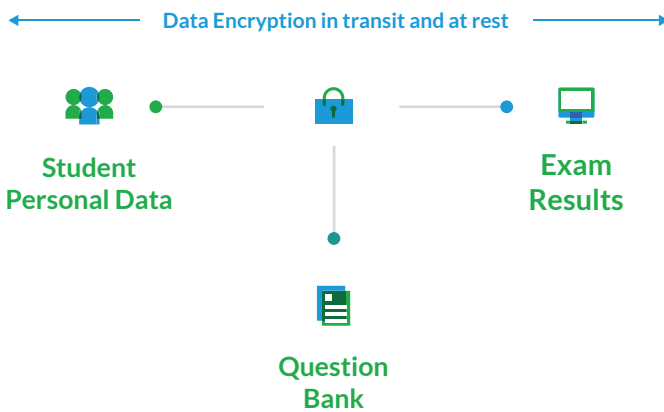
Our Data Security features:

- Secure Data Hosting on Amazon Web Services (AWS)
- Multi-factor authentication to ensure the authenticity of the examinee
- Bi-annual Vulnerability and Penetration Testing
- Defined Access Rights For Various Roles
- Regular Internal and External Audits

All Your Data & Information is Kept Safely with Mercer I Mettl

ISO 27001 CERTIFIED

ISO 9001 CERTIFIED

FULLY GDPR COMPLIANT

National Skill Development Corporation INNOVATION PARTNER

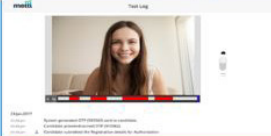**Connect with an expert**

Credibility

To reiterate, we take academic integrity during high-stakes exams very seriously. With cheating prediction abilities as high as 95%, MPaaS's credibility and predictability remain unmatched. Our state-of-the-art proctoring technologies combine the latest advances in AI-based and remote live proctoring to eliminate the risk of cheating and impersonation in online exams. A stellar combination of AI flags, recording of the proctor session for later viewing, human proctoring ability, and applicants' authentication ensure accurate cheating detection.
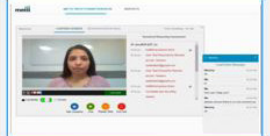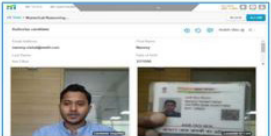
(Our credible suite of anti-cheating features)
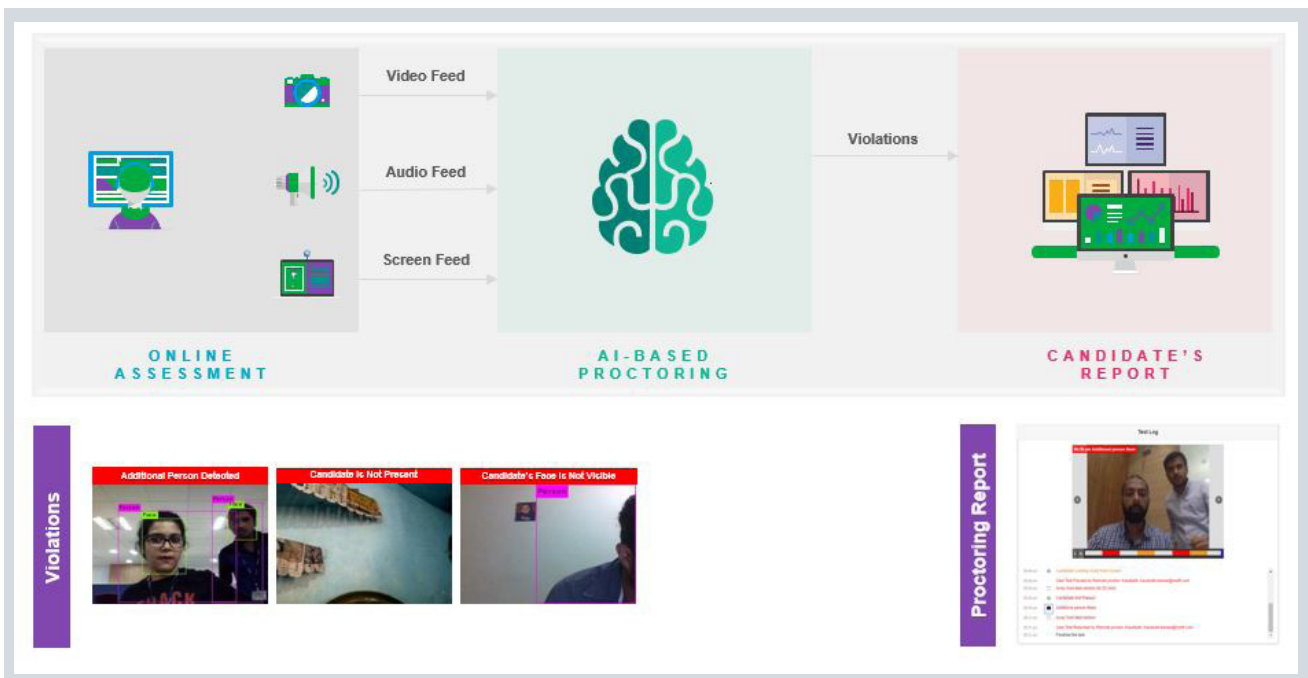
(How our AI-based bots function to predict cheating amongst students)

Adherence to Security Standards:

At Mercer | Mettl, the safety and security of our system, as well as services, is of utmost priority. Therefore, we have various established processes to ensure every micro and macro functionality of our service is optimized seamlessly. We continually fine-tune to improve upon them.

Penetration Testing:

We conduct penetration testing annually to ensure that hackers are unable to exploit any possible vulnerability. With help from external vendors, an unbiased test report is prepared, with, at least, an annual analysis. Network Penetration testing is also done manually to ensure more consistent network services.

Vulnerability Testing:

For an accurate and comprehensive assessment of our offering, we conduct a Vulnerability Assessment testing annually. With the help of internal experts and external vendors, third-party network and application vulnerability tests are conducted to assess the health of the service. Additionally, we run tools like WhiteHat daily to discover any application vulnerability and reduce its probability.

Security and Auditing:

External audits to evaluate possible security risks are performed once annually by certifying bodies, which is in line with ISO 27001:2013 standards. These audits eliminate any possible risks systematically. Internal reviews to ensure due diligence are also in place with a frequency of once every six months.

Conclusion

While tabling India's union budget for F.Y. 2020-21 in February 2020, the Government of India embraced online learning and higher education. The government acknowledged its potential for future growth. Finance Minister Nirmala Sitharaman even spoke on the need to make India's young people more employable through better higher-education opportunities. This indicates that the radical transformation in the sector is unfolding in the right direction. When admissions to classroom teaching, everything is moving online, why leave exams out? Online exams and e-assessments are central to this argument. The gamut of the industry is ever so evolving. And proctoring is a transformation with great potential that can be realized seamlessly through integration.

MPaaS is the new-age powerful wave, and integrating it into your LMS or personal systems, will only boost your market presence and outreach. What is holding you back? Now is the time to ride the online proctoring wave with Mercer | Mettl. The road to accomplishments with our progressive technology is only unfolding. Where it may take us is anybody's guess right now.

You may also like to read: Online Web Proctored Exams: All You Wanted to Know
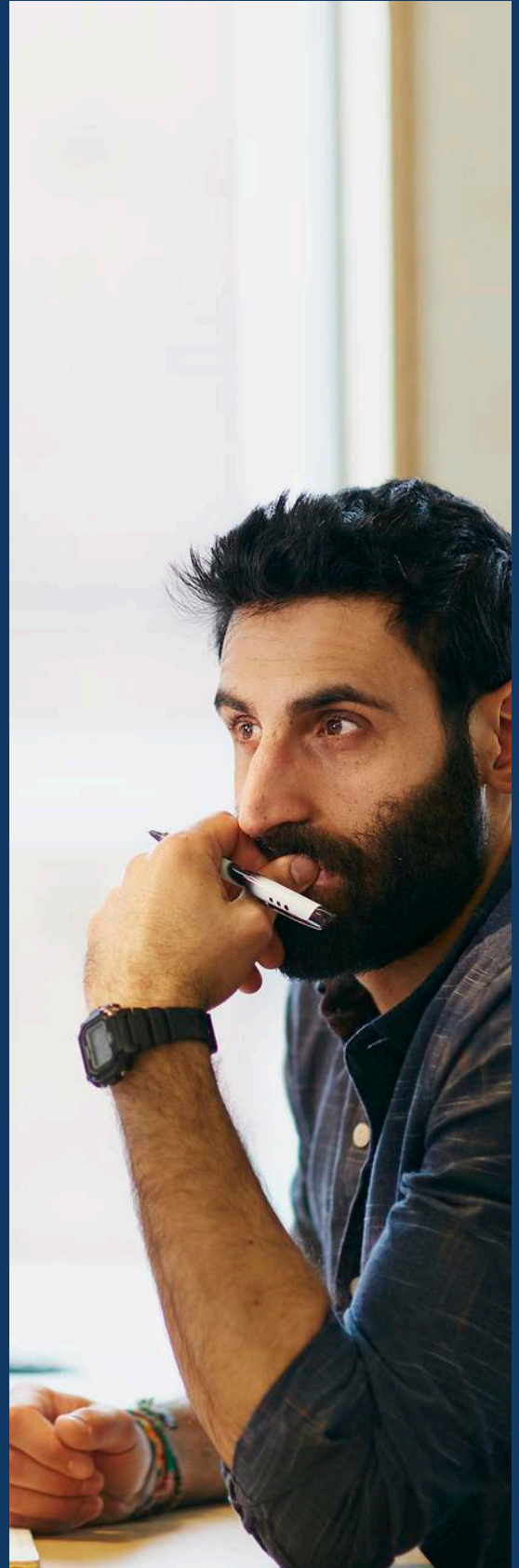
About Us

At Mercer I Mettl, our mission is to enable organizations to make better people decisions by making credible people decisions across two key areas: Acquisition and Development. Since our inception in 2010, we have partnered with 2900+ corporates, 31 sector skill councils/ government departments, and 15+ educational institutions across 90+ countries.

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