# YouTestMe

Executive Overview of Features & Services

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# 1 Method Statement

The YouTestMe Online Training and Examination Platform is a comprehensive solution designed to facilitate knowledge sharing, skill development, and certification through a digital medium. This method statement highlights the platform's positive impact on the environment, business creation, job opportunities, skill development, and community integration.

**Environmental Impact:** Our platform prioritizes sustainability by embracing paperless operations. By offering tests, training, and certifications online, we significantly reduce the demand for printed materials. This approach directly contributes to a decrease in paper consumption, thereby lowering the carbon footprint associated with paper production and disposal. Additionally, our online learning and testing modules eliminate the need for physical attendance, leading to reduced carbon emissions from commuting and travel to training centers.

**Resource Conservation:** The YouTestMe platform is built on the foundation of resource conservation. Our online infrastructure minimizes the need for physical resources such as classrooms, energy, and facilities. By providing a virtual environment for learning, we contribute to the preservation of resources and promote a sustainable approach to education. This aligns with our commitment to minimizing the impact on the environment.

**Business Creation and Content Marketplace:** YouTestMe goes beyond traditional educational models, fostering business creation and entrepreneurship. Entrepreneurs and subject matter experts can create and sell online courses, harnessing their expertise to establish viable businesses centered around knowledge sharing. Additionally, our platform acts as a content marketplace, allowing instructors and content creators to offer their courses to a broader audience. This dynamic ecosystem creates new opportunities for business growth and expansion.

**Global Access and Flexible Learning:** Our platform has a significant impact on global access to education. Individuals residing in remote areas or underserved communities gain access to educational opportunities and skill development that were previously inaccessible. The platform accommodates learners' schedules, enabling them to balance learning with work or other commitments. This flexible learning approach ensures that education becomes a more attainable goal for diverse audiences.

**Continuous Learning and Inclusivity:** The YouTestMe platform promotes continuous learning and inclusivity. Professionals can update their skills and knowledge through accessible online courses, enabling lifelong learning. Moreover, our platform caters to diverse audiences, including individuals with disabilities or language barriers, fostering inclusivity and expanding educational access.

**Cultural Exchange:** Online courses offered on our platform foster cross-cultural understanding and interaction. Learners from various regions and backgrounds come together to share experiences and insights, facilitating a cultural exchange that enriches the learning experience and promotes global unity.

In conclusion, the YouTestMe Online Training and Examination Platform exemplifies a holistic approach to education that positively impacts the environment, fuels business creation, generates job opportunities, encourages skill development, and enhances community integration. By embracing innovation and sustainability, we aim to contribute to a more inclusive, knowledgeable, and interconnected world.

# 2 Custom Development and Account Management

## 2.1 Account Management

At YouTestMe, we prioritize providing a comprehensive and dedicated approach to account management, ensuring your experience with our platform is seamless and tailored to your needs.

**Dedicated Point of Contact:** Upon partnering with us, you will be assigned a dedicated point of contact who will serve as your main liaison throughout our collaboration. This individual will be available to address any inquiries, concerns, or requirements you may have, ensuring effective communication and prompt resolution.

**Expert Project Management:** Our skilled project managers are adept at handling change requests, overseeing upgrades, and managing regular activities. This guarantees that your interactions with our platform remain efficient and aligned with your evolving needs.

**A Decade of Focused Expertise:** YouTestMe is an IT company singularly focused on refining and enhancing our software for the past 10 years. This exclusive dedication to our platform empowers us with an in-depth understanding of its intricacies, functionalities, and possibilities.

**Experienced Developers at Your Service:** Our team boasts a pool of experienced developers, always ready to address any custom development requirements you may have. Their expertise spans a wide array of technical domains, ensuring comprehensive support for your unique needs.

**Rapid Application Development and Customization:** We employ a rapid application development approach, supported by our proprietary internal tools. These tools generate a substantial portion (90%) of our codebase, expediting the development process while maintaining top-notch quality.

**Flexible and Reusable Architecture:** Our platform's architecture is strategically designed for maximum flexibility and code reusability. This architecture streamlines the custom development process, resulting in faster, reliable, and more affordable solutions tailored to your specifications.

By leveraging our dedicated account management and professional services, coupled with our decade-long experience and skilled development team, we ensure a collaborative partnership that continuously adapts to your unique requirements.

## 2.2 Custom Development and Change Requests

The needs and requirements of our clients may change over time, and we are committed to adapting to those changes. As an expert in custom development for our clients, we have the capability and flexibility to add new functions as per our client's requirements. Whenever a client requests new functionality, we provide a detailed specification with time and cost estimates, ensuring transparency and clarity throughout the process.

Our team of experts is highly skilled and experienced in developing custom solutions. We work closely with our clients to understand their needs and requirements and provide tailor-made solutions that meet their specific needs. Our commitment to providing the highest level of service and support ensures that our clients have access to the latest technology and features, making the test administration process seamless and efficient.

**Important notices about upgrades**:

1. Previous data is never lost with customization. All data is preserved and available in the updated version of the software.
2. Regular YouTestMe upgrades are delivered to both customized and non-customized versions of the software.
3. Future updates never override customized features. All customized features remain in the application.

Typical phases of our customization process are:

1. **Change request**. In this phase, the client is sending a short description of the modification they need.
2. **Analysis**: In this phase, YouTestMe clarifies the requirements with the client.
3. **Design**: In this phase, YouTestMe writes the specification with time and cost estimates for the client’s approval.
4. **Implementation**: In this phase, the feature is being developed. The client can follow the progress in the Sandbox environment which is updated regularly.
5. **User Acceptance Testing (UAT)**: In this phase, the new feature is deployed to the Sandbox environment, and instructional materials are sent to the client. The client goes confirms that the new feature is developed according to the specification.
6. **Deployment**: In this phase, the customized software is deployed to the client's environment, typically during the night hours and always on a date previously approved by the client.

### 2.2.1 Impact Analysis

YouTestMe conducts impact analysis before implementing changes, ensuring all modifications are authorized. Changes are first deployed in a Sandbox environment for client review and user acceptance testing. Deployment to production is restricted to authorized IT personnel and scheduled at pre-approved times, preserving all existing data and custom features.

## 2.3 Example of a Successful Customization

**Example of a customization project - IFSE Success Story**

IFSE Institute (IFSE) serves as the educational wing of The Investment Funds Institute of Canada (IFIC), excelling in financial services education.

With thousands of annual tests across categories, languages, and formats, IFSE required a holistic test administration solution. Challenges encompassed data migration, multilingual support, and seamless test delivery. This complexity demanded solutions for managing extensive test items and diverse tests, streamlining historical data migration, enabling online tests with proctoring options, implementing a secure test delivery platform, offering bilingual interfaces for test-takers, and automating test generation and reporting.

YouTestMe emerged as the chosen partner, offering distinctive features and services. Through Agile development, YouTestMe swiftly ensured seamless testing through advanced automated and live proctoring, minimizing cheating risks and ensuring valid results. YouTestMe developed multilingual capabilities ensuring inclusivity, enabling users to interact in their preferred language for both interface and test content.

During onboarding, a smooth staff transition was ensured. This encompassed tailored system adjustments, training material organization, and integration with the learning management system.

## 2.4 AGILE Methodology

**Case Study: Agile Implementation for Lufthansa Aviation**

**Overview:**
Our experience in Agile methodology is exemplified through a recent collaboration with Lufthansa Aviation. The project encompassed custom development on the YouTestMe platform to establish an advanced training and knowledge examination solution tailored to their specific needs. The engagement showcased our proficiency in Agile practices, effectively addressing intricate requirements and delivering a highly specialized solution.

**Agile Approach:**

- **Project Initiation and Scoping:**
    - A comprehensive understanding of Lufthansa Aviation's unique requirements was established through collaborative workshops and detailed discussions.
    - User stories were meticulously crafted to capture distinct needs, including the creation of new question types, sophisticated question pool organization, complex test generation rules, and LMS integration through LTI.
- **Sprint Planning:**

    - User stories were prioritized based on their strategic importance and alignment with Lufthansa's objectives.
    - Iterative development cycles (sprints) were established, each focused on delivering specific functionalities.
- **Iterative Development:**
    - The creation of new question types commenced with an iterative approach, allowing the gradual refinement of each type based on Lufthansa's evolving specifications.
    - The organization of questions within question pools was developed incrementally, ensuring that the structure seamlessly accommodated their intricate training modules.
- **Continuous Feedback:**
    - Regular demos were conducted to showcase the evolving solution, providing Lufthansa with a tangible understanding of the product's development and functionality.
    - Continuous feedback from Lufthansa stakeholders guided our team's adjustments, enhancing alignment with their evolving requirements.
- **Integration and Complex Rule Mechanism:**
    - A mechanism for complex rules in generating tests was systematically developed in iterative stages. This involved considering Lufthansa's specific test generation criteria and configuring the platform accordingly.
    - Integration with Lufthansa's Learning Management System (LMS) through LTI was pursued iteratively, ensuring seamless connectivity and interoperability.

**Key Achievements:**

- **Customization**: Agile practices facilitated the tailored development of new question types, intricate question pool organization, and the complex test generation mechanism, precisely meeting Lufthansa's unique training needs.
- **Adaptability**: Agile's iterative approach allowed us to respond dynamically to Lufthansa's evolving requirements, resulting in a solution that was fully aligned with their expectations.
- **Collaboration**: Regular feedback loops and demos fostered a collaborative partnership, ensuring constant alignment with Lufthansa's vision.

**Conclusion:**

Our collaboration with Lufthansa Aviation exemplifies our expertise in Agile methodology. Through iterative development, continuous feedback, and a commitment to addressing complex requirements, we successfully delivered a customized training and knowledge examination solution. This case study underscores our ability to leverage Agile practices to navigate intricate project requirements, ensuring the seamless integration of advanced functionalities tailored to specific industry needs.

## 2.5 Upgrade Process for New Releases

**Client-Controlled Upgrade Process**

Each client has full control over when to transition to a new release of YouTestMe. The process is designed to ensure minimal disruption while allowing clients to test new features and improvements at their own pace.

**Notification and Testing**

1. The YouTestMe account manager notifies the client when a new release is available and provides details on its benefits.
2. The client is offered the opportunity to test the new release on a User Acceptance Testing (UAT) instance before deciding on the upgrade.
3. The client can test the new release at their own pace and determine the best time for the transition.

**Upgrade Scheduling**

1. Once the client approves the upgrade, the YouTestMe account manager coordinates the upgrade process.
2. The upgrade is scheduled within the maintenance window defined for the client to minimize any impact on operations.
3. The transition is managed efficiently to ensure system stability and security.

This structured approach ensures that clients can transition to new releases with confidence while maintaining control over their testing and upgrade timelines.

# 3 Workspaces

In this chapter, we delve into the target audience for Workspaces and elucidate how this multi-tenant infrastructure operates seamlessly to meet their unique needs and requirements.

Workspaces cater to a diverse spectrum of organizations seeking efficient test and training management solutions. The primary beneficiaries include:

- Enterprises: Large corporations with multiple departments requiring tailored tests and training materials.
- Governments: Government agencies that necessitate secure, organized testing environments.
- Test Sponsors: Organizations or individuals responsible for creating and managing tests.
- Large Institutions: Academic institutions, research centers, or any sizable entities engaged in educational and evaluative activities.

At its core, Workspaces is a multi-tenant infrastructure designed to facilitate collaborative testing and training across various teams or organizations within a single platform. It ensures privacy and data security while fostering global accessibility and resource sharing.

Each team or organization is allocated a designated workspace where they have the autonomy to create, customize, and manage their tests and training materials. These workspaces operate in isolation, preserving data confidentiality and control.

Workspaces offers an array of branding and customization options to cater to the unique identity and preferences of each workspace. This feature allows organizations to tailor their Workspaces environment to align with their branding, visual identity, and overall aesthetic preferences.

Workspaces support a hierarchical structure, enabling higher-level managers or administrators to oversee and administer the workspaces of their subordinates or other collaborating teams. This feature offers a clear view of team activities and facilitates alignment with organizational goals.

Managing user roles is pivotal in ensuring the efficiency and organization of Workspaces. It distinguishes between global and local roles, each conferring specific permissions and capabilities to users. This hierarchical role-based system enhances productivity by enabling users to focus on their designated responsibilities.

Typical user roles are:

- **Super Admin**: The highest authority in the system, with full permissions to manage all aspects.
- **Workspace Admin**: Responsible for user management, training courses, tests, and data within their designated workspace.
- **Global Instructor**: Oversees tests across the entire system.
- **Workspace Instructor**: Manages tests within their assigned workspace.
- **Specific Test Manager**: Appointed by instructors to oversee specific tests.
- **Candidate**: Engages in training courses and tests within their allocated workspace.

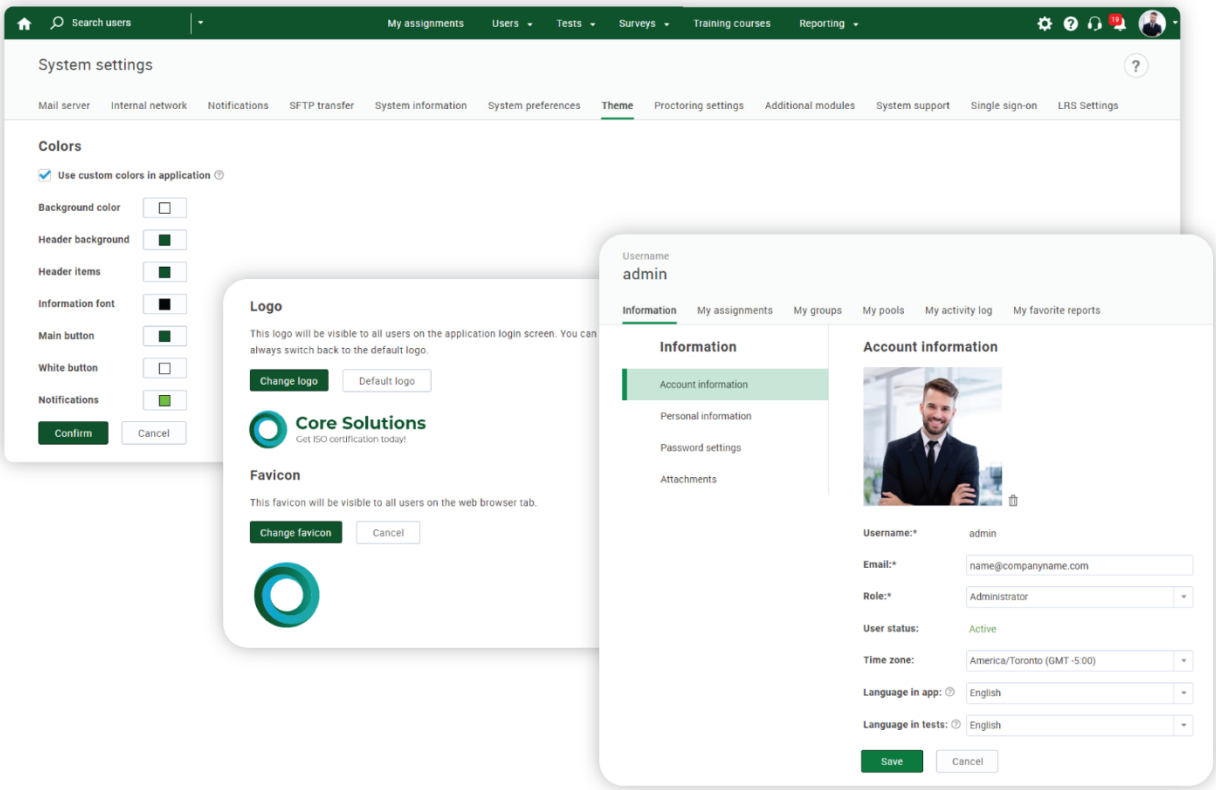
This structured role hierarchy ensures a streamlined, organized, and efficient Workspaces environment tailored to the needs of diverse organizations and teams.

# 4 White-Labeling

In this section, we will explore the comprehensive customization and configuration capabilities provided by YouTestMe to tailor the application to your organization's specific needs. These features include:

1. Theme customization
2. Logo and favicon management
3. Login page personalization
4. Notification customization
5. Mail server configuration

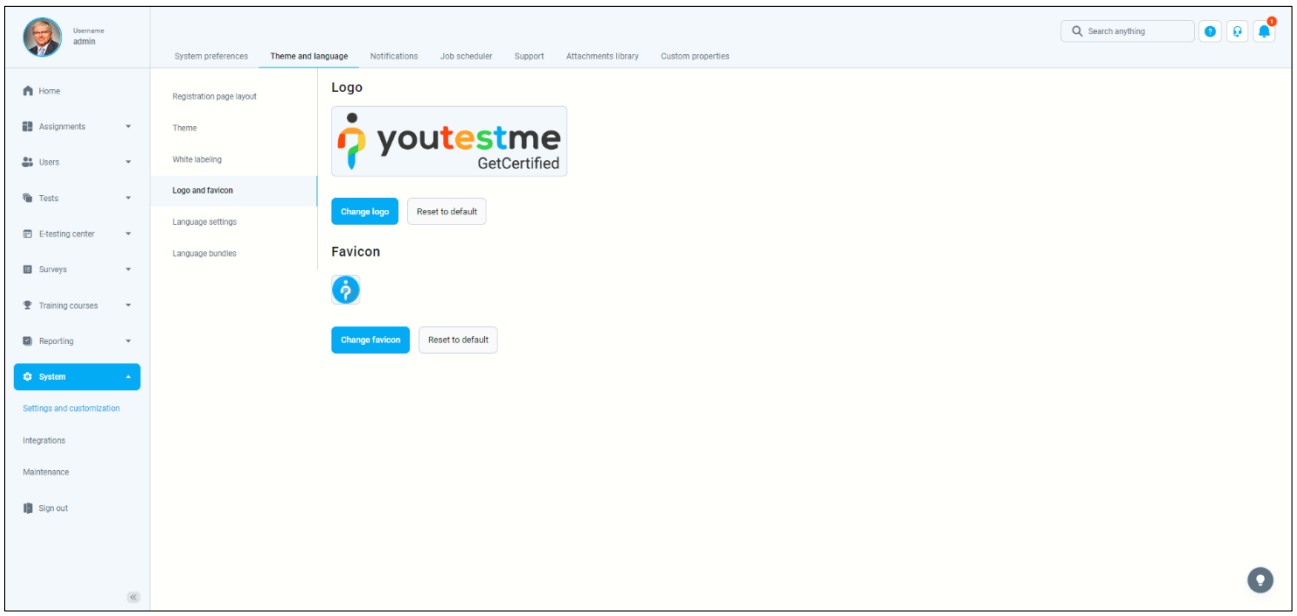
By leveraging these powerful customization and configuration features, YouTestMe empowers organizations to create a highly tailored and efficient learning and assessment environment that meets their unique requirements and reflects their brand identity.




## 4.1 Theme Customization

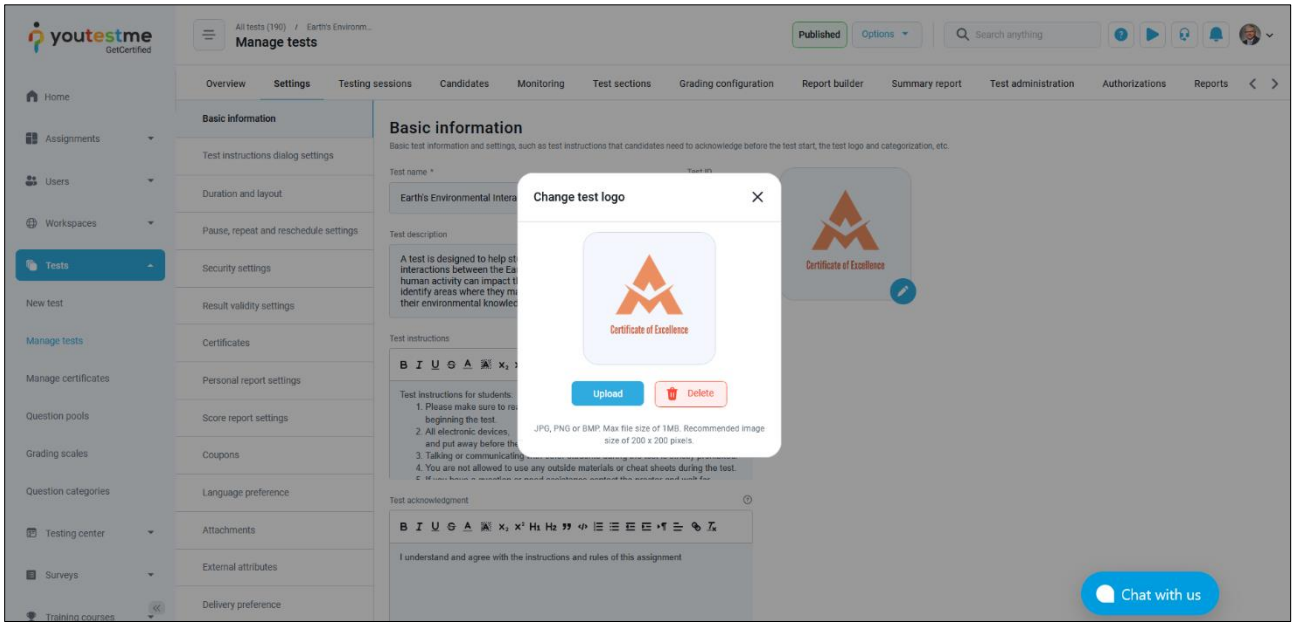
YouTestMe offers extensive theme customization options, allowing you to harmonize the application's visual appearance with your brand identity. This includes:

- **Changing Theme Colors**: Customize the color scheme of the application's interface to reflect your brand's identity and preferences.
- **Logo and Favicon**: Easily replace the default logo with your organization's logo and set a custom favicon for a consistent brand representation.
- **Login Page Personalization**: Add personalized instructions to the login page to guide users effectively.



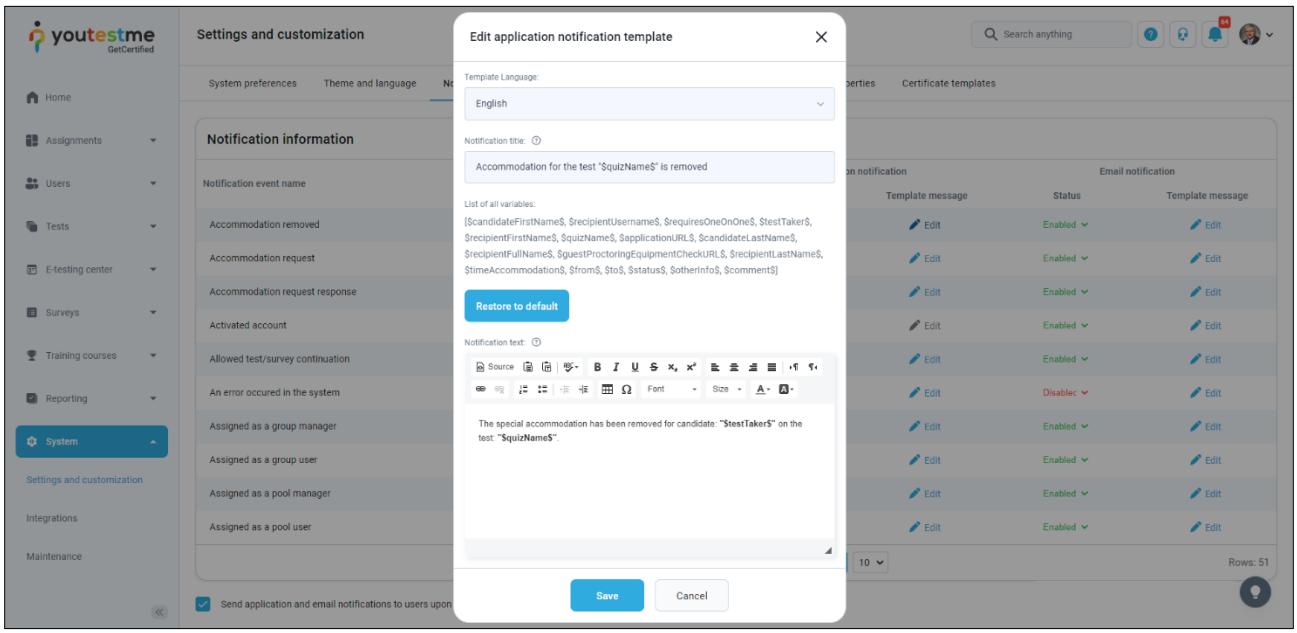

## 4.2 Test Logo Customization

For a more granular branding approach, YouTestMe allows you to set a specific logo for each test you create. This feature enables you to customize the visual identity of each test while maintaining a cohesive brand presence.




## 4.3 Customizing In-App and Email Notifications

YouTestMe allows you to customize in-app and email notifications, ensuring that communication with users aligns with your organization's tone and style. This includes modifying notification titles and text.



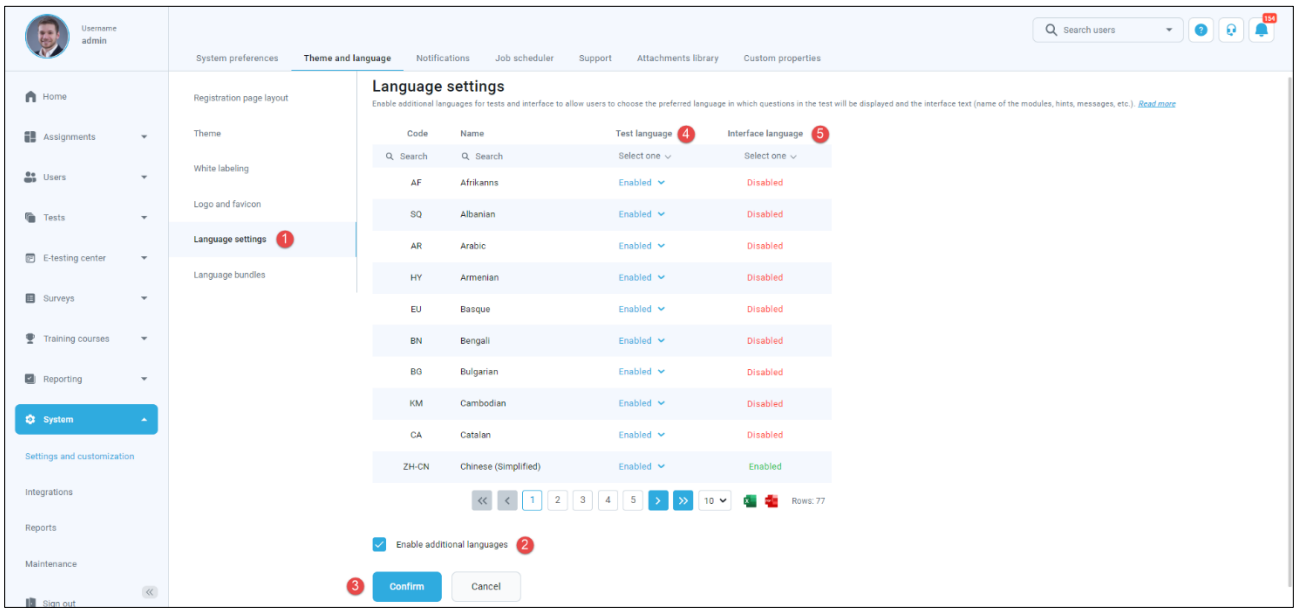

## 4.4 Mail Server Configuration

Configure the mail server settings within YouTestMe to enable the application to send notifications to administrators and users via email. This is essential for timely communication and updates.

## 4.5 Language Settings and Bundles (Multi-Language Support)

YouTestMe offers language customization options, allowing users to adapt the application's interface text to their specific needs. This includes changing labels, creating hints, and modifying notification content.

Customize language bundles based on key-value pairs, ensuring the application's text aligns with your desired language and terminology.




# 5 Email Notifications

YouTestMe features a robust automated email notification module that systematically sends email notifications to users for key system events.

This module ensures real-time communication and event-driven updates, enhancing user engagement and facilitating efficient information flow within the educational and assessment environment.

Below, you can see the list of most frequently triggered email notifications:

### 5.1.1 Test Notifications

- **Test published**: This notification is triggered when an instructor publishes a test, making it visible to candidates. Users assigned to the testing session receive an email and in-app notification containing the test details.
- **Product purchased**: This notification is triggered when a product payment is made through the e-commerce module. Users, such as candidates, receive this notification upon product purchase.
- **Allowed test continuation**: This notification is triggered when a user is allowed to continue a test they had previously left unfinished. The user receives an email and in-app notification after the manager allows continuation.
- **Test results**: This notification is triggered when a test is completed, and a manager previews the test results report. Users receive an email and in-app notification notifying them of the availability of the results.
- **Unresolved test report**: This notification is triggered when a test report remains unresolved by the manager. Candidates receive an email and in-app notification indicating the report's status.
- **Test results on the manager's approval**: This notification is triggered when a manager approves the test results. Users receive an email and in-app notification informing them of the availability of the test results for viewing.

- **Test suspended**: This notification is triggered when a test is suspended by the test manager. Users assigned to an active test session receive an email and in-app notification indicating the test suspension.

### 5.1.2 Users Notifications

- **New user profile created**: This notification is triggered when an administrator creates a new user profile. The newly created user receives an email with their profile credentials.
- **New registration request**: This notification is triggered when a user submits a registration request. The user receives a notification containing the submitted registration request information.
- **Registration request approved**: This notification is triggered when the system administrator approves a registration request. The user receives an email confirming the approval and granting access to the system.
- **Registration request declined**: This notification is triggered when the system administrator declines a registration request. The user receives an email notifying them of the request's rejection.
- **User's status changed**: This notification is triggered when a user's status is changed to Suspended, Locked, Deactivated, or Deleted. The user receives an email notification about the status change.
- **When the user's status is changed to active**: This notification is triggered when a user's status is changed back to Active. The user receives an email notification indicating the account reactivation.
- **Profile information updated**: This notification is triggered when a user updates their profile information. The user receives an email and in-app notification confirming the profile change.
- **Password changed**: This notification is triggered when a user changes their password. The user receives an email notification with the new password and an in-app notification confirming the password change.

### 5.1.3 User Groups Notifications

- **Assigned as a group user**: This notification is triggered when a user is assigned to a specific user group. The user receives an email and application notification containing the group name.
- **User removed from a group**: This notification is triggered when a group manager removes a user from a group. The removed user receives an email and in-app notification indicating the loss of access to the group and its subgroups.

### 5.1.4 Question Pools Notifications

- **Assigned as a pool manager**: This notification is triggered when a user is assigned as a pool manager. The user receives an email and application notification specifying the pool they now manage.
- **Assigned as a pool user**: This notification is triggered when a user is assigned as a pool user. The user receives an email and application notification indicating their membership in a specific pool.
- **User removed from a pool**: This notification is triggered when a pool manager removes a user from a pool. The removed user receives an email and in-app notification stating the loss of access to the pool.

### 5.1.5 Training Courses Notifications

- **Assigned as a training course manager**: This notification is triggered when a user is assigned as a manager of a training course. The user receives an email and application notification specifying the training course they manage.

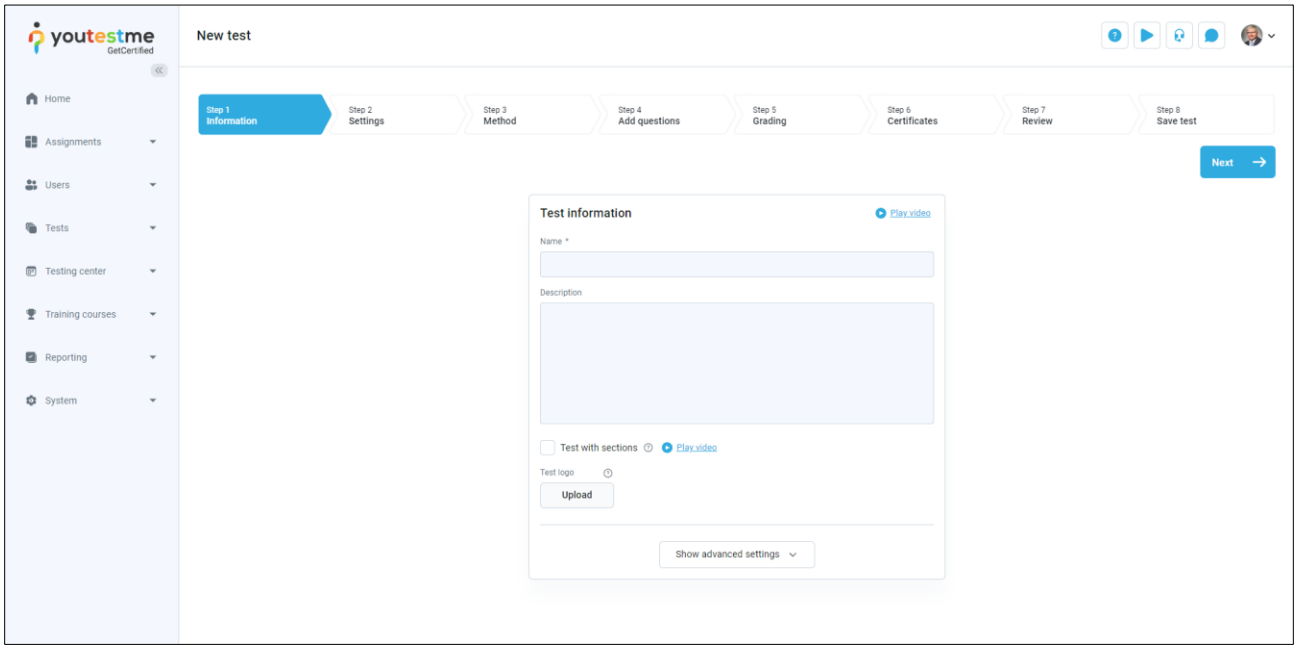
- **Assigned as a training course user**: This notification is triggered when a user is assigned as a training course user. The user receives an email and application notification with details about the training course.

# 6 User Interface and User Experience (UI/UX) Design

YouTestMe is designed with both candidates and administrative staff in mind, offering a seamless and intuitive user experience. We focus on simplicity and efficiency, ensuring that users can navigate the platform with ease.

**Key Features:**

1. **Simplified Navigation with Step-by-Step Guidance:**
   YouTestMe provides clear, step-by-step processes that guide users through tasks, ensuring they are always directed to the next logical step. This intuitive design helps users complete tasks quickly, without confusion or unnecessary clicks.




2. **Minimal Clicks, Maximum Efficiency:**
   YouTestMe is built to allow users to perform essential tasks with just a few intuitive clicks. Starting an exam, reviewing results, or managing proctoring sessions can all be accomplished with minimal effort.

3. **Clear and Understandable Terminology:**
   All instructions and features in YouTestMe are presented in plain, easily understandable English,

eliminating the need for technical expertise. Users can confidently navigate the platform without ambiguity or confusion.

4. **Adherence to Clean Design Standards:**
   YouTestMe adheres to clean design principles, ensuring that each screen displays no more and no less than what is necessary for the task at hand. This uncluttered approach enhances focus and usability, allowing users to engage with the platform without distractions.

5. **Responsive Design for Flexibility:**
   The interface of YouTestMe is fully responsive, ensuring smooth functionality across various devices and screen sizes. Whether accessed on a desktop, tablet, or smartphone, the user experience remains consistent and seamless.

6. **Contextual Assistance:**
   To further support users, YouTestMe provides integrated help features and tooltips that offer guidance during more complex tasks. These assistive features maintain the flow of the user experience while ensuring clarity when needed.

By focusing on step-by-step navigation, clear terminology, and a clean, functional design, YouTestMe ensures that both candidates and administrative staff can efficiently use the platform without unnecessary complexity.

# 7 Multilingual Interface and Tests

YouTestMe offers extensive multilingual support for both the application interface and tests, ensuring accessibility for candidates and instructors from diverse linguistic backgrounds. This functionality enhances the user experience, reduces barriers for non-native speakers, and supports global organizations in delivering seamless, multilingual assessments.

## 7.1 Benefits of Multilingual Functionality

1. **Enhanced Candidate Experience**: The ability to switch between languages allows candidates to take tests in their preferred language, ensuring clarity and reducing the chances of misunderstandings. This is particularly valuable for organizations with international candidates, as tests can be conducted in multiple languages without the need to create separate assessments for each language group.

2. **Customization for Global Reach**: YouTestMe supports over 100 languages, making it an ideal solution for multinational organizations, government agencies, and educational institutions. Languages supported include, but are not limited to:

   - English

- Mandarin Chinese
- Japanese
- German
- French
- Spanish
- Hindi
- Arabic
- Portuguese
- Korean
- Russian
- Italian
- Turkish
- Dutch
- Swedish
- Thai
- Vietnamese
- Filipino (Tagalog)
- Ukrainian
- Malay

This comprehensive range of language options enables YouTestMe to adapt to diverse geographical and cultural needs, facilitating smooth test administration across different regions.

3. **Flexible Language Selection for Candidates**: Candidates can choose their preferred language from the login page or via their profile settings. This flexibility ensures they can interact with the platform in their chosen language right from the start. During a test, if a translation is available, candidates can seamlessly switch between languages for individual questions, allowing them to understand the material in their most comfortable language without the need for a separate test.

4. **Automated Translation via Google API**: In addition to manual translation, YouTestMe integrates with Google Translate via the Google API to automatically translate test questions into over 100 supported languages. This feature simplifies the translation process for instructors and ensures candidates can take tests in their preferred language with ease, enhancing the overall accessibility of the platform.

5. **Improved Accessibility**: By offering multilingual support and automatic translation, YouTestMe promotes inclusivity, allowing organizations to support candidates with varying language needs. This increases the accessibility of the testing platform and improves the overall experience for a diverse range of users.

## 7.2 How Multilingual Functionality Works

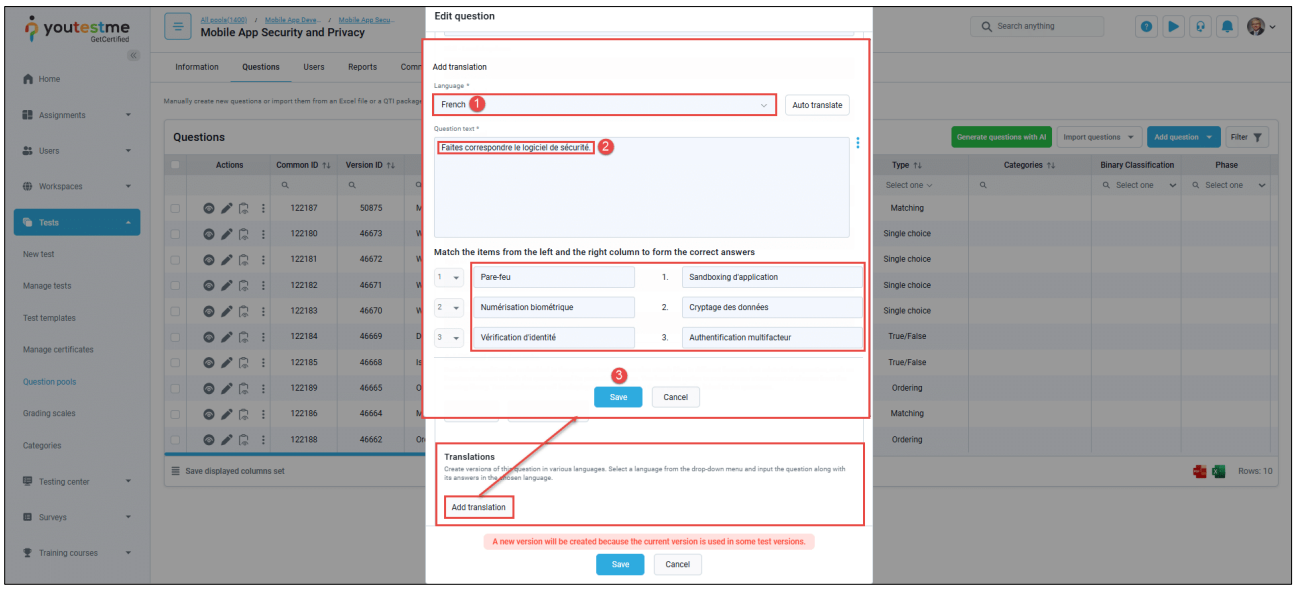
1. **Setting the Language for the Test**: To enable multiple languages, administrators must first configure the system settings. This involves navigating to the "System and Customization" section, selecting "Theme and Language," and then enabling additional languages under "Language Settings." Once a language is activated, it becomes available across the platform, allowing candidates to select their preferred language for both the interface and test content.

2. **Creating Multilingual Questions**: Instructors can manually translate each question or use the integrated Google API to automatically translate questions during test creation. This can be done using the test wizard, where multiple translations can be added to a single question. The language displayed to candidates will depend on their profile settings or the default language set for that specific question. This flexible approach allows a single test to cater to multiple language preferences, minimizing the need for duplicate test creation.

3. **Candidate's Perspective**: From the candidate's point of view, the login page presents language options for easy selection. Once logged in, candidates can adjust their language preferences through their profile settings. If a test includes multilingual questions, candidates will automatically see the question in their preferred language (if available). Otherwise, they can use the system's language selection feature to change the language on a per-question basis, ensuring a seamless and personalized test-taking experience.

## 7.3 Multilingual Questions

YouTestMe supports multilingual questions, allowing instructors to create and manage tests accessible to candidates in multiple languages. This functionality ensures inclusivity and a seamless testing experience for diverse candidate groups, improving accessibility and user satisfaction.



**Benefits**

1. **Inclusive Testing Environment**: Multilingual questions enable candidates to take tests in their preferred language, ensuring clarity and understanding.
2. **Streamlined Management**: Instructors can efficiently manage translations within the platform, minimizing the need for external tools or additional workflows.
3. **Enhanced Candidate Experience**: Questions are displayed based on the candidate's selected profile language, creating a personalized experience.
4. **Comprehensive Reporting**: Personal reports reflect the language in which candidates submit their answers, providing clarity and consistency.

**How It Works**

1. **Adding Translations**:
   - Access the desired question pool under the Tests/Question Pools tab.
   - Select an existing question to edit or create a new question.
   - Use the "Add Translation" feature to manually input translations or enable auto-translation through API integration.
2. **Translation Options**:
   - **Manual Translation**: Add translations for each required language and save changes.
   - **Auto-Translation**: Configure translation settings and automatically translate content.
3. **Candidate Display**:
   - Questions appear in the candidate's profile-selected language. If unavailable, the default language is displayed.

### 7.3.1 Reminder for Translations (Roadmap Feature)

YouTestMe ensures that translations remain accurate and up-to-date by providing a built-in reminder feature for multilingual questions. This functionality enhances the consistency and quality of tests, ensuring a seamless experience for candidates across different languages.

**Benefits**

1. **Improved Translation Accuracy**: The reminder highlights changes in the primary language, prompting instructors to review translations for consistency.
2. **Streamlined Management**: Instructors can efficiently maintain translations without overlooking updates, saving time and effort.

**How It Works**

1. **Attention Marker**:
   - When a question is edited in one language, YouTestMe automatically flags its translations with an attention marker.

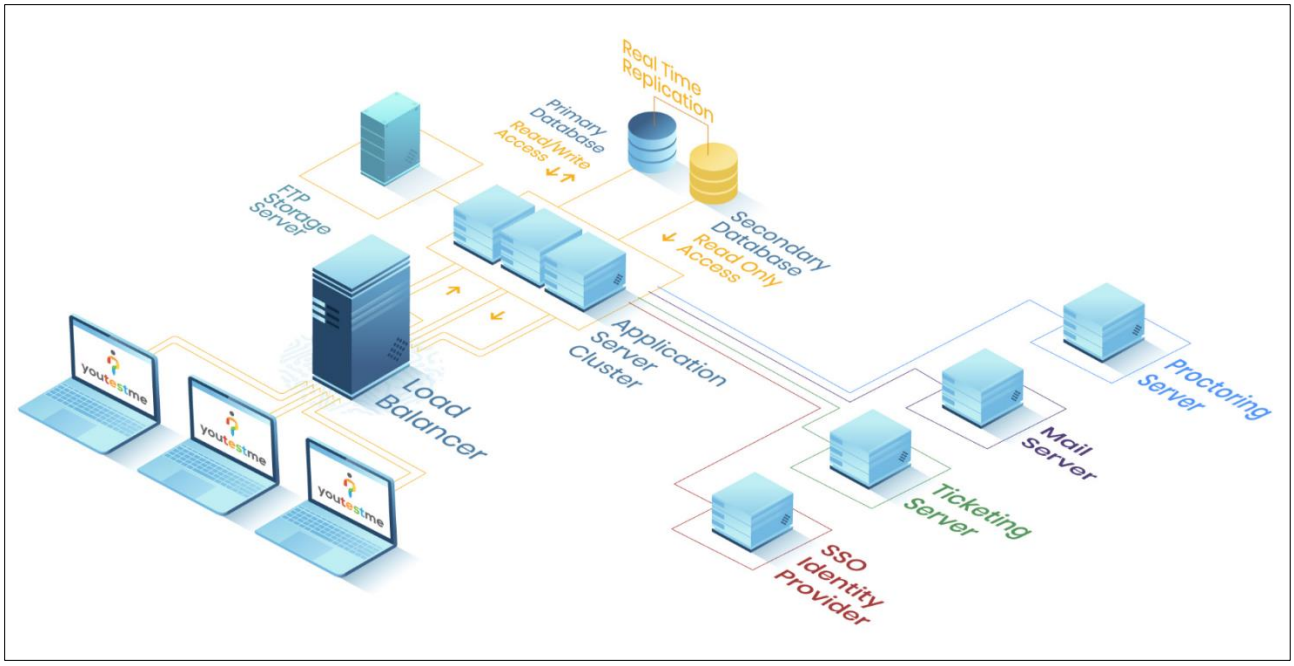
2. **Review and Update**:
    - Instructors are prompted to review and update translations to align with the latest edits, ensuring coherence across all languages.

# 8 Architecture

## 8.1 Physical Architecture

The YouTestMe platform is a web-based application distributed as a virtual appliance, offering a deployment structure that enhances reliability and performance. The Enterprise edition comprises six core servers:

1. **Application Servers (3) and Load Balancer (1):** Ensure high availability and load distribution.
2. **Database Servers (2):** Provide data redundancy and fast access.




Optional servers for extended functionality include:

- **Proctoring Server:** Facilitates remote monitoring and exam integrity.
- **Mail Server:** Supports automated notifications and communication.
- **Ticketing Server:** Manages user support and issue tracking.
- **SSO Identity Provider:** Enables secure single sign-on integration.

This architecture allows each virtual machine to be hosted on separate physical servers, including geographically distributed locations, ensuring maximum security, availability, and disaster recovery.

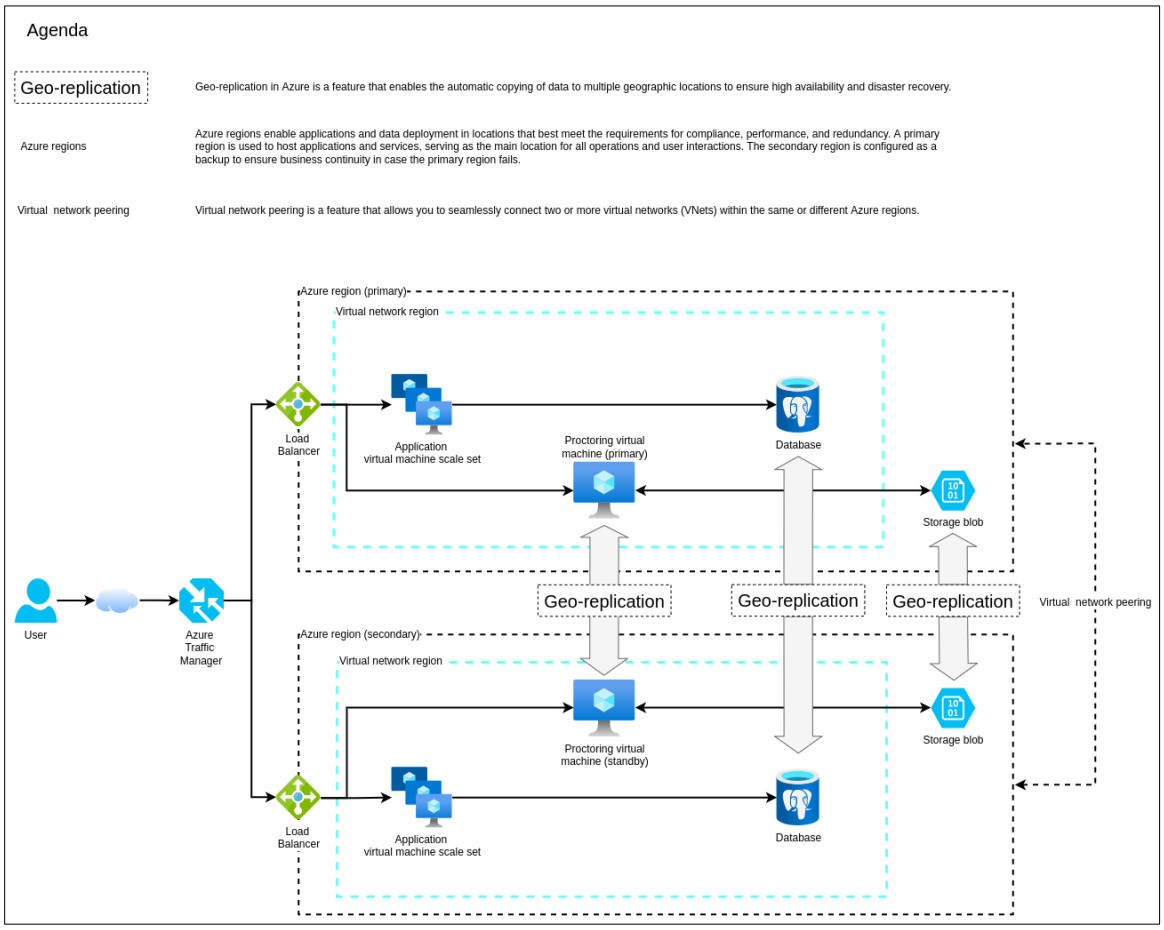
## 8.2 System Architecture

YouTestMe is a scalable, secure, and expandable platform designed to meet diverse testing and training needs. It is delivered as a pre-configured virtual appliance, ensuring quick deployment and seamless integration into existing IT environments. The core components include:

1. **Operating System:** Oracle Unbreakable Linux OS ensures stability, security, and long-term support.
2. **Database:** Postgres Relational Database provides robust data management and high-performance querying.
3. **Application Server:** Manages business logic and user interactions with optimized performance.
4. **YouTestMe Application:** A comprehensive suite of tools for test management, user administration, and reporting.
5. **Self-Maintenance Utilities:** Automated libraries and tools for efficient system monitoring and maintenance.

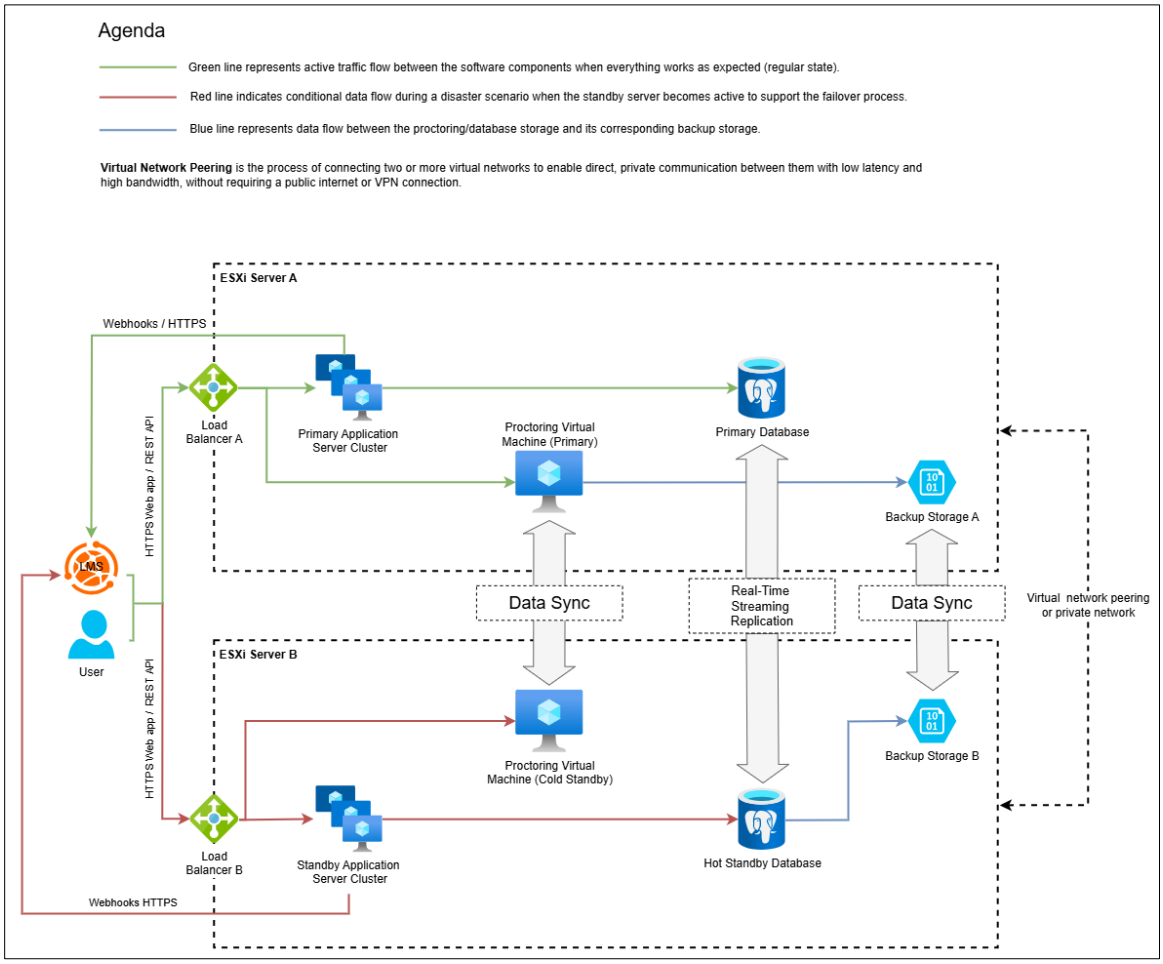
YouTestMe can be hosted either in the cloud, leveraging platforms such as Azure, or within the client's data center (on-premise), offering deployment flexibility based on organizational preferences.

### 8.2.1 Cloud Deployment: System Architecture




*YouTestMe System Architecture on Azure with Proctoring and Failover Mechanism*

### 8.2.2 On-Premise Deployment: System Architecture

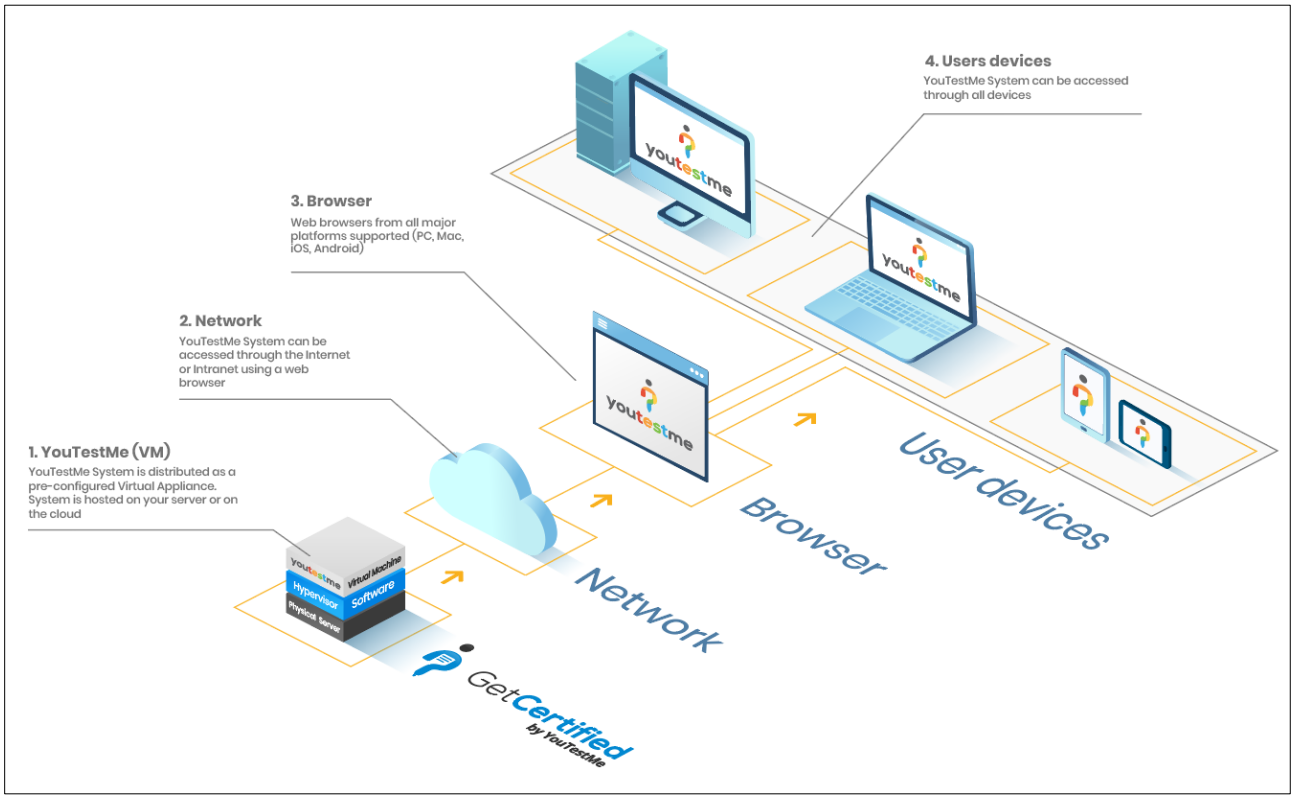



*YouTestMe On-Premise System Architecture with Proctoring and Failover Mechanism*

## 8.3 End-to-End Communication Flow

The YouTestMe platform ensures secure, seamless, and reliable communication between the system and end-users. The communication flow follows a structured path:

1. **YouTestMe Virtual Machine (YTM VM):** The platform operates as a pre-configured virtual appliance, hosting all core system components and services.
2. **Network Layer:** Secure data transmission occurs through encrypted network channels, ensuring confidentiality and integrity.
3. **Browser Access:** Candidates, instructors, proctors, and administrators interact with the system through a web-based interface, requiring only an internet connection and a compatible browser.
4. **User Devices:** The system is optimized for access from desktops, laptops, tablets, and mobile devices, providing a consistent user experience across platforms.



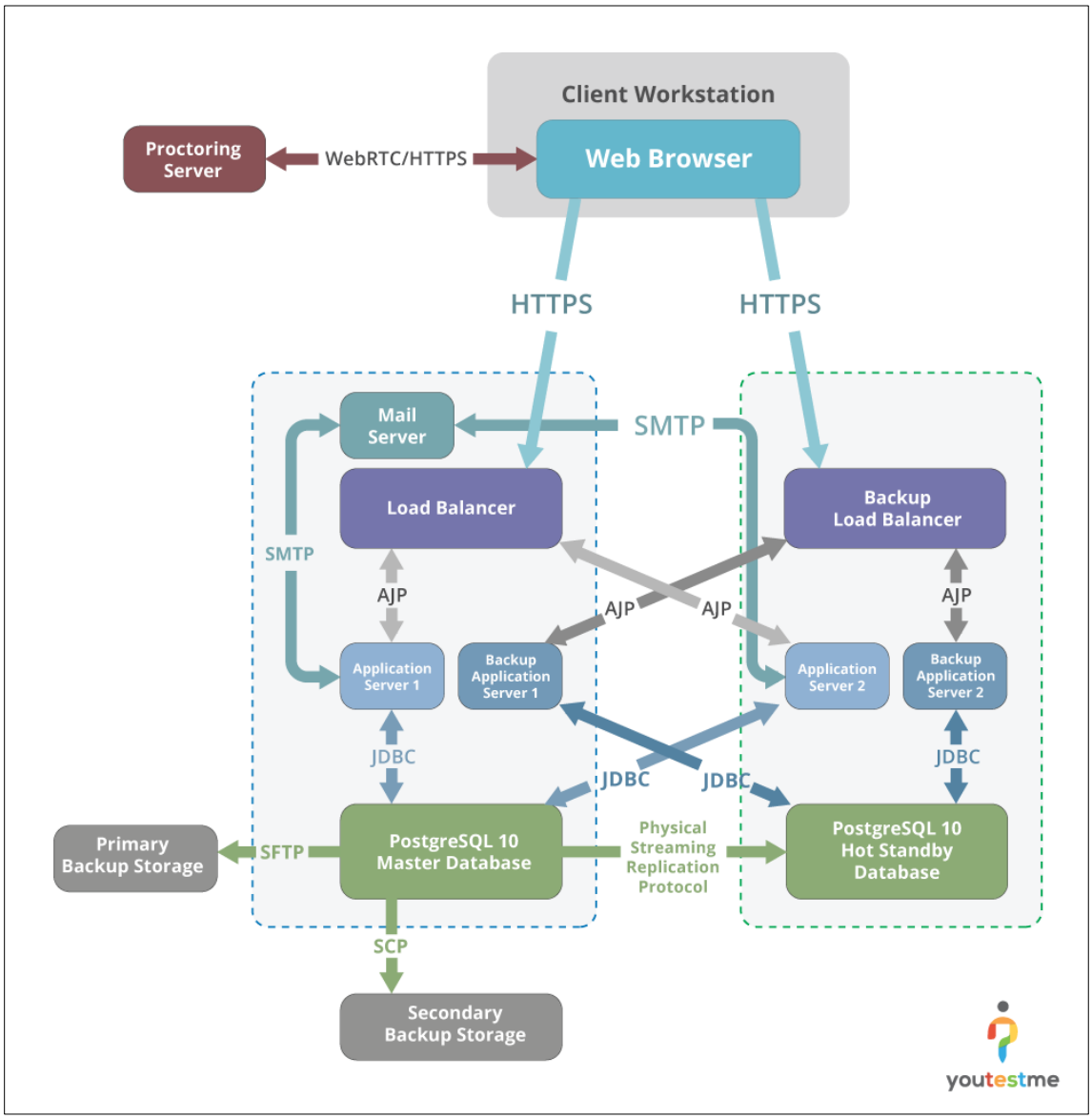

*YouTestMe End-to-End Communication Flow - From Virtual Machine to User Devices*

This architecture allows users to access YouTestMe from anywhere while maintaining high security, system performance, and user convenience.

## 8.4 Logical Architecture

The logical architecture of YouTestMe follows a modular design, ensuring flexibility, scalability, and security. The platform is structured into independent yet interconnected modules, enabling seamless management of users, tests, results, and reports. Key benefits include:

1. **Data Integrity:** All user data, test results, and configurations are securely stored within the relational database.
2. **Modular Approach:** Each module operates independently while communicating through secure APIs, ensuring system stability and efficient resource utilization.
3. **Flexible Hosting:** The system supports both single-server deployments and complex multi-server architectures for large-scale operations.




*YouTestMe Data Flow Diagram Showing Communication Between Primary and Standby Servers*

# 9 Technology Stack

YouTestMe is built on industry-leading technologies to ensure reliability, performance, and long-term support:

1. **Operating System:** CentOS 7
2. **Database:** Postgres 14
3. **Programming Language:** Adoptium Java 11 LTS

This architecture ensures that YouTestMe can efficiently support complex testing environments while maintaining high security, system resilience, and optimal performance.

# 10 Scalability and High Availability

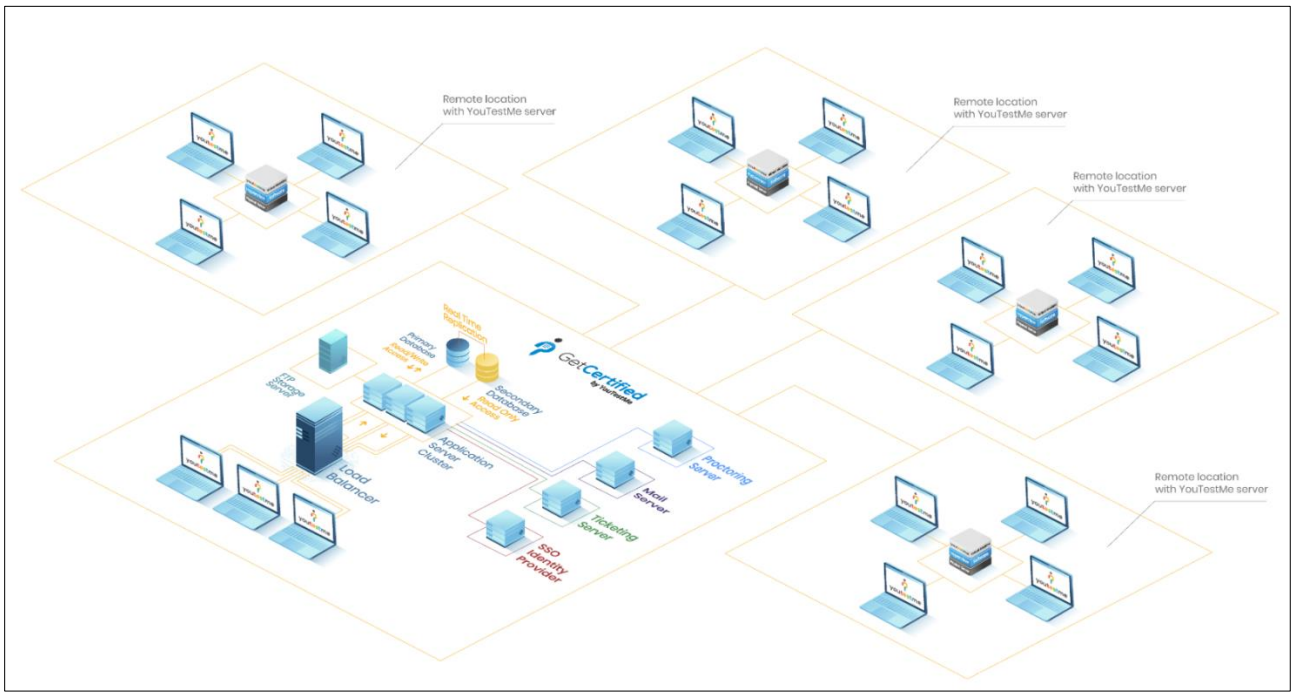
The YouTestMe platform is fully scalable and can efficiently serve organizations with a large number of users located on different sites such as:

- Municipalities, cities, provinces, countries
- Worldwide corporate and government locations

### 10.1.1 Distributed System

A distributed YouTestMe system makes it possible to:

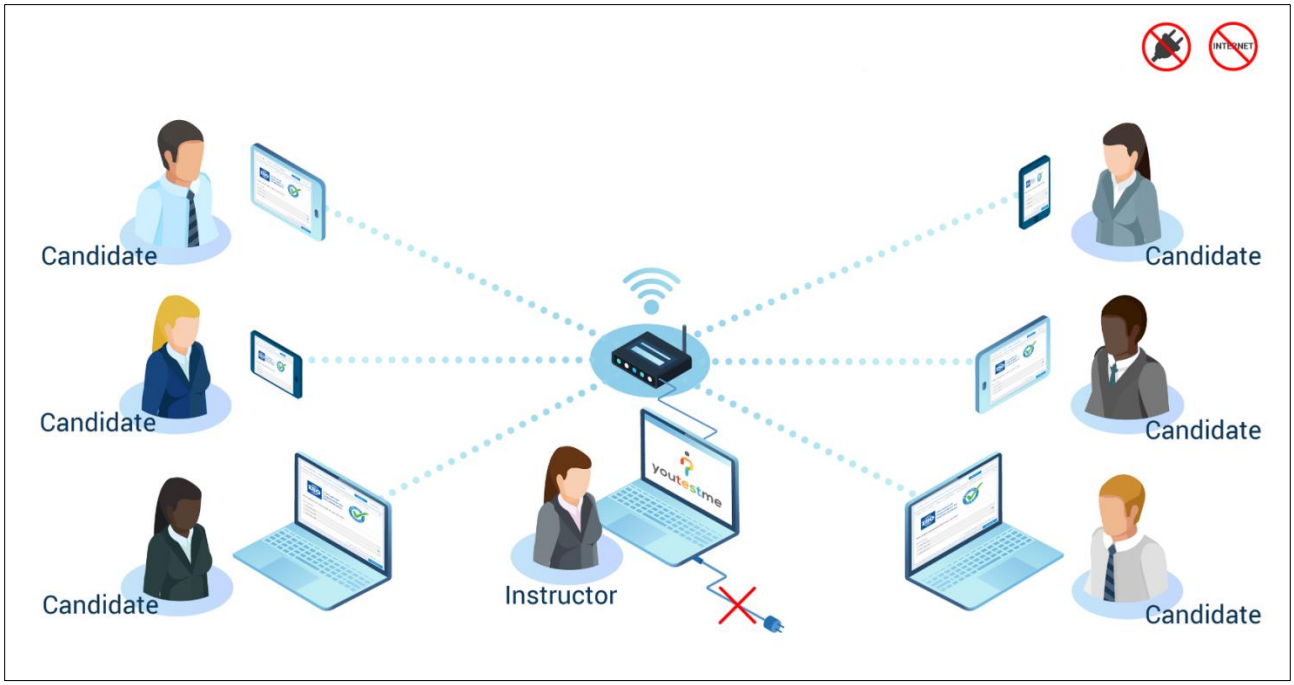
- Have test centers at locations where an Internet connection is scarce or does not exist.
- Handle a very large load on the system by distributing a load on various servers.
- Make the system very reliable since servers on various locations can take over from other servers in disaster scenarios.




Data from the various location can be synchronized with the main server using a network connection (when available) or with the file exchange.

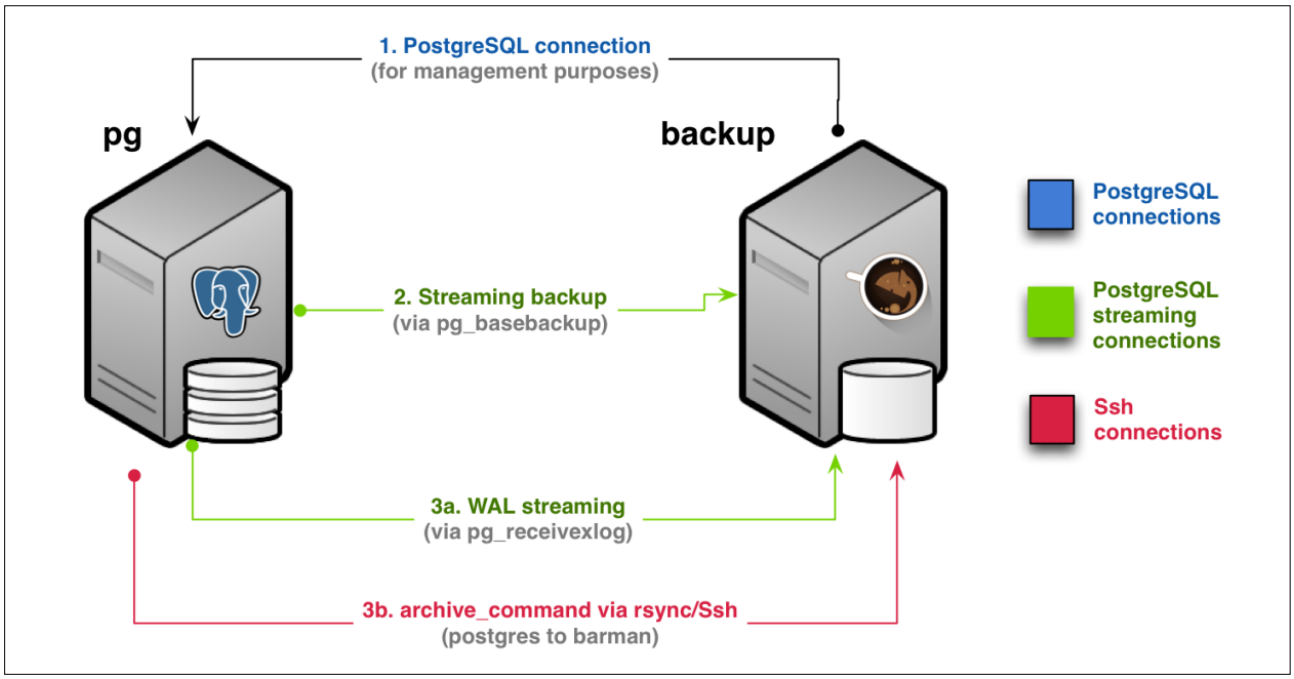
### 10.1.2 Off-the-grid Testing

The YouTestMe platform supports organizing off-the-grid test centers that may run without the internet and even without power connection (the entire system may be battery operated using laptops and tablets).



### 10.1.3 Database High Availability and Redundancy

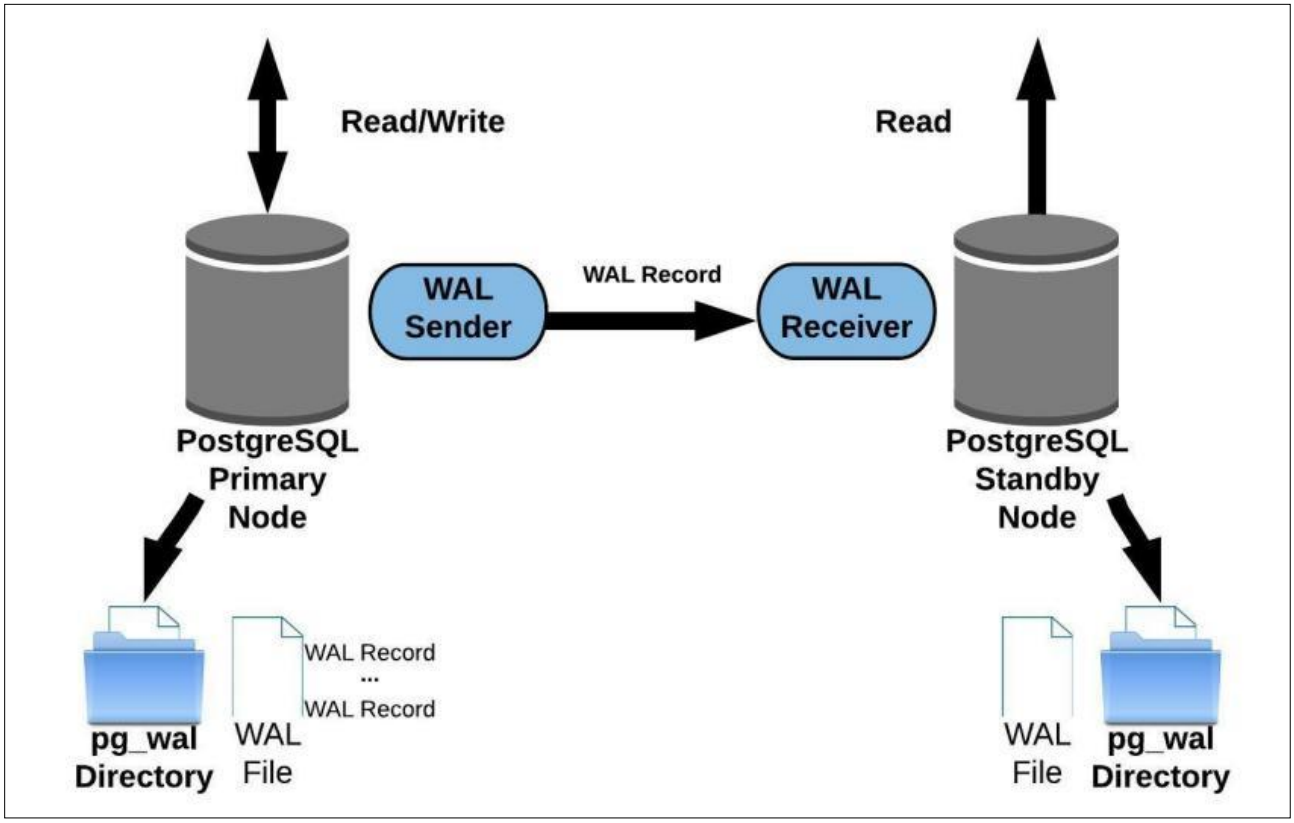
High availability with Postgres database is implemented using a hot standby server, as shown in the picture below. In addition to providing high availability and redundancy, the standby server is always online and available for read-only access. It can be used for querying the database and reporting so the load on the primary database can be relieved.



### 10.1.4 Direct Access to the Database

With Postgres database cluster, you can accomplish several things:

- Seamlessly integrate other systems with The YouTestMe platform. For example, you could have a separate reporting system connecting directly to the standby (read-only) database and run complex online reports without affecting the security or performance of YouTestMe.
- Have reporting module form The YouTestMe platform use a standby database instead of a primary database and hence preserve processing cycles in a primary database only for mission-critical tasks (i.e., taking tests)
- Provide secure, direct access to the read-only standby database to your personnel for data analysis and system support




# 11 Installation and maintenance

The YouTestMe platform is distributed as a Virtual Appliance with the following characteristics:

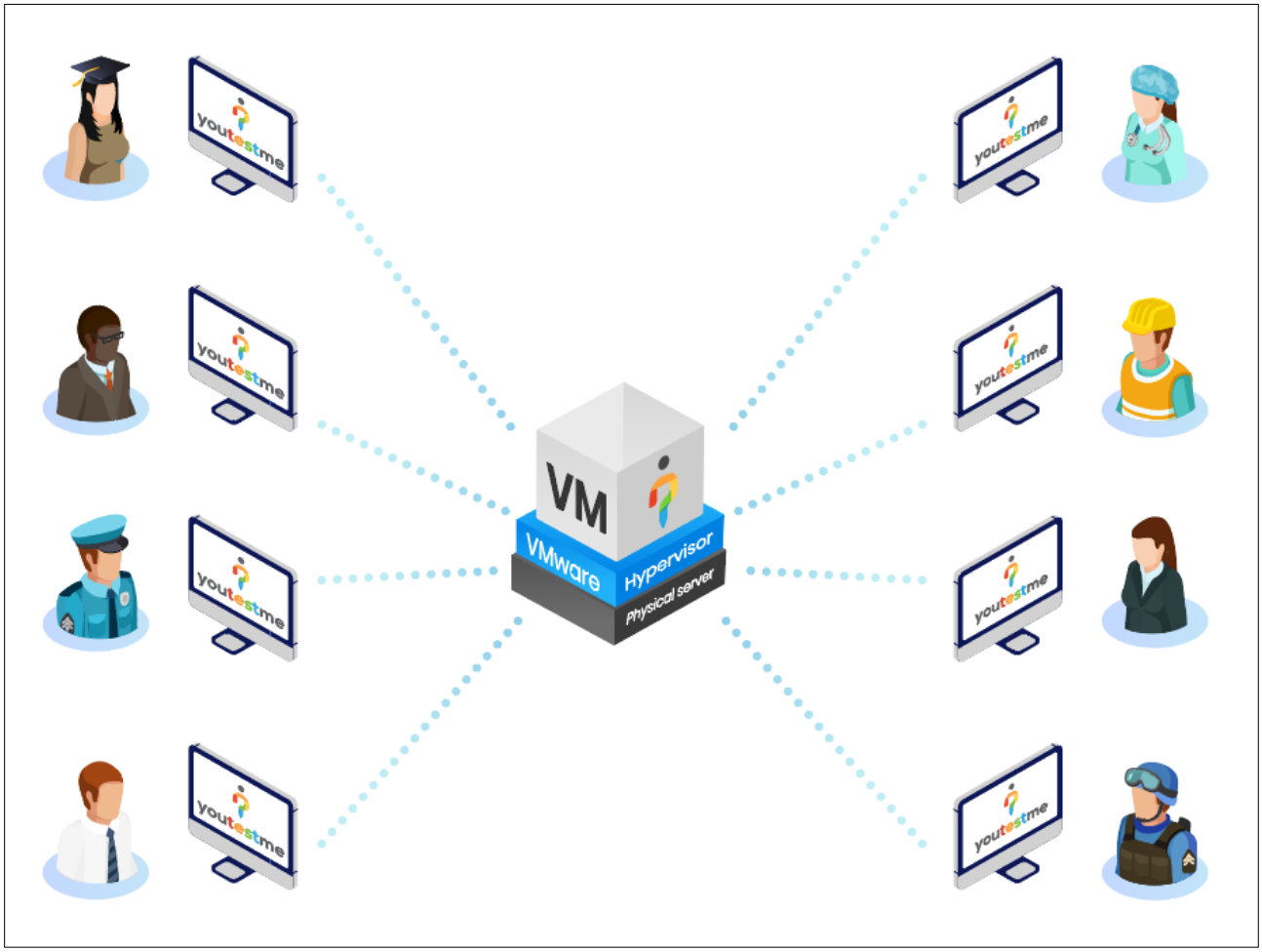
- It can run on any platform that supports VMware Virtualization or Oracle VirtualBox (please see table below for a detailed list of supported hypervisor software)
- It does not depend on the underlying OS
- The virtual appliance has all required software components preinstalled and preconfigured (operating system, database, application server, application, etc.)

- Easy installation and configuration - the entire system can be deployed within minutes
- Easy backup and restore of entire system and data
- Easy migration to other servers or other physical locations
- Ability to easily duplicate the entire system and deploy multiple application instances

YouTestMe Virtual Appliance is supported on the following major hypervisor software:

| Hypervisor Software | Description |
|---|---|
| VMware ESXi v5.* and v6.* | Used in data centers |
| VMware Player | Suitable for workstations and small to medium servers |
| VMware Workstation | Suitable for workstations and small to medium servers |
| Oracle VirtualBox | Suitable for workstations and small to medium servers |

Virtual Appliance runs within a physical server, as demonstrated in the picture below:



Virtualization is a popular concept in data centers, and it is likely that your organization already has an infrastructure with hypervisor software.

## 12 System Requirements

The required capacity of the system depends on the following parameters:

1. Number of concurrent users on the system.
2. Average load that one user generates on the system.
3. Type and performance of hardware (CPU type, storage type, network capacity, etc.).

The table below represents a comparison of various activities and their load on the system.

| # | Activity | Load on the System |
|---|---|---|
| 1. | Taking the test | Light |
| 2. | Registering user | Light |
| 3. | Downloading large files | Medium |
| 4. | Running simple reports | Medium |
| 5. | Running complex reports | Heavy |
| 6. | Batch operations like loading large amount of data from external files | Heavy |

The overall performance of the system will depend on the load and infrastructure capacity.
For more precise estimates, we recommend doing a proof of concept designed to produce concrete data in a specific environment.

Thanks to its scalability, the system can be easily upgraded by adding more hardware resources.
Based on the conservative estimates regarding the load that will be put on the system by users, a table below is created with recommended system hardware requirements.

## 12.1 System Hardware Requirements

| # | Virtual Machine | 200 concurrent users | 600 concurrent users |
|---|---|---|---|
| 1. | **Load Balancer** | **Processor**: 4 virtual CPUs (vCPUs)<br>**Memory**: 8 GB RAM<br>**Storage**: 50 GB system disk space | **Processor**: 4 virtual CPUs (vCPUs)<br>**Memory**: 8 GB RAM<br>**Storage**: 50 GB system disk space |
| 2. | **Application Server 1** | **Processor**: 4 virtual CPUs (vCPUs)<br>**Memory**: 32 GB RAM<br>**Storage**: 200 GB system disk space | **Processor**: 8 virtual CPUs (vCPUs)<br>**Memory**: 64 GB RAM<br>**Storage**: 200 GB system disk space |
| 3. | **Application Server 2** | **Processor**: 4 virtual CPUs (vCPUs)<br>**Memory**: 32 GB RAM<br>**Storage**: 200 GB system disk space | **Processor**: 8 virtual CPUs (vCPUs)<br>**Memory**: 64 GB RAM<br>**Storage**: 200 GB system disk space |
| 4. | **Application Server 3** | **Processor**: 4 virtual CPUs (vCPUs)<br>**Memory**: 32 GB RAM<br>**Storage**: 200 GB system disk space | **Processor**: 8 virtual CPUs (vCPUs)<br>**Memory**: 64 GB RAM<br>**Storage**: 200 GB system disk space |
| 5. | **Primary Database** | **Processor**: 4 virtual CPUs (vCPUs)<br>**Memory**: 16 GB RAM<br>**Storage**: 500 GB system disk space | **Processor**: 4 virtual CPUs (vCPUs)<br>**Memory**: 16 GB RAM<br>**Storage**: 500 GB system disk space |
| 6. | **Secondary Database** | **Processor**: 4 virtual CPUs (vCPUs)<br>**Memory**: 16 GB RAM<br>**Storage**: 500 GB system disk space | **Processor**: 4 virtual CPUs (vCPUs)<br>**Memory**: 16 GB RAM<br>**Storage**: 500 GB system disk space |
| 7. | **Proctoring Server** | **Processor**: 8 virtual CPUs (vCPUs)<br>**Memory**: 8 GB RAM<br>**Storage**: 1,000 GB system disk space | **Processor**: 16 virtual CPUs (vCPUs)<br>**Memory**: 16 GB RAM<br>**Storage**: 3,000 GB system disk space |

## 12.2 CPU, Memory, and Storage Recommendations

- **CPU Recommendation:** For production environments, YouTestMe requires CPUs with a base clock of at least 3 GHz. Recent dedicated deployments have utilized the AMD EPYC 7312. Both Intel i7 and i9 processors are fully compatible with the deployment.
- **RAM (DDR4 vs. DDR5):** YouTestMe's configuration is optimized for DDR4 memory, but DDR5 is also supported without compatibility issues.
- **Storage (SSD vs. HDD):** SSD is strongly recommended for optimal performance. However, the application is capable of running on HDDs. The difference between SATA and NVMe SSDs is minimal in regular operations, but NVMe provides a clear advantage in backups and maintenance tasks.

## 12.3 Scalability and Performance Assurance

In today's rapidly evolving educational and assessment landscape, the ability to handle growing volumes of users and maintain exceptional performance is paramount. In this chapter, we explore how YouTestMe's robust architecture ensures scalability and performance, making it an ideal choice for organizations with diverse and dynamic needs.

YouTestMe's commitment to scalability and performance assurance sets us apart as a reliable partner for organizations of all sizes and needs. Our platform is architected to adapt and grow with you, making it an

ideal choice for educational institutions, corporations, and government agencies looking to deliver assessments with confidence.

As you consider the future of your testing and assessment needs, rest assured that YouTestMe is equipped to support your journey, no matter how ambitious or dynamic it may be. We invite you to explore the boundless possibilities that our platform offers, secure in the knowledge that scalability and exceptional performance are at the core of what we do.

### 12.3.1 Scalability: Meeting Your Volume Demands

YouTestMe is designed to be highly scalable, allowing organizations to adapt to changing demands seamlessly. Whether you anticipate a gradual increase in user volumes or need to accommodate a sudden surge in usage, our platform can flexibly and effectively handle any scenario.

### 12.3.2 Adding Application Servers

One of the key elements that enable our scalability is the ability to add more application servers to the architecture. This means that as your user base grows, the infrastructure can be expanded almost effortlessly to meet the increased demand. Thousands of candidates taking tests simultaneously are fully supported through our flexible architecture, which permits the addition of more resources and components as needed.

### 12.3.3 Efficient Resource Allocation

Our platform optimizes resource allocation, ensuring that system resources are efficiently distributed to accommodate the highest concurrent user loads. This dynamic resource management guarantees that users experience consistent performance, even during peak usage periods.

### 12.3.4 Load Balancing

Load balancing is a fundamental component of our architecture. It evenly distributes incoming user requests across multiple application servers, preventing any single server from becoming overwhelmed. This results in reduced response times and improved overall system performance.

### 12.3.5 Automated Scaling

Our system employs automated scaling mechanisms that can dynamically adjust the available resources based on current demand. This ensures that even unexpected surges in usage are managed effectively without manual intervention.

## 12.4 Third-Party Components and Licenses

YouTestMe leverages a sophisticated array of components to power its robust system.

| | |
|---|---|
| Apache Webserver | Apache Webserver efficiently delivers web content, ensuring reliable and scalable hosting for applications. |
| Application dependencies | Link to the report where there is a list of dependencies with a license for each of it. |

| | |
|---|---|
| Postfix | Postfix reliably manages email delivery, ensuring seamless communication within the system and with external parties. |
| PostgreSQL 14 | Relational database management system, that efficiently stores and manages structured data, providing scalability, reliability, and advanced features for data management and analysis. |
| Tomcat 9 | Tomcat serves as an application server, handling HTTP requests and supporting Java servlets and JSP pages for dynamic web content. |
| Ubuntu 22.04 | Popular and reliable Linux distribution. |
| Wazuh 4.5.1 (Security Monitoring) | Wazuh actively detects and responds to security threats, safeguarding systems and data from malicious activity. |
| Zabbix 6 (Monitoring software) | Zabbix continuously tracks system performance and health metrics, enabling proactive management and optimization. |

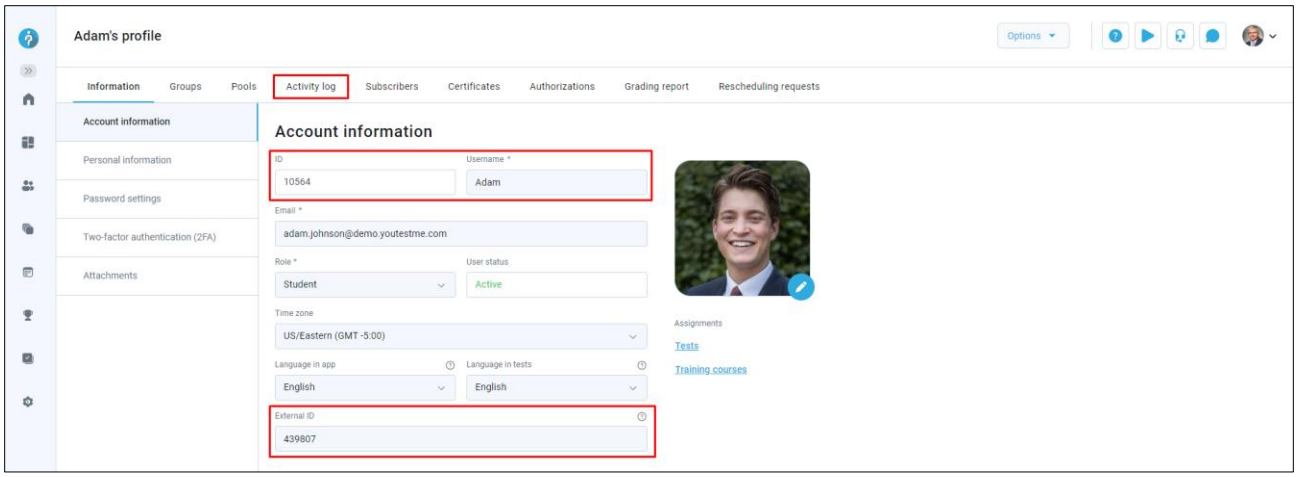
# 13 User Management

## 13.1 Unique Identification Credentials

YouTestMe provides each candidate, instructor, proctor, and administrator with unique identification credentials to ensure secure and personalized access to the system. These credentials consist of a unique username and user ID, both of which are generated by YouTestMe.

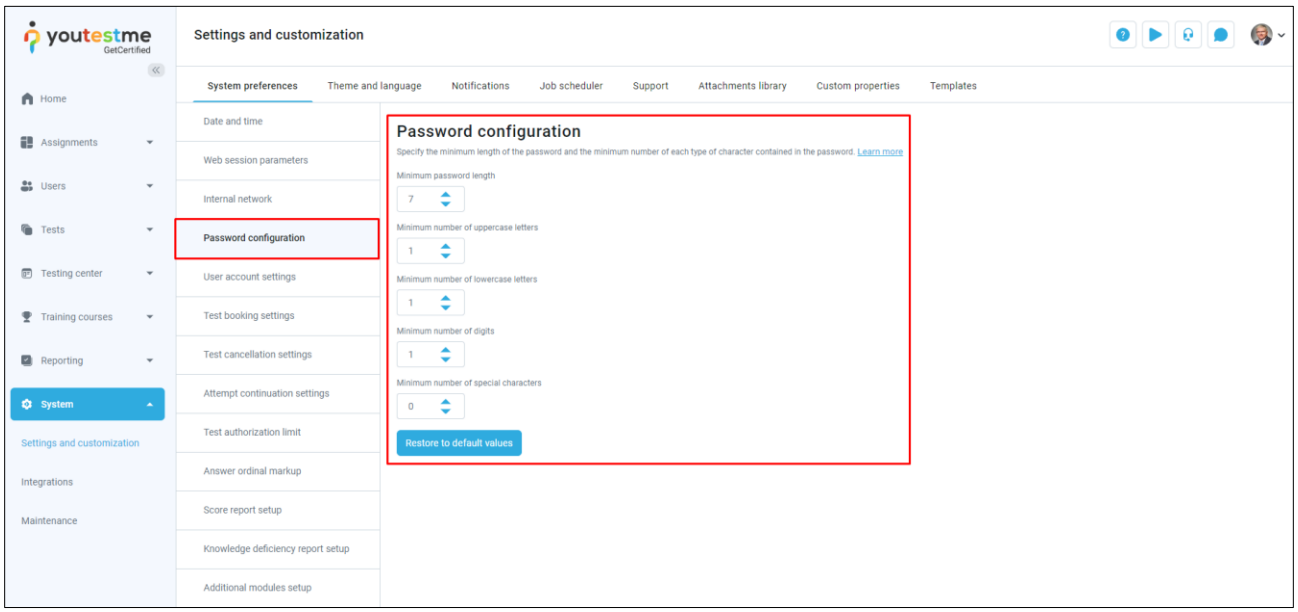
### 13.1.1 Username and User ID

Each user is assigned a unique username and user ID generated by YouTestMe. These identifiers are critical for tracking user activities and ensuring that no two users have the same login credentials.




### 13.1.2 Password Generation and Customization

Passwords can be generated automatically by the system or customized by the administrator based on predefined password rules. Password requirements, such as length and complexity, can be configured within YouTestMe settings.




### 13.1.3 User Synchronization

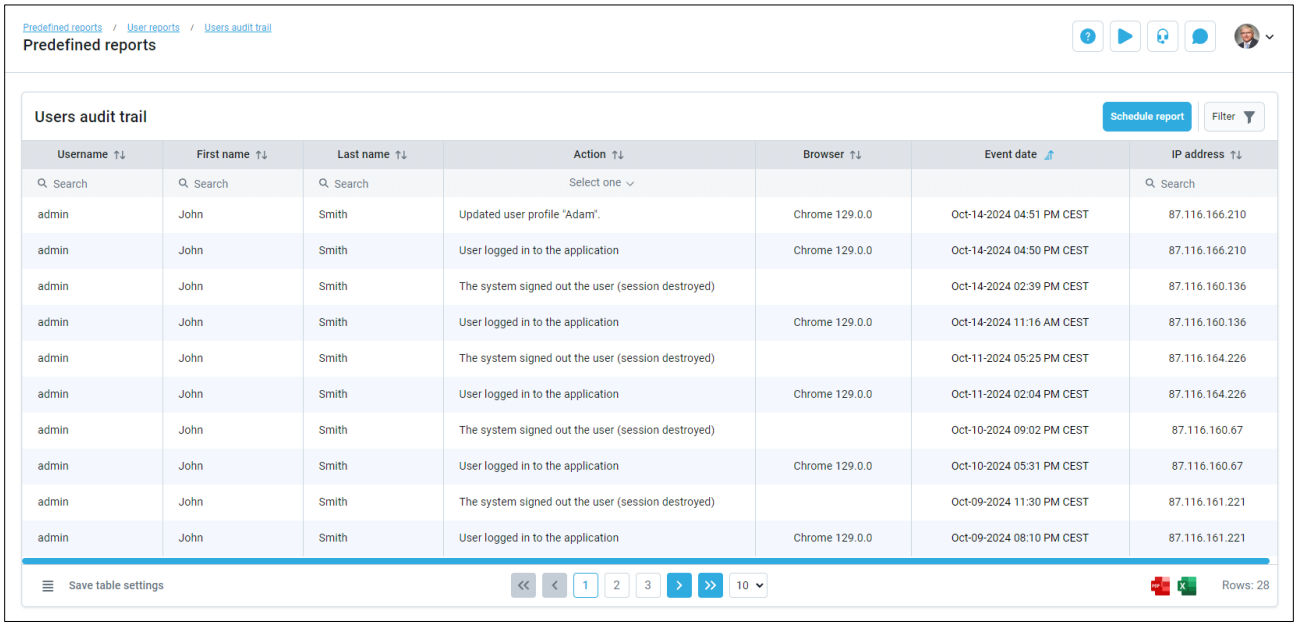
YouTestMe supports SSO and user synchronization with external systems. In such cases, usernames or external user IDs can be pulled from the integrated system to ensure a seamless user experience.

### 13.1.4 Credential Distribution

If permitted, credentials can be sent automatically via email to users, ensuring easy distribution.

### 13.1.5 User Audit Log

All user activities are tracked and recorded in the audit log, which relies on unique identifiers like the username and user ID for detailed reporting.



## 13.2 User Profile Creation

User credentials in YouTestMe are automatically generated and assigned immediately after a user profile is created. This process ensures quick and seamless access to the platform, with the correct user role being applied based on the security permissions associated with the created profile.

Upon profile creation, a predefined security role (e.g., candidate, instructor, proctor, administrator) must be assigned, ensuring that the correct level of access and permissions is granted immediately.

### 13.2.1 Methods of Profile Creation

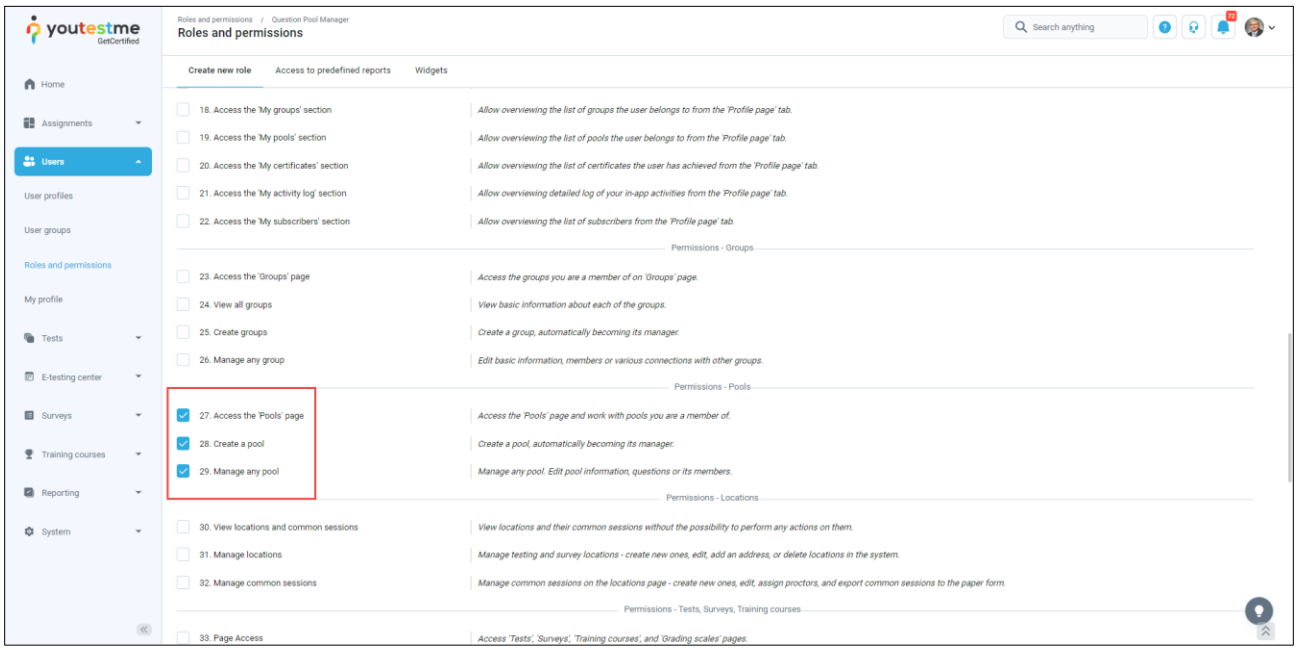
1. **Manual creation**: Administrators can manually enter user details and assign the appropriate role.
2. **Bulk creation**: Excel importers can be used to create multiple profiles simultaneously, streamlining the process for large groups.
3. **Registration requests**: Candidates can request registration, which must be approved or declined by an administrator.
4. **Self-registration**: If enabled, users can create their own profiles, which are then automatically assigned roles based on predefined settings.
5. **Synchronization with external systems**: YouTestMe can sync with external databases to automatically import users.
6. **Single Sign-On (SSO)**: Users can be authenticated through an external SSO provider, bypassing manual profile creation.

## 13.3 Access Control and User Roles

The YouTestMe platform places a strong emphasis on providing advanced access control to specific functions and data, ensuring that users have precisely the right level of access they need. This is achieved through the utilization of default roles or the creation of custom roles tailored to your organization's unique requirements.

### 13.3.1 Role-Based Access Control

User roles within YouTestMe are meticulously designed to be aligned with sets of permissions, allowing for the granular assignment of authorization rights within the application. These permissions define the scope of actions each user can perform.




### 13.3.2 Default Roles

To streamline the setup process, YouTestMe offers predefined roles, including:

- **Administrator**: This role, by default, possesses the authority to create and manage other user roles and permissions.
- **Candidate**: Represents the standard user role for test-takers.
- **Proctor**: Responsible for overseeing test sessions and ensuring their smooth conduct.
- **Instructor**: Empowered to create and manage instructional content and assessments.

These predefined roles serve as a foundation but are also fully editable to adapt to your organization's specific needs.

### 13.3.3 Advanced User Roles

Beyond the default roles, YouTestMe provides several advanced roles that mirror real-life organizational structures and cater to individuals involved in test management. These advanced roles are tailored to support a wide range of activities and responsibilities within the platform.

- **Grader**: Graders play a pivotal role in evaluating and providing feedback on user groups to which they are assigned as managers. They are equipped to assess questions, view group statistics, access candidate information in the testing session they oversee, and generate reports on test attempts. This role empowers instructors and organizations to maintain a high level of assessment quality.
- **Content Manager**: The Content Manager role grants users access to all options related to question pools and tests. This role is intended for individuals responsible for creating and editing tests, surveys, training materials, question pools, attachments, and other content within the platform. It streamlines content creation and management processes.

- **Analyst**: Analysts are entrusted with the task of delving into application data, scrutinizing reports, and crafting report templates. This role is tailored for those who need to extract valuable insights from the system's data, allowing for informed decision-making and performance analysis.
- **Customer Service Representative (CSR)**: The CSR role is designed to facilitate all aspects of test organization. CSR users can manage user profiles and information, oversee tests, surveys, training courses, and common sessions. Additionally, they have the capability to create special accommodations for candidates, ensuring a smooth and accommodating testing experience.

By offering these advanced roles, YouTestMe empowers organizations to mirror their real-world structures and optimize the management of tests and assessment processes.

### 13.3.4 Custom Roles

YouTestMe facilitates controlled access by enabling the creation of an unlimited number of custom roles. These custom roles can be endowed with highly specific permissions, allowing you to finely tune the level of access for various user groups. By simply assigning a security role to a user, you can effortlessly control their access to functions and data within the platform.

### 13.3.5 Default Page Redirection

Additionally, YouTestMe offers the flexibility to define default page redirections after user login for each role. This feature enhances user experience by ensuring that users are directed to the most relevant areas of the application based on their role.

## 13.4 Custom User Properties

### 13.4.1 Introduction

This chapter explores the versatile functionality of custom user properties within the YouTestMe platform. Custom user properties empower organizations to capture and manage additional user information beyond the standard profile fields. This added flexibility is invaluable for tailoring user profiles to specific organizational needs, whether it involves tracking departmental affiliations, organizational associations, language preferences, and much more. In this chapter, we will delve into how custom user properties can be configured and leveraged to enhance user profiles and information management.

### 13.4.2 Defining Custom User Properties

Custom user properties offer a structured approach to defining and recording users' supplementary information.

These fields are prominently displayed within user profiles, neatly organized under the "Personal Information" section.

The YouTestMe platform provides granular control over the visibility of these custom properties, allowing organizations to adapt user profiles to their precise requirements.

The available data types of custom user properties include:

- **Yes / No**: This data type allows users to provide binary responses, making it suitable for capturing preferences, consent, or simple "yes" or "no" choices.
- **Text**: Text fields are ideal for capturing alphanumeric information such as department names, job titles, or other textual data relevant to user profiles.
- **Timestamps**: Timestamps can record date and time information, useful for tracking events or milestones related to users.
- **Date**: Date fields specifically capture calendar dates, providing a structured way to record birthdays, hire dates, or other significant dates.
- **Number**: Number fields are designed to capture numeric data, making them suitable for recording quantities, numerical identifiers, or any data that requires numerical input.

## 13.5 User Group Organization

In this chapter, we delve into the versatile functionality of user group organization within the YouTestMe platform. User groups serve as a fundamental element to structure and manage users effectively in alignment with your organization's unique hierarchy. Whether you are overseeing distributed associations, managing company departments, or coordinating classes in educational institutions, user groups offer invaluable flexibility to streamline various processes. This chapter explores the benefits of user group organization and its impact on automating test distribution, optimizing the registration process, and managing access rights seamlessly.

User groups within YouTestMe are a cornerstone feature that empowers organizations to align their digital ecosystem with real-world structures. Leveraging user groups can significantly enhance the efficiency and effectiveness of your operations. Here's how:

### 13.5.1 Mapping Organizational Structure

To begin, you can create user groups that mirror your organization's hierarchy. This strategic alignment ensures that the platform adapts seamlessly to your specific structure. By organizing users into groups that reflect your departments, divisions, or other organizational units, you can effortlessly manage and track activities within each unit.

### 13.5.2 Monitoring Certification Progress

User groups provide a convenient means of monitoring certification progress within departments or divisions. This feature enables you to gain insights into the performance of different segments of your organization. By associating tests with specific groups, you can assess certification progress across departments, facilitating informed decision-making and targeted interventions where necessary.

### 13.5.3 Efficient Test Distribution

Assigning tests to entire groups is a powerful tool for optimizing the test distribution process. Instead of manually selecting individual users, you can designate entire groups to receive specific assessments. This

not only saves time but also ensures that the right tests are delivered to the right audience, reducing the risk of errors and oversights.

### 13.5.4 Comparative Analysis

YouTestMe's user group capabilities extend to comparative analysis. You can easily compare the statistics of individual group members to the group's average. This feature is particularly valuable for assessing the performance of individuals in relation to their peers within the same department or division. It fosters healthy competition and can drive improvements in overall performance.

### 13.5.5 Self-Enrollment and User Management

User groups offer flexible enrollment options. Users can self-enroll in groups, simplifying the registration process and reducing administrative overhead. Additionally, managers can be granted the authority to add new members to their respective groups, streamlining user management and ensuring that groups remain up-to-date.

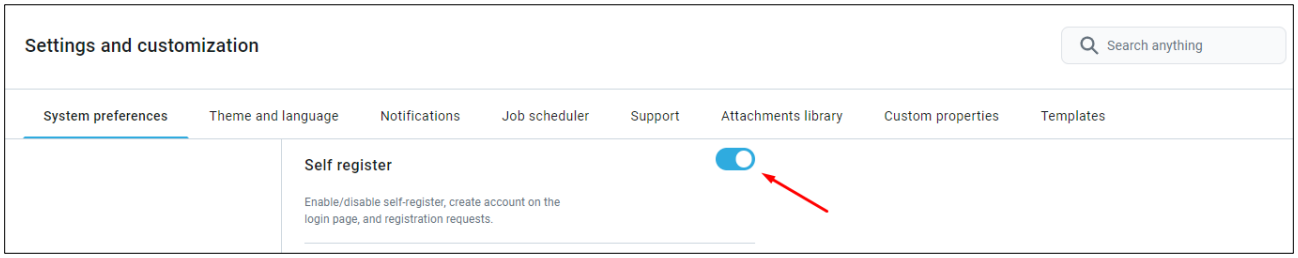
### 13.5.6 Direct Access and Registration Links

To further enhance user experience, YouTestMe provides direct access links for registration and group assignment. These links facilitate a seamless onboarding process for users, allowing them to quickly register and join their designated groups with ease.

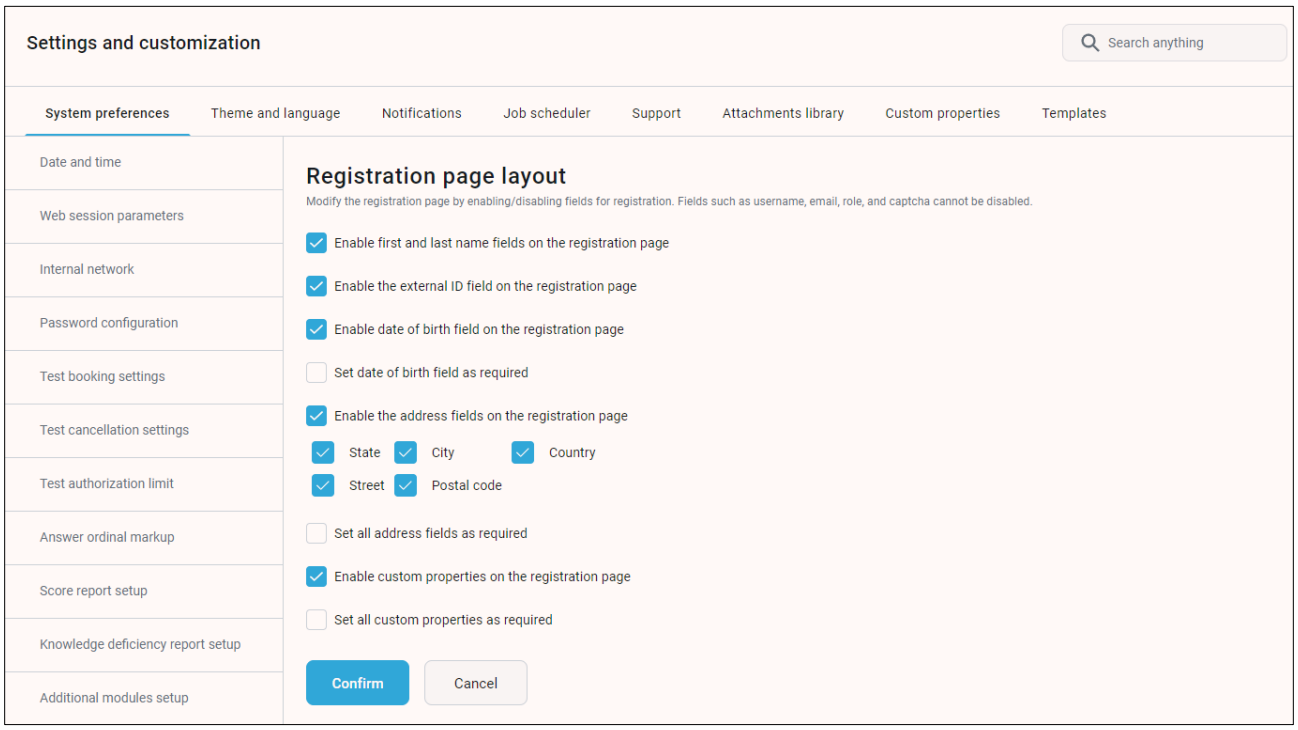
## 13.6 Self-Registration

YouTestMe provides comprehensive support for the implementation of self-registration as an efficient mechanism for profile establishment.

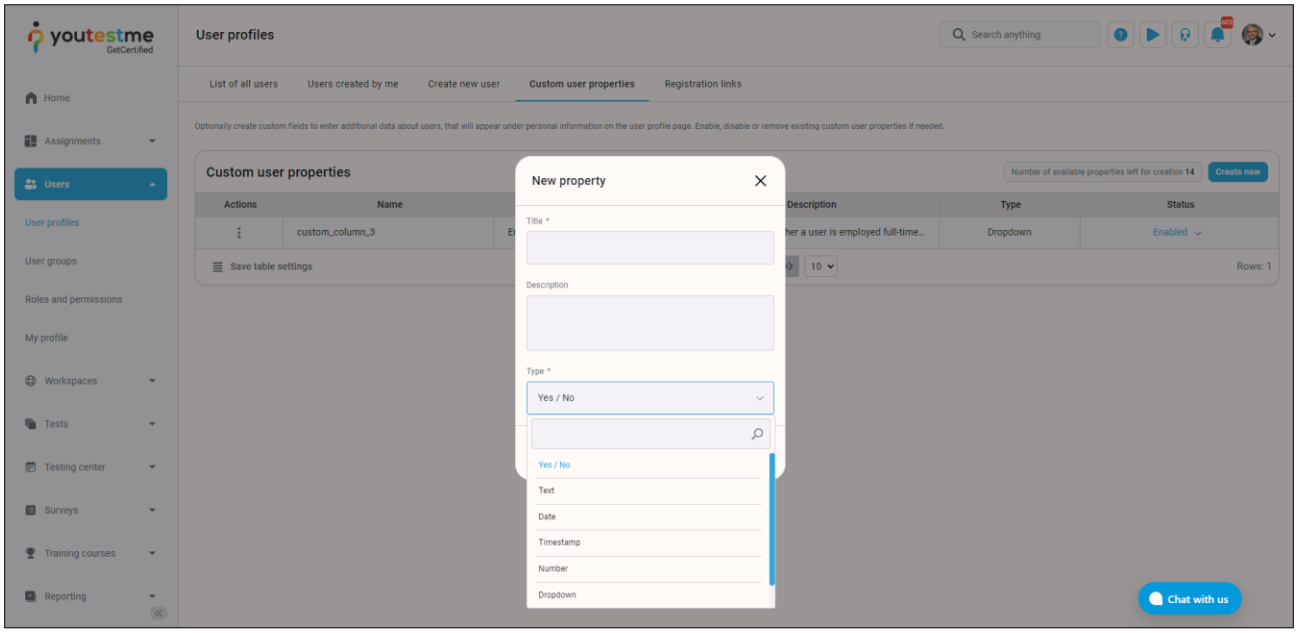
Within the realm of system preferences, the administrator is presented with a straightforward task of activating the self-registration feature for candidates, thereby configuring the system accordingly.



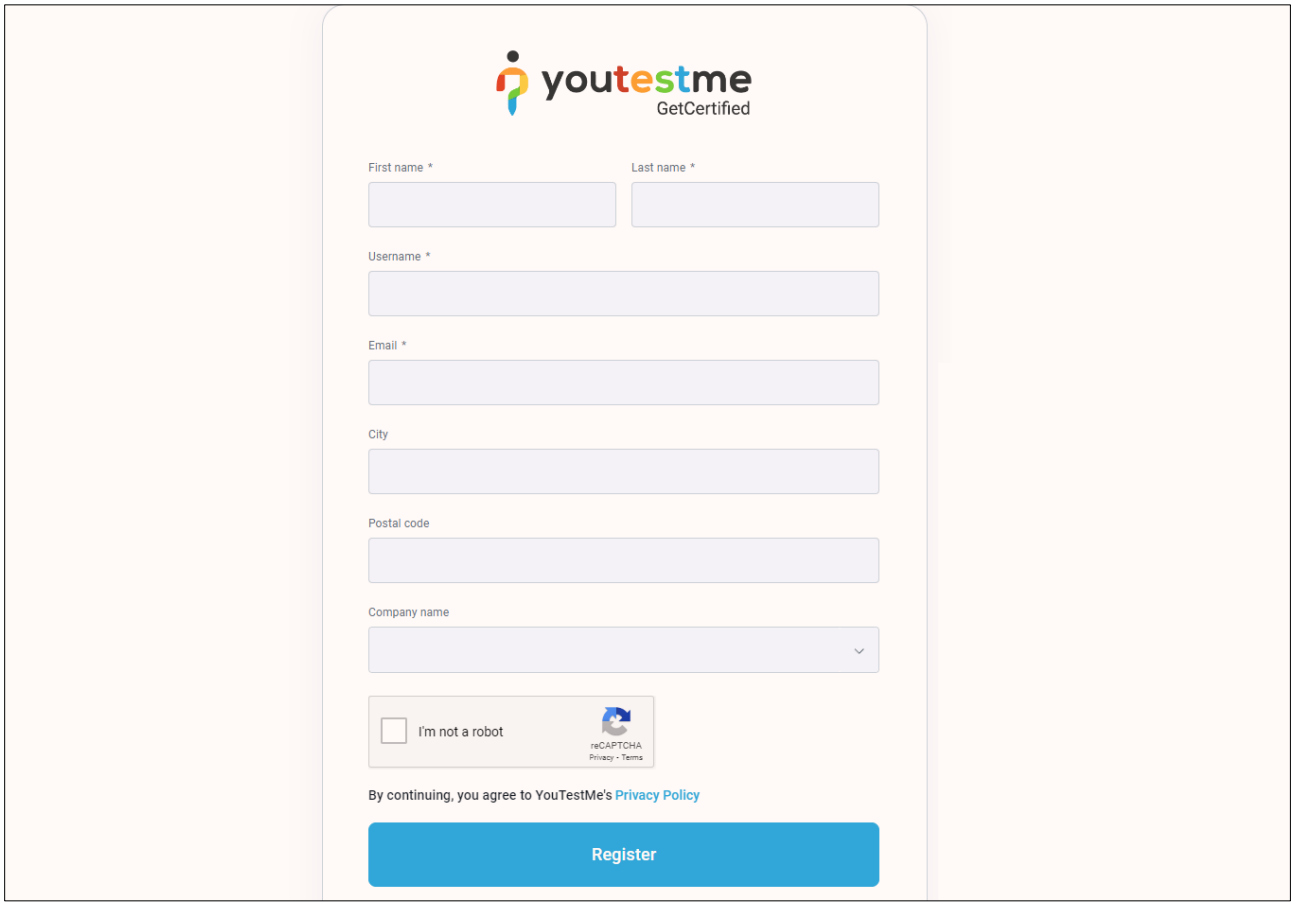

In the context of self-registration, clients exhibit a preference for maintaining complete oversight over the information solicited from candidates. YouTestMe facilitates this by empowering clients to craft a wholly customized registration interface, encompassing precise data fields aligned with their requirements. Additionally, clients retain full authority over designating mandatory and optional status for each field.




A pivotal facet of this process resides in the utilization of custom user properties, which serve as bespoke fields of diverse formats. This innovative functionality empowers client administrators to define and incorporate distinct fields within user profiles. These fields cater to the capture of specific information that extends beyond the scope of the pre-existing default fields inherent to the system.



Following the administrator's configuration of the designated registration panel, their responsibilities are effectively fulfilled, transferring the subsequent onus onto the candidates.




## 13.7 Two-Factor Authentication (2FA)

Two-factor authentication (2FA) is a critical security feature integrated into YouTestMe to safeguard user accounts against unauthorized access. By adding an additional layer of verification, 2FA enhances system security while maintaining a seamless user experience.

**Benefits of Two-Factor Authentication in YouTestMe**

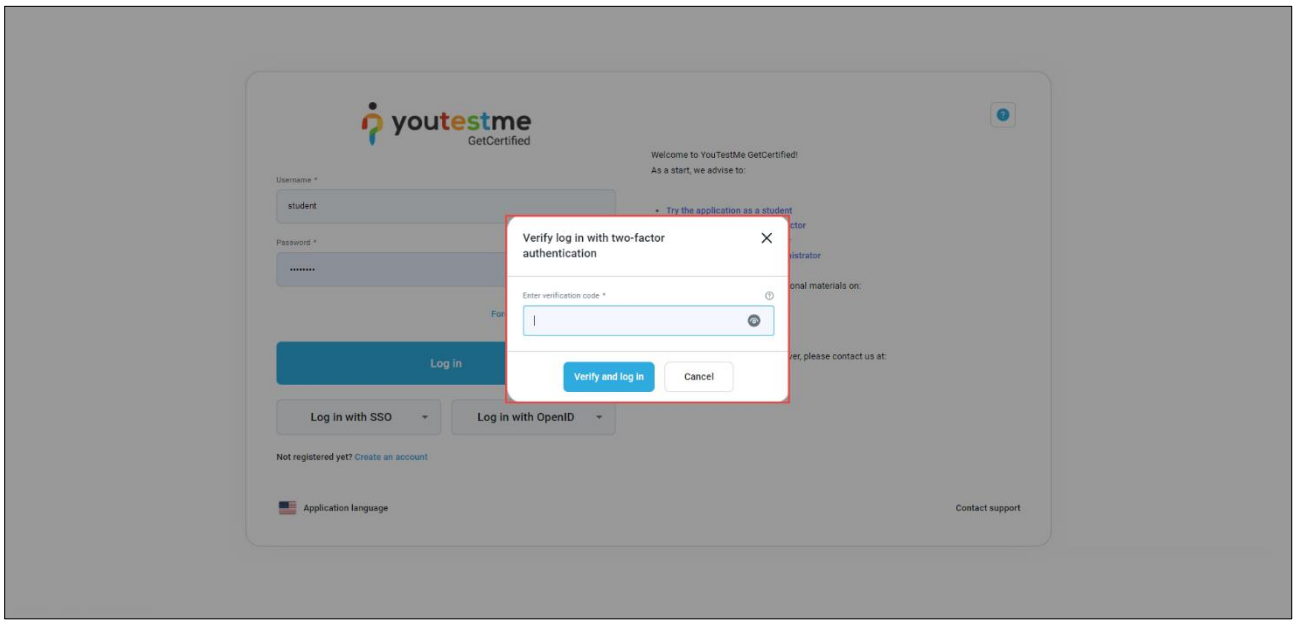
1. **Enhanced Security**
   - 2FA combines two verification steps: something the candidate knows (e.g., username and password) and something they have (e.g., a verification code). This dual-step process ensures that even if login credentials are compromised, unauthorized access is prevented.
2. **Mitigating Risks**
   - By requiring dynamic, time-sensitive verification codes generated through an authenticator application, 2FA significantly reduces the risk of malicious login attempts.

- For administrators, it adds an extra layer of protection for accounts with elevated privileges.

3. **Flexibility and Convenience**
   - Candidates and instructors can configure 2FA to suit their security needs, such as adjusting code validity duration or code length.
   - Administrators retain control over enabling or disabling 2FA, ensuring operational continuity even if a user loses access to their authentication device.
4. **Comprehensive Coverage**
   - 2FA is compatible with both traditional logins and Single Sign-On (SSO) setups, providing consistent security across various authentication scenarios.

**How Two-Factor Authentication Works**

1. **Activation Process**
   - Candidates and instructors activate 2FA through their profiles by installing a supported authenticator app (e.g., Google Authenticator).
   - A QR code is scanned to link the application to their YouTestMe account. Alternatively, a manual configuration using a secret key is available.
2. **Customization Options**
   - Users can tailor 2FA settings to their security requirements:
     - Select the hash algorithm for code generation (e.g., SHA-256).
     - Set the validity duration of the one-time verification code.
     - Adjust the length of verification codes for enhanced security.
3. **Login Procedure**
   - After entering their username and password, candidates and instructors are prompted to input the verification code generated by their authenticator app. Only upon successful verification can they access the platform.




4. **Backup and Recovery**
    - During 2FA registration, users receive backup codes for alternative access if they lose their authentication device. This ensures uninterrupted system availability.

By seamlessly integrating two-factor authentication, YouTestMe provides robust protection for client data, ensuring secure and reliable operation across all user roles.

## 13.8 Single Sign-On (SSO)

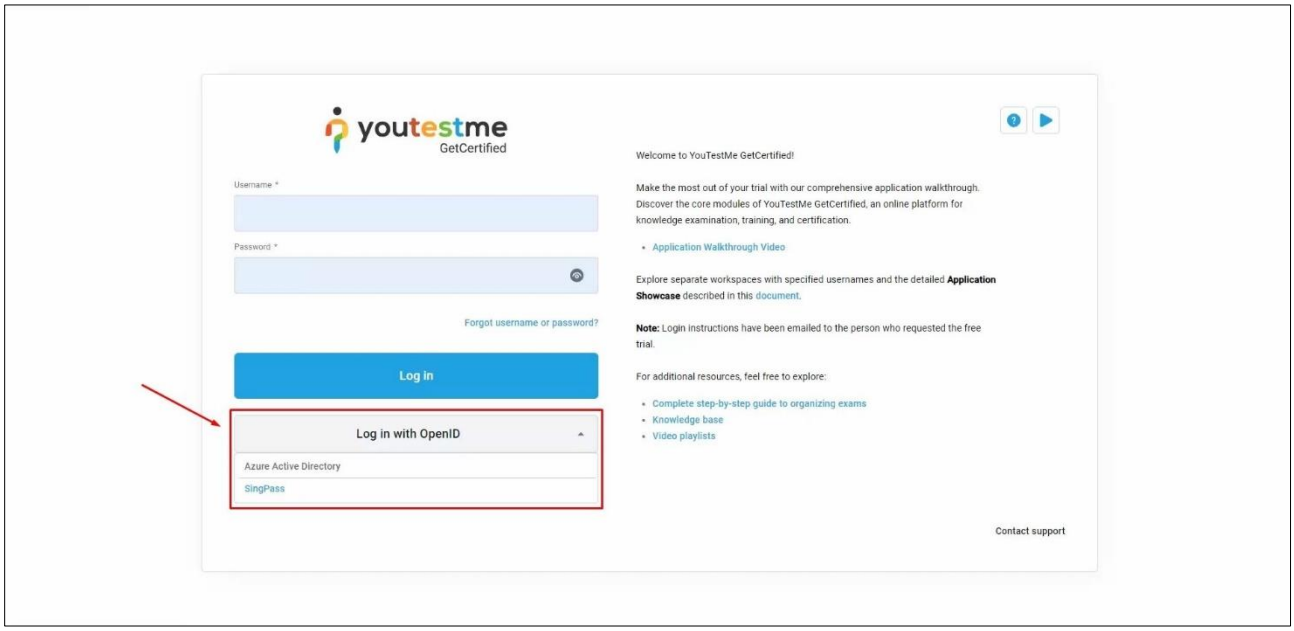
YouTestMe seamlessly facilitates Single Sign-On (SSO) through two established protocols: SAML 2.0 and OpenID Connect. As a Service Provider, YouTestMe engages the SAML 2.0 protocol, ensuring the secure exchange of authorization data with Identity Providers such as OneLogin, Okta, and SSO Circle.

In addition to SAML 2.0, YouTestMe's SSO capabilities extend to OpenID Connect, an authentication layer built atop OAuth 2.0. This protocol empowers users to log in to multiple applications using a single set of credentials. Supported Identity Providers span a wide range, ensuring compatibility and flexibility.

Within the realm of SAML 2.0 and OpenID Connect based Single Sign-On (SSO), YouTestMe excels in configurability. It supports concurrent setup for multiple identity providers, each with distinct SSO configurations. These configurations encompass the definition of identity provider parameters, coupled with the establishment of assertion consumer service end-points dedicated to processing SAML and OpenID Connect responses. This meticulous approach ensures a robust and secure environment for SSO authentication across diverse platforms.

### 13.8.1 Integration of Singpass for Candidate Login

YouTestMe provides seamless integration with Singpass, Singapore's national digital identity system, enabling candidates to log in using their existing credentials. By utilizing Singpass, candidates benefit from a secure, efficient, and user-friendly authentication process, eliminating the need to create and remember additional login details. This functionality is particularly advantageous for public users, enhancing accessibility while maintaining the platform's robust security standards.




**Benefits of Singpass Integration**

1. **Enhanced Security**
   - Singpass ensures secure access through its trusted national digital identity framework, significantly reducing the risk of unauthorized access or credential theft.
   - The integration supports secure data transfer using the OpenID Connect protocol, adhering to stringent security standards.
2. **Streamlined User Experience**
   - Candidates can log in effortlessly by leveraging their existing Singpass credentials, eliminating the need for new account creation.
   - The familiar login process reduces friction, enhancing satisfaction and promoting frequent platform use.
3. **Simplified Account Management for Administrators**
   - Administrators benefit from reduced account creation and maintenance efforts since candidate profiles are automatically created or authorized upon first login.
   - The system minimizes errors associated with manual data entry, ensuring a smoother onboarding experience.

**How Singpass Integration Works**

1. **Authentication Flow**
    - Candidates visit the YouTestMe login page and select the **Log in with OpenID** option.
    - They then click on the **Singpass** option and proceed to log in using their Singpass credentials.
2. **Account Creation and Authorization**
    - If the candidate's account does not exist in YouTestMe, the system automatically creates a new profile using data retrieved from Singpass, based on the external ID attribute.
    - If the candidate's account already exists, the system verifies and authorizes their access.
    - Once authenticated, the candidate is granted access to the platform.

**Technical Setup**

To enable Singpass integration, the following parameters must be configured in YouTestMe:

1. **Configuration URL**: Specifies the endpoint for Singpass authentication.
2. **Client ID**: Identifies the YouTestMe instance during the authentication process.
3. **Client Secret**: Ensures secure communication between YouTestMe and Singpass.
4. **Scope**: Defines the data and permissions required from Singpass.
   **External ID Attribute**: Maps the Singpass ID to the corresponding YouTestMe candidate profile.

By integrating Singpass, YouTestMe enhances its usability, security, and adaptability, making it a robust solution for both candidates and administrators.

### 13.8.2 Active Directory Integration

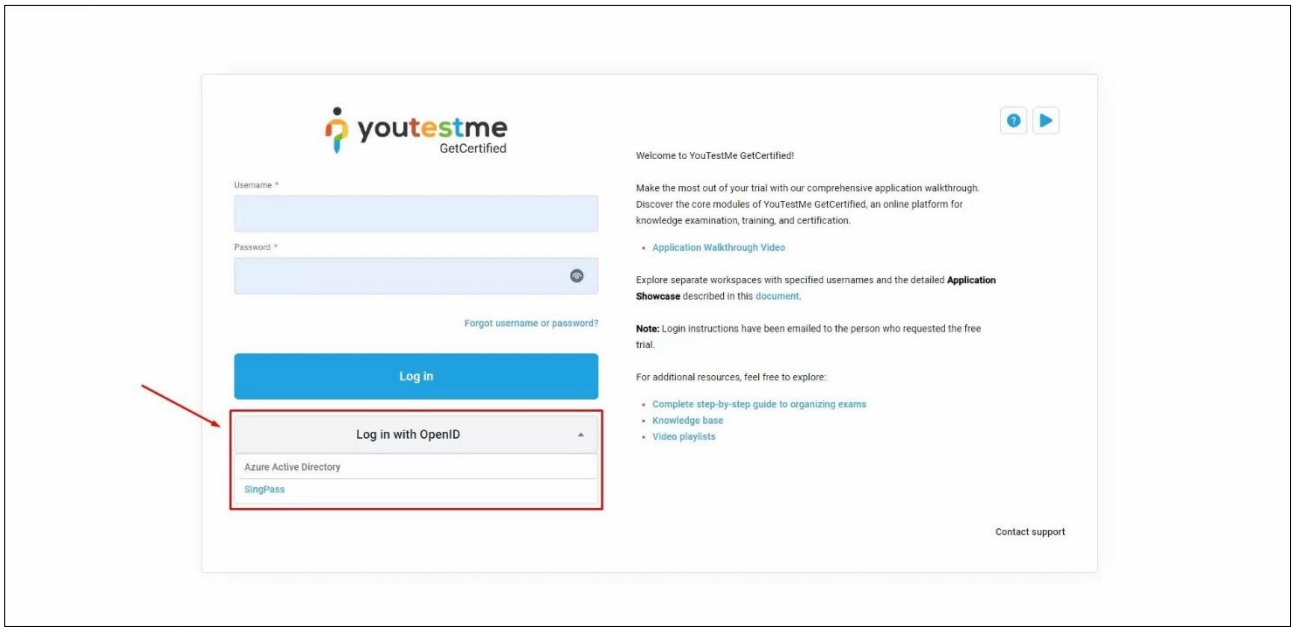
YouTestMe integrates seamlessly with Azure Active Directory (Azure AD) using the OpenID Connect (OIDC) protocol. This functionality enhances user authentication and provides a streamlined, secure single sign-on (SSO) experience for candidates, instructors, proctors, and administrators. By connecting YouTestMe to Azure AD, clients can achieve improved user management, increased security, and a unified authentication process.

**Benefits of Active Directory Integration**

1. **Enhanced Security**
    - The integration leverages Azure AD's robust authentication mechanisms, reducing the risk of unauthorized access and ensuring data security.
2. **Simplified Access Management**
    - Administrators can manage user permissions and roles centrally in Azure AD, which automatically applies to YouTestMe. This reduces administrative overhead and ensures consistency in access control.
3. **Improved User Experience**

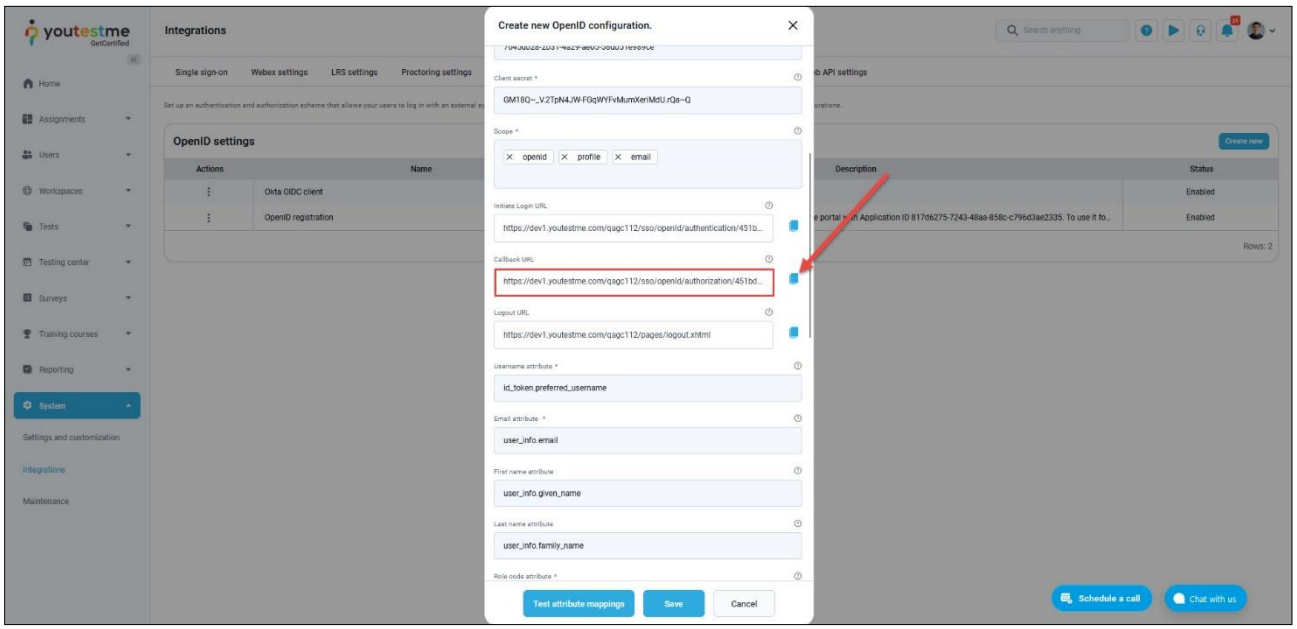
- Single sign-on (SSO) allows users to access YouTestMe and other connected applications with a single set of credentials, eliminating the need to remember multiple passwords.

4. **Scalability**
   - The integration supports large-scale organizations by enabling seamless onboarding and offboarding of users through Azure AD.




**How Active Directory Integration Works**

1. **Authentication Through Azure AD**
   - When a user attempts to log in to YouTestMe, they are redirected to Azure AD for authentication.
   - Azure AD verifies the user's credentials and issues an ID token.
2. **Token Validation**
   - YouTestMe validates the ID token provided by Azure AD, ensuring that only authorized users gain access to the platform.
3. **User Role Assignment**
   - Based on predefined settings in Azure AD, users are automatically assigned roles such as candidates, instructors, proctors, or administrators within YouTestMe.




This integration provides a robust, scalable, and secure method for managing access to YouTestMe, making it a valuable feature for clients aiming to streamline their testing and training processes.

# 14 Question Pools - Organizing Questions

In this chapter, we delve into the dynamic world of question pools within the YouTestMe platform. Question pools serve as a central hub for organizing, managing, and optimizing your question database. They empower organizations to streamline the test generation process, ensuring practicality and flexibility in assessment creation. This chapter explores how question pools can be configured and leveraged to enhance question management, automate test generation, and facilitate multilingual assessments.

Question pools are a fundamental feature that allows for the structured organization of questions. By grouping questions into pools, organizations can simplify and expedite various aspects of assessment management. Here are some key functionalities associated with question pools:

1. **Control Access with Pool Roles**: YouTestMe provides the ability to control access to question pools through pool roles. These roles can be set to "read-only" or "read-write," granting specific users the appropriate level of access. This ensures that question pools are managed securely and in accordance with your organization's needs.

2. **Effortless Pool Movement**: Managing your question database becomes effortless with the capability to move question pools and sub-pools. This feature streamlines database management, allowing you to reorganize your questions with ease.

3. **Offline Question Preparation**: The platform accommodates both online and offline question preparation. Questions can be conveniently prepared offline using MS Excel and subsequently uploaded into question pools or sub-pools. This method enhances efficiency, particularly when preparing a large number of questions.

4. **Copy and Move Flexibility**: Flexibility in question management is further emphasized by the ability to copy and move questions between question pools. You can also create duplicates of entire question pools, making it easier to reuse questions or create variations of existing assessments.

5. **Input for Automated Test Generation**: Question pools can be used as input for the automated test generator. This means that you can define any combination of question pools to serve as source material for generating tests. This automation simplifies the process of creating diverse and comprehensive assessments.

6. **Question Categories and Custom Properties**: Enhancing the organization of your questions, you have the option to create question categories. These categories allow you to label questions and establish rules for generating tests. Additionally, custom properties for different question types facilitate efficient filtering of questions through pools, making it easier to locate specific items.

7. **Export and Reuse**: The YouTestMe platform offers the ability to export questions from a pool, make necessary changes, and then upload the modified file into another question pool. This streamlined export-import process ensures that questions can be easily shared, modified, and reused across different assessments.

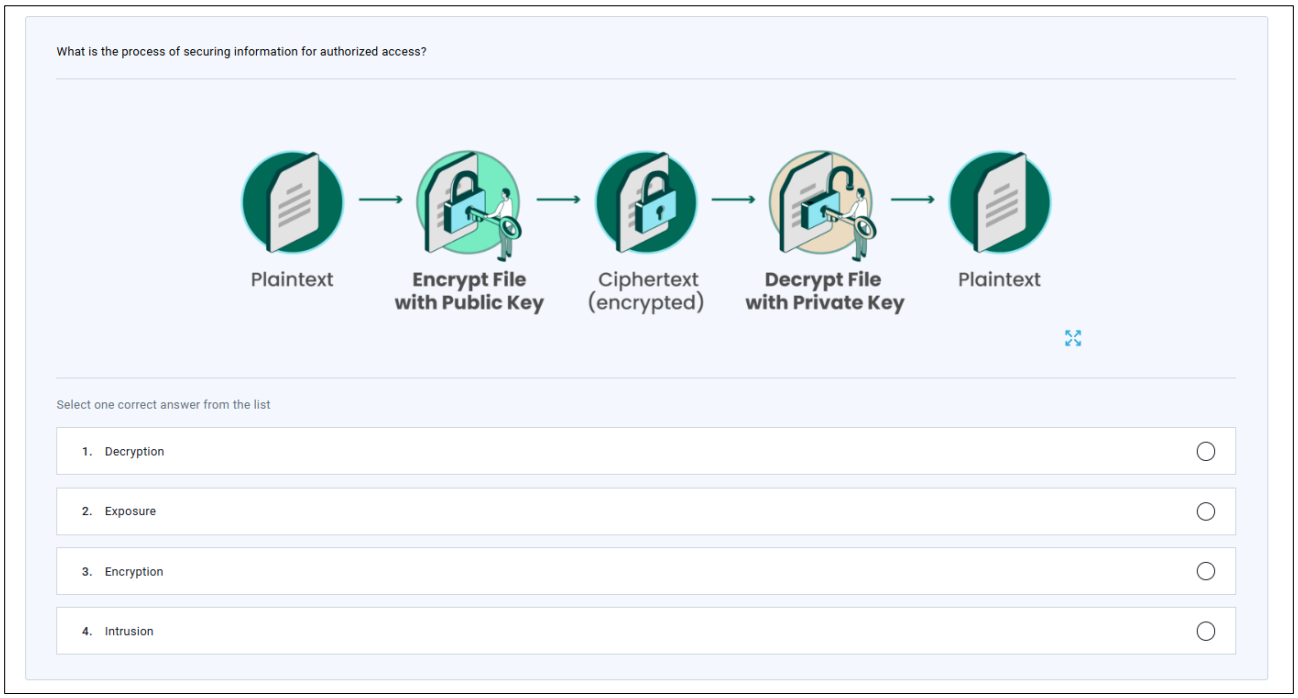
## 14.1 Question Types

YouTestMe supports a wide variety of question types designed to effectively assess comprehension levels. The available question types include:

1. **Single Choice**: Displays multiple answers but allows only one correct selection.
2. **Multiple Choice**: Permits selecting multiple correct answers.
3. **Essay**: Requires candidates to compose responses, which are manually graded.
4. **Ordering**: Requires candidates to arrange answers correctly.
5. **Fill in the Blanks**: Can be formatted for free text or numerical input.
6. **True/False**: Involves selecting the correct statement.
7. **Matching**: Requires pairing items from two lists.
8. **Matrix**: Presents a grid format with questions in rows and answer choices in columns.
9. **Open-Ended**: Involves candidates providing an answer that the system will compare to a predefined correct answer.
10. **Hot Spot**: Requires users to mark one or multiple spots on an image as an answer.

### 14.1.1 Single Choice Questions

Single choice questions are one of the most commonly used question types in YouTestMe, designed to evaluate a candidate's understanding by allowing only one correct answer from a list of options. These questions are ideal for knowledge checks, standardized tests, and certification exams, as they provide clear scoring logic and are easy to configure and analyze.




**Benefits of Single Choice Questions**

1. **Objective Scoring**: Single choice questions ensure automatic, unbiased grading based on predefined correct answers, increasing the reliability and consistency of test results.
2. **Flexible Content Formatting:** Instructors can enhance questions and answers with multimedia files (images, audio, video), advanced formatting, tables, and mathematical formulas, making them suitable for a wide range of industries and use cases.
3. **Dynamic Feedback:** Instructors can attach feedback to both questions and individual answers, which can be shown immediately or after answering, depending on test configuration. This supports formative testing and continuous improvement.
4. **Randomization Support:** Using the answer generator, instructors can create dynamic questions by defining how many correct and incorrect options should be randomly shown to each candidate, improving test security and reducing cheating.

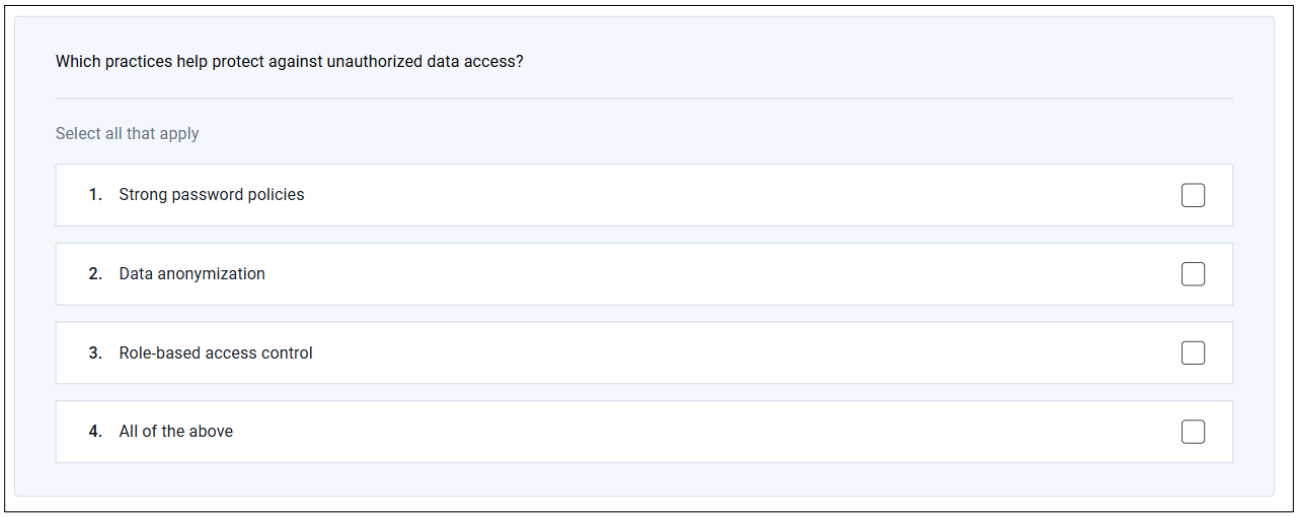
**How Single Choice Questions Work**

1. **Creating a New Question:** To create a single choice question, the instructor enters the question text into the designated field. Additional formatting options are available through an advanced editor or by inserting multimedia files or formulas. Instructors can also add question-level feedback.
2. **Editing Answer Options:** Each answer option has its own text field and can be individually formatted using the advanced editor. Multimedia and formulas may also be added to each answer. Instructors can provide answer-level feedback that appears based on candidate selection.
3. **Marking the Correct Answer**: Only one correct answer can be selected by checking the corresponding box. Instructors also have the option to include “All of the Above” or “None of the Above” in the answer set by clicking the arrow icon.
4. **Using the Answer Generator**: For added variability, the instructor may define how many correct and incorrect options should be randomly pulled from a larger pool for each candidate, ensuring that each test attempt is unique.
5. **Adding the Question to a Test or Pool**: Once configured, the question can be added directly to a test or saved to a question pool, depending on the desired test structure. The instructor also has the option to cancel the creation process at any time.

This flexibility and control make single choice questions a robust and reliable component of YouTestMe’s testing framework.

### 14.1.2 Multiple-Choice Questions

Multiple choice questions are a flexible and widely used question type in YouTestMe, allowing instructors to define several possible answers with one or more marked as correct. This format is ideal for testing a deeper level of candidate understanding, as it can include multiple valid concepts in a single question.




**Benefits of Multiple-Choice Questions**

1. **Assessment of Complex Knowledge**: Unlike single choice questions, multiple choice questions can require candidates to identify all correct answers, helping instructors evaluate critical thinking and subject mastery more effectively.
2. **Customizable Answer Combinations**: Instructors can designate any number of correct answers, supporting a variety of use cases, such as “select all that apply” scenarios, which improve the quality of test content and scoring differentiation.
3. **Automated and Accurate Grading**: YouTestMe supports automatic grading of multiple choice questions based on predefined scoring logic, reducing the administrative workload while maintaining grading consistency.
4. **Enhanced Security with Randomization:** With answer randomization and dynamic generation options, each candidate can receive a different combination of answer choices, minimizing the chance of answer sharing and improving test integrity.

**How Multiple-Choice Questions Work**

1. **Selecting the Question Type:** To create a multiple-choice question, the instructor selects this type from the list of available question formats. The interface is consistent with that of single choice questions but allows more than one correct answer to be selected.
2. **Entering Question and Answer Content**: The question text is entered into a dedicated field. Instructors can use the advanced editor to format the content, insert tables, upload multimedia files, or add mathematical formulas. Feedback specific to the question can also be included.
3. **Configuring Answer Options:** Each answer option can be edited using the advanced editor, formatted, and enriched with multimedia content or formulas. Instructors can mark multiple answers as correct by selecting the corresponding checkboxes.
4. **Adding Feedback and Special Options**: Instructors may provide feedback for each answer, which can be shown to the candidate depending on test settings. Additionally, options like “All of the Above” or “None of the Above” can be included using the dedicated interface controls.
5. **Finalizing and Saving the Question**: Once configured, the question can be added to a test or a question pool. Instructors also have access to an answer generator tool for creating randomized answer sets across candidate attempts.

This feature enables clients to create advanced test structures while maintaining usability, grading precision, and exam integrity.

### 14.1.3 Essay Questions

Essay questions in YouTestMe provide instructors with the flexibility to evaluate a candidate’s critical thinking, reasoning, and written communication skills. These questions require candidates to construct detailed responses, making them particularly effective for testing knowledge application, analysis, and subject mastery beyond simple recognition or recall.

**Benefits of Essay Questions**

1. **Evaluation of Higher-Order Thinking:** Essay questions allow instructors to assess a candidate's ability to analyze, synthesize, and articulate ideas in a structured format, making them ideal for advanced educational and professional assessments.
2. **Flexible Answer Format:** Candidates can respond directly in a rich text editor or by completing a structured, editable PDF file. This versatility supports use cases across industries where formatted submissions, such as legal or regulatory responses, are required.
3. **Instructor-Controlled Evaluation:** As essay responses are manually graded, instructors have full control over scoring based on rubrics, criteria, or subjective analysis, ensuring fair and context-sensitive evaluation.

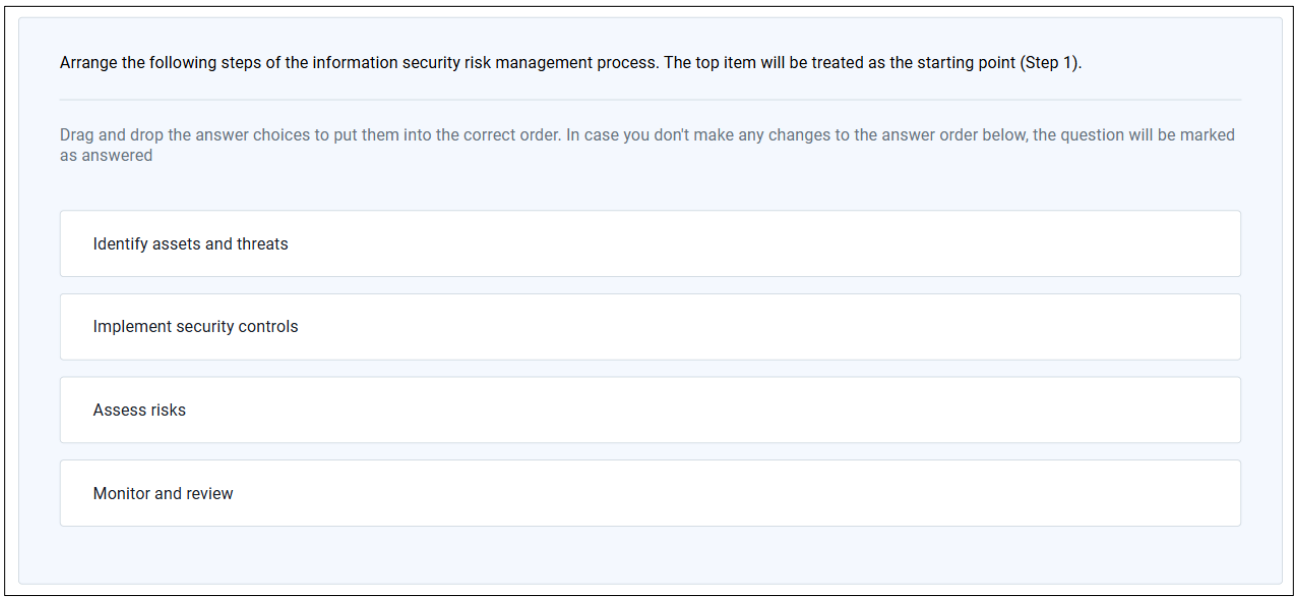
**How Essay Questions Work**

1. **Selecting the Question Type**: To create an essay question, the instructor selects this type from the list of available question formats. The interface allows the instructor to input the question text and apply formatting through the advanced editor, including tables, multimedia, or formulas.
2. **Optional PDF-Based Answer Submission**: If preferred, instructors can enable the "Answer question by filling out a PDF document" option. In this mode, candidates complete the essay by downloading and editing a provided fillable PDF form. The instructor uploads this editable PDF during question configuration.
3. **Configuring the Question Display**: Instructors may add multimedia elements, mathematical notation, or structured content to enrich the question. Feedback may also be configured to be shown after the test submission or during review, depending on test settings.
4. **Saving and Adding to a Test or Pool:** Once finalized, the essay question can be added to a test or stored in a question pool for future use. The instructor can cancel the creation process at any point if changes are needed.

Essay questions are a powerful tool in YouTestMe, enabling clients to conduct qualitative evaluations and tailor their testing approach to fit complex, open-ended assessment needs.

### 14.1.4 Ordering Questions

Ordering questions in **YouTestMe** require candidates to arrange a series of items in the correct sequence. This question type is particularly effective in evaluating logical thinking, process knowledge, and the understanding of chronological or procedural steps. Commonly used in assessments involving workflows, lifecycles, or ranked information, ordering questions add diversity and depth to any test.




**Benefits of Ordering Questions**

1. **Assessment of Process Understanding:** Ordering questions enable instructors to test whether candidates understand the correct flow or sequence of a process, which is often not measurable through standard question types.
2. **Objective Evaluation**: Responses are automatically graded based on whether the submitted order matches the predefined correct sequence, ensuring consistency across candidate attempts.
3. **Enhanced Engagement**: The interactive drag-and-drop format (or selection-based, depending on device settings) helps maintain candidate focus and supports various learning styles, particularly in visual or applied subjects.

**How Ordering Questions Work**

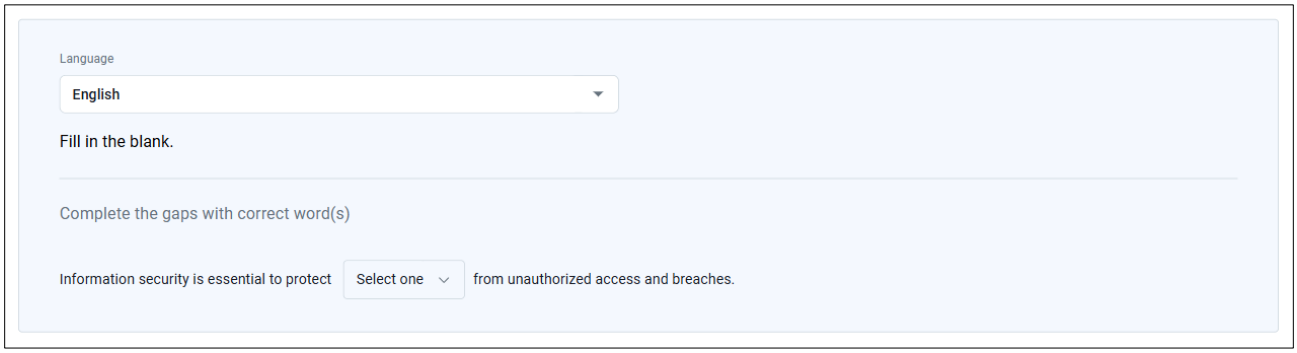
1. **Question Creation**: Instructors begin by selecting the Ordering question type from the list of available formats. In the Question Text field, the instructor enters the prompt that defines the task. This may describe a process to arrange, a timeline to reconstruct, or a ranking to apply. Formatting tools are available to apply rich text or insert multimedia files and formulas into the question for additional context or clarity.
2. **Defining the Ordered Items:** Instructors then list the items that need to be arranged, entering each element as a separate answer option. The correct order must be defined during creation; YouTestMe uses this order to evaluate the candidate's response. Items can be rearranged manually by dragging them into the desired order during the configuration phase.
3. **Feedback and Enhancements:** Instructors may add feedback at the question level to help candidates understand the correct logic after submission. If supported by the test settings, partial scoring may be configured—crediting candidates for each item placed in the correct position.

4. **Test Integration and Use:** Once finalized, the question can be added directly to a test or stored in a question pool for future use. During delivery, candidates interact with the question by placing items in order using drag-and-drop or selection controls, depending on the interface used.

Ordering questions in YouTestMe offer instructors a robust method for evaluating a candidate's ability to understand and apply structured knowledge, making them a valuable component in a well-rounded test design.

### 14.1.5 Fill in the Blanks Questions

Fill in the blanks questions in **YouTestMe** are designed to assess candidate understanding through direct input, offering three flexible response modes: free-form text, predefined options, and numerical values. These questions are especially useful for testing recall, factual accuracy, and mathematical calculations. Instructors can place multiple blanks within a single question and configure each one with unique rules, enhancing test diversity and accuracy.




**Benefits of Fill in the Blank Questions**

1. **Precise Knowledge Evaluation:** Fill in the blanks questions allow instructors to assess not just recognition, but also recall and accurate input of knowledge, which provides deeper insight into candidate understanding.
2. **Flexible Response Types:** With support for text, numerical, and predefined dropdown options, this format is adaptable to various subjects, from language and science to finance and engineering.
3. **Automated, Rule-Based Scoring:** Instructor-defined validation rules ensure that candidate responses are scored objectively and automatically, improving consistency and saving time.

**2. How Fill in the Blanks Questions Work**

1. **Question Creation**: The instructor selects Fill in the Blanks from the list of question types and enters the question title and text. The question can include multiple blanks, each marked in the preview window and associated with a unique index for configuration. Multimedia files, tables, or formulas can be embedded using the advanced editor.
2. **Response Configuration**: Instructors must choose one of three input formats for each blank. Free-form text: Candidates manually type the answer using characters and numbers. Instructors define

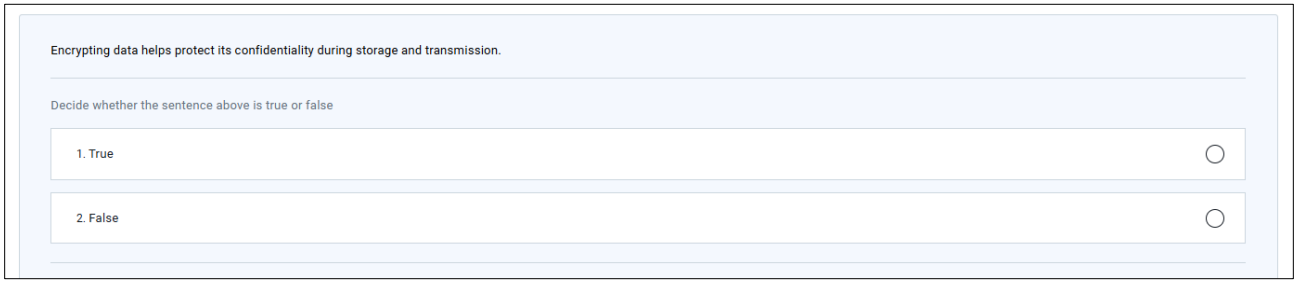
the correct input and can set case sensitivity, character limits, and whitespace handling. Numerical: Candidates enter numeric values. Instructors can choose between exact value matching (e.g., "545.59") or in-bound matching (e.g., values between "540.00" and "550.00"). Decimal precision, minimum, and maximum allowed values can also be specified. Offered answers: Candidates select one option from a dropdown list. Instructors define all possible answers and check the correct one.

3. **Answer and Layout Management**: Instructors can configure each blank's placement by editing the surrounding text. Each part of the question text can contain a blank, with text before and after. The order of blanks and text parts can be adjusted using drag-and-drop controls. Incorrect or unused entries can be removed, and additional parts can be added as needed.
4. **Finalizing and Use:** Once configured, the question can be added directly to a test or stored in a question pool. During the test, candidates interact with the input fields and YouTestMe automatically validates their responses according to the defined logic.

Fill in the blanks questions offer instructors a high level of control and granularity in assessing knowledge, while maintaining ease of use and efficient test delivery through YouTestMe 's intuitive interface.

### 14.1.6 True/False Questions

True/false questions in **YouTestMe** are a simple yet effective way to assess a candidate's understanding of factual statements. Each question presents a statement, and the candidate must evaluate it as either *True* or *False*. This format is ideal for quickly testing comprehension, identifying misconceptions, or verifying basic knowledge across a wide range of subject areas.




**Benefits of True/False Questions**

1. **Efficiency in Testing:** True/false questions are quick to answer and easy to understand, making them well-suited for high-volume or time-limited tests.
2. **Straightforward Configuration and Scoring:** With only two possible responses, these questions are fast to create, automatically scored, and ideal for baseline knowledge checks.
3. **Versatility in Usage:** They can be used as standalone items or embedded alongside more complex question types to create a balanced assessment.

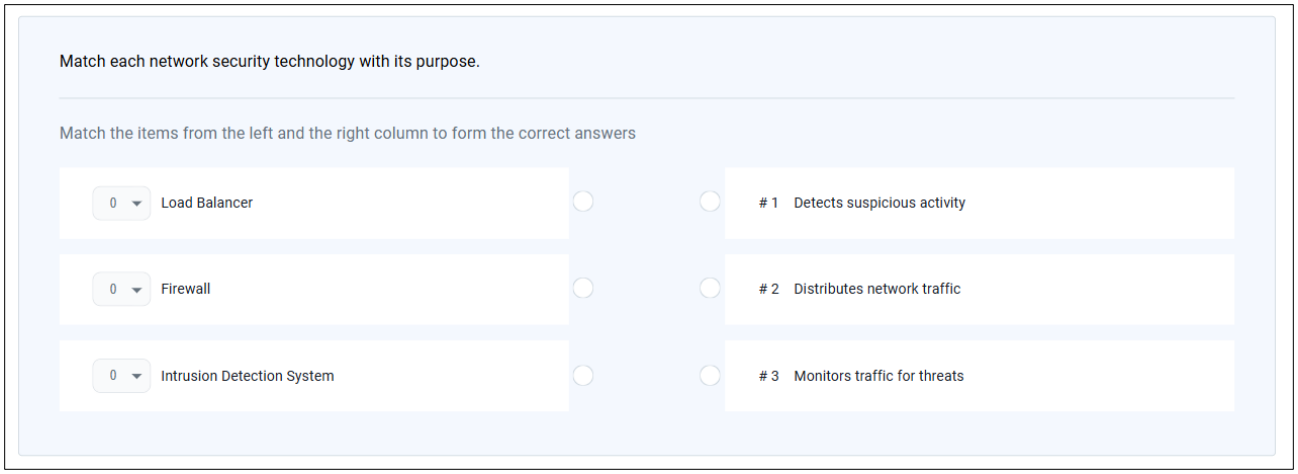
**How True/False Questions Work**

1. **Question Creation:** Instructors select True/False from the list of available question types.
   A new screen is displayed, prompting the instructor to enter the Question Text—the statement to be evaluated. Advanced formatting options are available through the rich-text editor, allowing the instructor to include multimedia content such as images, audio, video, tables, or mathematical formulas.
2. **Answer Configuration:** Unlike other question types, the answer options (True and False) are automatically generated and fixed. The instructor selects which of the two is the correct answer. Optional feedback can be added to explain the reasoning behind the correct answer. This feedback may be shown after the candidate submits their answer, depending on test settings.
3. **Finalization and Integration:** The instructor can preview the question before adding it to a test or saving it to a question pool. The question is fully compatible with test randomization, meaning true/false items can be mixed with other types and shuffled as needed. During test delivery, proctors may oversee the session, while YouTestMe handles automatic scoring and results reporting for each candidate.

True/false questions offer a clear, efficient way to measure factual accuracy and concept clarity, making them a valuable part of any test created in YouTestMe.

### 14.1.7 Matching Questions

Matching questions in **YouTestMe** require candidates to correctly pair related items from two lists—one displayed on the left and the other on the right. This format is ideal for assessing associative knowledge such as terminology, definitions, causes and effects, or equivalent concepts across domains. Matching questions promote cognitive engagement by challenging candidates to recognize relationships between concepts, not just recall facts.




**Benefits of Matching Questions**

1. **Efficient Evaluation of Associative Knowledge:** Matching questions are effective for testing a candidate's ability to associate related terms, categories, or items, which is essential in fields such as language learning, medicine, law, and business.
2. **Compact Format for Broad Coverage:** A single matching question can cover multiple subtopics within a subject, reducing the number of separate questions needed while still maintaining comprehensive test coverage.
3. **Objective, Automated Grading:** Each correct pair is evaluated automatically and individually, enabling accurate scoring without instructor intervention. Partial credit can be awarded if configured by the instructor.

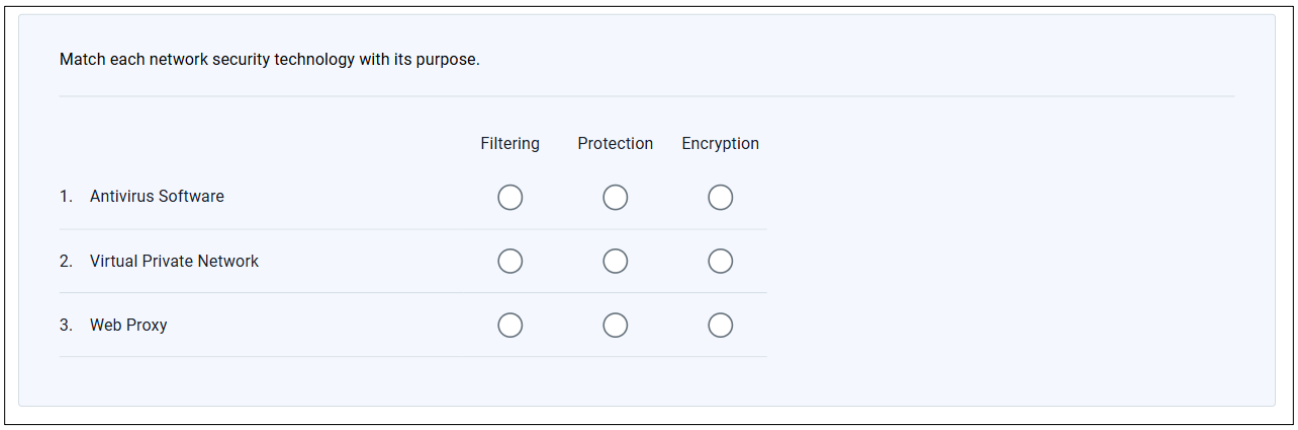
**How Matching Questions Work in YouTestMe**

1. **Question Setup:** The instructor selects Matching from the available question types.
   In the Question Text field, a general instruction or context for the matching task is provided. Advanced formatting tools are available to include multimedia (images, audio, video), tables, or formulas within the question prompt for greater clarity or subject specificity.
2. **Creating Pairs:** The instructor creates a list of items on the left side and their corresponding matches on the right. Each left-side item must be correctly paired with one right-side item. The number of pairs is flexible and can be adapted to the scope of the test.
3. **Display and Interaction:** During the test, candidates view the items on the left and select the correct corresponding value from a dropdown menu or matching list on the right. The matching interface is intuitive and responsive, supporting drag-and-drop or menu-based selection depending on device type and configuration.
4. **Validation and Feedback:** Instructors can preview and test the matching question before adding it to a test or question pool. Optional feedback can be configured at the item level or for the question overall, depending on test settings.

Matching questions in YouTestMe are a powerful way to assess understanding of related concepts while offering flexibility, automation, and ease of use for both instructors and candidates.

### 14.1.8 Matrix Questions

Matrix questions in **YouTestMe** allow instructors to present a series of statements (rows) that must be evaluated or answered based on a common set of response options (columns). Each statement is matched with only one correct answer, making this format ideal for evaluating structured knowledge, opinion scales, or scenario-based analysis within a compact and user-friendly interface.




**Benefits of Matrix Questions**

1. **Efficient Assessment of Multiple Items:** Matrix questions allow instructors to assess several related items within a single interface, reducing redundancy and test length while increasing content coverage.
2. **Consistent Structure and Simplified Candidate Experience:** Because all sub-items share the same set of response options, candidates can focus on the content of each statement without needing to adapt to different formats.
3. **Ideal for Categorization and Concept Differentiation:** This format is well-suited for distinguishing between concepts, such as identifying correct classifications, rating levels of agreement, or selecting appropriate responses in aligned scenarios.

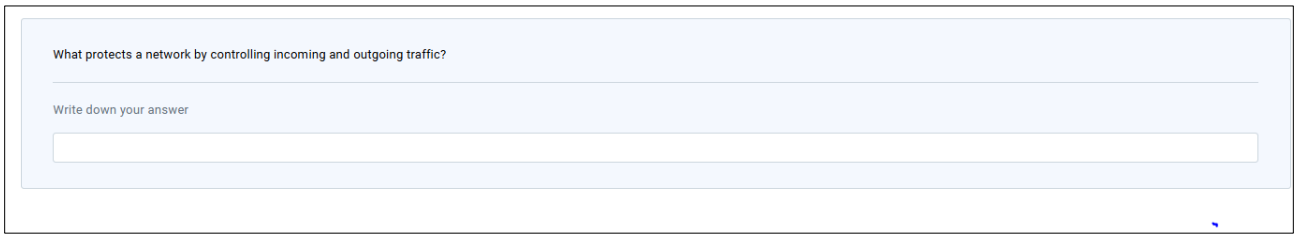
**How Matrix Questions Work**

1. **Question Initialization:** Instructors begin by selecting Matrix from the list of available question types.
   The instructor enters the overall Question Text to provide context for the matrix—such as a general instruction or scenario.
2. **Configuring Rows and Columns:** Each row in the matrix represents an individual statement or sub-question that the candidate must evaluate. The instructor defines a uniform set of column choices (e.g., True/False, Agree/Disagree, or specific categories) that apply across all rows.
   For each row, the instructor selects the correct answer from the available column choices.
3. **Formatting and Enhancements:** Using the advanced editor, instructors may format the matrix or embed multimedia, such as images or tables, to add context or increase complexity. Optional feedback can be configured per row or for the entire matrix, depending on how test feedback is set up.
4. **Scoring and Preview:** Each row is scored independently, and candidates must select the correct answer for each to receive full credit. Once completed, the matrix question can be added to a test or stored in a question pool for later use.

Matrix questions in YouTestMe provide an efficient way to assess structured thinking and comparative knowledge while simplifying both test design and candidate experience.

### 14.1.9 Open-Ended Questions

Open-ended questions in **YouTestMe** are designed to capture free-form, descriptive responses from candidates. Instead of selecting from predefined options, candidates are required to construct their own answers in response to a prompt. This format is ideal for evaluating analytical thinking, problem-solving, written communication skills, or subject matter comprehension that cannot be measured through objective formats.




**Benefits of Open-Ended Questions**

1. **Deeper Insight into Candidate Understanding:** Open-ended questions assess a candidate's ability to articulate, explain, and apply knowledge, offering a more nuanced evaluation of their skills and reasoning.
2. **Supports Critical Thinking and Expression:** This format allows candidates to demonstrate original thought and develop structured responses, especially valuable in academic, professional certification, and high-stakes environments.
3. **Customizable and Versatile Use:** Instructors can use open-ended questions across disciplines—from essay-style questions in humanities to problem-solving explanations in technical subjects.

**How Open-Ended Questions Work**

1. **Question Setup:** Instructors begin by selecting Open-Ended from the list of question types.In the Question Text field, the instructor defines the prompt, scenario, or question that candidates must respond to. The text field supports advanced formatting, tables, multimedia (images, audio, video), and mathematical formulas to clarify complex prompts.
2. **Candidate Interaction:** During the test, candidates are provided with a text box where they can write their response. The size of the answer field is configurable, and response length is unrestricted unless character limits are applied during test setup. Candidates may also copy-paste content into the field if permitted by test rules, and formatting options can be restricted or enabled depending on the test settings.
3. **Review and Grading:** Open-ended responses are manually reviewed and graded by instructors. YouTestMe provides a dedicated interface for evaluating and scoring open-ended questions, with

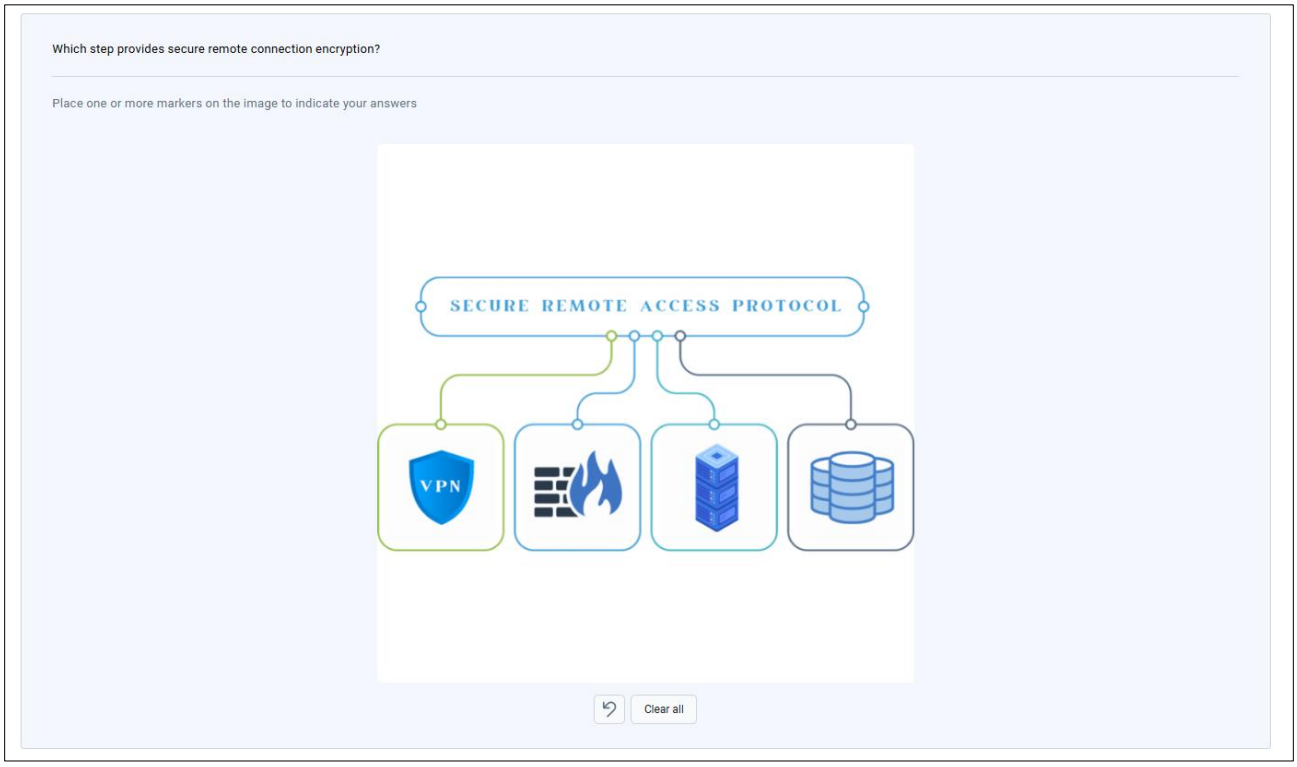
options to leave comments or apply rubrics. Scores can be added individually or in bulk, depending on instructor preferences and test volume.

4. **Integration into Test Workflow:** Once created, the open-ended question can be added to a test or saved in a question pool. In a live or proctored environment, proctors monitor candidate behavior, while YouTestMe captures all inputs for secure storage and evaluation.

Open-ended questions are essential for assessing depth of knowledge and critical thinking, providing a qualitative layer of insight in test evaluation within YouTestMe.

### 14.1.10 Hot Spot Questions

Hot spot questions in **YouTestMe** allow candidates to respond by clicking on specific areas of an image. This visually interactive question type is ideal for evaluating practical knowledge, visual recognition, spatial understanding, or scenario-based tasks where selecting the correct region is more effective than text-based input.




**Benefits of Hot-Spot Questions**

1. **Visual and Practical Assessment:** Hot spot questions are particularly useful in domains such as medicine, engineering, geography, and design, where visual cues are essential. They allow instructors to assess knowledge by having candidates identify components, locations, or patterns directly on an image.

2. **Increased Engagement and Realism:** This question type introduces a dynamic, image-based interaction that mirrors real-world conditions, making tests more engaging and representative of practical tasks.
3. **Clear, Automated Scoring:** Answers are evaluated based on whether the candidate selected the correct pre-defined area(s), enabling immediate and objective grading without manual review.

**How Hot Spot Questions Works:**

1. **Question Creation:** The instructor begins by selecting Hot Spot from the list of question types.In the Question Text field, the instructor enters the prompt that describes what the candidate needs to identify or select on the image.  options, tables, multimedia, and formulas can be added using the advanced editor if needed for clarity.
2. **Image Configuration:** The instructor uploads the desired image file, which serves as the background for interaction. At any point, the image can be replaced without restarting the setup.
3. **Defining Hot Spot Areas:** Using built-in tools, the instructor selects a shape (rectangle or circle) to define the clickable areas that represent the correct answers. Multiple areas can be defined if required, and the number of correct selections can be specified. Instructors can undo recent actions or clear all selected areas to start over.
4. **Finalization and Test Integration:** After configuration, the instructor can add the question to a test or store it in a question pool. During test delivery, candidates will view the image and respond by clicking on the designated area(s), which are then automatically evaluated based on accuracy.

Hot spot questions in YouTestMe provide an intuitive and visual method for testing knowledge, particularly in fields where spatial accuracy and image interpretation are key.

### 14.1.11 Video Hotspot Questions (Roadmap Feature)

Video hotspot questions in YouTestMe provide a dynamic and interactive approach to testing by requiring candidates to identify specific elements or actions within a video. This functionality is particularly effective for tests that assess practical knowledge or situational awareness, such as identifying hazards during a driver's license test. By incorporating video content into tests, YouTestMe enhances realism and engages candidates in a more immersive assessment environment.

**Benefits of Video Hotspot Questions**

- **Real-World Scenario Testing**: Video hotspot questions allow instructors to present candidates with realistic scenarios, making tests more relevant to real-world applications.
- **Enhanced Engagement**: Interactive video elements keep candidates actively involved, improving their focus and test performance.
- **Objective Grading**: Answers are automatically compared with pre-defined correct responses, eliminating the need for manual grading and ensuring consistent evaluations.

- **Flexible Configuration**: Instructors can define multiple hotspot areas within a single video and specify the timeframes during which candidates must respond, enabling comprehensive and adaptable test designs.
- **Improved Test Integrity**: Automated grading reduces the risk of human error, increasing reliability and fairness.

**How Video Hotspot Questions Work**

1. **Question Creation**: Instructors upload a video and define one or more hotspot areas directly on the video. These hotspots can span specific timeframes as needed.
2. **Candidate Interaction**: During the test, candidates watch the video and click on the correct hotspot within the designated timeframe to submit their answers.
3. **Automated Grading**: Candidate responses are automatically matched against the pre-defined correct hotspots, providing instant scoring without instructor intervention.
4. **Customizability**: Administrators can configure the number, position, and duration of hotspots, tailoring the question to specific requirements.

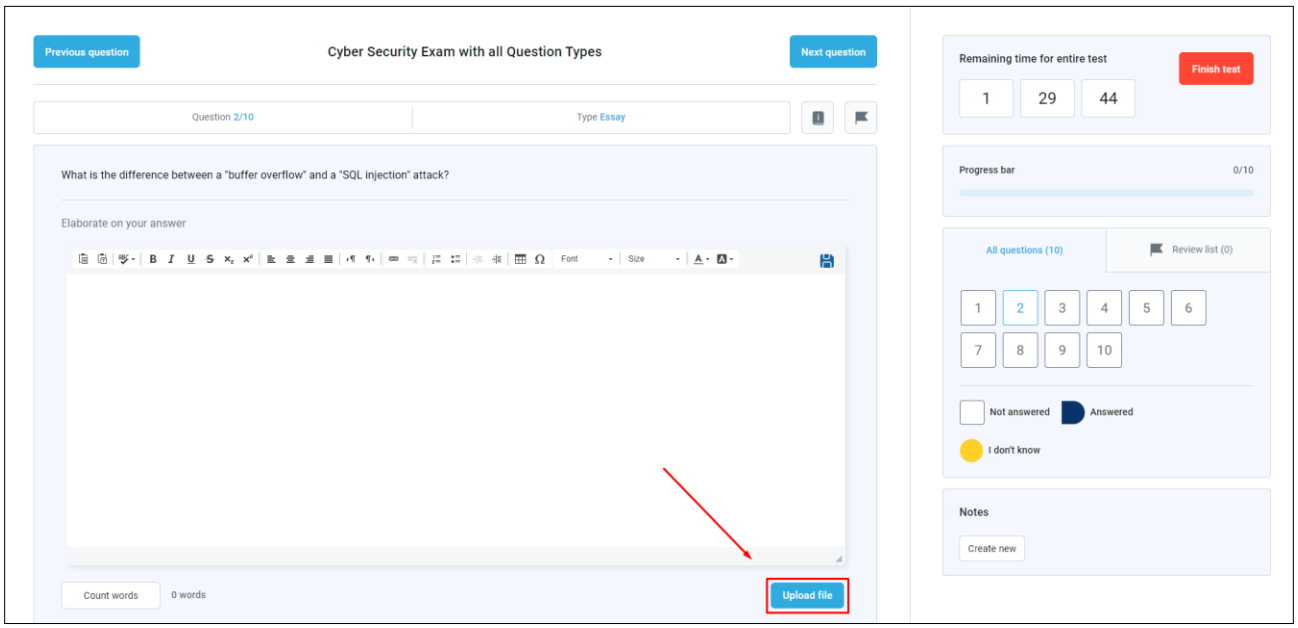
## 14.2 Uploading Responses in Microsoft Office Formats and Other File Types

**Overview and Benefits of Document Upload Functionality**

YouTestMe enables candidates to upload and submit documents in Microsoft Office formats such as Excel, PowerPoint, and Word, along with other file types including images, audio, video, PDFs, and zip files. This feature provides exceptional flexibility, allowing candidates to deliver comprehensive and detailed responses. By supporting a wide range of file formats, YouTestMe enhances the assessment process, making it ideal for various industries that require multimedia elements, data analysis, and complex presentations. The ability to upload different formats allows candidates to better showcase their skills, which can contribute to higher test scores when multiple formats are utilized effectively.

**How the Document Upload Functionality Works**

1. **Uploading Attachments:** Candidates can upload a variety of file types during a test by clicking the *Upload file* option. They can select relevant files, including Microsoft Office documents, images, audio, video, PDFs, and zip files, from their device. This functionality allows candidates to provide rich, multimedia responses. Files can be removed if necessary by clicking the *Remove file* option.




2. **Instructor Review:** After the test is completed, instructors can download and review all uploaded files by clicking the *Download attachment* button. This allows for thorough assessment of the candidate's response across multiple formats.

3. **Customization:** Administrators have the ability to customize the system by enabling or disabling file uploads for specific tests, ensuring the flexibility to meet varying test requirements.

## 14.3 Importing Questions

YouTestMe facilitates the efficient import and storage of testing items on the testing platform. This includes the creation of individual test forms, such as capability tests, by randomly selecting test items based on predefined parameters.

1. **Bulk Import Options**: Administrators can import large volumes of test items using **predefined Excel templates**, **QTI format**, or **JSON**. This emphasis on multiple formats ensures maximum flexibility, allowing users to choose the import method that best suits their organizational needs.

2. **Custom Importers**: To enhance the transition from legacy systems to YouTestMe, custom importers have been developed, streamlining the process and ensuring a smooth integration of existing question banks.

3. **Metadata Management**: All question data and metadata can be imported, even if there are mismatches in the fields. Administrators can create and utilize custom question properties, allowing organizations to capture specific data relevant to their testing requirements.

This robust functionality ensures that instructors can easily manage their question banks and create tailored assessments that meet diverse testing needs.

### 14.3.1 Importing Testing Questions by the YouTestMe Team

YouTestMe offers two approaches for importing testing questions by the YouTestMe Team, allowing flexibility based on user preferences:

1. **Manual Import**: Questions can be imported manually, with a charge applied per item. Customers can request additional imports as needed, allowing for ongoing updates.
2. **Custom Importers**: YouTestMe can create custom importers that accommodate the customer's current question format. This enables customers to import questions independently, without requiring future assistance from our team. The custom importers streamline the process and ensure compatibility with your existing data.

## 14.4 Adding, Removing, and Archiving Questions

### 14.4.1 Adding and Removing Questions

In YouTestMe, instructors or any role with the appropriate privileges can add or remove questions at any time. This flexibility allows for the continuous update and customization of tests to meet evolving requirements. The added questions become immediately available for inclusion in future tests.

### 14.4.2 Archiving Questions

YouTestMe also offers the option to archive questions without permanently deleting them. Using the "frequency factor" parameter, instructors can set a question to "Never" appear in tests, effectively archiving it. This feature allows administrators to maintain a complete record of all questions while controlling their visibility and use.

#### 14.4.2.1 Frequency Settings

The frequency factor parameter further allows administrators to control how often a question appears in tests. Settings like "Always," "Often," or "Rarely" enable fine-tuning of question selection, ensuring that frequently used questions or specialized items are appropriately distributed across tests. This ensures balanced test content while preserving archived questions for potential future use.

## 14.5 Editing Questions

YouTestMe allows full flexibility in editing questions, enabling instructors to modify all parameters at any point. This feature provides adaptability to ensure that tests remain relevant and up to date.

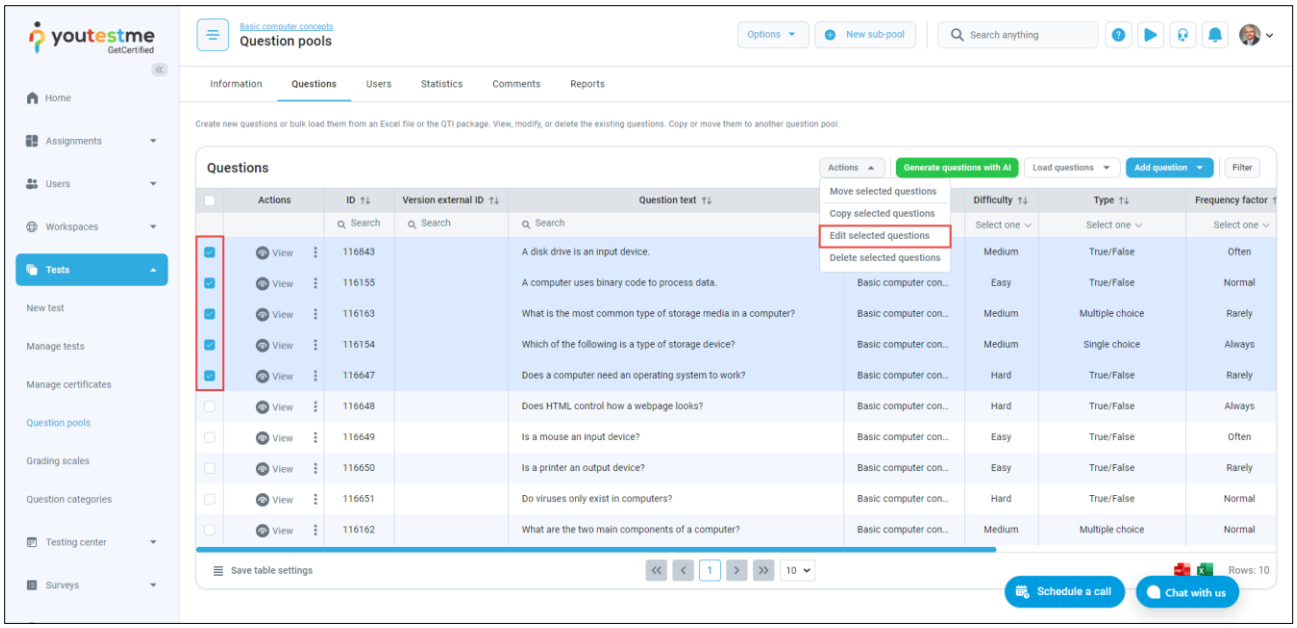
1. **Editing Process**: Questions can be edited at any time by instructors, and any changes made will be applied immediately to newly started test attempts. This ensures that candidates taking future tests will always interact with the most current version of the questions.

2. **Archiving and Version Control**: When a question is edited, the previous version is automatically archived. Instructors and administrators can access this archived version through the editing log, which provides a full history of changes for reference or auditing purposes. This ensures transparency and traceability of all modifications made to questions.

3. **Immediate Updates**: As soon as a question is updated, the new version will be instantly applied to all future test attempts. However, any tests that are already in progress will not be affected by these changes, ensuring fairness for candidates.

### 14.5.1 Bulk Updating Question Attachments (Roadmap Feature)

YouTestMe offers a streamlined process for managing question attachments across multiple tests. This feature allows instructors and administrators to efficiently update attachments, such as images or diagrams, across all associated questions, ensuring consistency and accuracy.




**Benefits**

1. **Improved Efficiency**: Instructors can manage attachments from a dedicated interface, similar to a library, designed specifically for this purpose.
2. **Consistency Across Tests**: Updating an attachment automatically applies the changes to all associated questions, ensuring that candidates are always presented with the latest information.
3. **Version Control**: Historical data is preserved by archiving older question versions with outdated attachments, providing a reliable record of changes.
4. **Ease of Use**: The process is simplified through an intuitive interface, requiring only a single action to update attachments across all relevant questions.

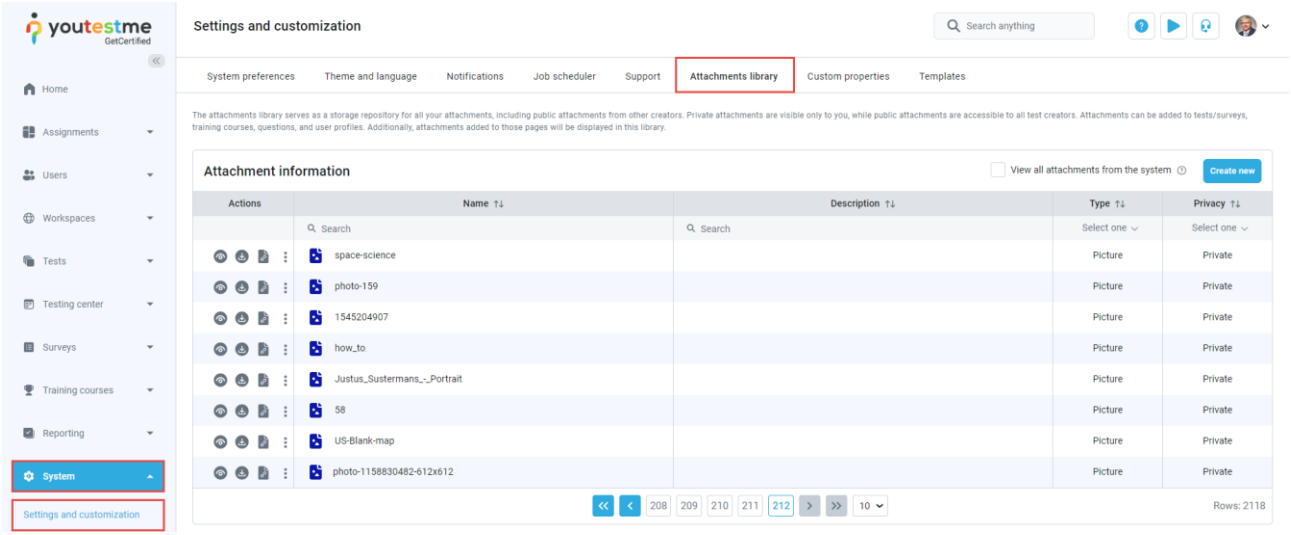
5. **Enhanced Test Accuracy**: This functionality is particularly valuable for tests involving frequently updated materials, such as road signs, technical diagrams, or legal references.

**How It Works**

1. **Identify Questions**: The system identifies all questions using a specific attachment.
2. **Update Attachments**: With one click, instructors or administrators can replace the old attachment with the updated version.
3. **Archive Old Versions**: The previous versions of questions are automatically archived to maintain historical data.
4. **Activate New Versions**: Updated questions become the current versions used in test generation.

#### 14.5.1.1 Tagging Attachments with Metadata (Roadmap Feature)

YouTestMe enables efficient management of attachments through metadata tagging, enhancing organization and usability. Metadata, such as technical terms, can be associated with each attachment, facilitating better search, filtering, and utilization during test creation.




**Benefits**

1. **Enhanced Searchability**: Metadata tags allow instructors and administrators to quickly locate specific attachments in the attachment library.
2. **Improved Organization**: Tags provide a structured approach to categorizing attachments, making it easier to manage large libraries.
3. **Flexibility**: Metadata can be parametrically added, modified, or deleted, ensuring adaptability to changing client requirements.

**How It Works**

1. Attachments are stored in the centralized attachment library.
2. Metadata, such as technical terms, can be added to each attachment.
3. Instructors and administrators can edit or delete metadata as needed.
4. Metadata supports streamlined filtering and retrieval during question creation.

This feature ensures seamless attachment management, optimizing test creation workflows for clients.

## 14.6 Question Metadata

YouTestMe allows administrators and instructors to manage and edit question metadata to ensure tests are properly structured and tailored to specific needs. This feature provides flexibility for organizing questions based on key characteristics such as difficulty, type, and other essential parameters. Through the Question Pools module, users can efficiently manage question metadata using an intuitive interface that supports individual or bulk editing.

YouTestMe supports the editing of various metadata parameters that contribute to the organization and functionality of tests. The most commonly edited parameters include:

- **Difficulty Level**: Instructors can assign difficulty labels to questions, helping to create balanced tests that measure different levels of candidate knowledge. Difficulty levels ensure that tests are neither too challenging nor too easy for candidates.

- **Question and Answer Text**: Both the question and answer content can be edited to maintain accuracy and clarity, ensuring the information presented is up-to-date and relevant.

- **Answers**: Instructors can modify correct and incorrect answers, as well as change answer formats when needed.

- **Frequency Factor**: This parameter allows instructors to control how often questions appear in tests, with options like "Always," "Often," "Rarely," or "Never," providing a flexible way to manage question rotation.

- **Points and Penalties**: Each question can be assigned a specific point value, as well as penalties for incorrect answers, enabling instructors to fine-tune the scoring system of their tests.

- **Question Feedback**: Instructors can provide feedback that will be displayed to candidates after they answer the question, offering educational value and improving the overall test experience.

- **Question Duration**: The time limit for answering each question can be set, ensuring that time-bound assessments are effectively managed.

- **Tags**: Tags can be added to questions, allowing instructors to categorize questions based on topics or themes for easier retrieval during test creation.

- **Attachments and Translations**: Questions can include attachments such as images or documents, and can also be translated into multiple languages to accommodate a diverse candidate base.

- **Custom Question Properties**
  In addition to the standard metadata fields, YouTestMe allows users to create custom question properties to capture any additional information needed. This flexibility ensures that any unique requirements for tests are fully supported, providing comprehensive control over question management.

By offering these diverse metadata management capabilities, YouTestMe enables instructors and administrators to create well-organized, adaptable tests that suit the needs of different industries and candidate groups.

## 14.7 Question Validity Period (Roadmap Feature)

The "Question Validity Period" feature in YouTestMe offers significant advantages for instructors and administrators seeking to maintain the quality and relevance of their test content:

1. **Ensures Up-to-Date Content:** By setting a validity period for questions, instructors can ensure that only accurate and current information is used in tests, reflecting the latest standards and practices.
2. **Streamlines Test Management:** The automatic transition of questions to an "inactive" status after their validity period eliminates the need for constant manual updates, saving time and reducing administrative overhead.
3. **Enhances Test Quality:** Preventing outdated or irrelevant questions from being used ensures that tests remain fair, challenging, and aligned with learning objectives.
4. **Customizable for Client Needs:** This feature allows for adaptability across industries and testing scenarios, enabling clients to manage their question pools efficiently.

**How the Question Validity Period Works**

1. **Setting the Validity Period:**
   - Instructors or administrators can specify a start and end date for each question during the creation or editing process.
   - Questions remain active and eligible for use in tests during the validity period.
2. **Automatic Status Update:**
   - When the validity period expires, the question's status changes automatically to "inactive."
   - Inactive questions will no longer appear in test creation workflows.
3. **Manual Override Option:**

- Administrators have the flexibility to deactivate or reactivate questions manually as needed, providing additional control over the question pool.

By leveraging the Question Validity Period, YouTestMe empowers clients to maintain an organized, dynamic, and relevant repository of test questions, ensuring the highest standards of testing excellence.

## 14.8 Conflicting Questions (Roadmap Feature)

The "Conflicting Questions" feature in YouTestMe ensures the integrity and fairness of tests by preventing contradictory or related questions from appearing in the same test version. This functionality streamlines test generation, reduces errors, and enhances the overall quality of assessments.

**Benefits of the Conflicting Questions Feature**

1. **Enhanced Test Integrity**: By excluding conflicting questions from the same test version, instructors can eliminate the risk of presenting candidates with questions that may provide unintended hints or create confusion.
2. **Improved Test Quality**: The feature allows instructors to design clear and coherent tests, ensuring candidates receive a consistent and professional testing experience.
3. **Time-Saving Automation**: The automatic exclusion of conflicting questions simplifies test creation, saving instructors time and effort during test preparation.
4. **Flexibility for Diverse Needs**: Instructors can define multiple conflicting relationships for a single question, enabling the creation of tailored tests that align with specific testing requirements.

**How the Conflicting Questions Feature Works**

1. **Defining Conflicting Relationships**: During question creation, instructors can assign unique IDs to conflicting questions. These IDs establish a link that ensures the defined questions cannot appear together in the same test version.
2. **Automated Test Generation**: When generating a test, YouTestMe automatically excludes conflicting questions. If one of the conflicting questions is added to a test version through random generation, its conflicting questions are excluded to maintain the integrity and structure of the test.

This feature ensures that tests are accurate, fair, and aligned with the client's expectations, providing a seamless experience for candidates and instructors alike.

## 14.9 Additional Functionalities for User-Friendly Question Pool Management

YouTestMe offers a range of functionalities designed to simplify and enhance the management of question pools (banks of items), ensuring that instructors and administrators can efficiently organize, review, and optimize test content. Below are the key features that contribute to a user-friendly experience:

1. **Question Statistics Analysis**
   Instructors can analyze detailed question statistics, such as the success ratio and average time candidates take to answer each question. This data allows instructors to refine the quality of questions and adjust difficulty levels based on real-time performance.

2. **AI-Generated Questions**
   YouTestMe provides an option to leverage artificial intelligence to generate questions by analyzing uploaded files. This feature streamlines the content creation process and ensures that relevant questions can be quickly added to the test bank.

3. **Hierarchical Question Organization**
   The platform supports organizing questions into a hierarchical structure, such as folders and subfolders. This helps instructors group related questions and navigate the question pool more efficiently when creating tests.

4. **Question Review Process**
   Instructors can set up a formal review process for questions. This ensures that questions go through necessary revisions or approvals before they are used in tests, guaranteeing accuracy and quality control.

5. **Import/Export Functionality**
   YouTestMe allows easy import and export of questions, enabling instructors to transfer content between different test environments. This feature is particularly useful when scaling tests or migrating question pools from other systems.

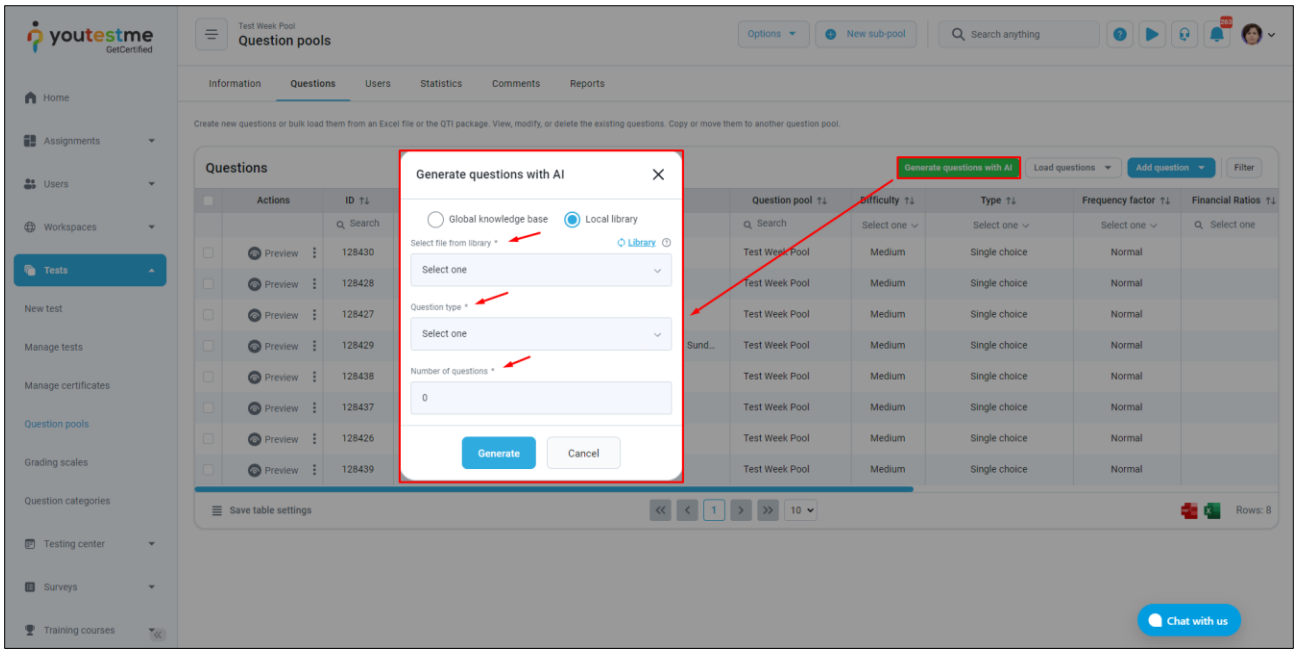
6. **Tags and Custom Properties**
   The system supports the use of tags and custom properties to categorize questions, allowing for effective filtering during test creation. Instructors can easily locate questions based on topics, difficulty levels, or other metadata.

7. **Bulk Editing of Questions**
   For efficiency, YouTestMe includes the ability to bulk edit multiple questions at once. This is especially beneficial when making widespread changes, such as updating the difficulty level or assigning points to a large set of questions.

These additional functionalities in YouTestMe enhance the user experience by providing tools that ensure seamless management of question pools, from content creation to analysis and review, ultimately supporting the delivery of well-organized and adaptable tests.

# 15 Generating Questions using AI

The YouTestMe item creation process relies on groundbreaking item authoring technology developed by the YouTestMe Research & Development Team in 2023. This cutting-edge technology empowers question pool managers to seamlessly incorporate various resources into the YouTestMe platform, such as books, articles, transcripts, and more. It further enables them to instruct the system to generate an unlimited number of questions across a diverse range of question types.




**Functionality**

The system's functionality is as follows:

1. Resource Analysis: Upon uploading content, the system performs a comprehensive analysis of the provided materials.
2. Question Generation: Based on the content analysis, the system generates questions, including:
    a. Formulating the questions
    b. Identifying and marking the correct answer(s)
    c. Generating incorrect answer options (distractors)

**Technological Foundation**

This innovative methodology leverages integration with OpenAI's GPT series (Generative Pre-trained Transformer), a highly regarded language model exemplified by ChatGPT. The artificial intelligence embedded within the system processes the uploaded resources and formulates questions based on the information contained within them.

**Key Benefits**

The adoption of this approach yields several notable advantages:

1. **Time Efficiency**: By automating the question generation process, this technology significantly reduces the time burden on item authors. This results in substantial time savings.
2. **Dynamic Question Pool**: The automated process allows for more frequent updates to your question pools. This ensures that your assessments remain current and aligned with the latest knowledge and materials.

**User Control**

While AI-generated questions form a solid foundation, item authors retain the flexibility to fine-tune and customize questions to meet specific requirements. This hybrid approach enables item authors to enhance the quality of questions while still benefiting from the substantial time savings offered by the automated system.

**Seamless Updates**

The system enables the effortless generation of new questions by simply uploading the most recent manuals and resources and instructing the AI to generate a new batch of questions. This approach minimizes the time gap between the release of new materials and the commencement of assessments based on these resources.

# 16 Quality Assurance of Questions

Ensuring the reliability and validity of evaluation items is paramount in maintaining the integrity of assessments conducted through the YouTestMe platform. Our process for quality assurance and improvement is meticulous, designed to meet the highest standards of assessment validity and reliability.

1. **Initial AI Generation**

Upon uploading resources and instructing the system to generate questions, the AI-driven process begins. During this phase, the system generates questions, marks correct answers, and formulates distractors. While the AI's capabilities are impressive, it is important to recognize that this initial output serves as a foundation.

2. **Expert Review**

To enhance the quality of generated questions and ensure their alignment with the intended learning objectives, an expert review stage is incorporated. Experienced subject matter experts thoroughly evaluate

the questions generated by the AI. This step is essential for addressing specific nuances, clarifications, or domain-specific considerations that the AI might not fully capture.

3. **Item Analysis**

Statistical analysis techniques are applied to assess the performance of generated items. This includes analyzing item difficulty, discrimination, and reliability measures. Items that do not meet predefined statistical criteria are flagged for further review and potential refinement.

4. **Continuous Monitoring**

The quality assurance process is ongoing. Regular audits and assessments of the question pool are conducted to identify and rectify any potential issues that may arise. This proactive approach ensures that the question pool remains reliable and valid throughout its lifecycle.

5. **User Feedback Integration**

We encourage user feedback regarding the quality and effectiveness of assessment items. User input is carefully considered in the continuous improvement process, allowing us to address specific user concerns and preferences.

**Conclusion**

The YouTestMe platform's commitment to quality assurance and improvement underscores our dedication to delivering assessments of the highest standard. By combining the capabilities of AI with human expertise and a robust validation process, we ensure that evaluation items consistently exhibit the reliability and validity necessary for accurate and meaningful assessment outcomes. Our system is designed to evolve and adapt, guaranteeing the ongoing improvement of assessment items and, ultimately, enhancing the overall educational experience for users.

# 17 Test Creation and Test Settings

## 17.1 Test Creation Methods in YouTestMe

YouTestMe offers four distinct test creation methods, each designed to accommodate a variety of testing needs, ranging from simple to highly customizable assessments. These methods provide instructors with the flexibility to create tests tailored to their specific goals, whether that involves creating a single version of a test or dynamically generating numerous versions based on advanced criteria. By leveraging YouTestMe's test creation options, instructors can ensure both consistency and fairness while enhancing the assessment experience for candidates.

**Benefits of Test Creation Methods**

1. **Customization and Flexibility**: YouTestMe's test creation methods offer significant flexibility. Instructors can choose to manually create a single test version for all candidates or generate multiple dynamic versions based on predefined criteria such as question difficulty or advanced categories. This variety ensures that the system can meet the needs of different testing environments, from simple assessments to more complex, large-scale exams. Furthermore, the randomization of questions and answers ensures fairness and reduces the risk of cheating.

2. **Automated Test Generation**: The system's ability to automatically generate tests based on question difficulty or advanced categories saves instructors considerable time. These methods allow instructors to produce numerous test versions—either a predefined number or an unlimited number—that maintain consistency in content difficulty. This automated generation is especially beneficial for large groups of candidates, where test variability is key to maintaining security and fairness. Instructors can also fine-tune question selection to create balanced tests based on predefined rules, ensuring each candidate receives an appropriately challenging assessment.

3. **Scalability and Efficiency**: YouTestMe's test creation methods scale well, making the system suitable for environments where large numbers of candidates are assessed simultaneously. With automated generation, instructors can quickly set up tests using question pools and rules, reducing manual effort while still ensuring that the test content remains relevant and aligned with assessment goals. This functionality is particularly useful for high-stakes exams, where security, scalability, and efficiency are essential.

YouTestMe provides four test creation methods, each tailored to different use cases. These test creation options offer flexibility, scalability, and precision, making YouTestMe an ideal platform for a wide range of industries and testing scenarios.

### 17.1.1 Manual Test Creation

This method allows instructors to manually create tests, ensuring that all candidates receive the same test version. Instructors can:

1. Add questions manually or import them from question pools.
2. Randomize the order of questions and answers if needed to increase test integrity.
3. Control various test settings, such as question weight and time limits.

### 17.1.2 Generated Test Based on Question Difficulty (Predefined Number of Versions)

Instructors can create tests by selecting questions based on their difficulty levels (easy, medium, hard). A fixed number of versions will be generated, which are circulated among candidates. The process involves:

1. Selecting the method based on question difficulty.
2. Choosing question pools and specifying the number of questions per difficulty level.
3. Setting the number of test versions that will circulate among candidates.
4. Defining points and penalties for correct and incorrect answers.

### 17.1.3 Generated Test Based on Question Difficulty (Unlimited Versions)

In this method, instructors can generate an unlimited number of test versions, ensuring that each candidate receives a unique combination of questions based on their difficulty. The steps are similar to the predefined version method:

1. Select the method based on question difficulty.
2. Choose question pools and define the difficulty distribution.
3. Allow the system to generate an unlimited number of test versions dynamically, ensuring test variability and fairness for all candidates.

### 17.1.4 Generated Test Based on Advanced Categories

This advanced method leverages meta-data attached to questions and allows instructors to define detailed rules for how tests are generated. It is particularly useful for complex assessments that require sophisticated test versioning. The process involves:

1. Attaching meta-data to questions based on categories, such as topic or learning objectives.
2. Defining advanced rules for test generation, such as ensuring a specific distribution of question types or difficulty across test versions.
3. Dynamically generating an unlimited number of test versions based on these rules, ensuring that each test is tailored to the specific needs of the assessment.

## 17.2 Test Settings and Configuration

YouTestMe offers a highly customizable testing platform that allows instructors to configure various aspects of tests to meet specific requirements. The flexibility in test settings ensures that tests are tailored to the needs of both the organization and the candidates, providing a seamless and controlled testing experience.

### 17.2.1 Benefits of Flexible Test Configuration

1. **Customizable Test Templates**: Instructors can save time by utilizing pre-configured test templates. These templates store settings and question pools, allowing the automatic application of preferred configurations for future tests, ensuring consistency across testing sessions.

2. **Versatile Timing Options**: YouTestMe allows instructors to set flexible time limits, offering three different duration types:
    a. Unlimited time for candidates to complete tests.
    b. Time per question, ensuring focus and quick decision-making.
    c. A fixed duration to answer all questions, maintaining the overall test pace. This adaptability enhances control over the testing environment and accommodates various testing strategies.

3. **Personalized Reporting**: The system offers a range of reporting options that can be tailored to organizational needs. Instructors can configure reports to be available at different stages—immediately after the test, after grading, or upon managerial approval. Additionally, the report's

content can be customized to show either full details (including the correct answers) or just the candidate's score, ensuring privacy and control over result disclosure.

4. **Enhanced Test Integrity**: The proctoring mode is a key feature, providing real-time or post-test supervision. With AI-powered monitoring, YouTestMe detects suspicious behavior using the candidate's camera, microphone, and screen, significantly reducing the risk of cheating. Additionally, this data can be reviewed live or after the test, offering flexibility in test monitoring.

5. **Dynamic Candidate Experience**: Instructors can choose from a variety of settings that enhance the candidate's test-taking experience. Options like enabling notes, showing question metadata, and displaying calculators allow candidates to interact with the test in a way that aligns with their learning and testing style. Features like real-time answer feedback provide immediate insights, improving the overall test engagement.

### 17.2.2 How the Flexible Test Configuration Works

1. **Page Formatting**: Instructors can decide whether questions appear one at a time or all at once. This can prevent candidates from skipping ahead or feeling overwhelmed by too much information at once. For tests with branching questions, the "one question per page" option is automatically applied to maintain the test's logical flow.

2. **Advanced Instruction Management**: Test instructions can be fully customized using a built-in text editor, ensuring that candidates receive clear and well-presented guidelines before starting their test. This also includes requiring candidates to acknowledge instructions, adding an extra layer of security before they proceed with the test.

3. **Retake and Rescheduling Options**: YouTestMe offers flexible retake settings, allowing instructors to enable test retakes and specify conditions such as the number of attempts, time intervals between attempts, or the option for retaking only in the case of a failed test. Rescheduling features are equally flexible, allowing candidates to request reschedules under specific circumstances, even if deadlines have passed.

4. **Proctoring and Browser Lockdown**: For secure online exams, the system's proctoring features can be combined with browser lockdown functionality, ensuring that candidates remain focused on the test. While these options are highly effective, they cannot be used simultaneously with test continuation, maintaining balance between flexibility and security.

In summary, the flexible test settings in YouTestMe enhance both the functionality and user experience of online tests, offering robust tools for managing time limits, proctoring, retakes, and more, all while maintaining the integrity and adaptability of the system.

## 17.3 Test Settings and Question Editing During Testing

YouTestMe allows instructors to edit both test settings and questions even during an ongoing test. Any changes made will be immediately applied to all future test attempts, ensuring that candidates starting their tests after the modifications encounter the updated configurations. Additionally, previous versions of both settings and questions are preserved as historical data, allowing administrators to review past configurations and maintain full traceability of all modifications for transparency and integrity.

## 17.4 Test Duration

YouTestMe offers flexible options for setting test duration, allowing instructors to customize time limits according to the needs of their testing sessions. There are four duration settings available:

1. **Unlimited Time**: Instructors can set a test with no time limit, giving candidates the flexibility to complete the test at their own pace.

2. **Per Test**: A specific duration is set for the entire test, and candidates must complete all sections within the allotted time.

3. **Per Test Section**: Time limits can be applied to individual sections of the test, ensuring that candidates manage their time appropriately across different parts of the test.

4. **Per Question**: A time limit can be assigned to each question, forcing candidates to answer within the given timeframe before moving on to the next.

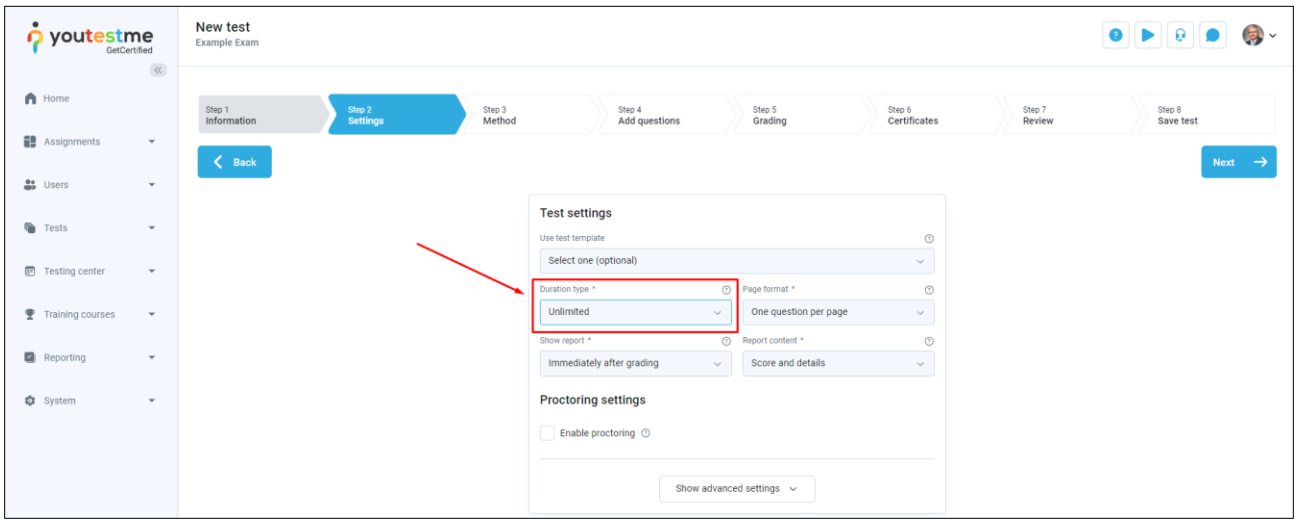
### 17.4.1 Extending Test Duration

Additionally, instructors can extend the time for all candidates within a test session or provide extensions to individual candidates based on specific needs.

For further flexibility, YouTestMe includes an **Accommodations Module** that allows candidates to request additional time in advance. These requests go through a simple, streamlined approval process, ensuring that all candidates have the appropriate time accommodations before starting the test.

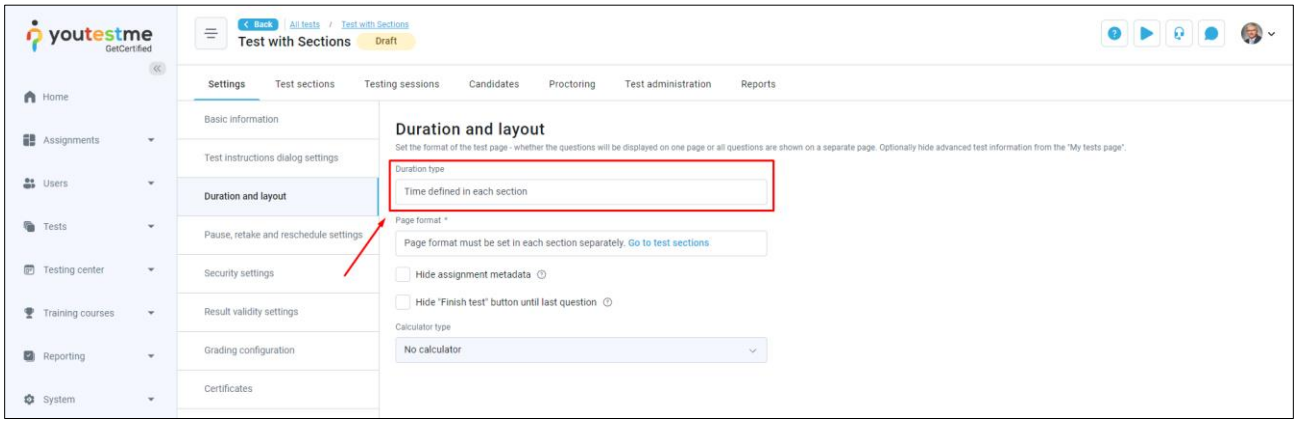
### 17.4.2 Open-Time Tests in YouTestMe

YouTestMe fully supports the creation of open-time tests by allowing instructors to disable the timer for any test where time constraints are unnecessary. This provides candidates with unlimited time to complete their assessments. By simply configuring the test settings, instructors can ensure that no timer is shown during the test, offering flexibility for candidates and aligning the test format with the specific needs of the assessment. This feature is ideal for tests focused on content comprehension rather than time management.




### 17.4.3 Individual Timing for Tests and Sections in YouTestMe

YouTestMe supports the individual timing of different tests and their sections, even when candidates are required to take multiple tests in a sequence. Administrators can configure duration settings at both the test level and the test section level. This flexibility allows instructors to assign specific time limits tailored to the content and complexity of each section, enhancing the overall testing experience. Candidates can focus on each test without the pressure of a fixed total duration, resulting in a more effective and less stressful assessment process.



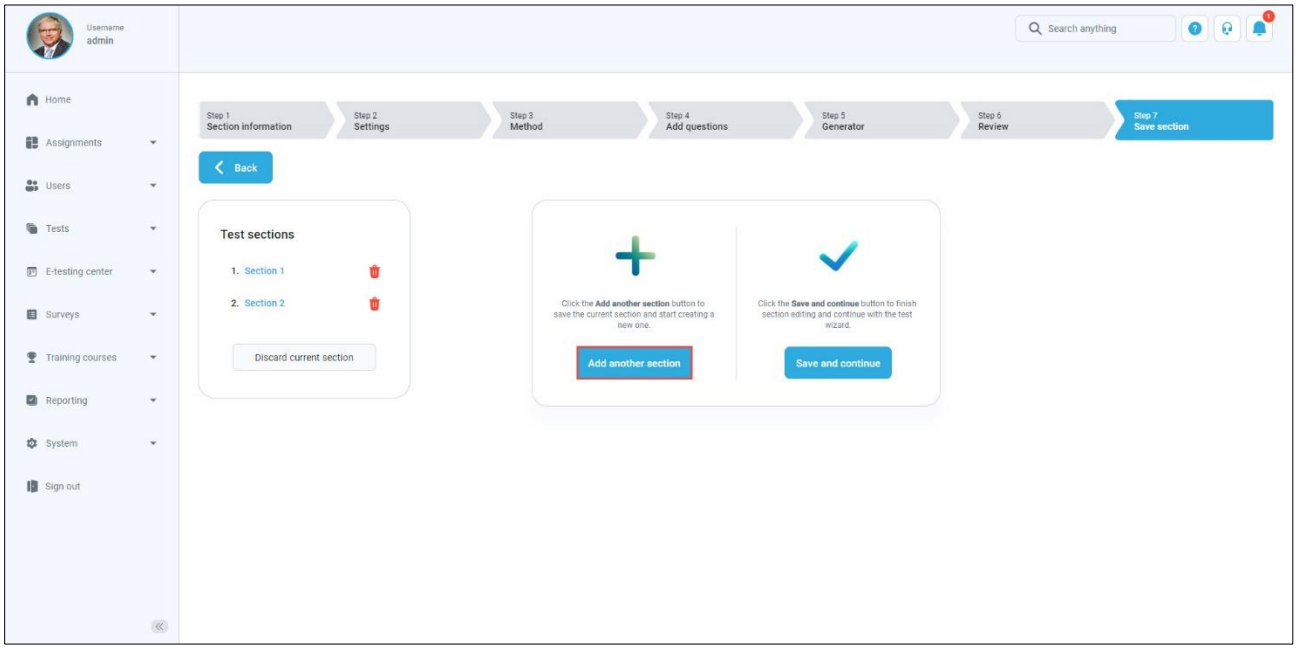

## 17.5 Test Attachments

Test Attachments enable you to enhance the testing experience by including supplementary materials alongside your assessments. These attachments can be displayed to candidates either at the beginning of the test or throughout the entire test-taking process. You have the flexibility to create new attachments or import existing ones from your library.

- **Creating a New Test Attachment**: If you choose to create a new attachment, you can define its name, description, visibility, and whether it should be private or public. This allows you to tailor the attachment to your specific testing needs.
- **Importing Test Attachments**: Alternatively, you can import attachments from your library. The library houses previously created attachments and public attachments from other creators, streamlining the process of adding valuable resources to your tests.

## 17.6 Test Sections

In this chapter, we explore the innovative concept of "Test Sections" within the YouTestMe platform. Test Sections introduce a powerful paradigm where tests can be subdivided into subsections, each with its personalized settings. This feature not only adds flexibility and precision to test creation but also enhances the monitoring and analysis of candidates' progress and results. This chapter elucidates the advantages and functionalities of Test Sections in optimizing the testing experience.



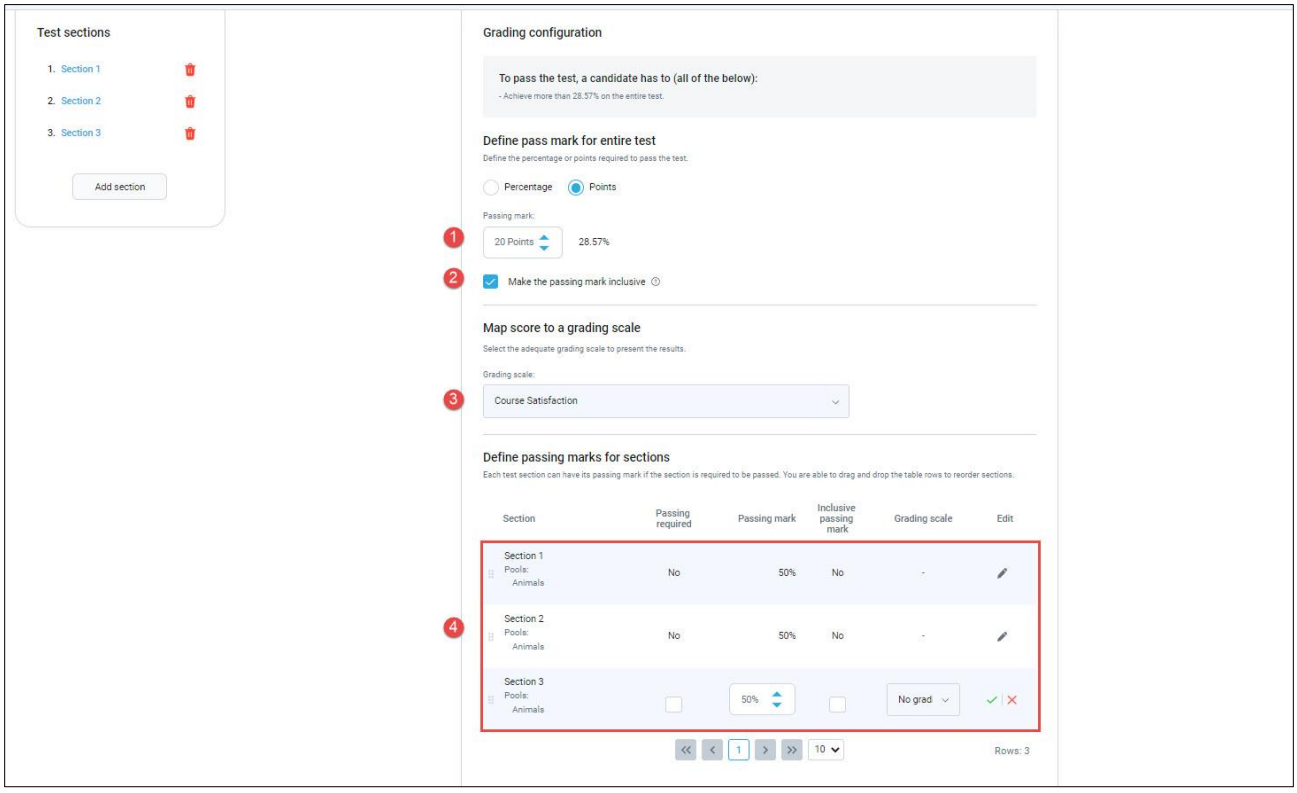

The notion of Test Sections is akin to having "tests within a test." It provides test creators with the ability to organize assessments into distinct subsections, each with its unique settings and parameters. This feature transforms the way tests are structured and managed, offering the following advantages:

### 17.6.1 Systematic Question Organization

Test Sections bring order and structure to question organization. Instead of presenting a random assortment of questions, you can categorize them into logical sections based on topics, themes, or any other criteria. This systematic organization simplifies the assessment process, ensuring that questions are presented in a coherent and meaningful manner.

### 17.6.2 Customized Settings for Each Section

One of the hallmark features of Test Sections is the ability to define and customize settings for each section individually. This includes parameters such as section duration and pass marks. By tailoring these settings to specific sections, you can create a more nuanced and customized testing experience.




### 17.6.3 Comprehensive Tests with Multiple Topics

Test Sections empower you to design comprehensive tests that encompass various topics or subject areas without the need to create an excessive number of separate tests. This consolidation streamlines the testing process and prevents test fatigue for candidates who would otherwise need to navigate multiple assessments.

### 17.6.4 Enhanced Tracking and Analysis

The true power of Test Sections is revealed in the enhanced tracking and analysis of candidates' knowledge. With each section providing distinct insights, you can gain a more granular understanding of test-takers' strengths and weaknesses. This level of detail aids in decision-making, allowing you to tailor interventions and support based on specific areas of improvement.

## 17.7 Scoring Mechanisms in YouTestMe

YouTestMe offers flexible scoring mechanisms that allow instructors to define whether a candidate's test is marked as a pass or fail based on predetermined criteria. The scoring is adaptable, supporting various configurations that cater to different testing needs.

When setting up a test, administrators can configure YouTestMe to automatically calculate whether a candidate passes or fails based on the overall score or more nuanced parameters, ensuring efficient and accurate test evaluation.

### 17.7.1 Simple and Advanced Grading

1. **Simple Grading**: YouTestMe allows instructors to assign a basic pass/fail threshold for an entire test. Candidates must meet or exceed the designated passing score to successfully pass the test.

2. **Advanced Grading**: Instructors can introduce additional parameters to evaluate a candidate's performance. For example, certain test sections may have separate passing criteria, or the proctor's report could influence the final score, adding more depth to the grading system.

### 17.7.2 Grading Questions

1. **Correct/Incorrect Answers**: Each question in YouTestMe can be configured to offer maximum points for correct answers or no points for incorrect ones. This binary scoring system ensures clear, decisive outcomes based on candidate responses.

2. **Weighted Answers**: For more complex assessments, instructors can assign weights to different answers. This method allows for partial scores, giving candidates credit based on the completeness or accuracy of their responses.

## 17.8 Testing Sessions and Advanced Test Scheduling

YouTestMe offers a robust Testing Sessions feature that enhances the management of tests for candidates, ensuring a seamless and organized testing experience. This functionality provides instructors with the ability to customize the scheduling and administration of tests according to the needs of different candidate groups. By enabling instructors to manage testing sessions effectively, YouTestMe empowers educational institutions and organizations to maintain high standards of exam integrity and accessibility.

**Benefits of Testing Sessions**

1. **Customizable Scheduling**: YouTestMe allows instructors to define distinct availability periods for each testing session, accommodating the schedules of various candidate groups. This flexibility ensures that candidates can take their tests at times that are most convenient for them, thus enhancing participation rates.

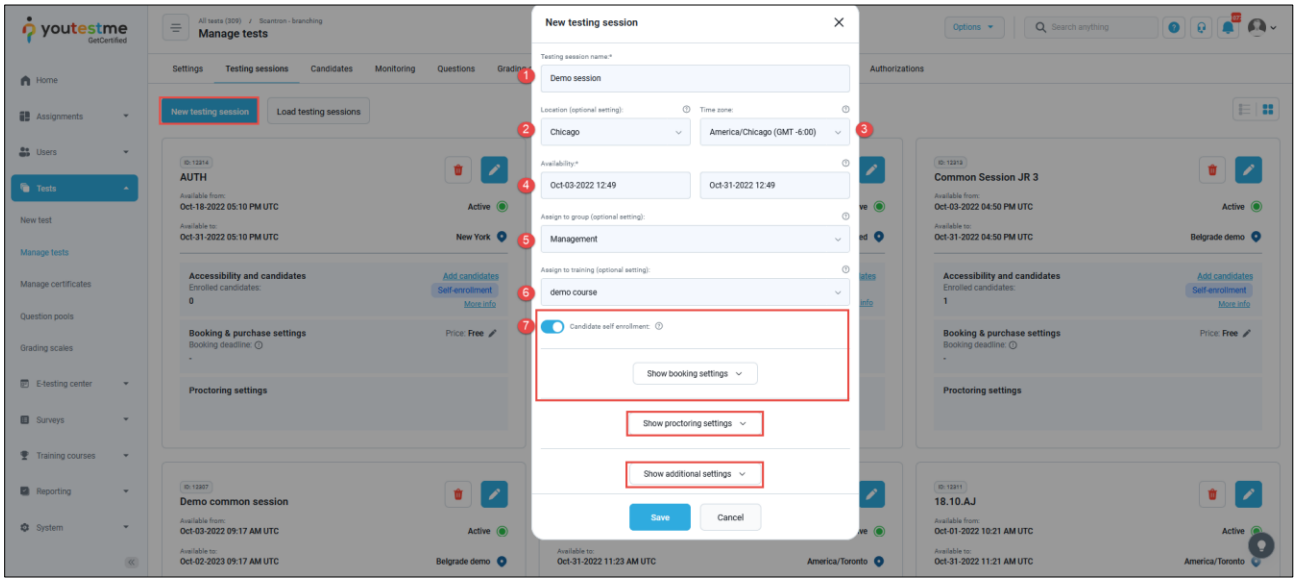
2. **Group Management**: Instructors can assign specific user groups to testing sessions, tailoring the assessment experience to meet the unique needs of different cohorts. This targeted approach allows for differentiated instruction and assessment, promoting a more personalized learning environment.

3. **Direct Access and Self-Enrollment**: By sending direct links via email, instructors can simplify the login process for candidates, eliminating unnecessary barriers. Additionally, the self-enrollment feature empowers candidates to select their preferred testing sessions, increasing engagement and ownership of their learning experience.

4. **Enhanced Security Features**: Testing sessions can incorporate password-based locks and proctoring options, ensuring that only authorized candidates participate. This added layer of security maximizes test integrity and minimizes the risk of cheating.

5. **Effective Resource Management**: Instructors can set a maximum seating capacity for each testing session, ensuring efficient resource allocation. By defining booking and cancellation deadlines, instructors can mitigate last-minute disruptions and maintain a structured testing environment.

**Functionality of Testing Sessions**




1. **Creating Testing Sessions**: To create a testing session, instructors first complete the test creation wizard and select the Testing Sessions tab. They can either click the "New Testing Session" button or load a predefined Excel template. Each session can be designated as either active or inactive, determining its visibility to candidates.

2. **Session Configuration**: Instructors define key session parameters, including the session name, start and end times, and time zone. They can allow candidates to finish their attempts after expiration and specify booking prices, retake prices, and seat reservation options.

3. **Candidate Management**: Instructors can manually add candidates to testing sessions or allow candidates to self-enroll. The system also enables the assignment of candidates from the Testing Sessions or Candidates tabs, streamlining the process of managing participant lists.

4. **Proctoring and Security Settings**: Instructors can enable proctoring options to enhance exam security. This includes integrating with conferencing tools and implementing browser lockdown features to prevent unauthorized actions during tests.

5. **Finalization of Sessions**: Once all parameters are set, instructors click the "Save" button to create the testing session. They can then assign candidates and manage their participation effectively, ensuring a smooth testing process for all involved.

By leveraging the Testing Sessions functionality within YouTestMe, organizations can significantly enhance their testing processes, ensuring integrity and accessibility for all candidates.

### 17.8.1 Extending Testing Periods

1. YouTestMe provides the flexibility to extend the testing period for candidates, ensuring that they have ample time to schedule their tests even after initial invitations have been sent.
2. Instructors can adjust the availability of testing sessions at any time, accommodating changes in candidates' schedules or unforeseen circumstances.
3. This functionality enhances the user experience by allowing candidates to access tests without the pressure of strict deadlines, ultimately improving participation rates and overall satisfaction.

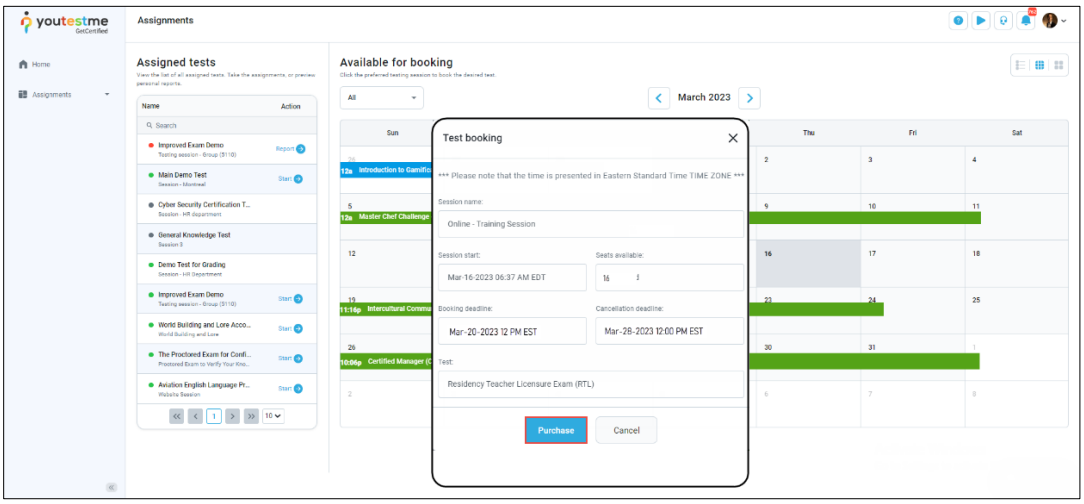
# 18 Test Registration

There are three test registration processes available, depending on the type of the test and its availability:

1. **Allowing only eligible candidates to register**. Typically done for official tests.
2. **Allowing all candidates to register**. Typically done for practice tests.
3. **Hand-picking the candidates that can access the test**. Typically done for tests with special rules.

**Allowing only eligible candidates to register**

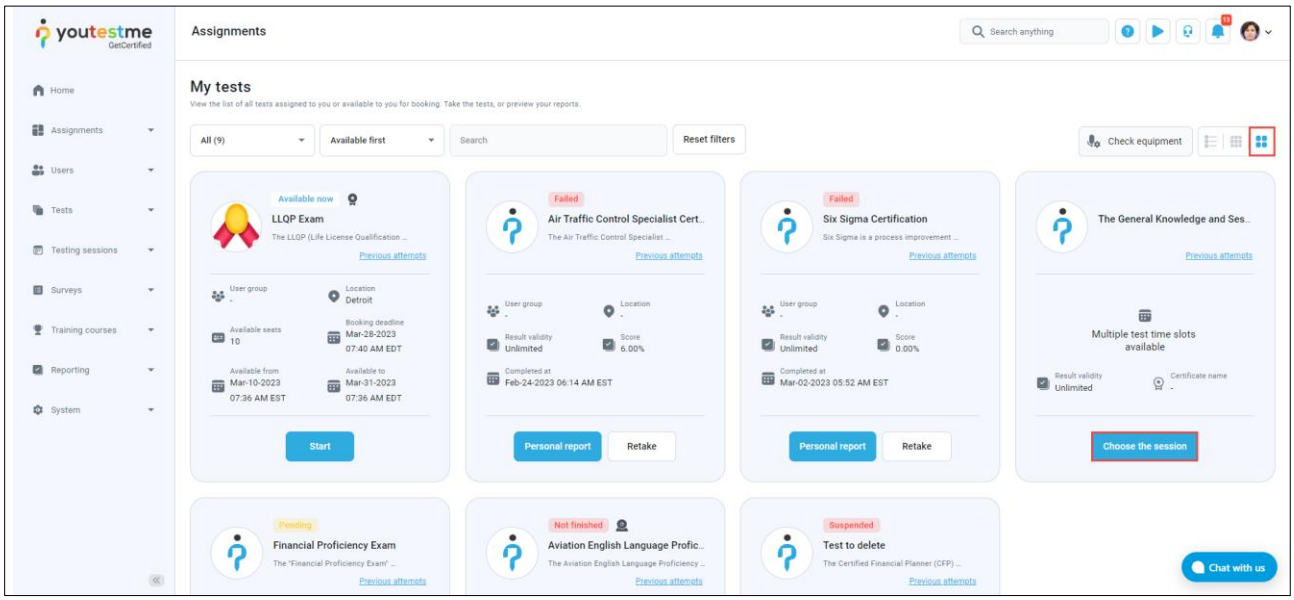
YouTestMe provides the option to manage and govern a candidate's admission to a specific test using the authorization feature. If multiple tests are being offered to various candidate groups, the test authorization feature provided by YouTestMe can be highly effective in organizing which tests are available to which candidates. Authorization is typically granted automatically once payment has been made, ensuring that a candidate can only view and attempt the tests that they have purchased.



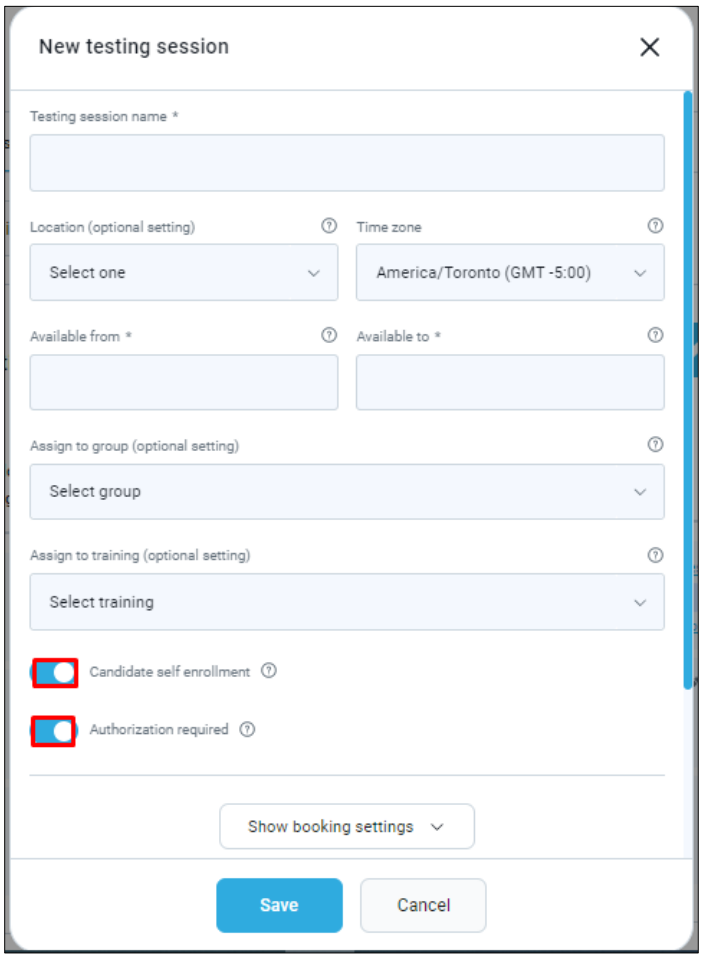

Depending on the proctoring settings, an authorized candidate can either:

1. Begin an automated proctored test at their convenience or
2. Book a time-limited session for a live proctored test.

In either scenario, the authorization can only be utilized once. Therefore, if a candidate wishes to retake the test, they must either obtain a new authorization by making a payment or obtain approval from the system administrator.

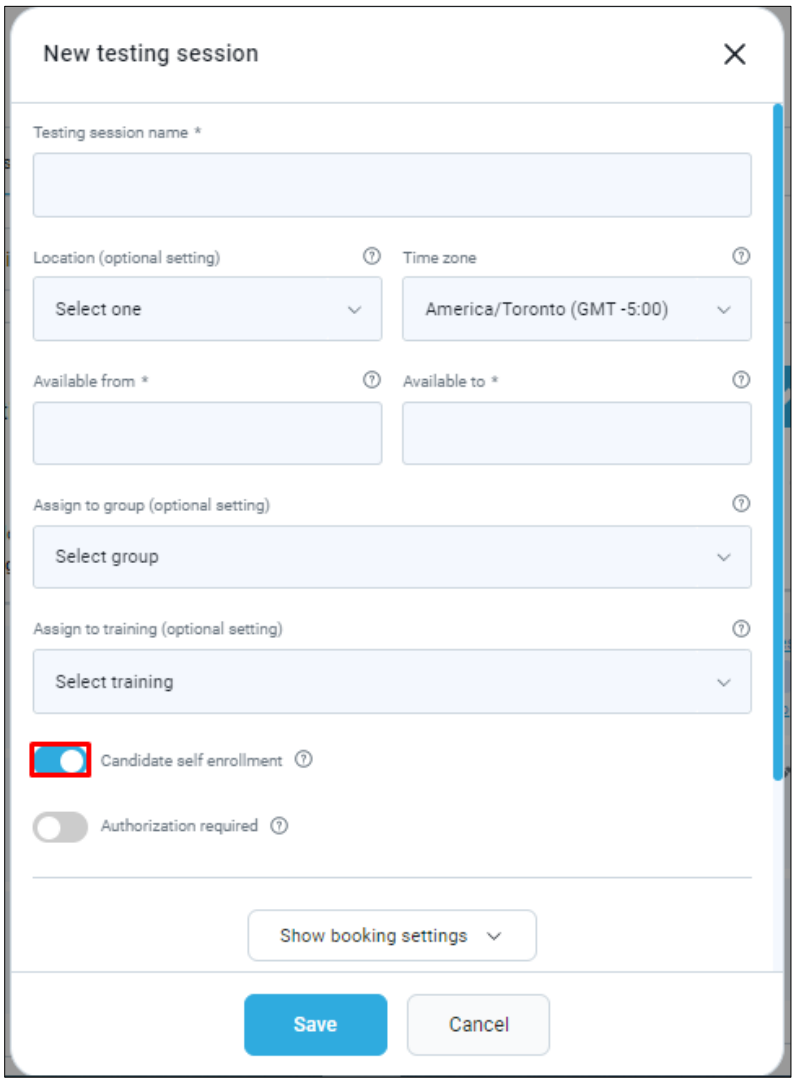



To use this approach, the test organizer must enable the self-enrollment and authorization required options when creating the testing session.




**Allowing all candidates to register**

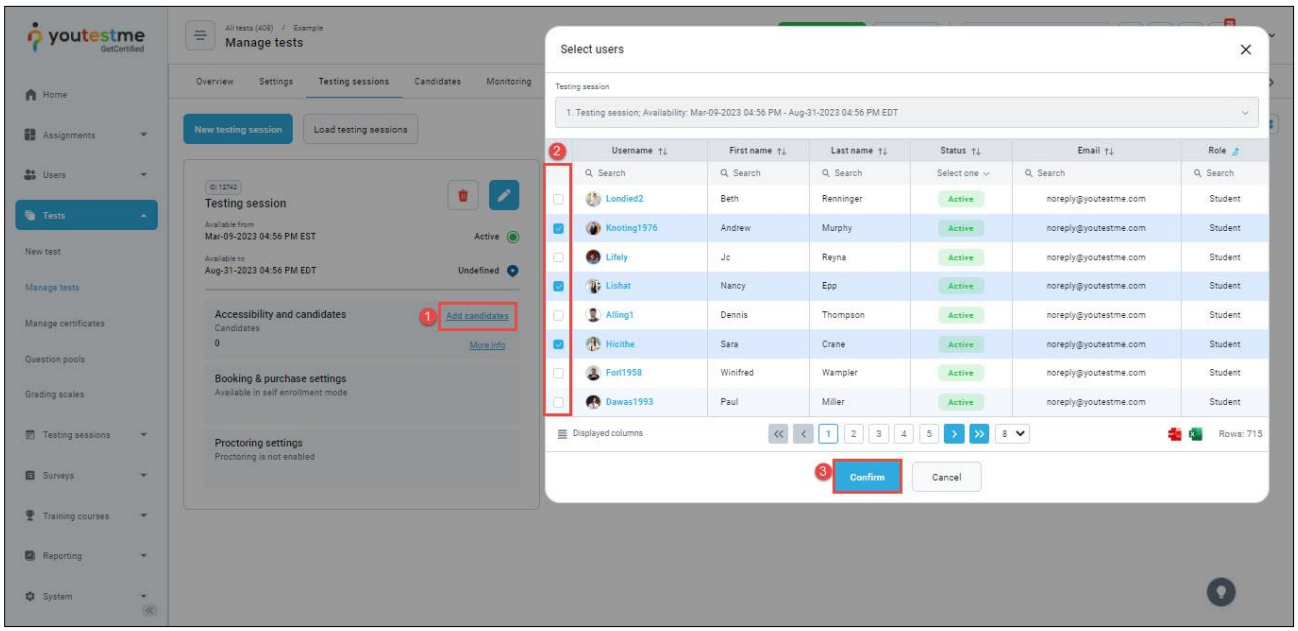
This scenario will be achieved if the "Candidate self-enrollment" option is enabled. This way, all candidates in the system can access this defined test, and there are no specific requirements that candidates must fulfill. This test configuration is recommended for dummy tests intended for candidates to familiarize themselves with the system or for similar purposes. To use this approach, the test organizer must enable the self-enrollment option when creating the testing session.




**Hand-picking the candidates that can access the test**

The test organizer can manually add all candidates who are allowed to take a specific test. In this case, the self-enrollment option will remain disabled, and no candidate who has not been added by the test organizer will see that test.

To use this approach, the test manager simply needs to click on "Add candidates" and select the candidates for whom they want to create a registration for the given test.




## 18.1 Features Related to the Test Registration

YouTestMe is all-in-one platform covering test registration, administration, proctoring, reporting and many more options. In this answer, we will focus on the test registration aspects of YouTestMe.

We offer a wide range of features and capabilities related to the test registration process, including:

1. **Accommodations**: Candidates can request accommodations for the test, such as extended time, assistance from a person to read the text due to poor eyesight, allowed food and drink due to specific health issues, etc.
2. **Scheduling tests in different time zones**.
3. **Setting booking and cancellation deadlines for tests**.
4. **Determining whether a specific test will be available only during certain periods or 24/7**.
5. **Defining access criteria for the test**, such as whether the candidate must purchase the test or if it is free of charge.
6. **Offering discounts on the price of a specific test**.
7. **Multilingual support for the application**: YouTestMe supports multiple languages, including English, German, Spanish, French, Italian, Dutch, and Serbian. Other languages can be added upon request to meet the needs of different clients.
8. **Automatic email and app notifications**: This feature sends automated email and app notifications to all stakeholders involved in the test registration process, including test details, dates, times, and other important information.
9. **Customizable content for email and app notifications:** This feature allows complete customization of email and app notification content, allowing test organizers to personalize messages and provide additional information based on specific test requirements.
10. **Language selection for notifications**: This feature enables users to receive notifications in the

language they have selected in their profile, particularly useful for international organizations with employees who speak different languages.

11. **Three different workflows for test registration**
    a) **Test authorization**: This feature enables the test organizer to manage and govern a candidate's admission to a specific test using the authorization feature, providing enhanced security and integrity for the testing process.
    b) **Manual candidate registration**: Test organizers can manually add specific candidates to a particular test.
    c) **Candidate self-enrollment**: This feature allows candidates to register themselves for open tests where the "Candidate self-enrollment option" is enabled.

## 18.2 Registering for a Test, and Scheduling a Test Date and Time

Depending on the test type, there are two recommendations for setting up the test date and time.

1. **Tests that are proctored live by YouTestMe proctors** in real-time remotely with the help of artificial intelligence (AI) **require setting up the exact test date and time** so YouTestMe proctors know when they have to be present.
2. **Tests that are proctored automatically by artificial intelligence** can be **open at all times** since YouTestMe proctors do not have to be present during the test and their role is to examine the recordings generated by the AI for each candidate.

Both options are handled easily through the concept of **testing sessions**.

1. Testing sessions allow you to determine when the test can be taken.
2. A single test can have any number of testing sessions.
3. You can have any number of sessions specified for a single day or week or month, allowing candidates to choose the exact time that works for them.

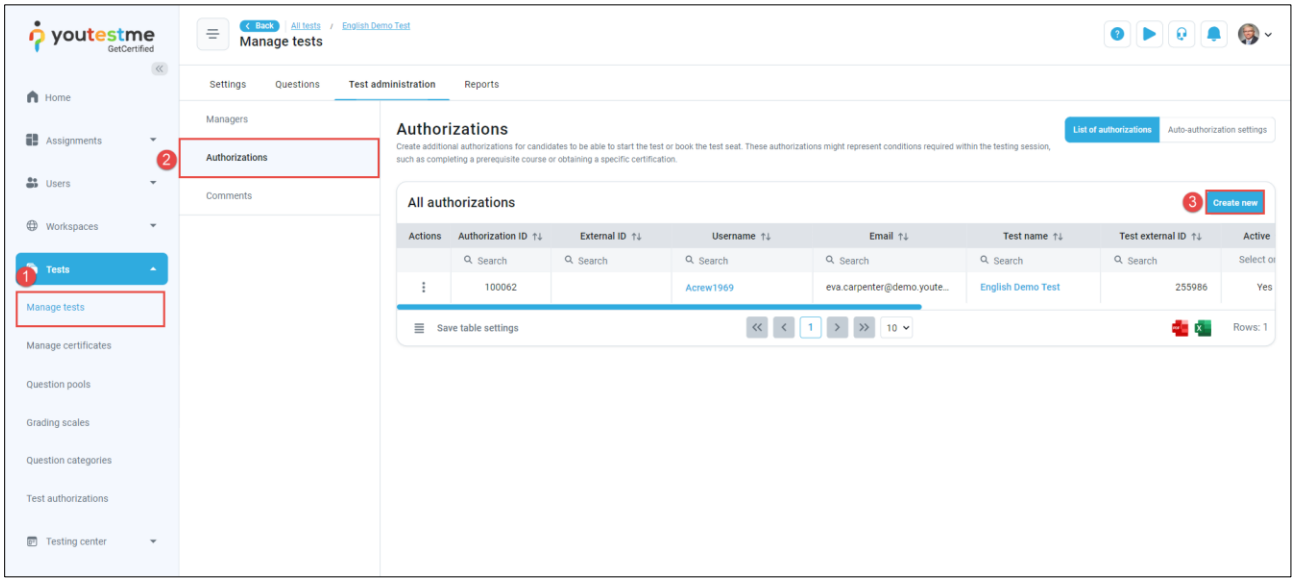
From the candidates' perspective, the process is very straightforward and the application leads them through these simple steps:

1. **Choose** the test from the list of tests.
2. **Purchase** the test if it has a price.
3. In the case of automated proctoring, they can:
    a. **Start** the test immediately (or whenever it suits them)
4. In the case of live proctoring, they would:
    a. **Book** the desired date for the test.
    b. When the date comes, **start** the test.

## 18.3 Test Authorization - Eligibility-Based Test Visibility

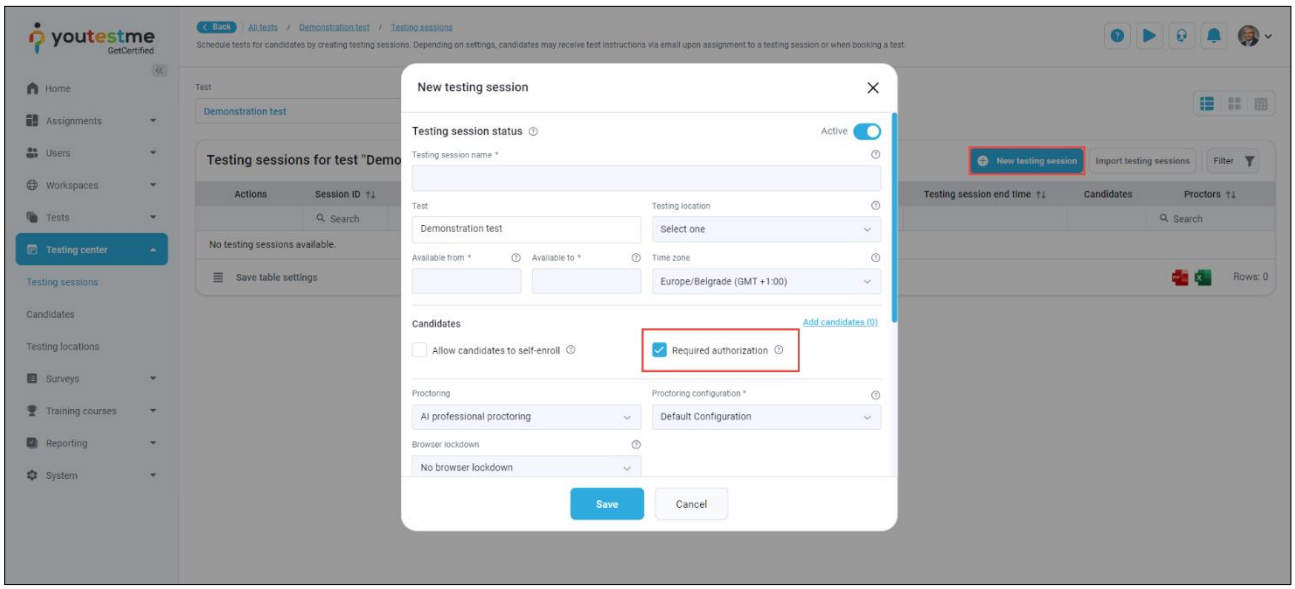
Test Authorization in YouTestMe ensures that candidates can view and access only the tests they are authorized to take based on specific criteria established by administrators or instructors. This functionality

enhances the efficiency and organization of the testing process, enabling a tailored experience for candidates and streamlining administrative tasks for instructors.



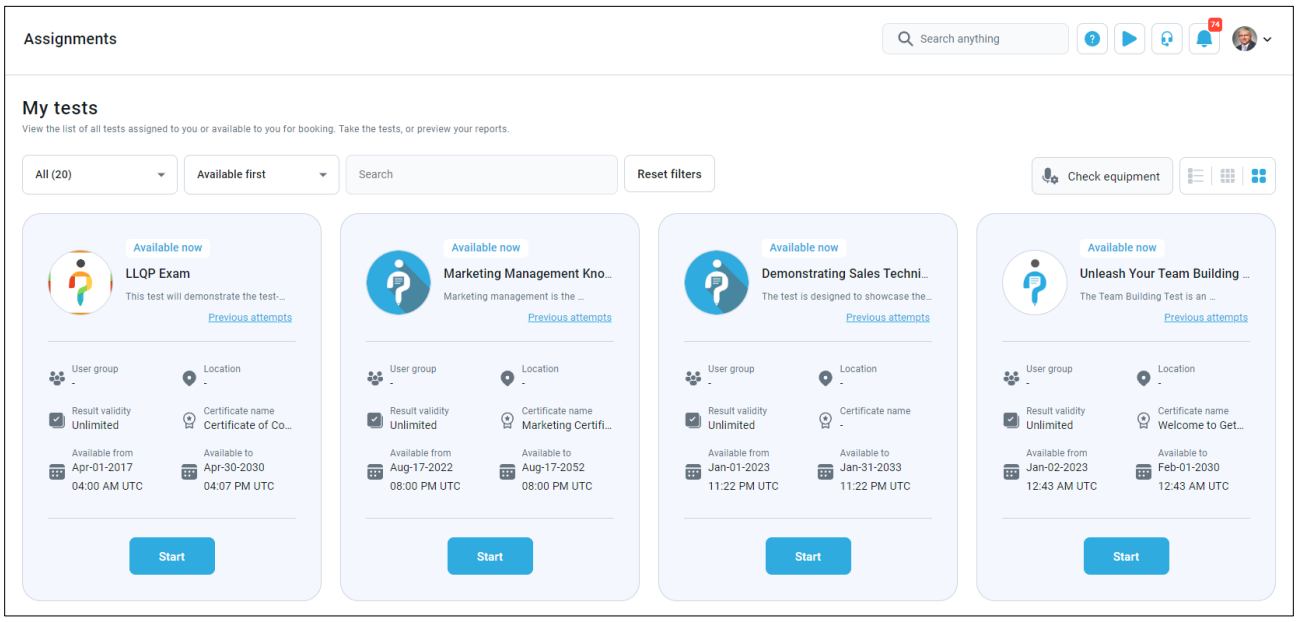

**Benefits of Test Authorization**

1. **Targeted Access for Candidates**
   - Candidates can only see tests they are eligible to take, ensuring clarity and reducing confusion.
   - Eligibility can be determined based on various factors, such as completed training hours, certifications, or previously achieved licenses.
2. **Enhanced Security and Integrity**
   - Restricting test visibility to authorized candidates reduces the risk of unauthorized access, safeguarding the integrity of the testing process.
3. **Streamlined Test Management**
   - Instructors and administrators can efficiently manage test assignments by defining clear authorization criteria, ensuring that only qualified candidates participate in specific tests.
4. **Improved Candidate Experience**
   - By displaying only relevant tests, candidates can easily locate and focus on their assigned assessments, saving time and reducing the likelihood of errors.




**How Test Authorization Works**

1. **Setting Up Test Authorizations**
   - Administrators and instructors can establish test authorizations using the "Test Authorizations" sub-menu in the YouTestMe platform.
   - Authorization criteria can include requirements such as specific qualifications, mandatory training hours, or payment confirmations.
2. **Authorization Assignment**
   - Administrators select candidates and assign authorizations for specific tests. This assignment can include setting expiration dates and specifying the number of allowable attempts.
   - Only candidates meeting the defined criteria will have the test appear in their "My Tests" list, ensuring that unauthorized candidates cannot access restricted assessments.
3. **Dynamic Test Visibility**
   - Tests will automatically appear or disappear from the candidate's view based on their authorization status.
   - For example, candidates who complete required training or achieve a new license will gain access to newly authorized tests without further manual intervention.
4. **Managing Authorizations**
   - Administrators can modify or deactivate authorizations as needed, adjusting access to tests in real time.
   - Authorization statuses, including expiration dates and usage limits, are displayed in a structured table for easy monitoring and updates.




Test Authorization is a vital feature for ensuring organized, secure, and efficient test management in YouTestMe, catering to the unique requirements of various industries and institutions.

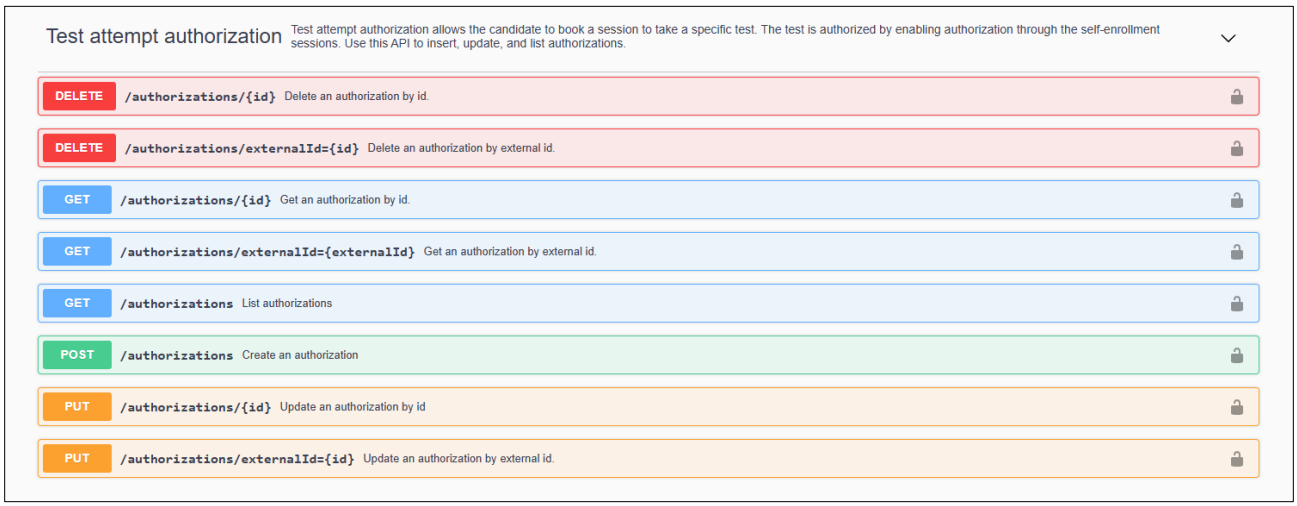
### 18.3.1 Verifying the Eligibility to write the Test

There are four workflows for approving the eligibility of candidates to write the test.

1. **Automated API-based approach**
2. **Manual verification by YouTestMe staff**
3. **Manual verification by the client staff**
4. **Excel-based verification by the client staff**

**Automated API -based approach** means that the YouTestMe system will:

1. **The YouTestMe application pulls the eligibility data automatically from the client's system** where the eligibility information is stored. Typically, that is a simple Yes/No flag to determine if the candidate is eligible to write a desired test.
2. **The YouTestMe application performs the verification automatically** (check the value of the flag)
3. **The YouTestMe application allows/disallows the candidate to start the test** depending on the value of the flag
4. **The candidate starts the test**




**Manual verification by YouTestMe staff** means that:

1. **The client provides YouTestMe staff with the exact set of rules** for determining the candidate's eligibility
2. **The candidate uploads the necessary information** to determine their eligibility
3. **YouTestMe staff verifies the eligibility of the candidate manually** by comparing the uploaded information with the rules provided by the client
4. **YouTestMe staff allows/disallows the candidate to start the test**
5. **The candidate receives an email notification that they are eligible to take the test**
6. **The candidate (books and) starts the test**

**Manual verification by the client staff** is the same process as the **manual verification by YouTestMe staff**, except it is done by the client staff.

**Excel-based verification by the client staff:**

1. **The client uploads the Excel file with the eligibility information into the YouTestMe** application (on a regular basis)
2. **The candidate tries to start the test**
3. **The YouTestMe application performs the verification automatically** (check the value of the flag)
4. **The YouTestMe application allows/disallows the candidate to start the test** depending on the value of the flag
5. **The candidate starts the test**

## 18.4 Accommodating special circumstances for test registration

There are two ways of accommodating special circumstances:

1. **Manually overruling predefined settings as an administrator**
2. **Allowing special accommodations**

**Manually overruling predefined settings as an administrator** simply refers to mechanisms that allow administrators to bypass the standard settings and, for example, manually **allow a candidate to access the test even though they did not go through pre-requisite courses**.

**Allowing special accommodations** refers to a mechanism that allows candidates to request things like:

1. **More time for a test**
2. **Multiple bathroom breaks during the test**

YouTestMe has a mechanism in place that allows approving/not approving these requests and notifying the proctors immediately.

## 18.5 Type and time of communications provided to candidates

As an introduction to our response, please take a look at the video explaining automatic email notifications.

Communication with candidates can be categorized into three groups:

1. **Before the test**: Communication mainly involves **automated email notifications** sent to candidates, which include:
    a. **confirmation of purchased tests**
    b. **instructions for taking the test**
    c. **reminders for upcoming tests**, and other relevant information.
2. **During the test**: Candidates can reach out to technical support via **chat or phone** if they encounter any technical difficulties during the test. **Immediate assistance** will be provided to resolve the issue.
3. **After the test**: Communication focuses on **announcing the test results via automated email notification** and providing information on how to access them.

**Live chat support** is available throughout the entire application in all three phases, making it easy for candidates to reach out for assistance at any time. YouTestMe ensures that candidates have access to support throughout the entire test process, from registration to result announcement.

## 18.6 Communicating test booking confirmation, test details, rules, and regulations

As an introduction to our response, please take a look at the video explaining how to book a test.

The test booking confirmation, test details, test rules, and regulations are provided to candidates through the following types of email notifications:

1. **eTest Online Test Booking Confirmation**
2. **Cancel Booking**
3. **Test Booking Reminder**

**eTest Online Test Booking Confirmation**

Once a candidate has booked a test, an automatic booking email notification is triggered, which can be configured to suit your specific needs.

This email notification can be customized to address the candidate by their first name, first and last name, username, or any other preferred method.

You can also choose to include a **direct link to the application** and provide details such as the test name and when the session will be available.

Additionally, you can add **important test instructions** that will help the candidate prepare for the test.

Below is an **example** of a booking email confirmation:

Dear Irene,

You have a pending registration for the following exam: **"Compliance Assessment: Federal and State Laws and Regulations"**

Date & Time: **2022-01-19 12:00 EST**

---

**ACCESS TO THE CERTIFICATION EXAM**

- **You can access your certification exam by logging into this link.**

**GETTING READY TO TEST**

For a detailed guide on the YTM online examination system, review the Exam Taking Guide.

**You must present a valid government-issued ID before your exam and the name on your student profile must match exactly with the name on your government-issued ID.**

**ACCEPTABLE ID**

Acceptable forms of identification include Drivers License, Passport, Citizenship Card, Permanent Resident Card.

**TEST ACCOMMODATIONS**

If you need special accommodations during your exam, please contact us for approval **30 days BEFORE** your exam appointment.

**TEST REQUIREMENTS**

The proctor will be monitoring your environment during the exam. Any suspicious sounds heard through your microphone, or persons visible through your camera other than you could lead to the proctor terminating your exam early.

For a successful and trouble-free experience, please make sure you satisfy all of these requirements ahead of your scheduled exam.

- A quiet and private environment for the test
- A desktop or laptop computer
- A working webcam
- Microphone (or headphones with a microphone)
- A stable and fast internet connection
- Valid government-issued photo

**CLEAN DESK**

No objects are allowed on your desk during the exam except your computer.

You must clear the testing environment of any preparation materials or unauthorized items to avoid exam violation.

The following shows examples of what is **NOT** allowed during the exam. This is not an exhaustive list.

- Mobile phone (an app is available to communicate with the proctor)
- Tablet
- Second screen
- Calculator*
- Textbooks*
- Scrap Paper*
- Food or Beverages
- Cigarettes, e-cigarettes, vape pen, or other smoking device/instrument

*Please note that a calculator and online notepad are provided to you within the testing platform, you cannot use your own.

**EXAM SESSION RULES**

We take steps to ensure that every testing experience is a good one, but we still stop your exam if the rules aren't followed.

- You must stay within your webcam view
- You should be the only person in front of your camera
- You cannot get up and walk around
- No one can enter your testing environment
- You cannot get up and walk around
- No one can enter your testing environment
- You cannot leave your testing environment
- Washroom breaks are not permitted. If you have a medical condition that requires special accommodations, please contact us for approval 30 days **BEFORE** your exam appointment.
- You cannot move your webcam once your testing session has started
- You cannot move your webcam once your testing session has started
- Mumbling or speaking out loud is not permitted
- You may not use other tabs

**SCHEDULING AND RESCHEDULING**

Before scheduling your exam, you will be required to do the Equipment Validation Check to ensure your equipment and internet connection are satisfactory for you to be able to take the test.

Exam bookings can be made up until 1 hour before the scheduled exam start time. If you are unable to attend the exam, you can reschedule without penalty up to 2 business days (48 hours minimum) before the exam date.

**TECHNICAL ISSUES ON EXAM DAY**

If you experience technical issues on exam day, immediately contact Exam Session Technical Support at **(888) 888-888** for assistance.

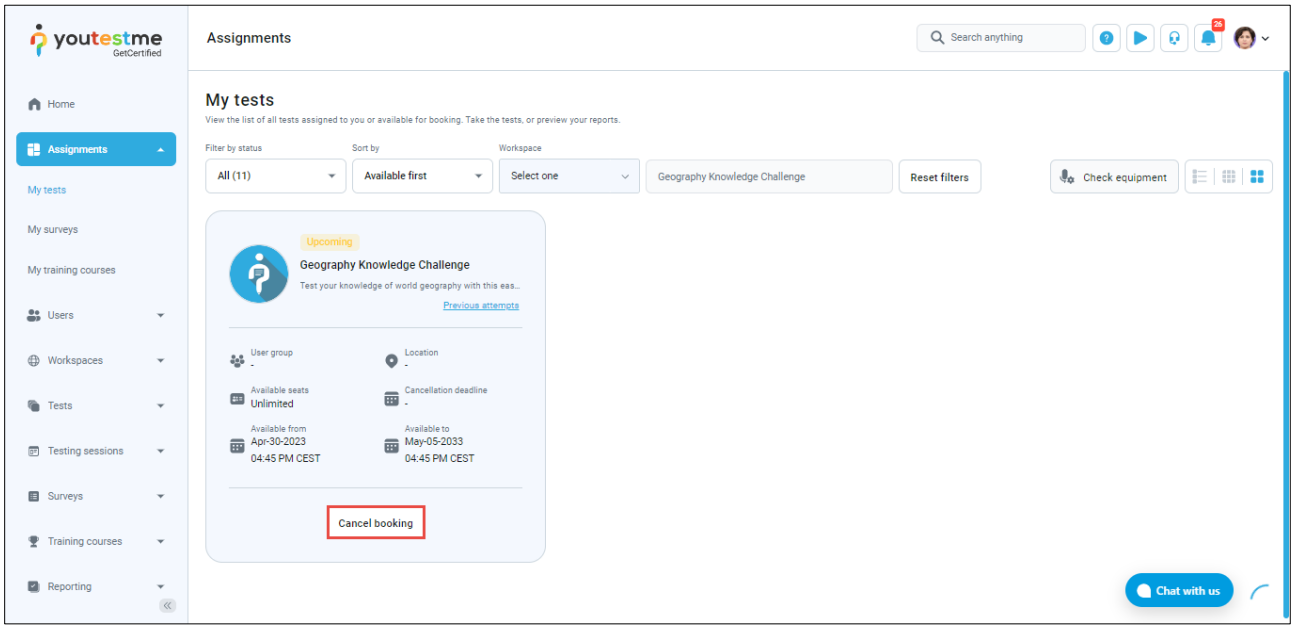
Please do not reply to this email.

Thank you for using the application.

**Cancel Booking**

Once the test has been booked, the candidate has the option to cancel their attempt if necessary.

This can be easily done with a simple click of the **Cancel booking** button.




To provide additional control over the cancellation of booked tests, the test organizer can set a **cancellation deadline** for testing sessions.

This allows candidates to cancel their booked attempt only within a defined number of days or hours before the test's scheduled start time.

If a cancellation deadline is defined, the candidate will be able to cancel their booked attempt within that time frame.

Below is an **example** of a cancelation email confirmation:

Dear Irene,

This email confirms that the following exam sitting has been canceled:

Course Name: **"Compliance Assessment: Federal and State Laws and Regulations"**

Date & Time: **2023-03-19 12:00 EDT**

Please do not reply to this email.

If you have any questions, please contact our Customer Service Department at 888-888-8888.

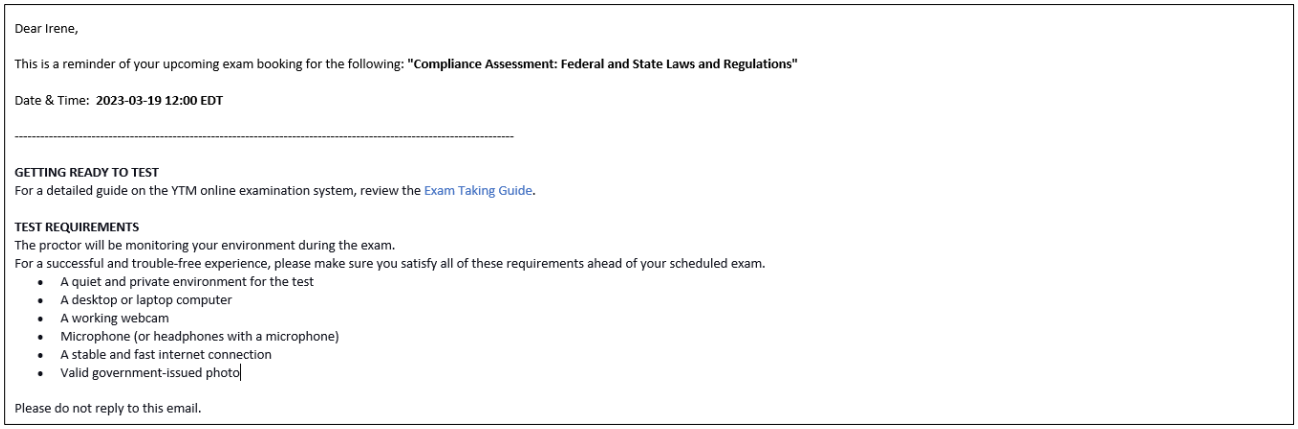
Thank you for using the application.

**Test Booking Reminder**

By specifying the number of days in advance for the email notification to be triggered, the test organizer can ensure that the candidates are well informed and appropriately prepared for their upcoming test.

For more information on how to configure **upcoming test sessions reminder**, please read this article.

Below is an **example** of an upcoming email confirmation:



Dear Irene,

This is a reminder of your upcoming exam booking for the following: **"Compliance Assessment: Federal and State Laws and Regulations"**

Date & Time: **2023-03-19 12:00 EDT**

---

**GETTING READY TO TEST**
For a detailed guide on the YTM online examination system, review the Exam Taking Guide.

**TEST REQUIREMENTS**
The proctor will be monitoring your environment during the exam.
For a successful and trouble-free experience, please make sure you satisfy all of these requirements ahead of your scheduled exam.

- A quiet and private environment for the test
- A desktop or laptop computer
- A working webcam
- Microphone (or headphones with a microphone)
- A stable and fast internet connection
- Valid government-issued photo

Please do not reply to this email.

## 18.7 Transferring candidate registration information to other systems

The best way to transfer candidate registration information is using the YouTestMe API. This will allow full automation of the process. Mechanisms for sending/receiving this information are already in place and usually require small adjustments based on the system(s) YouTestMe is communicating with.

## 18.8 System availability

The online proctored tests can be scheduled at any time, as the proctor team is available 24 hours a day, 7 days a week, and 365 days a year.

However, it is important to note that all test sessions need to be scheduled one month in advance.

This will ensure that the necessary arrangements are made and the proctor team is available to oversee the tests at the desired time.

With this approach, candidates will have the flexibility to choose a time that works best for them, including evenings and weekends, holidays, etc.

## 18.9 Requiring specific personal and custom information from candidates

he YouTestMe system fully supports the collection and storage of candidate identification information, including default and custom fields.

There are default identification fields that include **first name, middle name, last name, employee ID, date of birth, gender, phone number, affiliation, street address, city, state/province, country, and zip code**.

However, our system also allows admins with the highest permission level to create custom properties and add numerous other categories related to personal information. That way, you can include fields like the **CIPR number**.

For more information on how to create custom properties, please read this article.

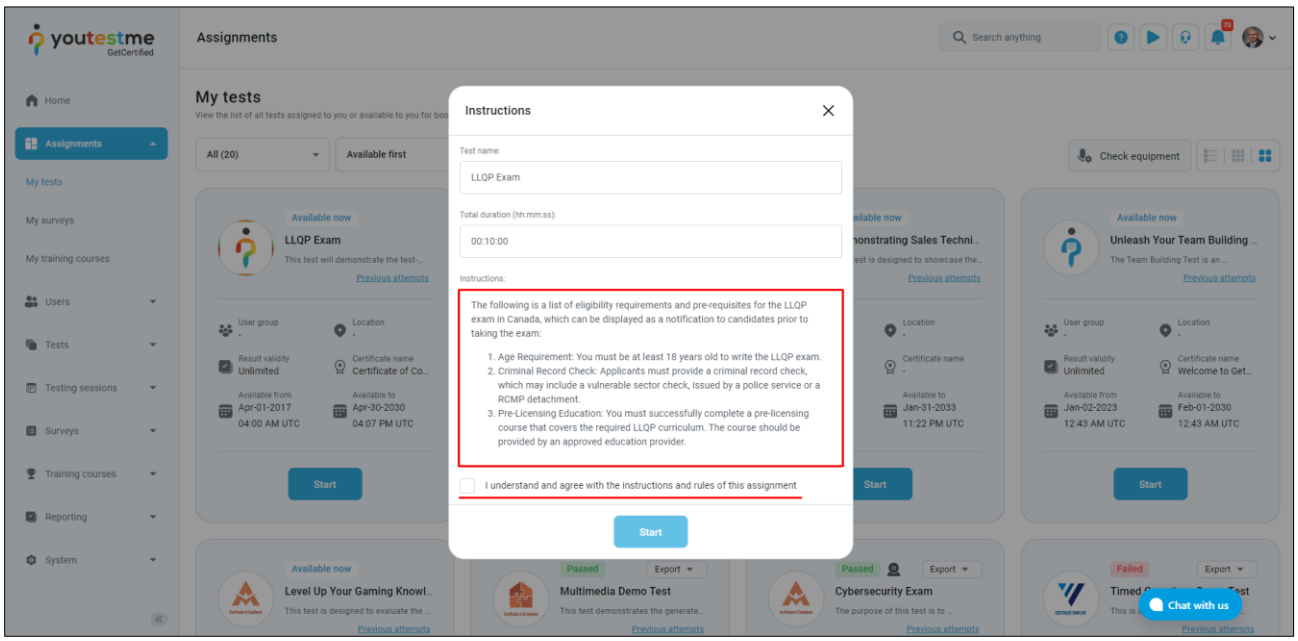
Furthermore, the system requires each candidate to **attach their ID when taking a test**. Our proctors then verify the candidate's identity by cross-referencing the ID with the personal information stored in the system and the candidate's recorded face during the test. For security reasons, once the candidate's identity has been verified, the ID can be deleted from the system.

## 18.10 Displaying the eligibility requirements to write the test

Displaying the eligibility requirements can be done on several panels, depending on your preference:

1. On the login page
2. On the homepage
3. Prior to starting the test

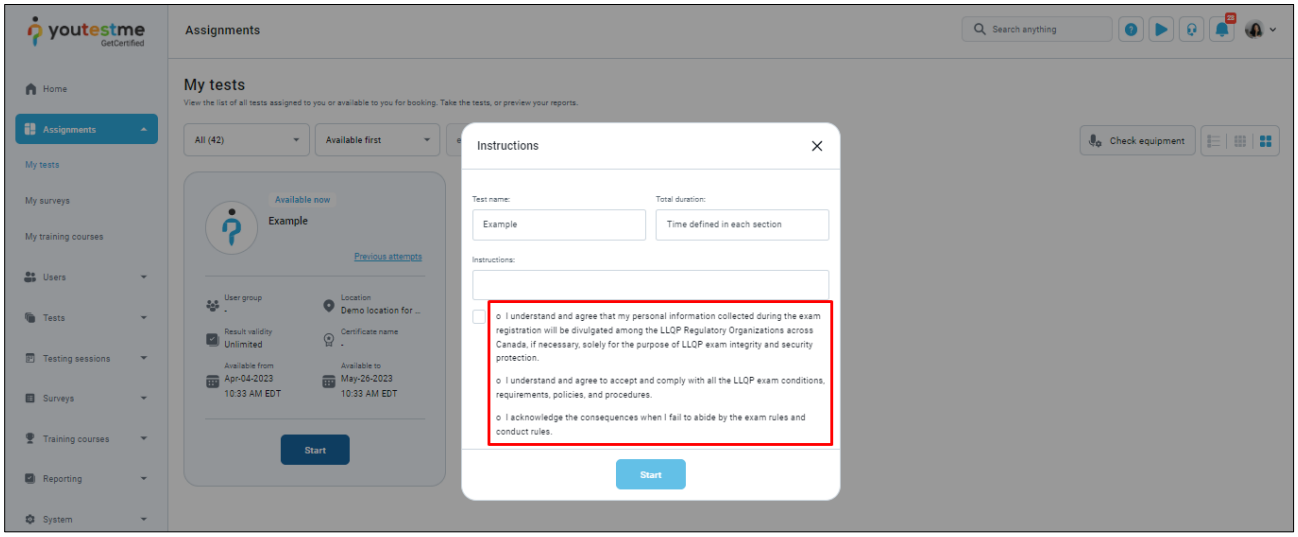
You can use all three options simultaneously if desired.



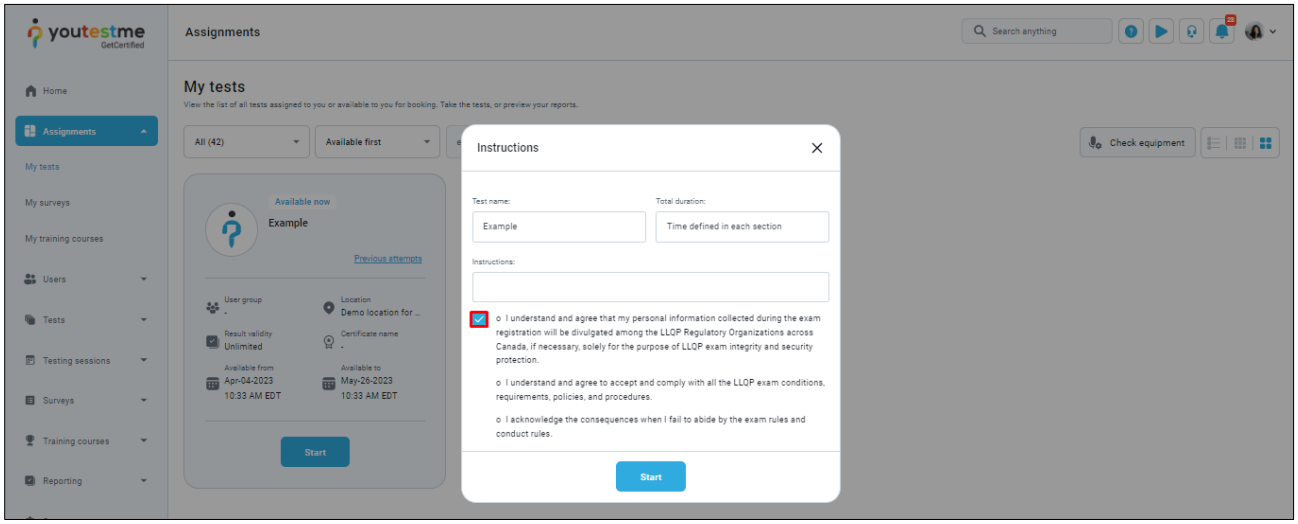

## 18.11 Acknowledgment of the test rules and conditions

The YouTestMe provides the option for the client to enter the test rules and candidate conduct rules and requires them to sign a notice or agreement in which they acknowledge and agree to various conditions.

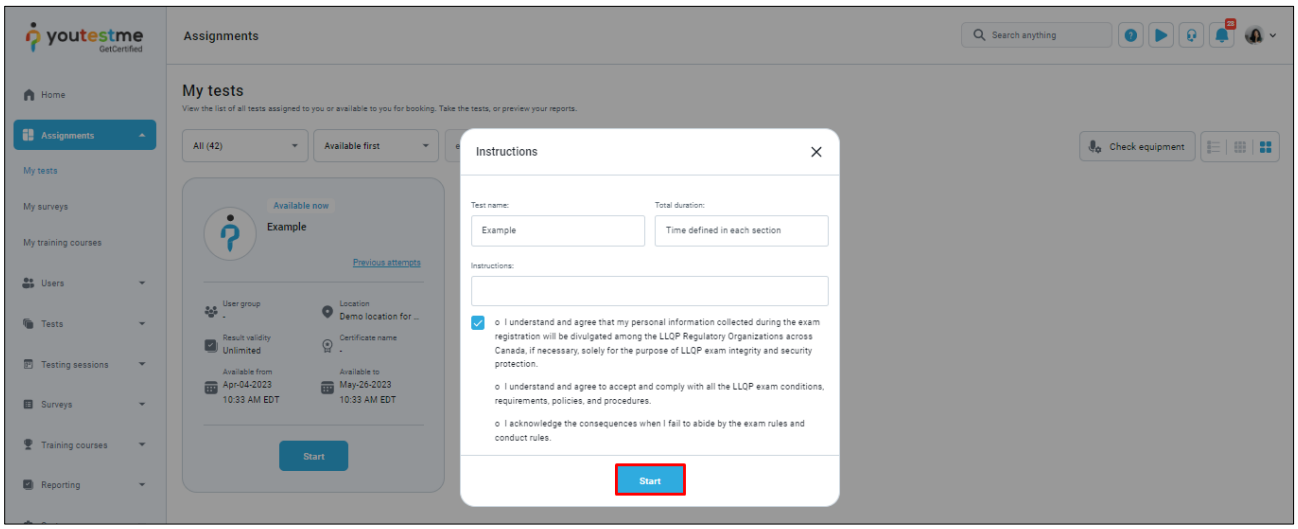
1. Before the start of the test, all these requirements will be displayed on the candidate's screen.




2. The candidate must check a box acknowledging the instructions.




3. The Start button becomes clickable only when the candidate has acknowledged the instructions, allowing the candidate to begin the test.

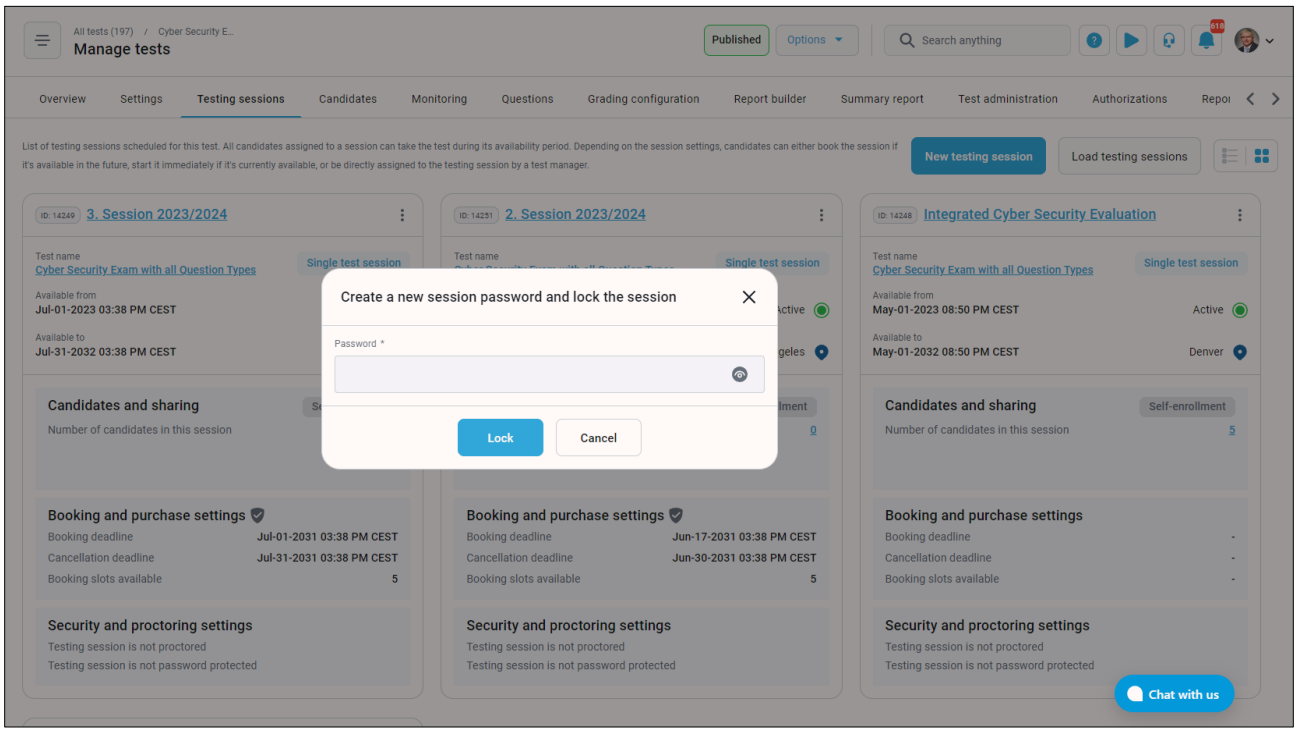



This process ensures that candidates are well-informed of the rules and requirements, and have agreed to abide by them before starting the test, which is essential for maintaining the integrity and security of the test.

## 18.12 Support for Password-Protected Tests

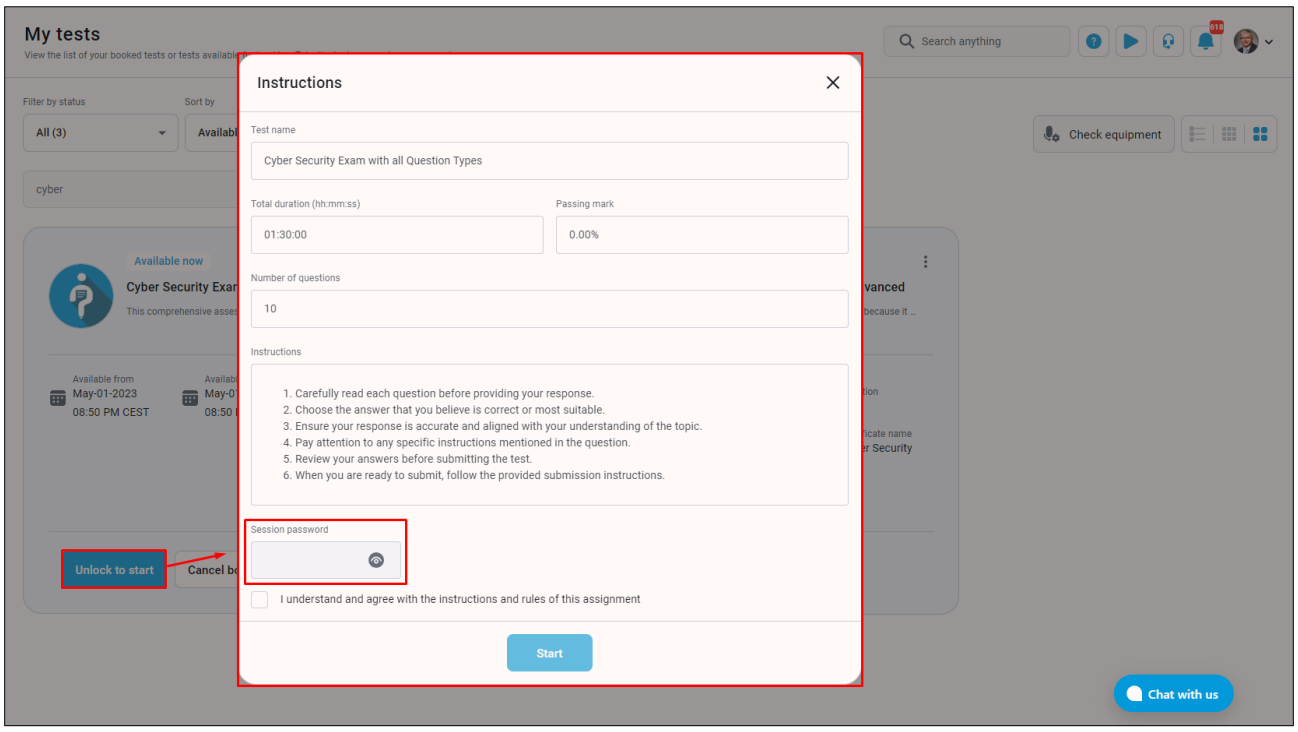
Password-protected tests are an additional layer of security offered by YouTestMe, especially in the case of live proctoring.

Passwords are generated for each testing session independently meaning that they cannot be used during a different testing session.



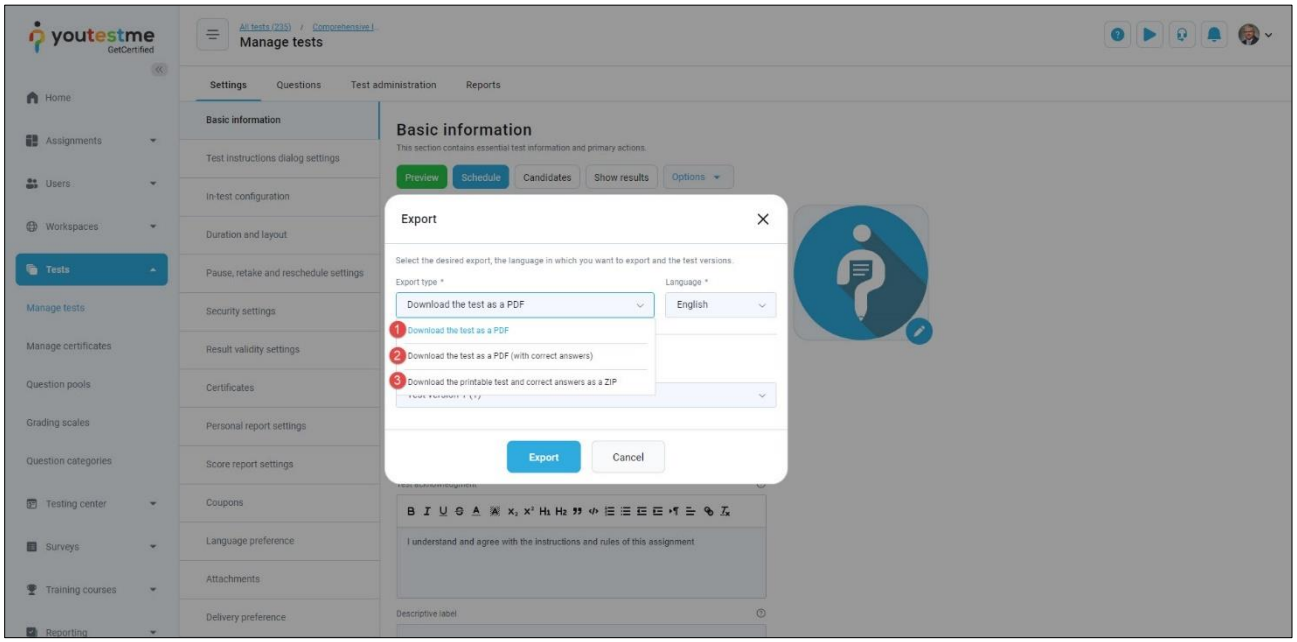

Typically, passwords are shared with the candidates by a proctor right before the test to ensure that they can proceed to the test only once the proctor officially starts the session.

Only after they type in the correct password, the candidates can access the test.



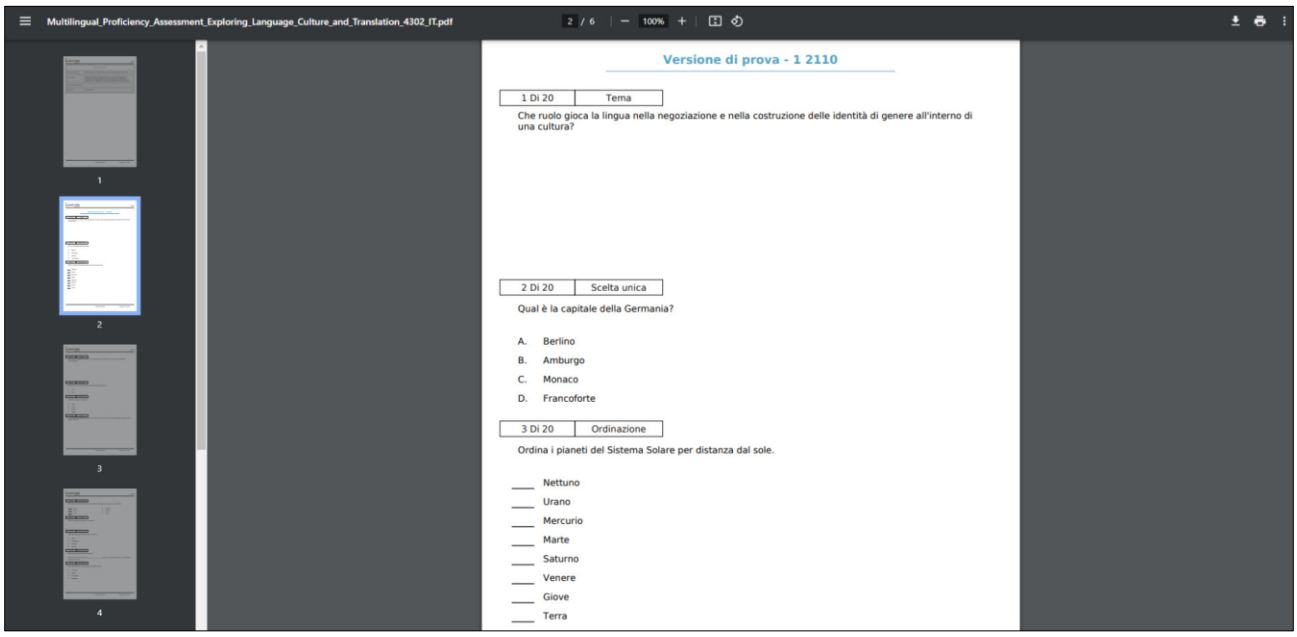
## 18.13 Exporting Tests and Test Keys as a PDF

The "Export as PDF" feature in YouTestMe allows instructors to efficiently download tests and test keys in PDF format, providing enhanced flexibility and utility for various testing scenarios. This functionality is ideal for creating paper-based tests, maintaining records, and sharing test content in a standardized format. It ensures that instructors can tailor the exported content to meet specific requirements, enhancing overall efficiency and usability.



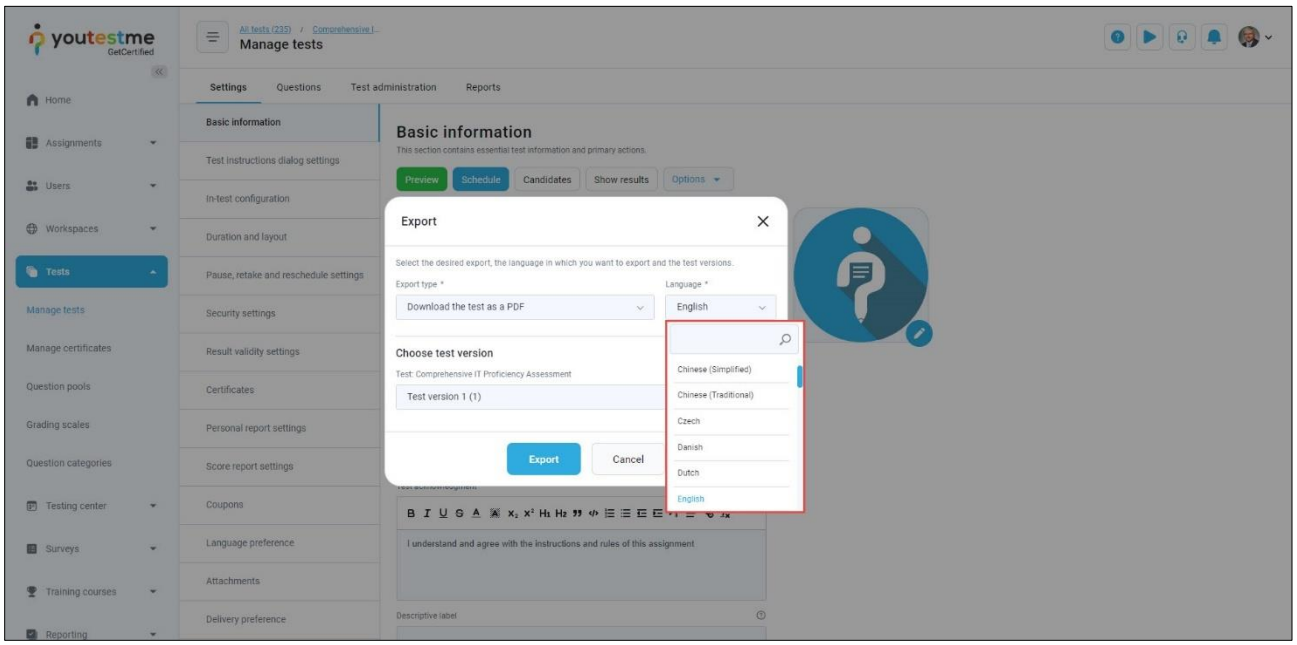

**Benefits**

1. **Flexibility in Test Delivery**
   - Export options allow instructors to generate tests suitable for paper-based testing environments.
   - The ability to include blank spaces for answers ensures seamless use in offline scenarios.
2. **Enhanced Record-Keeping**
   - Exporting both tests and keys in a single operation simplifies documentation and record maintenance.
   - Organized naming conventions for exported files make it easier to locate and manage test versions.
3. **Customizable Content**
   - Support for multiple languages ensures the exported test aligns with the candidate's language preferences.
   - Instructors can choose specific test versions, ensuring accuracy and relevance for each export.




**How to Export Tests and Test Keys as a PDF**

1. **Accessing the Page**
   - Navigate to the "Tests" tab and select "Manage Tests."
   - Choose the specific test you wish to export as a PDF.
2. **Configuring Export Options**
   - **Export Type**: Select from three options:
     1. *Questions and answers with blank spaces*: Ideal for paper-based testing.
     2. *Test key*: Includes questions and correct answers.
     3. *Both printable test and key*: Generates a ZIP file containing both formats.
   - **Language**: Choose the preferred language for the PDF. The system will default to your application's language setting unless specified otherwise.
   - **Test Version**: Select the desired test version. The system defaults to the latest version but allows the creation of new versions dynamically.
3. **Exporting the PDF**
   - Click the "Export" button to generate the PDF.
   - The file name will include test IDs and language codes for easy identification.

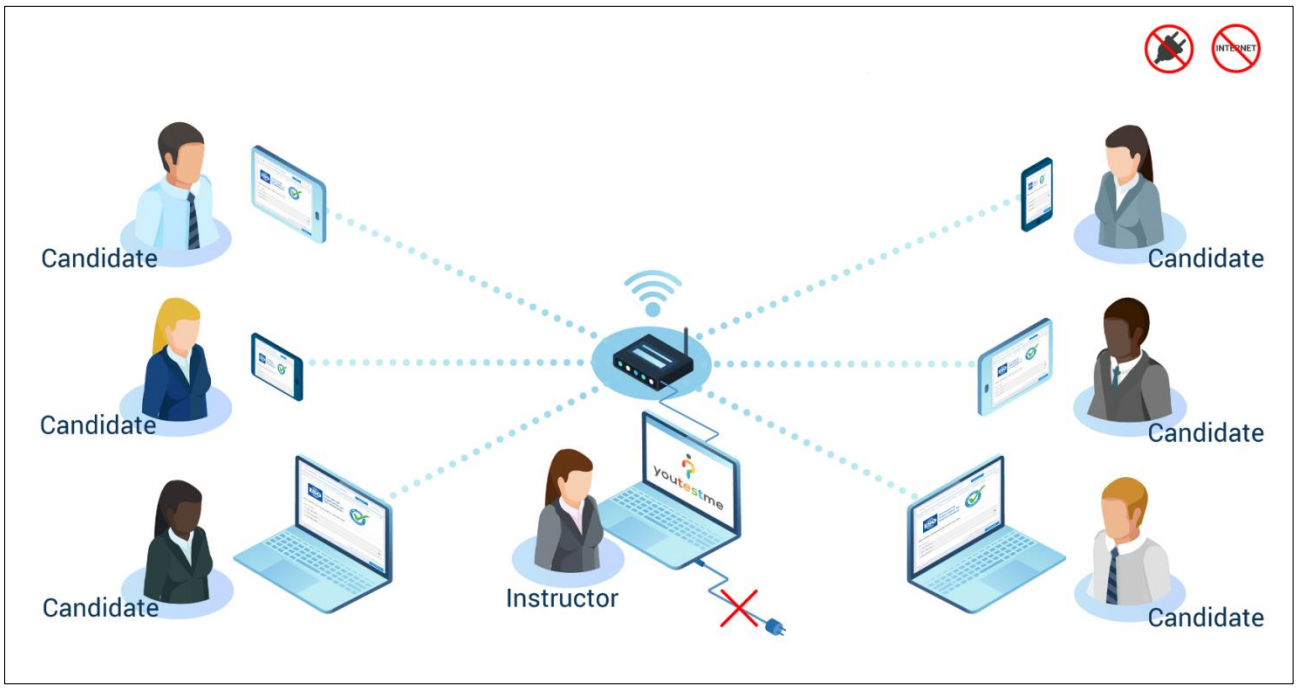



By leveraging the "Export as PDF" functionality, instructors can seamlessly manage test distribution and documentation, ensuring a versatile and efficient testing process.

## 18.14 Offline Testing Capabilities

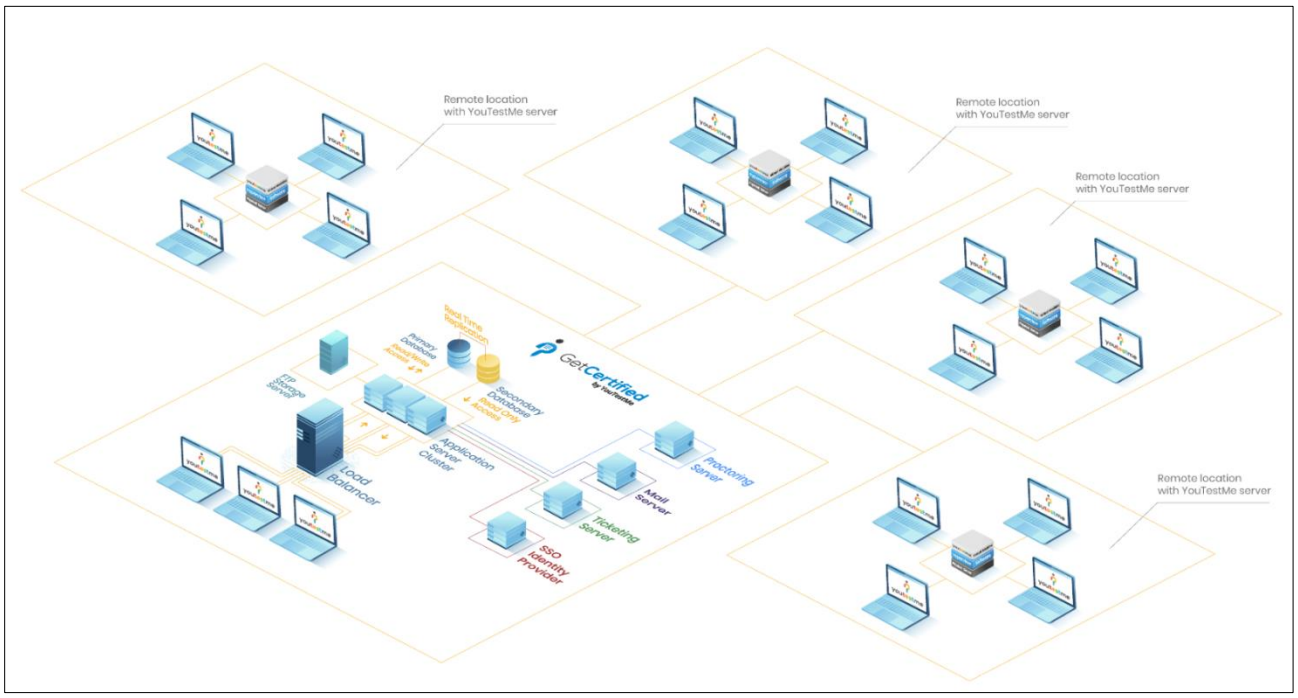
**Benefits of Offline Testing**

1. **Enhanced Accessibility:**
   - YouTestMe enables candidates to register and complete tests even in areas with unreliable or non-existent internet connections. This ensures equitable access to testing opportunities for all candidates, regardless of their location.
2. **Operational Flexibility:**
   - With the ability to deploy tests in off-the-grid locations, instructors can organize testing sessions in remote areas or facilities without internet infrastructure. This flexibility expands the reach of testing programs, accommodating diverse needs.
3. **Secure Data Handling:**
   - Offline testing ensures that candidates' test data is stored locally and securely until an internet connection is restored. This guarantees the integrity and confidentiality of test results.
4. **Seamless Data Synchronization:**
   - Once internet connectivity is re-established, test results are automatically synchronized with the main server. This process eliminates manual data entry, reducing errors and saving time for instructors and administrators.




**How Offline Testing Works**

1. **System Deployment:**
   - YouTestMe's modular platform can be deployed on virtual machines or local servers at testing locations. The system operates entirely within a Local Area Network (LAN), enabling candidates to complete tests without requiring internet access.
2. **Battery-Operated Devices:**
   - The platform supports battery-operated devices such as laptops and tablets, making it possible to conduct tests even without a power connection.
3. **Data Synchronization:**
   - Upon the restoration of internet services, all locally stored test data is automatically transmitted to the main server. This server consolidates data from multiple test centers, ensuring comprehensive reporting and analytics.
4. **Distributed System Support:**
   - YouTestMe's distributed architecture ensures reliability and scalability by balancing system loads across various servers. This setup also allows servers to take over operations in case of local failures, maintaining continuity in testing operations.




By leveraging these offline testing features, YouTestMe ensures seamless test administration in any environment, empowering clients to deliver reliable and accessible testing experiences.

## 18.15 Additional Reminders for Tests in YouTestMe

YouTestMe provides instructors and administrators with the ability to set up automatic reminders for upcoming or expiring test sessions. This feature enhances candidates' preparation and engagement by keeping them informed about key testing deadlines. Additional reminders, such as those sent several hours or days before a test begins or ends, help candidates better manage their time and avoid missing critical sessions. The reminders can be sent via email or as in-app notifications, ensuring that candidates remain aware of upcoming or expiring test sessions.

**Benefits of Additional Reminders**

1. **Improved Test Readiness**: With the ability to notify candidates well in advance, this feature ensures that candidates are adequately prepared for tests. Notifications are sent at specified times (e.g., one day or one hour before a test), allowing candidates to arrange their schedules and be ready for the test.
2. **Reduced Test No-Shows**: Reminding candidates of upcoming tests significantly reduces the likelihood of them forgetting the test schedule, which results in higher attendance and engagement rates.
3. **Customizable Notification Times**: Administrators can define specific times when reminders should be sent, making it possible to tailor the reminder system to suit various needs, such as last-minute or early preparation.

4. **Comprehensive Communication**: The reminders are delivered through multiple channels, including email and in-app notifications, ensuring candidates receive them regardless of how they access the platform.
5. **Enhanced Organizational Efficiency**: For instructors and administrators, the automatic reminder system minimizes the need for manual intervention, allowing them to focus on other critical tasks, such as creating tests and analyzing results.

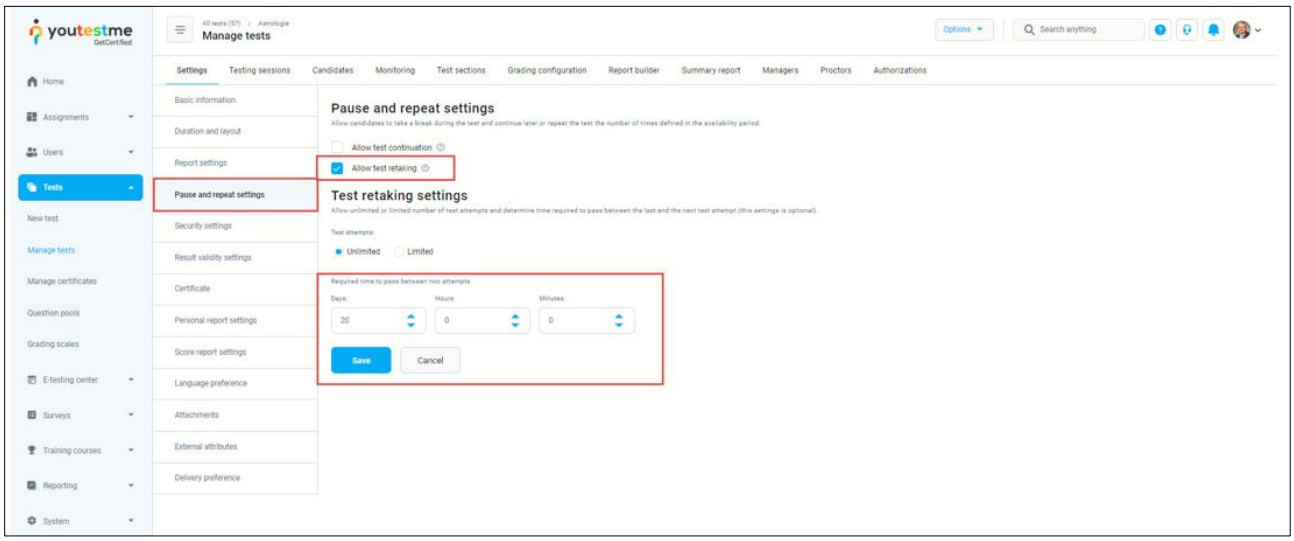
**How the Functionality Works**

1. **Setting Reminders**: Administrators can configure reminders by navigating to the "Settings and Customization" menu. Under "System Preferences," they can select the "Upcoming Tests Reminder" or "Expiring Tests Reminder" options. Once enabled, they can choose how often the system checks for test availabilities (daily or hourly) and define how many hours or days before the session a reminder should be sent.
2. **Scheduling Notifications**: The system can be set to check session availability on an hourly or daily basis, depending on the administrator's preferences. For example, reminders can be scheduled for one and seven days or hours before a session starts or expires.
3. **Candidate's Perspective**: Candidates will receive notifications both in-app and via email. The email includes a direct link to the test, making access seamless once the session becomes available. These reminders ensure candidates remain informed and on track for their scheduled tests.

By integrating these reminder options, YouTestMe empowers administrators to support candidates' success and engagement with minimal effort.

## 18.16 Test Attempts and Waiting Periods

The test manager can set the number of attempts allowed for each candidate as well as the waiting period between attempts. This means that users can choose how many times a candidate can take the same test and how long they must wait before retaking it. By allowing such customizations, YouTestMe enables users to tailor their testing process to meet their specific requirements and ensure that candidates have a fair and appropriate testing experience.



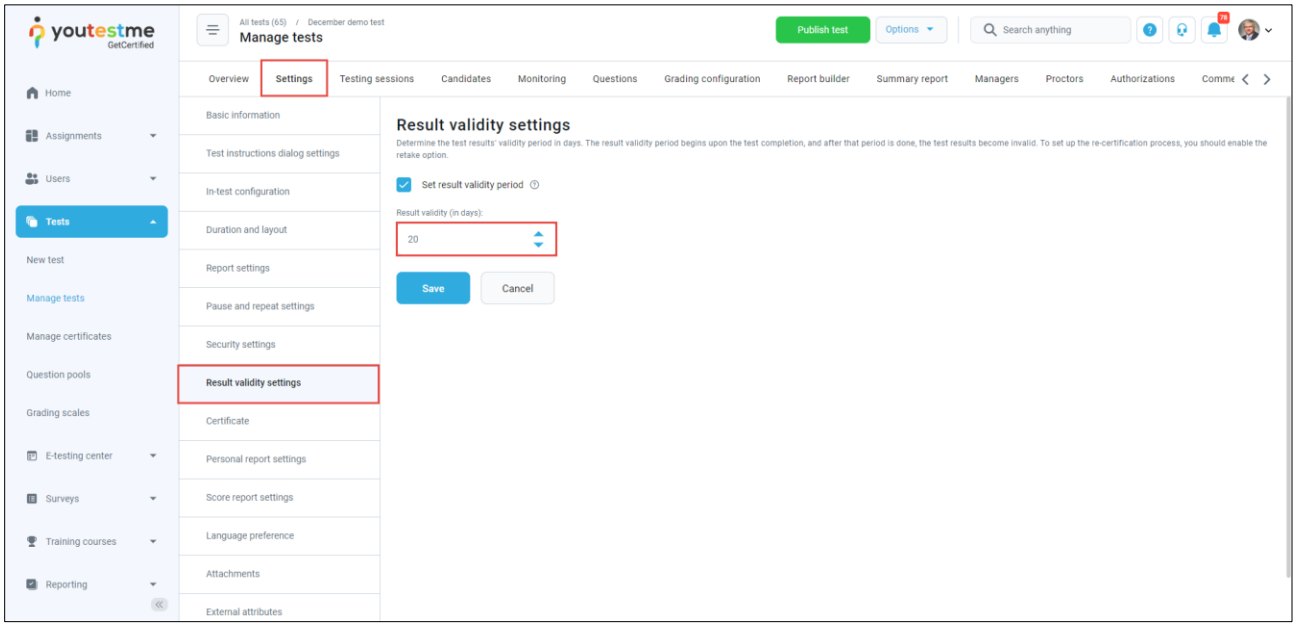

## 18.17 Automated Recertification

Automated recertification in YouTestMe simplifies the process of renewing candidates' certifications and test results, ensuring compliance with industry standards and maintaining up-to-date qualifications. This feature streamlines workflows for administrators, enhances efficiency for instructors, and provides a seamless experience for candidates.

**Benefits of Automated Recertification**

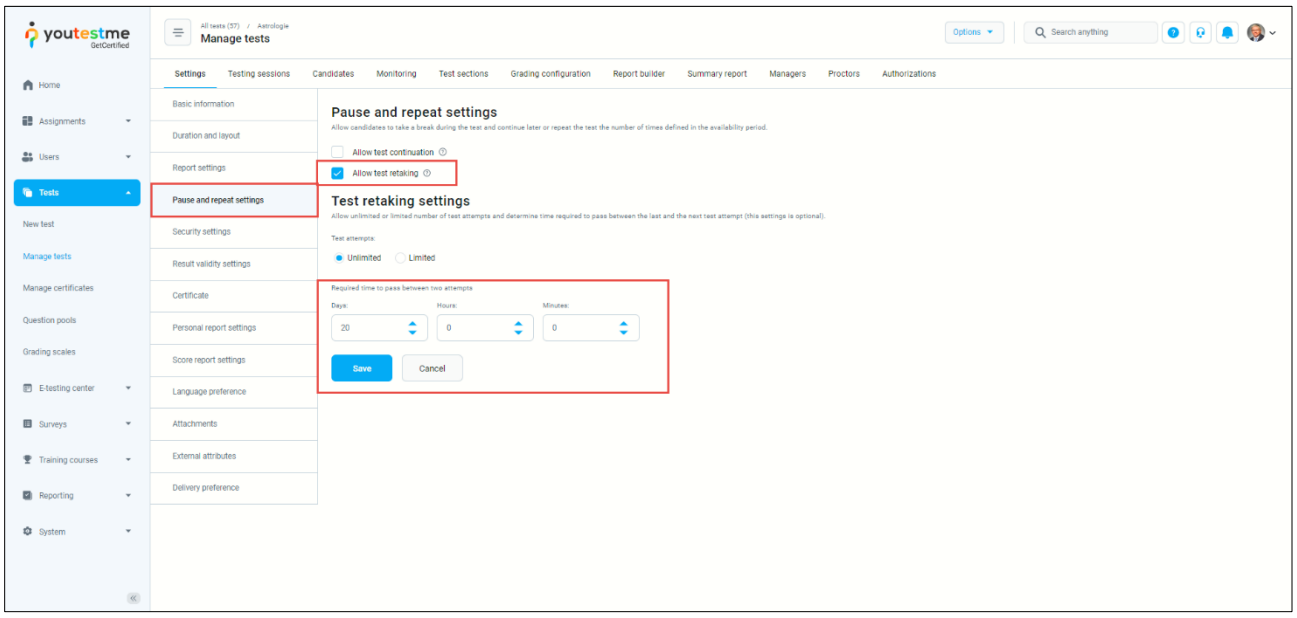
1. **Efficiency and Time Savings**
   - Automated recertification reduces the administrative workload by allowing administrators to define the validity of test results and certificates. Once configured, the system manages expirations and retakes automatically.
   - Proctors and instructors can focus on active test sessions and candidate management without manually tracking certificate validity periods.
2. **Enhanced Compliance and Reliability**
   - Ensures candidates' qualifications remain valid by prompting timely recertification, reducing the risk of expired certifications impacting organizational compliance.
   - Facilitates periodic evaluations to uphold standards and maintain a consistent level of knowledge or skills among certified candidates.
3. **Flexibility and Customization**
   - Administrators can define the validity periods for both test results and certificates, tailoring the recertification process to organizational or industry requirements.
   - The ability to enable test retakes ensures candidates have multiple opportunities to renew their certifications within the defined period.
4. **Improved Candidate Experience**
   - Candidates are notified when their certificates are about to expire, ensuring proactive recertification.

- Certificates are easily accessible in the candidate's profile, with clear information about validity and retake options.




**How Automated Recertification Works**

1. **Configuring Recertification**
   - Administrators create a new test using the test wizard. The test is saved as a draft, and the recertification parameters are set, including:
     - **Test Result Validity**: Define the duration (e.g., 20 days) for which the test result remains valid.
     - **Certificate Validity**: Specify the certificate's validity period, either unlimited or limited to a defined number of days.
     - **Test Retake Option**: Enable retaking the test within the validity period to allow candidates to recertify as needed.
2. **Publishing the Test**
   - After completing the setup, the test is published, making it available to candidates. If the test session duration aligns with the retake period, candidates can retake the test as often as necessary during the validity window.
3. **Candidate Perspective**
   - Candidates can view their certificates on the "My profile" page under the "My certificates" tab. The certificate displays its expiration date and status.
   - Upon expiration, the certificate and test result become invalid. Candidates are notified and can retake the test to renew their certification, provided the test session remains open or they are re-enrolled by an instructor.



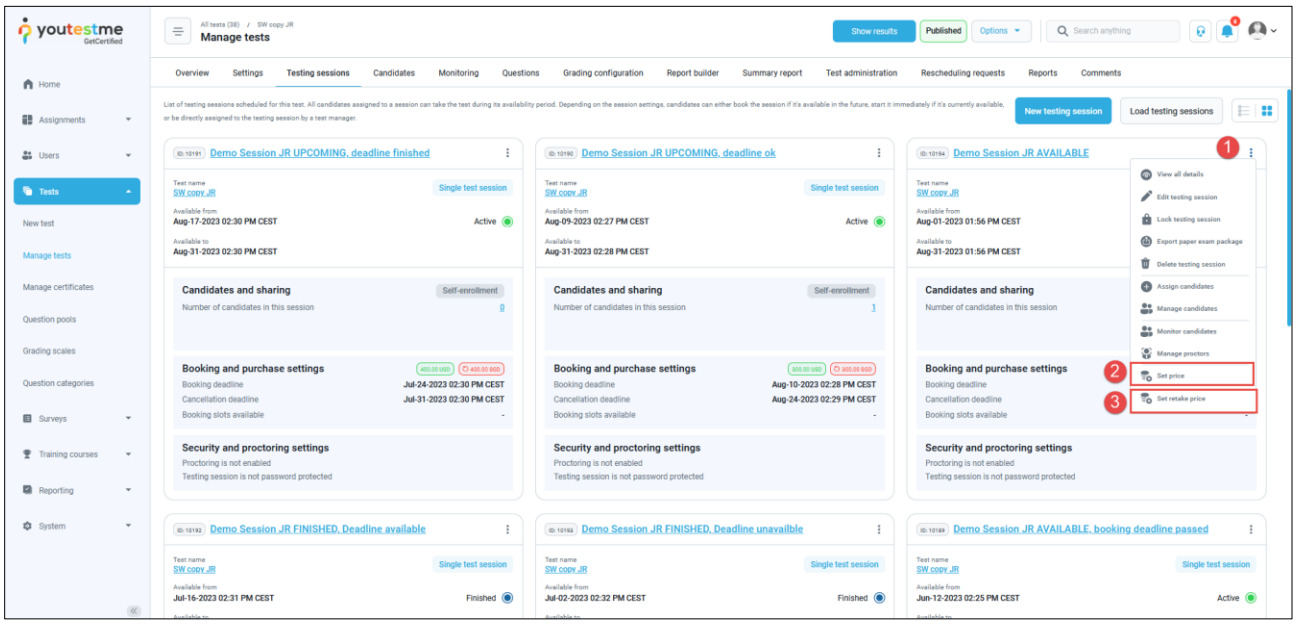

Automated recertification ensures a consistent, reliable, and user-friendly process for maintaining active certifications, benefiting all stakeholders involved in the testing and training ecosystem.

# 19 E-commerce Integration for Tests and Training Courses

YouTestMe offers seamless integration with E-commerce functionalities, enabling candidates to purchase access to tests and training courses directly within the platform. This feature enhances accessibility, streamlines administrative processes, and provides a flexible solution for managing payment-related tasks.

**Benefits of E-commerce Integration**

1. **Convenient Payment Process**: Candidates can easily purchase tests and training courses through a secure payment gateway, ensuring a smooth and user-friendly experience.
2. **Customizable Pricing Options**: Instructors and administrators can set predefined or custom prices, catering to specific organizational needs and varying course or test requirements.
3. **Flexible Retake and Rescheduling Policies**: E-commerce integration supports charging for retakes and offers options for rescheduling tests, providing adaptability to different scenarios.
4. **Comprehensive Notifications**: Both candidates and administrators receive automated notifications for purchases, enhancing communication and reducing manual follow-ups.
5. **Integration with Stripe**: The use of Stripe for payment processing ensures reliable, secure, and globally recognized financial transactions.
6. **Enhanced Control for Administrators**: Administrators can manage pricing, refunds, and payment settings directly from the platform, simplifying financial oversight.

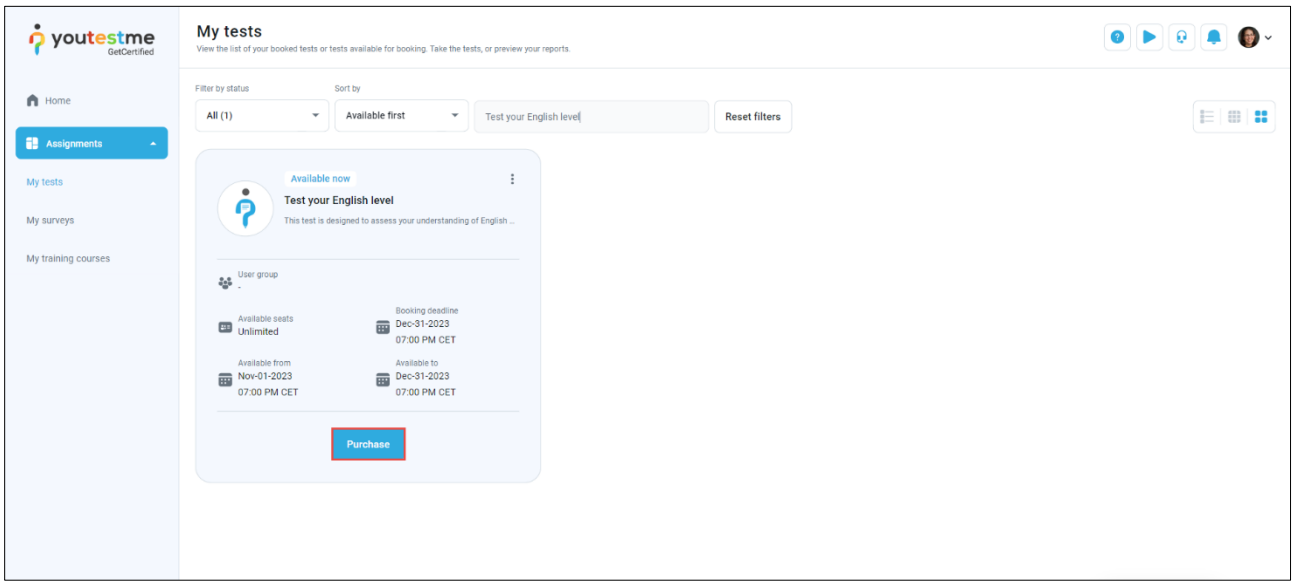



**Setting Up E-commerce for Tests**

1. **Configure Payment Gateway**: Navigate to the Integrations section under System settings and connect the platform to a Stripe account by entering the required API credentials.
2. **Define Prices**: Choose between:
    - **Predefined Prices**: Set fixed prices for tests in the E-commerce tab and assign them to testing sessions.
    - **Custom Prices**: Enable custom pricing to set unique prices for specific sessions directly during test creation.
3. **Link Prices to Sessions**: After creating self-enrolment testing sessions, assign predefined or custom prices to each session.

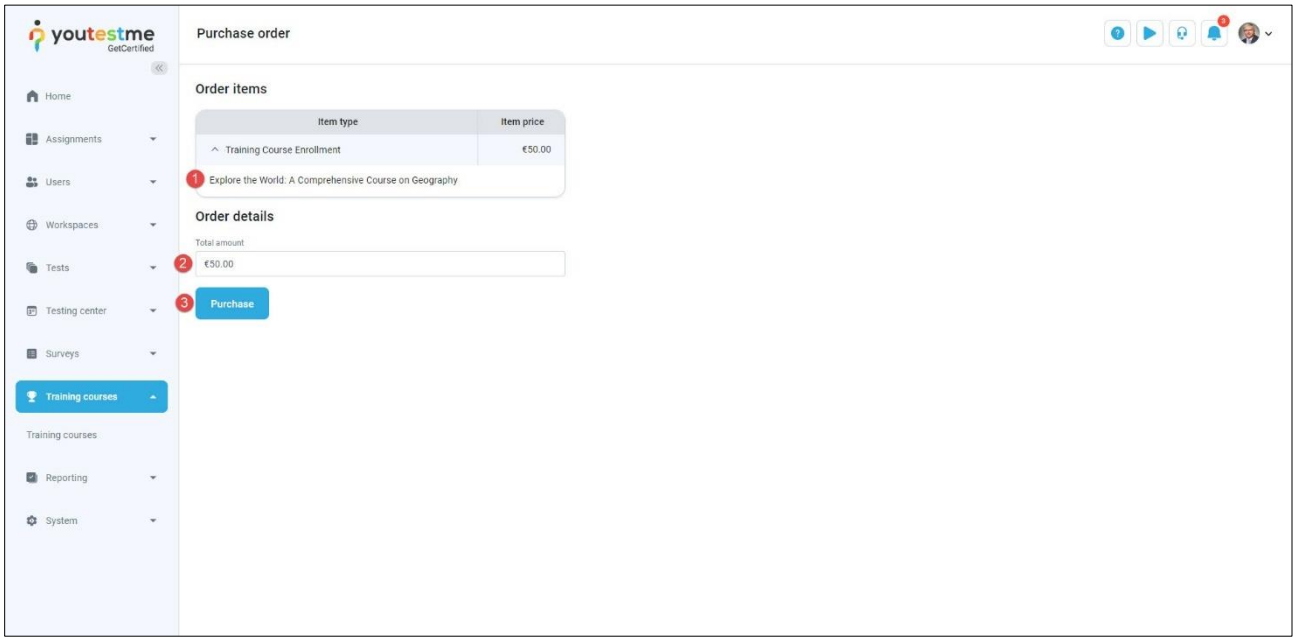
**Setting Up E-commerce for Training Courses**

1. **Enable Self-Enrolment**: Ensure the training course is configured for self-enrolment in the training management module.
2. **Assign Prices**:
    - For predefined prices, assign a price from the E-commerce tab.
    - For custom prices, enable the option in the settings and input the desired price during course configuration.




**Candidate Experience**

1. **Purchasing Tests or Courses**: Candidates access the relevant module, select their desired test or training course, and proceed to purchase using Stripe's secure checkout process.
2. **Notifications and Updates**: Upon successful payment, candidates receive instant confirmation via email and application notifications.




**Additional Features**

- **Retake Fees**: Administrators can configure retake fees for tests, ensuring clear financial policies for additional attempts.

- **Refund Management**: While cancellations do not automatically trigger refunds, administrators can process refund requests as needed.

By integrating E-commerce functionality, YouTestMe provides a comprehensive solution for managing payments, enhancing efficiency, and delivering a seamless experience for candidates and administrators alike.

# 20 Proctoring

## 20.1 Proctoring Overivew

**YouTestMe** provides a **comprehensive proctoring solution** that ensures the **integrity and security** of online tests through a combination of **AI-driven automation, live human supervision, and robust security measures**. The system supports both **live proctoring** and the **record and review model**, allowing for:

- **Real-time monitoring** with immediate intervention
- **Post-test analysis** for later review by a proctor

**AI-based automated proctoring** continuously tracks and flags **suspicious behaviors**, including:

- **Screen activity violations**, such as:
  - Switching tabs
  - Disabling full-screen mode
  - Using a second display
- **Unauthorized faces**, including:
  - Multiple faces detected
  - Face mismatch
- **Atypical keyboard patterns**, ensuring detection of irregular typing behavior

The system generates a **detailed credibility report**, assisting instructors in **validating test integrity**. **Live proctoring** enables proctors to actively oversee candidates via:

- **Video, audio, and screen sharing**
- **Intervention options**, including:
  - Issuing warnings
  - Pausing the test
  - Terminating an attempt if necessary

To prevent **unauthorized access and content leakage**, YouTestMe employs **multiple layers of protection**, including:

- **Browser lockdown** to restrict external access
- **Safe exam browser integration** for a controlled testing environment
- **Screen-sharing restrictions** to prevent unauthorized recordings

The **additional camera 360° view** feature enhances test security by allowing candidates to:

- **Connect a mobile device** for a broader environmental view
- **Ensure no unauthorized activity** occurs outside the primary camera's field of view

Candidates undergo an **equipment pre-check** to ensure all **proctoring requirements** are met before the test begins. If **connectivity issues** arise, the system provides **reconnection options** to:

- Resume from the exact point of disconnection
- Resume from the next question to prevent intentional disconnects for unfair advantages

All **proctored sessions** are **recorded and securely stored**, allowing **administrators** to:

- **Review flagged violations** before releasing scores
- **Determine result validity** with flexible configuration options

The system's **tailored security settings and validation workflows** ensure compliance with client-specific needs.

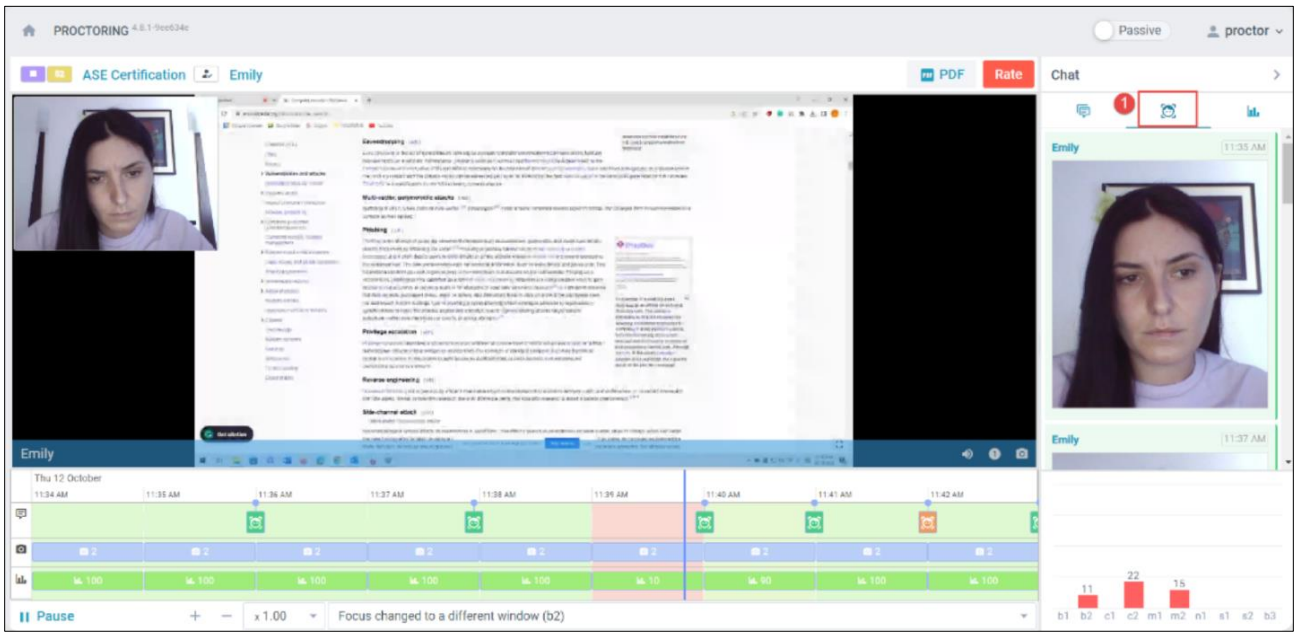
## 20.2 Proctoring Features and Safeguards for Secure and Reliable Testing

### 20.2.1 Suspicious Behaviours Tracked

YouTestMe's AI-based automated proctoring ensures the highest level of test integrity by continuously monitoring candidate behavior and flagging suspicious activities. This solution enhances security while minimizing the need for human intervention, making it an efficient and scalable proctoring option.

**Benefits of AI Automated Proctoring**

1. **Comprehensive Behavior Tracking** - The AI system detects and flags over 15 types of suspicious behaviors, ensuring a secure test environment.
2. **Real-Time Monitoring and Alerts** - Candidates are monitored throughout the test session, with violations flagged instantly for instructor review.
3. **Credibility Reporting** - The system generates a credibility score based on detected violations, providing a clear assessment of test integrity.
4. **Resource Optimization** - Reduces reliance on human proctors while maintaining high-security standards, leading to cost savings.
5. **Customizable Violation Handling** - Instructors can configure warning and attempt termination thresholds to align with test policies.




*AI-generated video report highlighting flagged suspicious behavior from a testing session*

**Tracked Suspicious Behaviors**

The AI system monitors and flags the following types of violations:

1. **Window and Screen Activity:**
   - Focus changed to a different window
   - Full-screen mode is disabled
   - Screen activities are not shared
   - The second display is used

2. **Camera and Identity Verification:**
   - Webcam is disabled
   - The face is not visible or not looking into the camera
   - Several faces detected in front of the camera
   - Face does not match the profile
   - Similar profile(s) identified

3. **Audio and Environment Monitoring:**
   - Microphone muted or volume too low
   - Background conversation or noise detected

4. **Network and Connectivity Issues:**
   - No network connection
   - No connection to a mobile camera

5. **Typing Patterns and Activity:**
    - Atypical keyboard key usage detected

*AI-generated PDF credibility report detailing all flagged suspicious behaviors, minute by minute*

**How AI Automated Proctoring Works**

1. **Behavior Detection** - The AI tracks and flags suspicious behaviors in real-time.
2. **Violation Management** - Each violation is assigned a weight, contributing to an overall credibility score.
3. **Automated Reporting** - The system generates a post-test credibility report summarizing violations and risk factors.
4. **Optional Human Review** - Instructors can review flagged sessions to confirm AI-detected violations.

This automated approach ensures reliable and scalable test supervision, reducing the risk of misconduct while maintaining a seamless candidate experience.

### 20.2.2 Test Content Protection

YouTestMe implements multiple security measures to prevent candidates from copying, printing, or recording test content. These features ensure the confidentiality of test materials, protect intellectual property, and maintain test integrity.

**Benefits of Preventing Unauthorized Access**

1. **Protection of Test Content** - Prevents candidates from sharing or distributing questions, preserving the value of the test.
2. **Enhanced Security** - Reduces the risk of content leaks, ensuring that test materials remain confidential.
3. **Fair Testing Environment** - Prevents candidates from gaining an unfair advantage through unauthorized access.
4. **Real-Time Monitoring** - Enables immediate intervention if suspicious behavior is detected.
5. **Customizable Restrictions** - Administrators can configure security settings to align with test requirements.

**How the System Prevents Unauthorized Actions**

1. **Live Proctoring** - Proctors actively monitor candidates during the test and can take action if an attempt to copy or record content is detected.
2. **Screen Activity Detection** - The system tracks screen activity and alerts proctors if candidates attempt to open new tabs, switch applications, or use unauthorized tools.
3. **Browser Lockdown** - Restricts access to external applications, disables copying, printing, and screen capture functions, and prevents the use of keyboard shortcuts.
4. **Safe Exam Browser Integration** - Enforces a highly secure test environment by preventing unauthorized background processes, blocking secondary applications, and ensuring full-screen mode remains active.

These combined measures ensure that test content remains secure and protected from unauthorized access.

### 20.2.3 Browser Lockdown

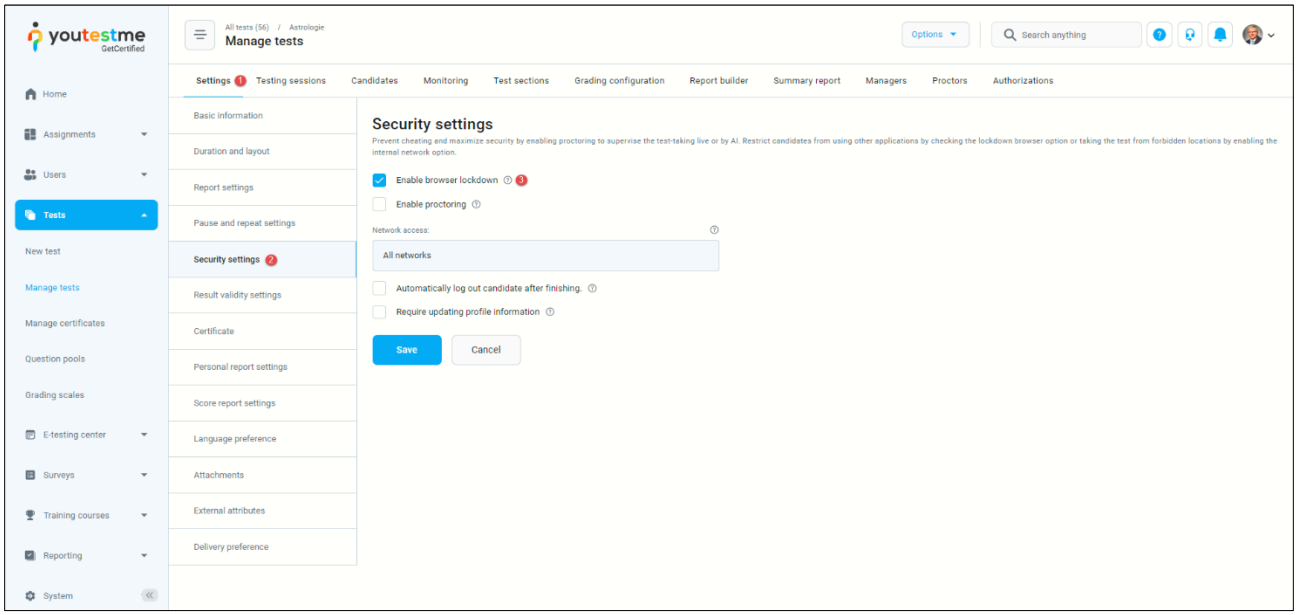
#### 20.2.3.1 Built-In Browser Lockdown

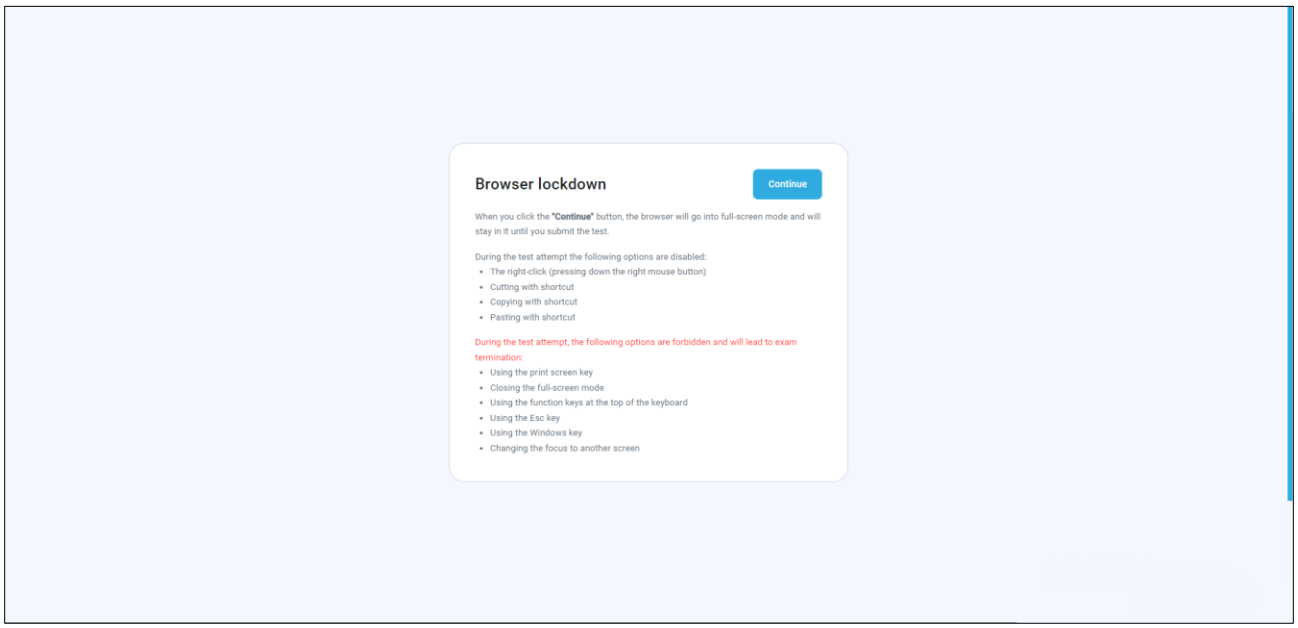
This chapter introduces the Browser Lockdown feature of YouTestMe, which serves as a robust solution for ensuring cheating prevention during online tests. In today's digital era, maintaining the integrity of online assessments is paramount, and the Browser Lockdown is designed to create a secure and controlled test environment. By limiting access to any other screen except the test-taking page, this feature fortifies the examination process, mitigating potential cheating attempts. This chapter elucidates the capabilities and benefits of the Browser Lockdown in maintaining the sanctity of online tests.

The Browser Lockdown within YouTestMe is a pivotal tool for safeguarding the integrity of online assessments. It achieves this by creating a secure test environment with the following key attributes:

- **Full-Screen Mode Enforcement**: The Lockdown Browser compels test-takers to remain within the examination environment by disabling the ability to exit full-screen mode. This restriction ensures that the test-taking experience remains focused solely on the assessment, deterring any attempts to access other applications or resources.

- **Copy, Cut, and Paste Restrictions**: To prevent the unauthorized extraction of content from the assessment, the Lockdown Browser imposes restrictions on copying, cutting, and pasting anything from the screen. This measure prevents the duplication of questions, answers, or any other test-related information.
- **Right Mouse Button Deactivation**: By deactivating the right mouse button, the Lockdown Browser obstructs the use of context menus and associated functions that could potentially be used for cheating purposes. This limitation further reinforces the controlled examination environment.
- **Print Screen Button Disablement**: To prevent the capture of test content through screenshots, the Lockdown Browser effectively disables the print screen button on the keyboard. This measure ensures that test-takers cannot capture or share test questions or answers through this method.






The Lockdown Browser feature within YouTestMe represents a robust commitment to maintaining the integrity of online tests. By creating a secure test environment, it significantly reduces the risk of cheating during assessments. With the Lockdown Browser in place, organizations can have confidence in the fairness and reliability of their online examination processes.

### 20.2.3.2 Safe Exam Browser

Safe Exam Browser (SEB) is an essential tool for ensuring secure and controlled online testing environments within YouTestMe. By integrating SEB, clients can maintain the integrity of their tests by preventing unauthorized access and limiting candidates to test-related functionalities.

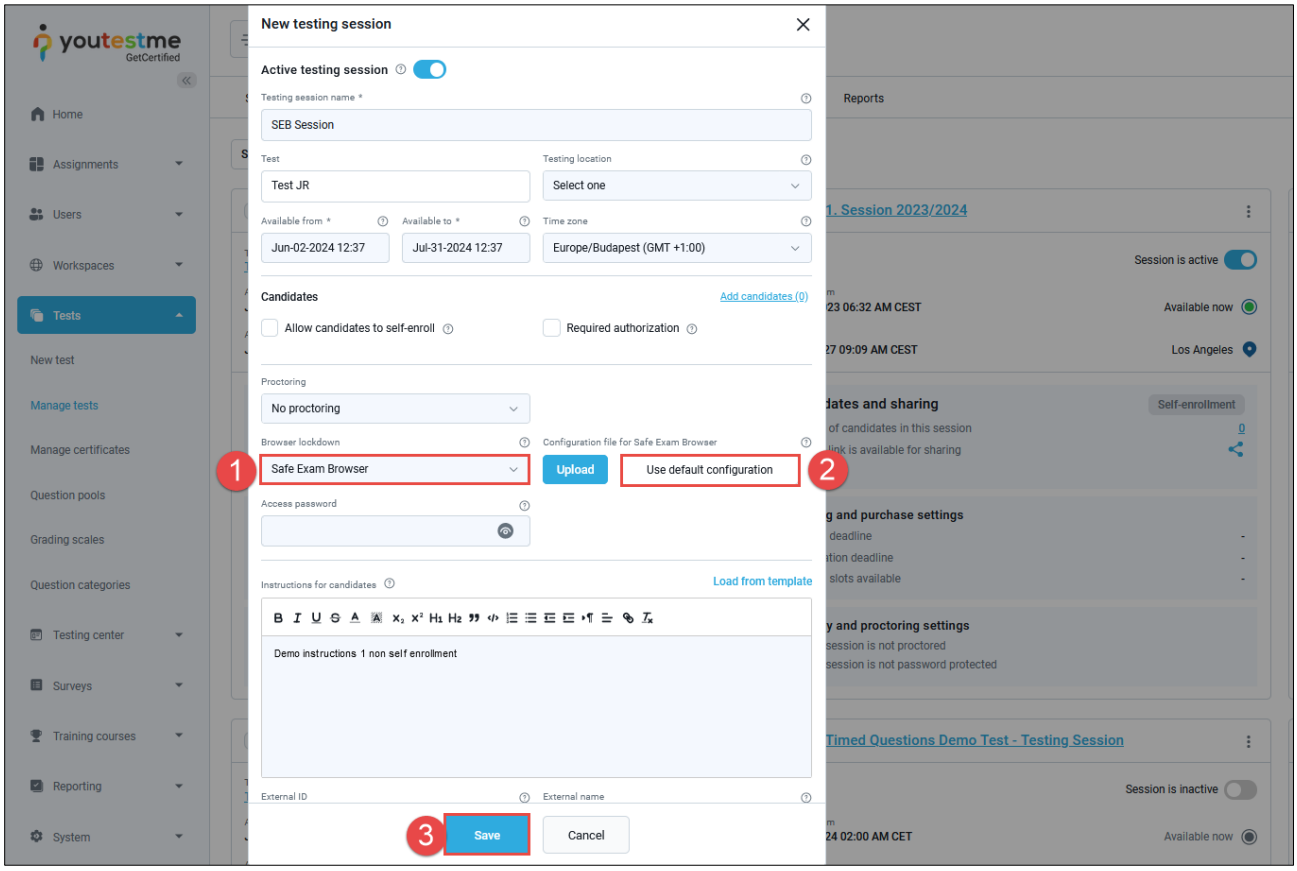
**Key Benefits of Using SEB**

1. **Enhanced Security:** SEB ensures a secure testing environment by disabling shortcuts, preventing multiple screens, and restricting access to unauthorized applications.
2. **Customizable Configurations:** Instructors can define SEB settings tailored to the specific needs of each test session.
3. **User-Friendly:** Candidates are guided through an intuitive process to install and launch SEB, minimizing potential technical challenges.
4. **Integrity Assurance:** The locked SEB configuration enforces strict compliance, ensuring candidates cannot alter or bypass security measures.

**Setting Up SEB on the Session Level**

1. Navigate to the **Sessions** tab after completing test creation.
2. Click on **New testing session** and select the **Safe Exam Browser** option.

3. Configure additional session settings as desired and click **Save** to finalize the setup.
4. Publish the test. Candidates will then be required to use SEB to access the test.

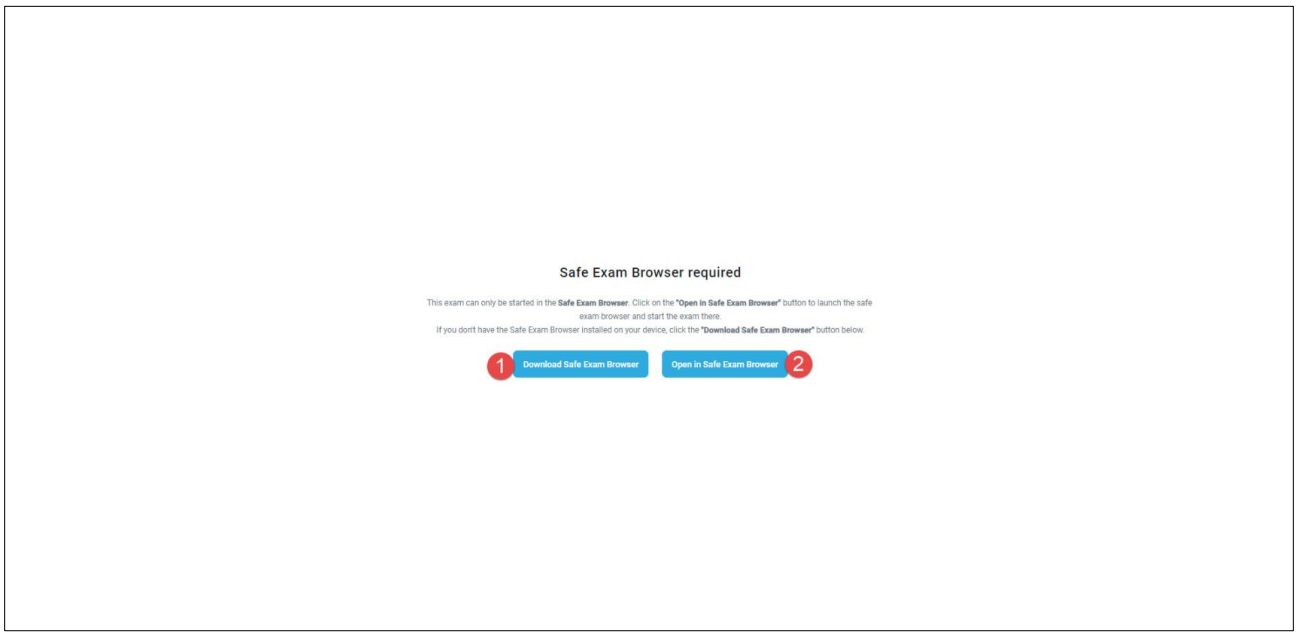



**Adjusting SEB Settings Post-Setup**

Instructors retain flexibility to modify SEB settings for existing sessions, ensuring adaptability to any last-minute changes.

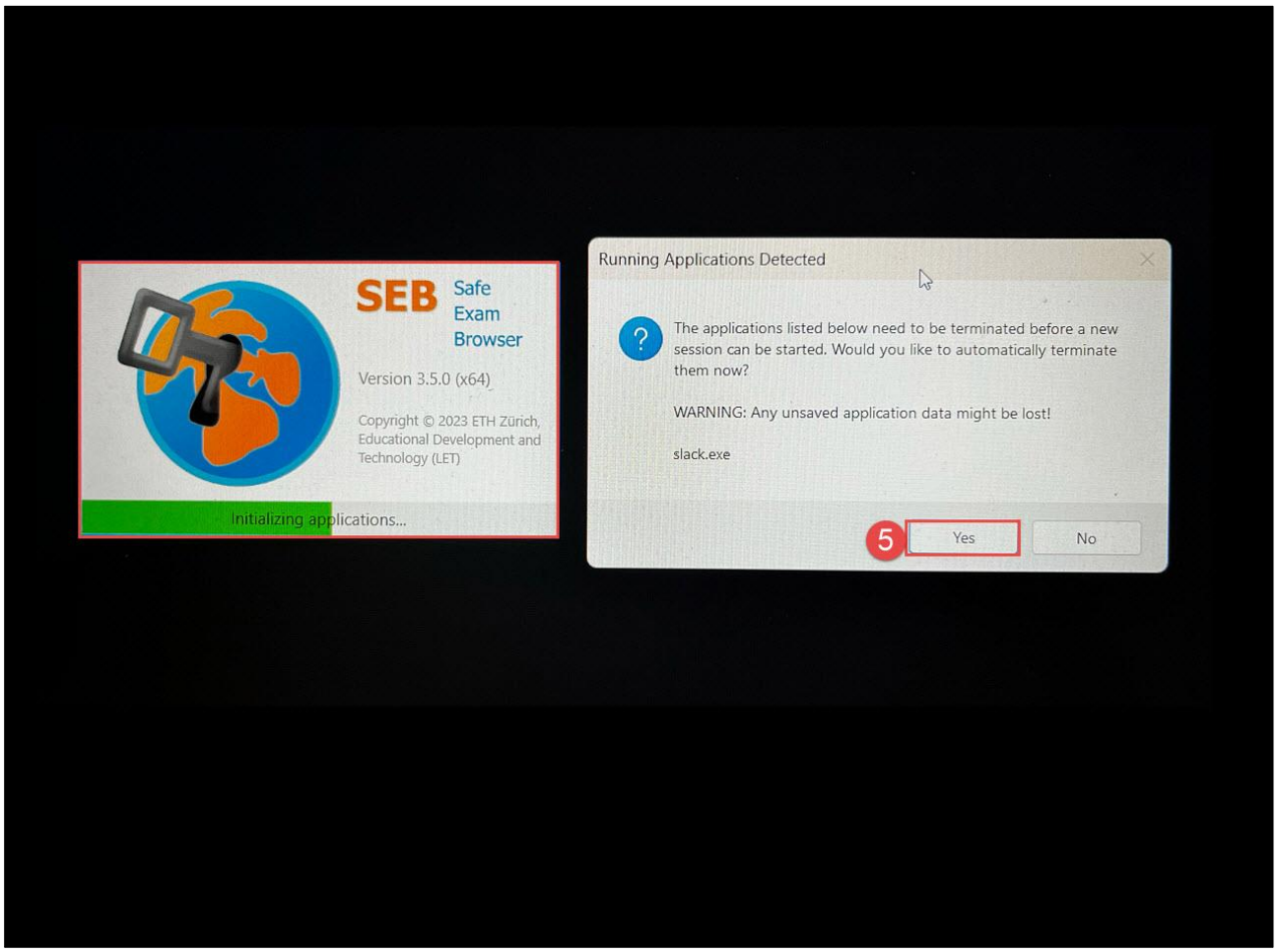
**Technical Requirements for SEB**

1. **Internet Connection:** Minimum 256 kbps in both directions.
2. **Supported Operating Systems:**
   - Windows 8.1 or higher (virtual machines not permitted).
   - macOS (Big Sur, Monterey, Ventura, or Sonoma with the specified Safari versions).
3. **Processors:** Intel, AMD, or ARM.
4. **Additional Notes:** Candidates should disconnect additional monitors and ensure their devices meet the requirements for seamless SEB operation.




**Candidate Workflow with SEB**

1. **Launching the Test:** Candidates will be redirected to download SEB or open the test directly in SEB.
2. **System Lockdown:**
    - SEB initiates in full-screen mode, blocking other actions.
    - Applications deemed unnecessary for the test are terminated.
3. **Starting the Test:** Candidates confirm their readiness, ensuring all pre-test instructions are followed for a smooth experience.



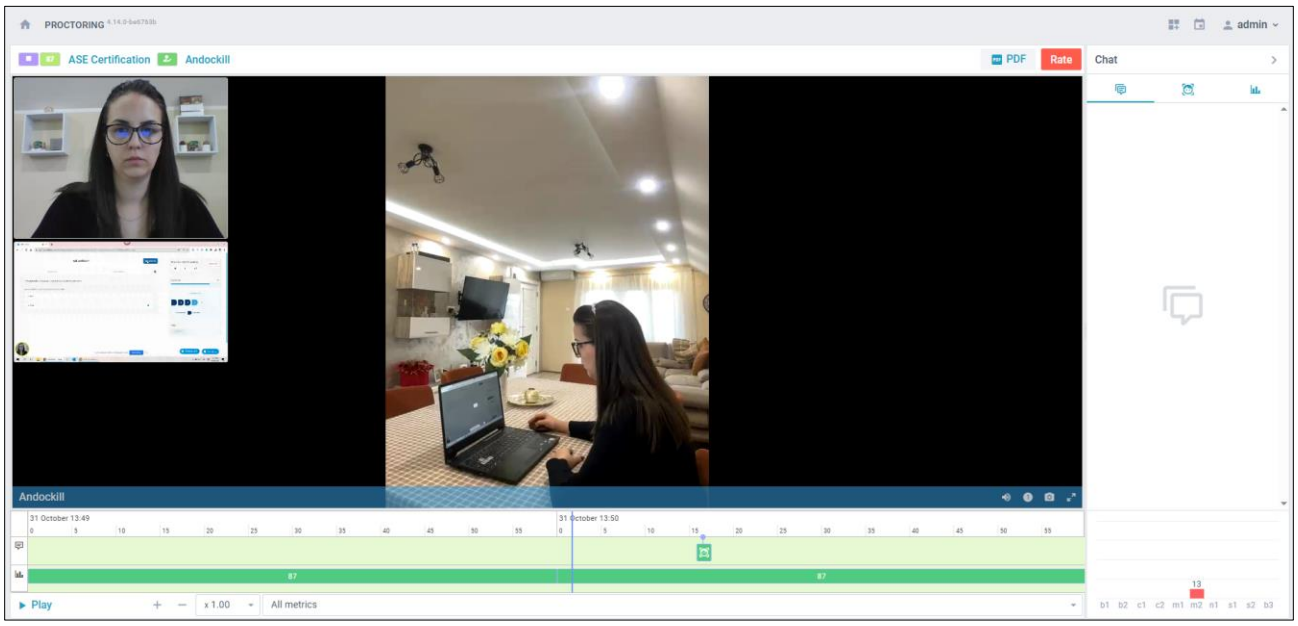

**Best Practices for Candidates**

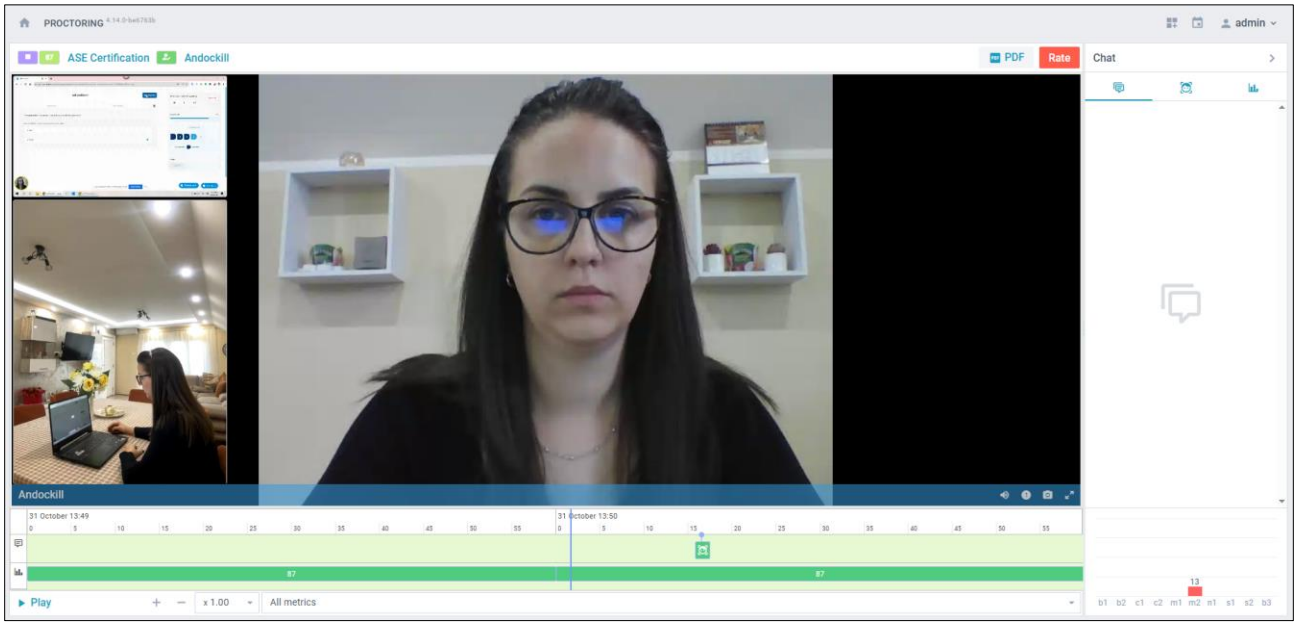
1. Use a personal computer to avoid conflicts with workplace security policies.
2. Temporarily disable VPNs, firewalls, and antivirus software.
3. Clear browser cache memory before starting the test.
4. Follow instructor guidelines to ensure compliance with SEB requirements.

By integrating Safe Exam Browser with YouTestMe, clients can offer candidates a secure and seamless online testing experience while maintaining strict adherence to test integrity protocols.

### 20.2.4 Additional Camera 360° View

YouTestMe enhances test security with the **Additional Camera 360° View** feature, allowing candidates to use a secondary device, such as a smartphone, to provide a comprehensive view of their testing environment. This additional perspective ensures the integrity of the test session by preventing unauthorized activities outside the primary camera's field of view.



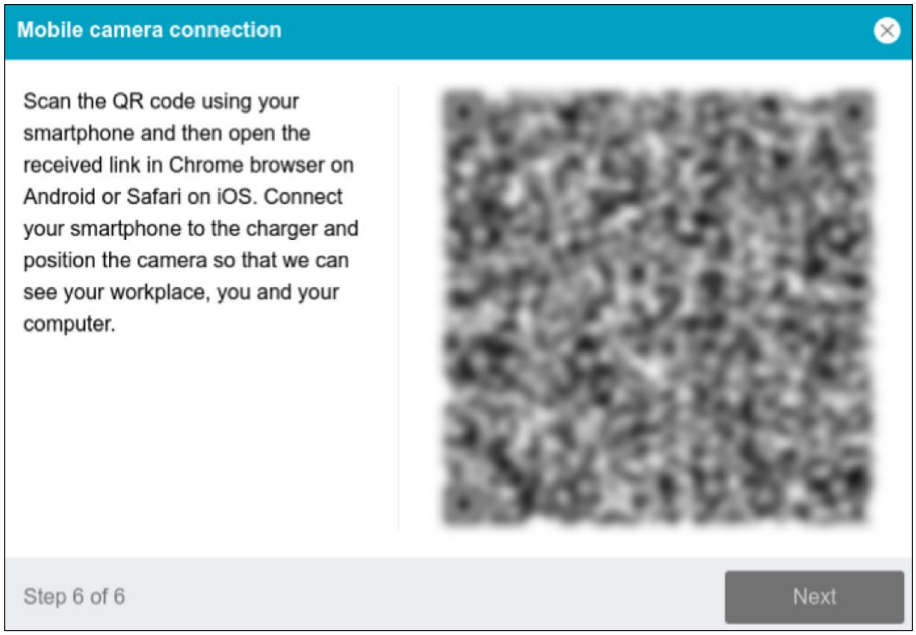

**Benefits of Additional Camera 360° View**

1. **Enhanced Security** - Expands visibility beyond the candidate's direct front view, reducing the risk of hidden materials or assistance.
2. **Full Environment Monitoring** - Enables proctors to inspect the entire workspace before and during the test.
3. **Simple and Secure Connection** - Candidates quickly link their mobile device using a QR code, ensuring a seamless setup.

4. **Real-Time Supervision** - Provides a live secondary feed to proctors, enabling immediate intervention if needed.
5. **No Screen Recording Concerns** - Mobile devices do not capture screen activities, ensuring compliance with platform security measures.

**How the Additional Camera Works**

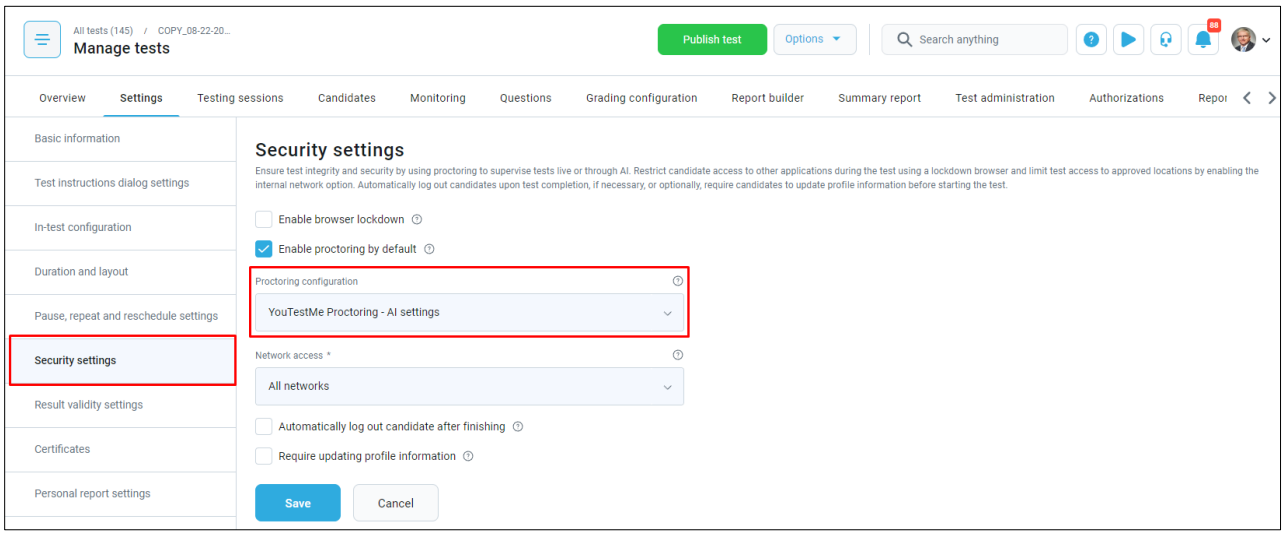
1. Candidates scan a **QR code** displayed on their computer screen using their smartphone camera.
2. They open the generated link in their mobile browser (Chrome for Android, Safari for iOS).
3. The mobile camera streams a **live feed**, giving proctors a 360° view of the environment.
4. Proctors monitor both the primary and secondary feeds, ensuring a secure and controlled test environment.




This feature provides an extra layer of security, ensuring that remote tests maintain the highest level of integrity.

### 20.2.5 Proctoring Configurations

YouTestMe offers flexible proctoring configurations, allowing instructors to customize test security settings based on specific requirements. This flexibility ensures an optimal balance between test integrity, candidate experience, and administrative efficiency.

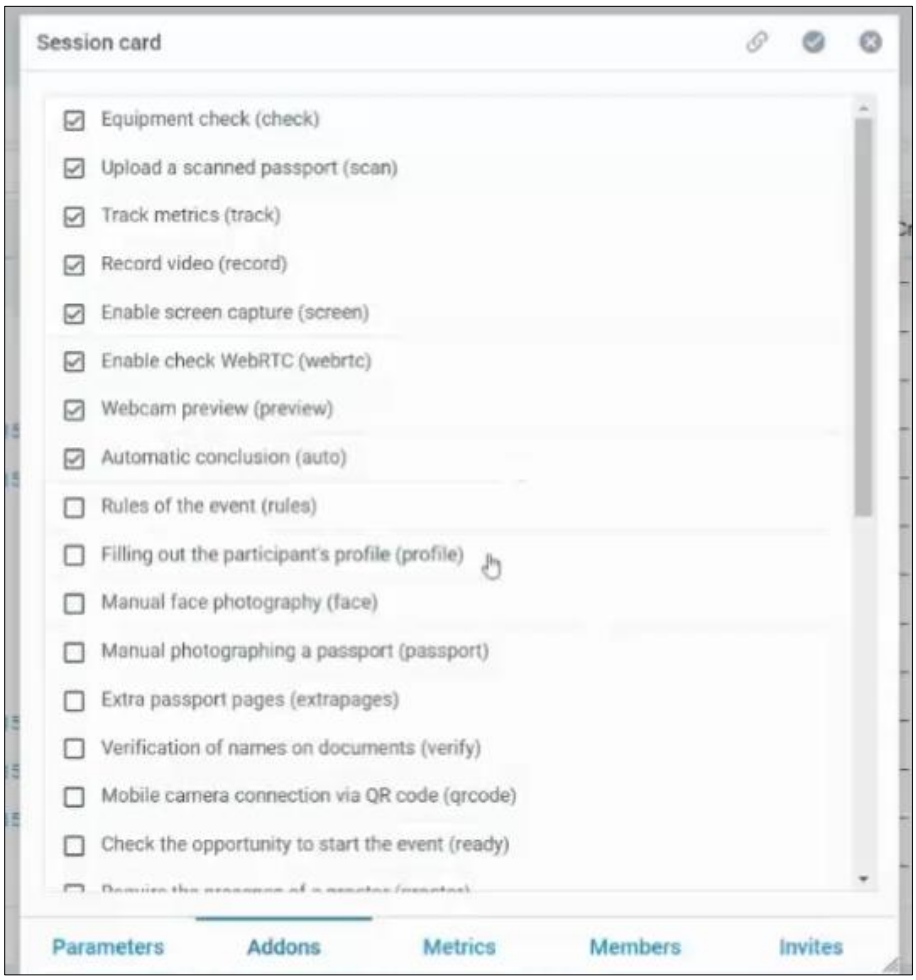



**Benefits of Proctoring Configuration**

1. **Customizable Security Levels** - Instructors can choose from various proctoring methods, ensuring the appropriate level of security for different test types.
2. **Enhanced Test Integrity** - Configurable settings allow for the implementation of automated and human supervision to prevent cheating.
3. **Predefined and Reusable Configurations** - Administrators can save frequently used configurations for streamlined test setup.
4. **Improved Candidate Experience** - Adjustable proctoring settings help maintain a fair and non-intrusive test environment.

**How Proctoring Configurations Works**

1. **Selection of Proctoring Method** - Instructors can choose between AI-based automated proctoring, live proctoring, or a combination of both.
2. **Configuration Adjustments** - Each setting can be enabled or disabled to create a tailored proctoring setup.
3. **Saving and Reusing Configurations** - Once defined, configurations can be stored and applied to future tests for consistency and efficiency.

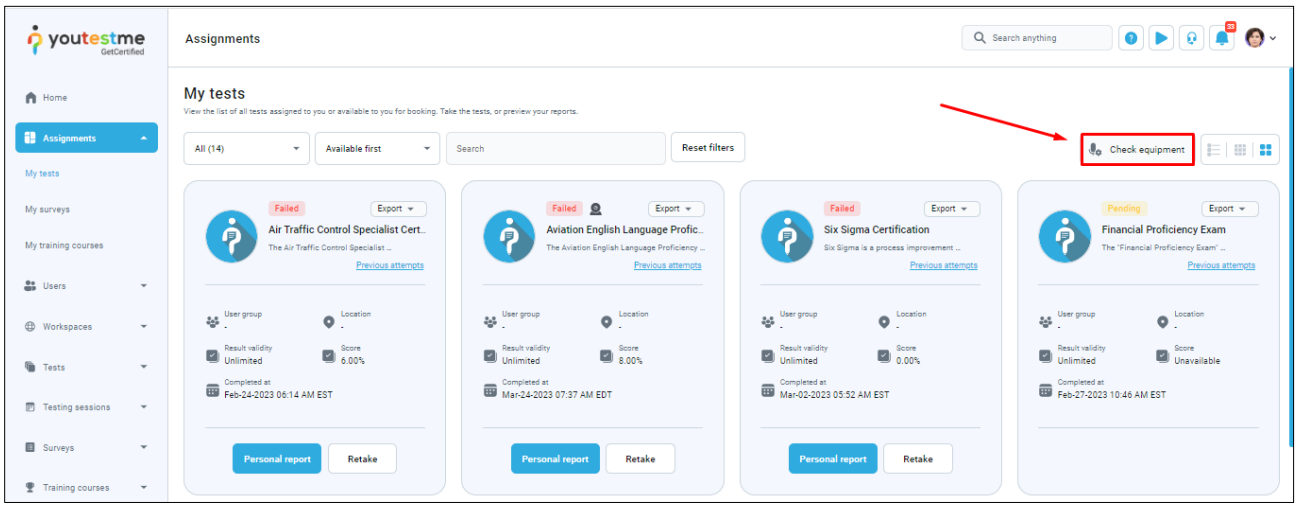



### 20.2.6 Pre-Check of the Candidates Equipment

There are two main types of system checks before the test:

1. **Preliminary equipment check**: In all instructional materials, candidates are encouraged to do the equipment check long before the test session to be able to resolve any equipment-related challenges with the assistance of our support team before the actual session.

They can easily do that by accessing the **Check equipment** option in the application.




2. **Pre-test equipment check**: Before the official start of the test, each candidate must undergo an equipment check process that automatically checks their internet connection, webcam, screen sharing, microphone, and other devices required for the test. If any of the candidate's equipment is not working, the system will not allow them to proceed. At this point, the candidate is free to contact our technical team, who will provide immediate assistance and support to help them fix any issues on their computer and proceed with the test.

### 20.2.7 Reconnection Options Upon Loss of Connection

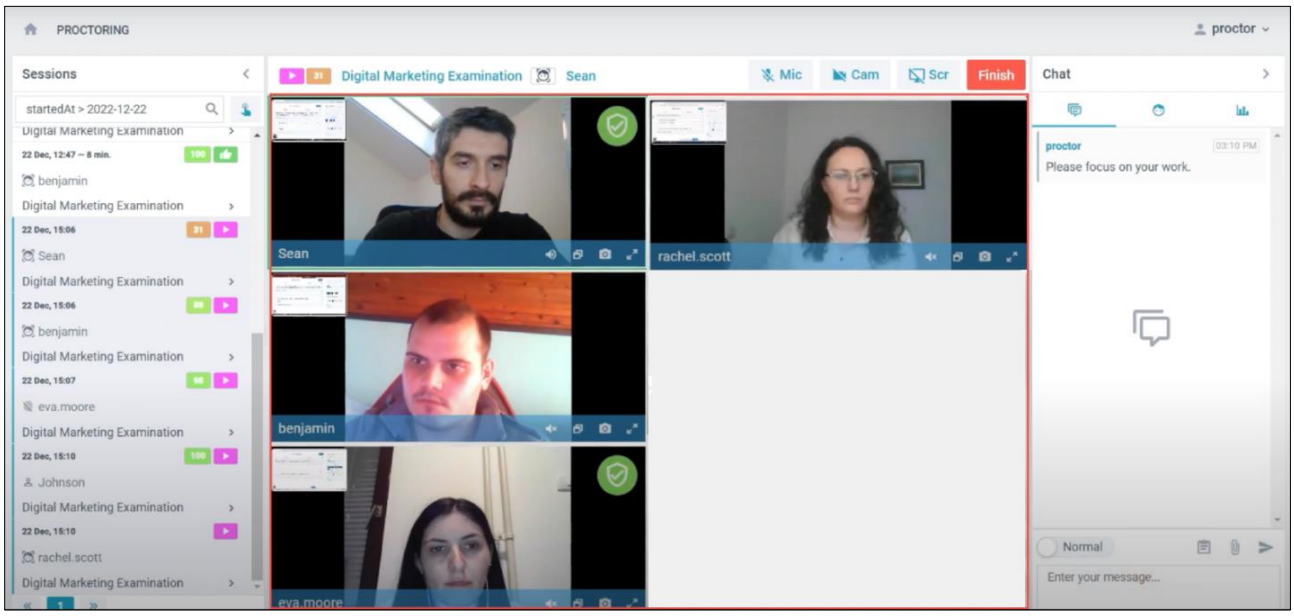
If an candidate experiences disconnection issues due to an unstable network connection or any other reason during the test, the situation is as follows:

- **An candidate can pick up where they left off**. Additionally, the system can be configured to allow them to resume the test from the next question rather than where they left off to ensure that they have not intentionally disconnected to check their answers.
- **The candidate's answers are automatically saved and the test timer is paused during the disconnection**. This means that the candidate will not lose any of their progress or the time they spent on the test while they were disconnected.

Overall, the system is designed to allow candidates to continue their test seamlessly even if they experience connectivity issues, while also ensuring the integrity of the test by preventing intentional disconnections to check answers.

## 20.3 Live Monitoring

YouTestMe's live monitoring feature provides real-time supervision of test sessions, ensuring high security and integrity through human oversight and AI-driven alerts. This method allows proctors to actively monitor candidates, verify their identity, and intervene in case of suspicious activity, making it one of the most reliable solutions for secure online testing.




**Benefits of Live Monitoring**

1. **Real-Time Candidate Supervision** - Proctors monitor candidates in real-time, ensuring compliance with test policies.
2. **Instant Violation Detection** - AI-driven alerts notify proctors of potential violations, allowing immediate action.
3. **Customizable Interaction Options** - Proctors can communicate with candidates via chat, audio, or video.
4. **Identity and Environment Verification** - Ensures candidates are who they claim to be and that their environment is secure.
5. **Multi-Candidate Oversight** - Proctors can monitor up to six candidates simultaneously, increasing efficiency.
6. **Seamless Integration with Proctoring Reports** - All interactions and violations are logged for post-test review.

### 20.3.1 Live Monitoring Process

#### 20.3.1.1 Check-In Process

1. Before the test begins, the proctor pauses the session for all candidates.
2. Candidates complete an equipment check, ensuring their camera, microphone, and screen-sharing functions properly.
3. Candidates upload or capture a photo of their government-issued ID for identity verification.
4. Candidates may be required to record their environment to ensure a secure test space.
5. The proctor reviews each candidate's information and grants approval to start the test.

#### 20.3.1.2 Real-Time Candidate Supervision

During the test, proctors have multiple options for monitoring and interacting with candidates:

- **Live Video Feed** - Proctors can observe candidates through their webcam.
- **Screen Sharing** - Candidates are required to share their screen to prevent unauthorized actions.
- **Live Chat & Messaging** - Proctors can communicate with candidates via chat and send warnings or instructions.
- **Two-Way Audio Communication** - Proctors can speak directly to candidates if needed.

#### 20.3.1.3 AI-Based Warnings and Violation Detection

The system automatically detects and flags suspicious behavior, including:

- Switching browser tabs or applications.
- Looking away from the screen for prolonged periods.
- Multiple faces detected in front of the camera.
- Microphone muted or excessive background noise.
- Use of an unauthorized second display.

When AI detects a violation, an alert is sent to the proctor, who can investigate the issue and take appropriate action.

#### 20.3.1.4 Incident Management and Proctor Actions

Proctors can address violations using the following options:

1. **Send a Warning Message** - If a minor violation occurs, the proctor can remind the candidate of the rules via chat.
2. **Pause the Test** - If suspicious behavior persists, the proctor can pause the candidate's test until further clarification is provided.
3. **Terminate the Attempt** - If a clear violation is detected, the proctor can end the test attempt immediately.

#### 20.3.1.5 Post-Test Review and Proctoring Report

After the test, proctors complete a proctoring report summarizing:

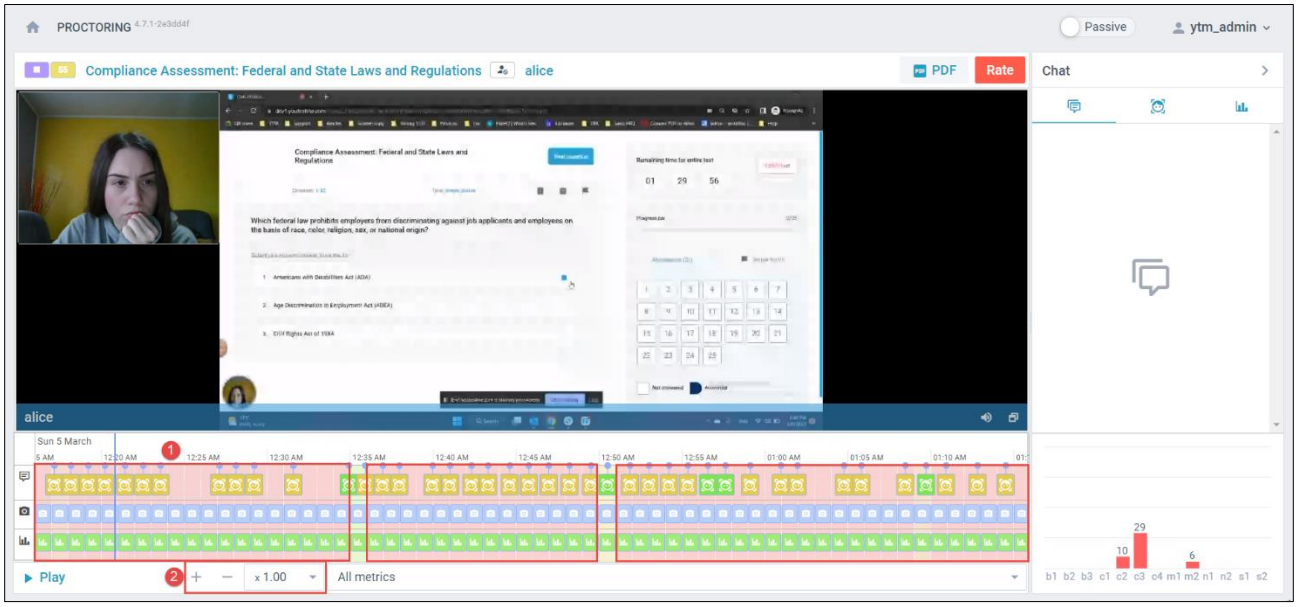
- Any detected violations.
- Candidate compliance during the test.
- Actions taken in response to suspicious behavior.
- Final test integrity rating (positive, neutral, or negative).

### 20.3.1.6 Review of Recorded Sessions

All live proctored sessions are recorded for further review. Administrators or instructors can access the session recordings and analyze flagged incidents for additional validation.

## 20.4 Record & Review

YouTestMe's **Record & Review** proctoring provides a secure and flexible way to monitor tests without requiring real-time proctor supervision. This model records the candidate's entire test session, flags suspicious activities, and allows a proctor to review the recording after the test is completed. This ensures test integrity while offering candidates the convenience of taking tests at any time.




**Benefits of Record & Review Proctoring**

1. **Flexible Test Scheduling** - Candidates can take tests at any time, without being restricted to pre-scheduled proctor availability.
2. **Comprehensive Test Session Review** - Proctors review full test recordings to verify identity, environment compliance, and detect rule violations.
3. **Automated Violation Flagging** - The system automatically detects and marks suspicious behaviors, reducing review time for proctors.
4. **Secure Storage of Recordings** - All test sessions are securely stored and can be reviewed by authorized personnel when needed.
5. **Scalability for Large Test Volumes** - This method supports a high number of candidates without requiring a proportional increase in live proctors.
6. **Objective Decision-Making** - Proctors base their review on flagged incidents, ensuring consistent and unbiased assessments.

### 20.4.1 Record & Review Proctoring Process

#### 20.4.1.1 Candidate Test Session Recording

1. **ID and Environment Verification** - The candidate submits an ID photo and an environment scan before starting the test.
2. **Screen and Webcam Recording** - The system records the candidate's webcam feed and screen activity throughout the test.
3. **Automated Behavior Monitoring** - AI-driven analysis detects suspicious activities and marks key points in the recording for later review.

#### 20.4.1.2 Accessing and Reviewing the Recordings

1. **Secure Storage** - Once a candidate completes the test, the recording is securely stored and made available for review by proctors.
2. **Proctor Notifications** - Proctors receive hourly email alerts with a list of completed test attempts requiring review.
3. **Recording Access** - Proctors navigate to the monitoring panel to review test footage, including the candidate's screen and webcam feed.

#### 20.4.1.3 Rules for Reviewing the Recording

Proctors follow a structured approach to reviewing test recordings:

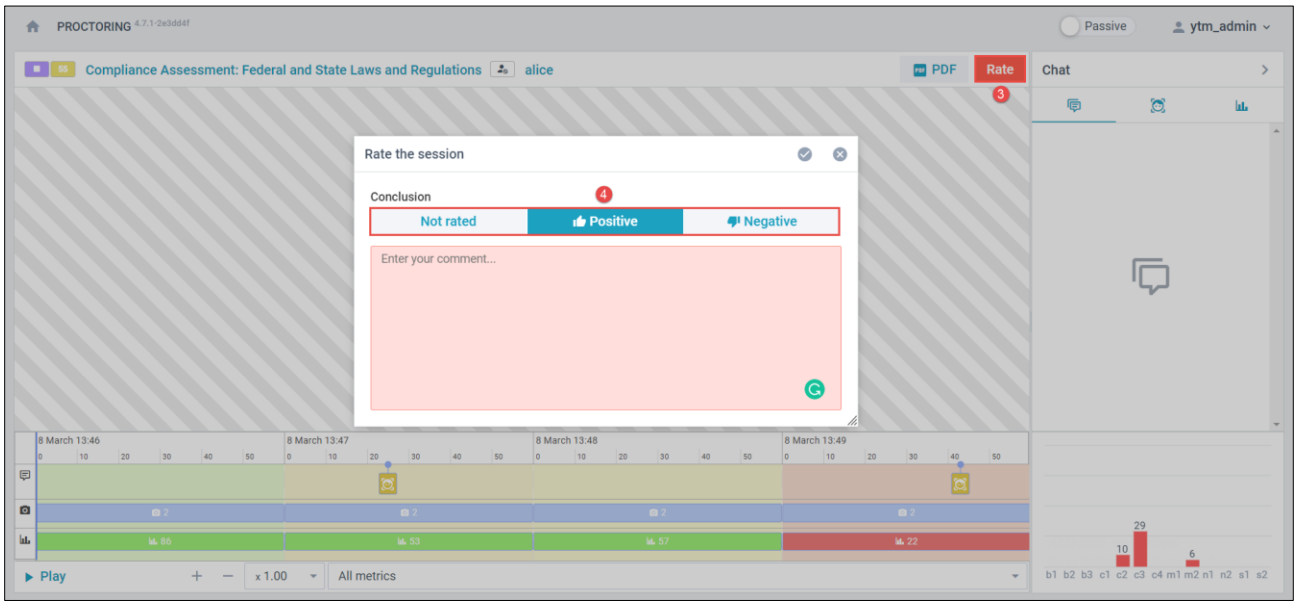
1. **Identity Verification**
    - The proctor checks the candidate's ID to confirm that the registered candidate took the test.
    - This prevents identity fraud and unauthorized test-taking.
2. **Environment Review**
    - The candidate's surroundings are examined to ensure compliance with test rules.
    - The proctor checks for unauthorized persons or prohibited materials in the test environment.
3. **Violation Detection**
    - The proctor reviews flagged incidents, including:
        - Looking away from the screen.
        - Presence of multiple faces in the camera view.
        - Unauthorized software or browser activity.
        - Muted microphone or background noise indicating assistance.
    - The proctor speeds up video playback to efficiently scan for additional rule violations.

#### 20.4.1.4 Writing the Proctoring Report

1. **Assessment Rating** - After reviewing the session, the proctor assigns a rating to the test attempt:
    - **Positive (0 violations)** - The candidate followed all rules.
    - **Neutral (Needs further review)** - Some behavior requires additional evaluation by another proctor or administrator.

- **Negative (Clear violations detected)** - Evidence of cheating is found.

2. **Incident Documentation** - The proctor provides comments describing any detected violations, aiding instructors or administrators in making final decisions.




### 20.4.1.5 Proctoring Report and Credibility Score

- The system generates a **credibility score** for each candidate based on the number and severity of violations detected.
- Administrators and instructors can review both the proctoring report and the credibility score before finalizing test results.

## 20.5 ID Verification Process

Ensuring the identity of candidates is fundamental to maintaining the integrity and security of online tests. YouTestMe offers a flexible and robust ID verification process applicable to both live-proctored and AI-monitored tests. This process guarantees that only eligible candidates participate while providing clients with a high level of control and confidence in the testing environment.

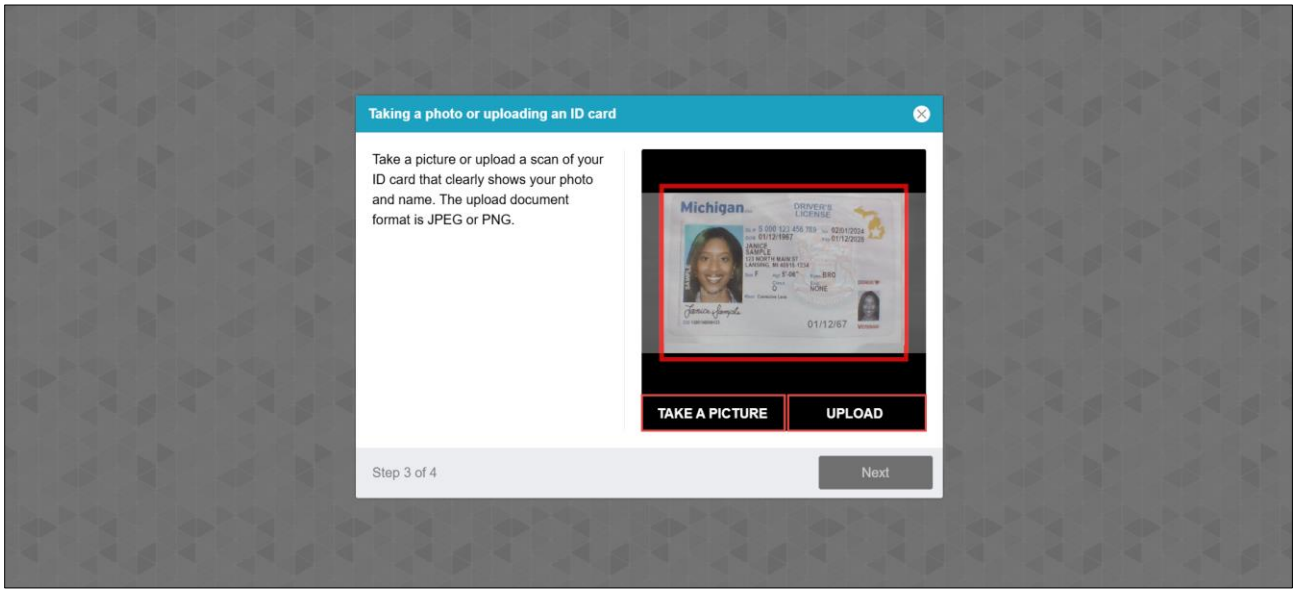
**Benefits of the ID Verification Process**

1. **Enhanced Test Integrity:** ID verification eliminates impersonation risks and ensures that only authorized candidates can access the test, reinforcing the credibility of test results.
2. **Customizable Process:** Administrators can configure each step of the check-in process, including ID verification, to match the client's specific security policies and testing needs.
3. **Candidate Guidance:** Candidates are guided step-by-step through the verification process, making it user-friendly and minimizing confusion or technical difficulties.

4. **Human and AI Flexibility:** YouTestMe supports both live proctoring and AI monitoring, allowing clients to choose the verification method that aligns with their organizational preferences and resource availability.
5. **Post-Test Control:** In AI-monitored scenarios, administrators retain full control to review identity documents after the test, providing an additional layer of oversight.
6. **Third-Party Integration:** For clients seeking advanced automation, YouTestMe offers integration with external ID verification software, streamlining the process without compromising security.

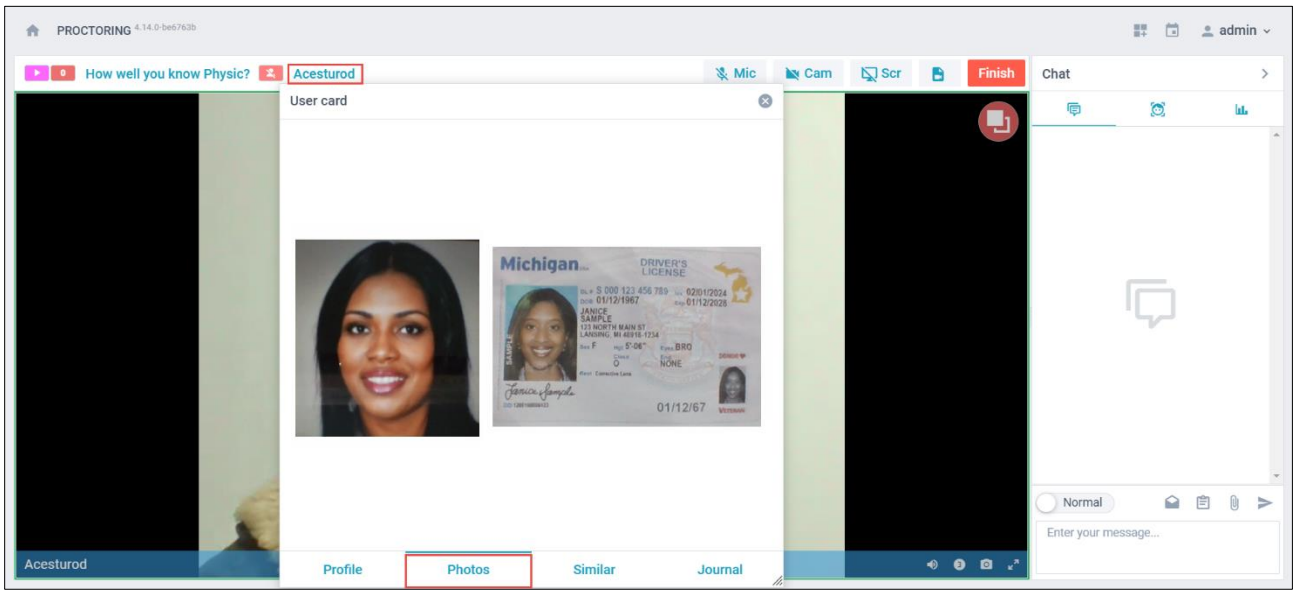
**How the ID Verification Process Works**

The ID verification begins with the candidate's check-in process, initiated by clicking the Start button. The check-in steps are pre-defined by administrators and may vary depending on the proctoring setup.
At the ID verification step, candidates are prompted to either upload or capture a picture of their government-issued identification document.

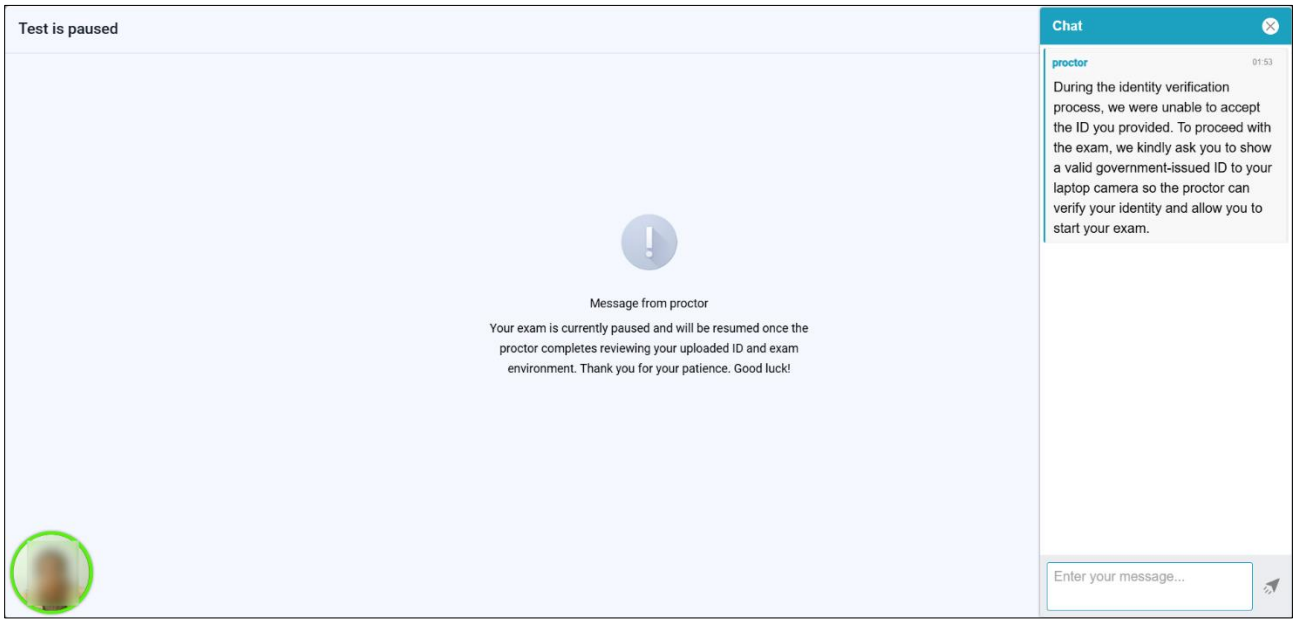



**Live-Proctored Tests**

1. The proctor pauses the test session for all candidates during check-in.
2. Each candidate's ID is manually reviewed by the proctor to ensure it matches the candidate's profile.



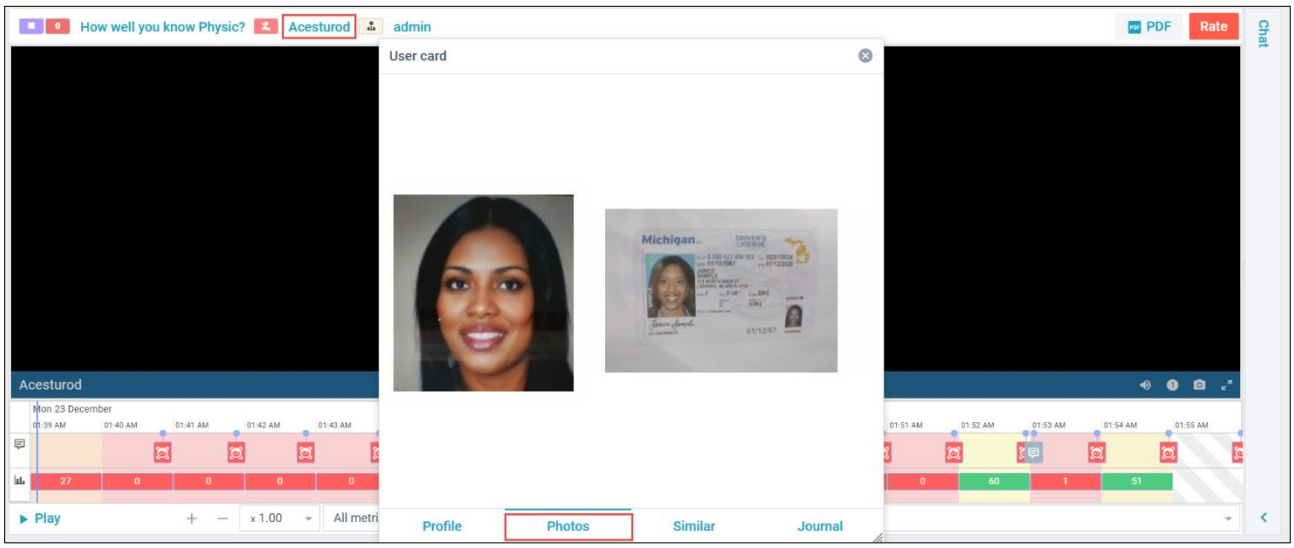

3. If valid, the proctor resumes the test individually for each compliant candidate.
4. If invalid, the proctor communicates with the candidate to request a valid ID.



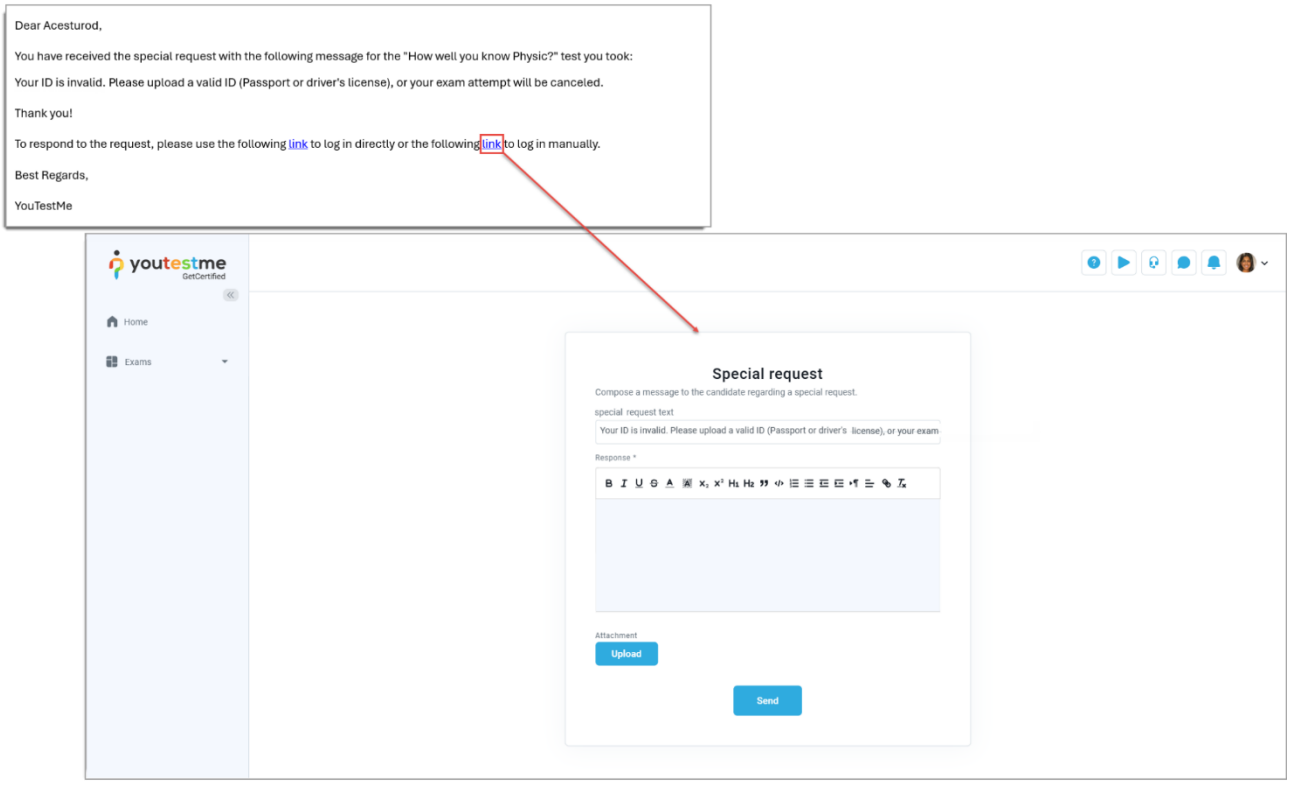

5. Failure to provide acceptable ID results in termination of the test attempt, followed by a detailed incident report.

**AI-Monitored Tests**

1. Candidates upload their ID during check-in, without real-time proctor intervention.
2. After the test submission, a proctor reviews the recording and verifies the ID.




3. If the ID is invalid, a request for a new valid ID is sent to the candidate via email with a secure upload link, configurable by administrators.
4. Candidates must respond within the specified timeframe, or their attempt may be rejected or rescheduled.




**Automatic ID Verification Integration**

YouTestMe supports integration with third-party ID verification solutions.
Clients provide their preferred software, and YouTestMe facilitates the integration. While this reduces manual effort, the reliability of automatic verification depends on the chosen software's capabilities.

## 20.6 Process of Validating the Test Attempts before releasing the Results

YouTestMe ensures a thorough validation process for proctored test attempts before releasing results. This process guarantees test integrity by reviewing proctor reports, video recordings, and system-generated credibility scores. Clients have the flexibility to determine the level of involvement they want in the validation process, allowing either full responsibility by YouTestMe or a shared decision-making model.

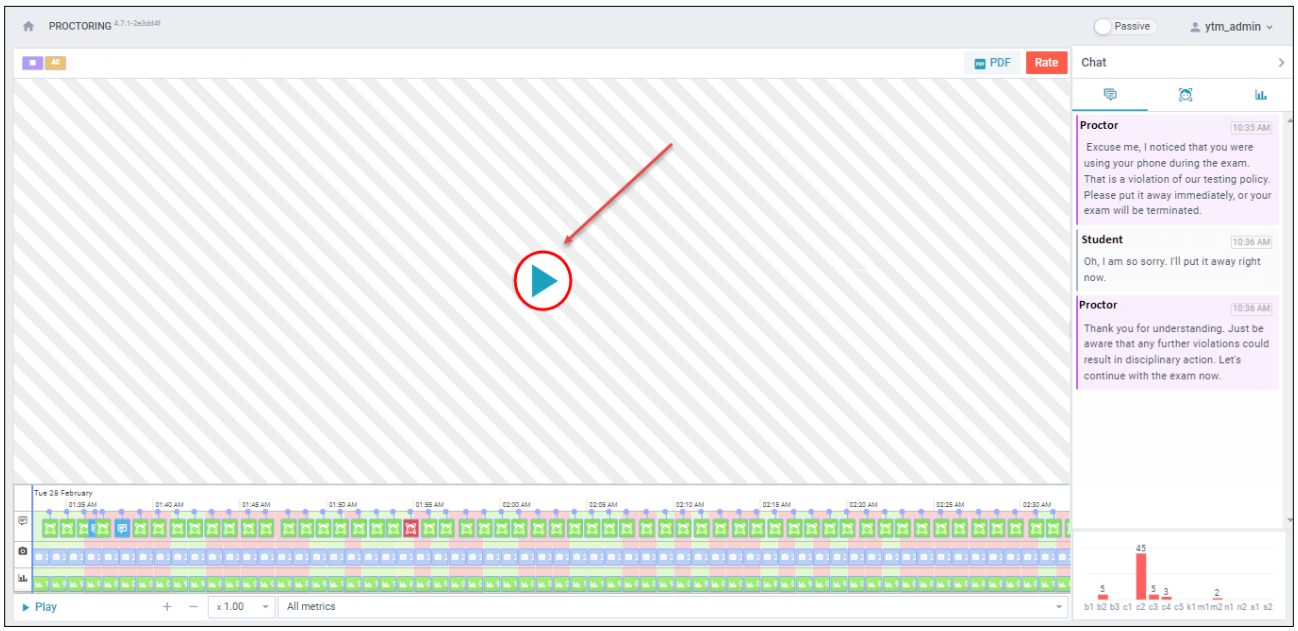
**Benefits of the Validation Process**

1. **Ensures Test Integrity** - Prevents the release of results for attempts that violate test rules.
2. **Objective and Transparent Review** - Uses AI-based violation tracking, human proctor analysis, and credibility reports.
3. **Customizable Responsibility** - Clients can either allow YouTestMe to validate results or participate in the decision-making process.
4. **Efficient Processing** - Filters and automated workflows enable quick and organized review.
5. **Fair and Consistent Evaluations** - Ensures candidates are assessed based on documented violations and evidence.

### 20.6.1 Validation Process Models

#### 20.6.1.1 Full Responsibility by YouTestMe

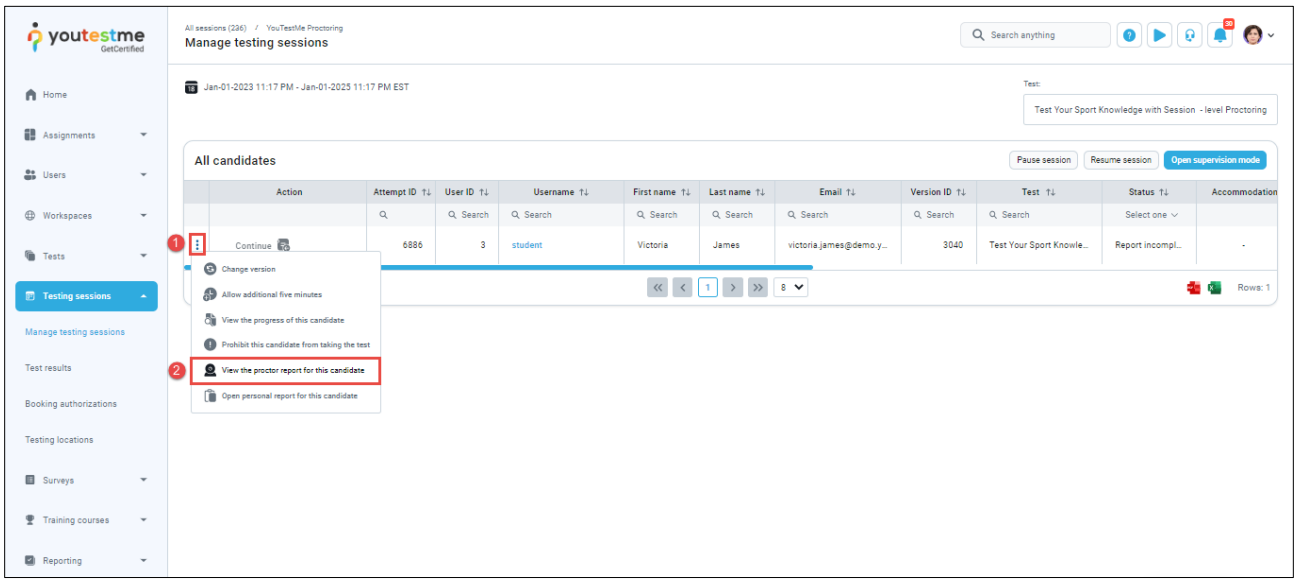
- The YouTestMe proctoring team reviews test sessions and determines whether a candidate's attempt is valid.
- If no violations occur, the attempt is marked **positive**, and results are released.
- If violations are detected, the attempt is marked **negative**, and results are withheld.




### 20.6.1.2 Shared Responsibility Model

In this model, YouTestMe and the client both participate in reviewing test attempts:

1. **Proctor Report Generation**
   - After each test, the proctor submits a report evaluating candidate behavior.
   - If no violations occur, the proctor marks the attempt **positive** and results are automatically released.
   - If violations are detected, the attempt is marked **neutral**, requiring further review.
2. **Filtering and Review by Client's Staff**
   - Client administrators filter **positive** proctor feedback and release those results automatically.
   - **Neutral** feedback attempts are manually reviewed by the client's staff.
3. **Final Decision by Client**
   - The client reviews the proctor report and flagged recording sections.
   - If no significant violations are found, feedback is changed to **positive**, and results are released.
   - If violations are confirmed, feedback is changed to **negative**, and the test attempt is invalidated.



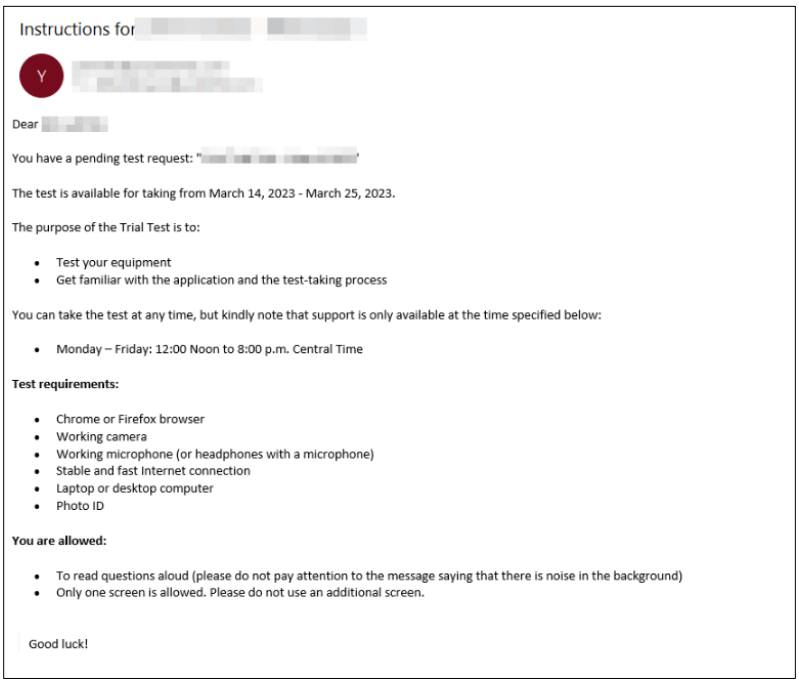

## 20.7 Candidate's Proctoring Journey

YouTestMe provides a seamless and secure proctoring experience, ensuring that candidates are well-prepared, supported during their test, and informed about their results. This structured journey applies to both **Live Proctoring** and **Record & Review**, guaranteeing fairness, security, and a smooth testing process.

### 20.7.1 Pre-Test Preparation

#### 20.7.1.1 Test Scheduling and Notifications

1. Candidates can book their test at a convenient time and location.
2. If applicable, payment is processed before confirming the session.
3. The system sends reminders with test details, policies, and preparation materials.



Instructions for [redacted]

Y [redacted]

Dear [redacted]

You have a pending test request: "[redacted]"

The test is available for taking from March 14, 2023 - March 25, 2023.

The purpose of the Trial Test is to:

- Test your equipment
- Get familiar with the application and the test-taking process

You can take the test at any time, but kindly note that support is only available at the time specified below:

- Monday – Friday: 12:00 Noon to 8:00 p.m. Central Time

**Test requirements:**

- Chrome or Firefox browser
- Working camera
- Working microphone (or headphones with a microphone)
- Stable and fast Internet connection
- Laptop or desktop computer
- Photo ID

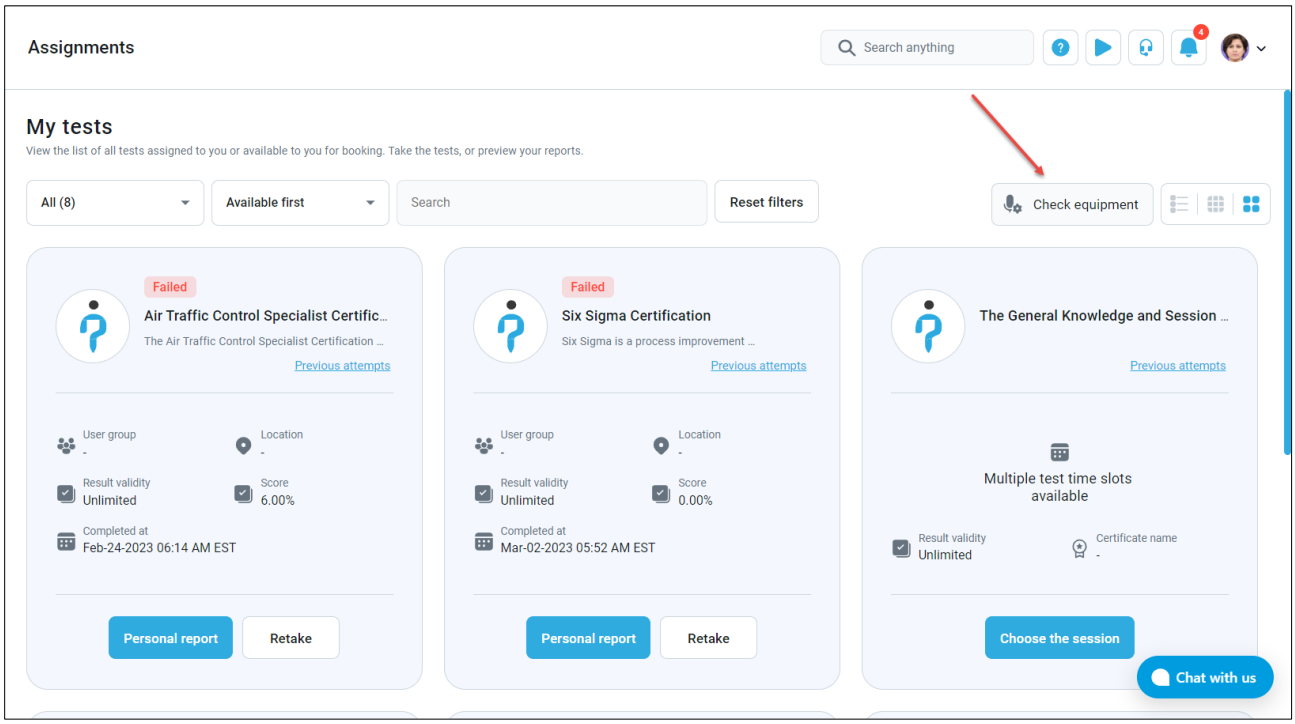
**You are allowed:**

- To read questions aloud (please do not pay attention to the message saying that there is noise in the background)
- Only one screen is allowed. Please do not use an additional screen.

Good luck!

### 20.7.1.2 Equipment Check and Practice Test

1. Candidates complete a system check to ensure their webcam, microphone, and internet connection function properly.
2. A **demo test** is available, allowing candidates to familiarize themselves with the platform and proctoring requirements.



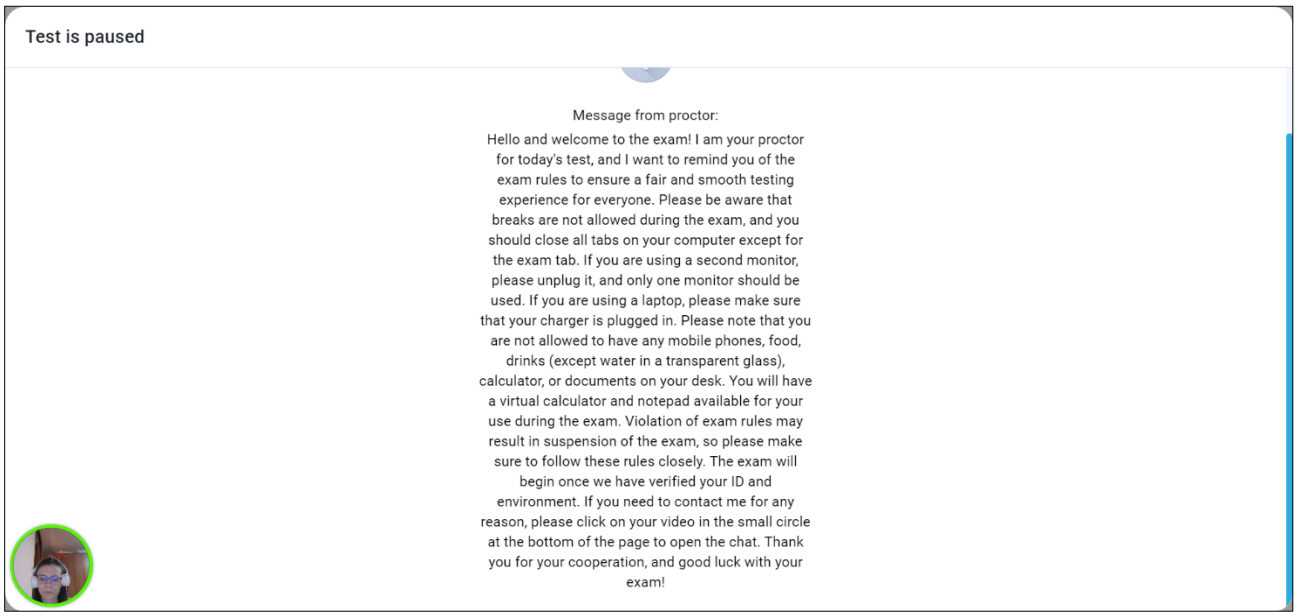
#### 20.7.1.3 Workspace and Identity Preparation

1. Candidates must choose a **quiet, well-lit, clutter-free workspace** to ensure compliance.
2. A valid **government-issued ID** is required for verification before test access.

### 20.7.2 Test Day Experience

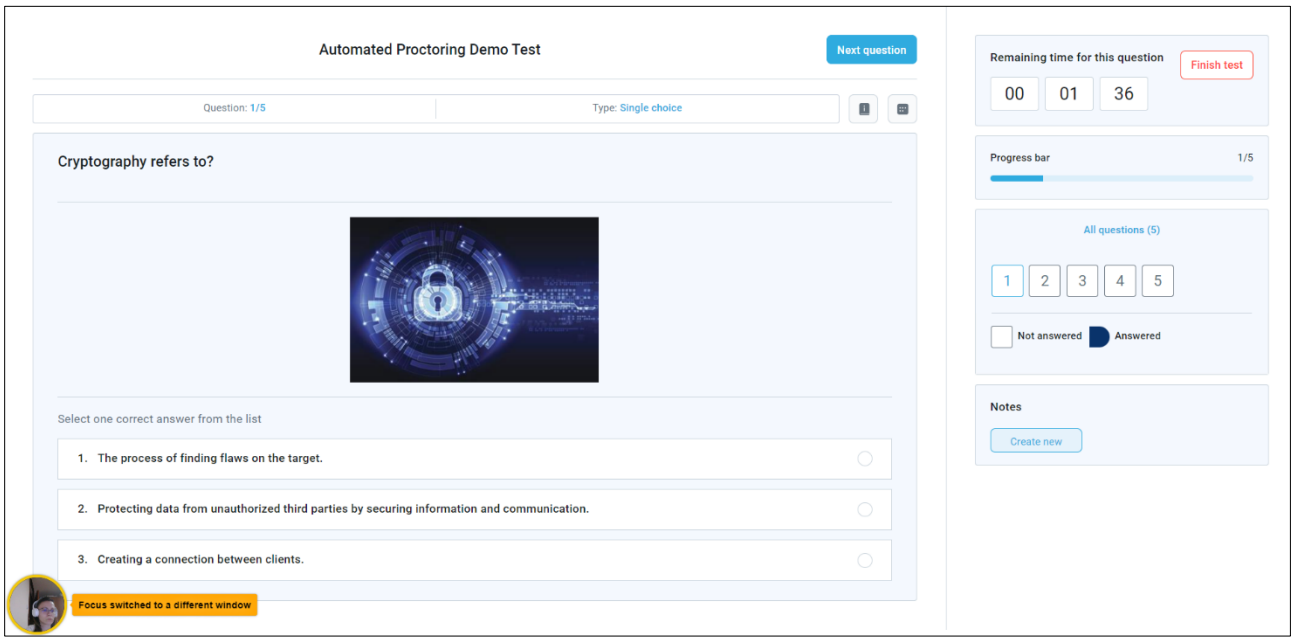
#### 20.7.2.1 Live Proctored Session

1. The **proctor greets the candidate** and verifies their identity.
2. Candidates complete an **environment scan**, ensuring no unauthorized materials or individuals are present.
3. Once verified, the proctor **starts the test** for the candidate.
4. During the test, the proctor:
    - Monitors candidates via **live video, screen sharing, and microphone**.
    - Communicates via chat or audio if needed.
    - Can pause or terminate the test if violations occur.




#### 20.7.2.2 Record & Review Session

1. The system records the entire test, including **webcam, screen activity, and environment**.
2. AI detects and flags suspicious behaviors for later review.
3. Candidates receive real-time warnings for detected issues (e.g., **looking away, unauthorized sounds, or multiple faces detected**).
4. After the test, a **human proctor reviews** the session and finalizes the credibility report.




### 20.7.3 Post-Test Review and Results

#### 20.7.3.1 Verification and Credibility Report

1. Test sessions are **automatically recorded and stored** for review.
2. The **credibility report** includes AI-detected violations and human proctor comments.

#### 20.7.3.2 Score Release and Certificates

1. Once validated, candidates receive an **email notification** with their results.
2. If applicable, digital certificates are issued, allowing candidates to share their achievement.

#### 20.7.3.3 Data Privacy and Compliance

1. All recordings and personal data are handled according to **GDPR, PIPEDA, and CCPA** regulations.
2. Candidates can request data deletion in accordance with privacy policies.

## 20.8 Direct Integrations with YouTestMe Proctoring

### 20.8.1 Integration with Blackboard

YouTestMe supports seamless integration of its proctoring functionalities with Blackboard LMS using IMS LTI technology. This integration allows clients to securely conduct proctored tests within the Blackboard environment while maintaining exam integrity, data synchronization, and streamlined candidate experience.

**Benefits of YouTestMe Proctoring Integration with Blackboard**

1. **End-to-End Test Security**: The integration enables secure and reliable proctoring for tests delivered through Blackboard, ensuring that candidates adhere to testing rules and preventing academic dishonesty.
2. **Single Sign-On Convenience**: Candidates can access proctored tests directly within Blackboard without needing separate logins.
3. **Automated Grade Synchronization**: Proctoring results, including confidence scores, are automatically transferred back to Blackboard, simplifying instructor workflows.
4. **Customizable Implementation**: The integration setup allows flexibility in configuring proctoring sessions, test access, and reporting according to the client's specific needs.

#### 20.8.1.1 Blackboard Configuration

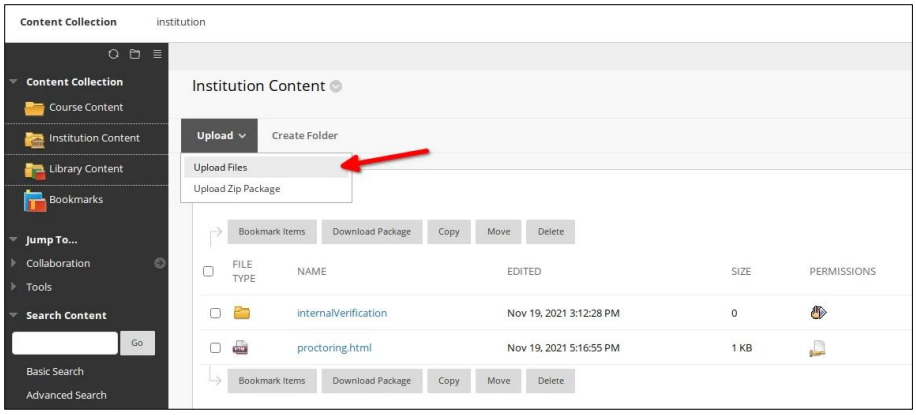
The integration process consists of setting up the required configurations on the Blackboard LMS side to enable YouTestMe proctoring.

**SSL Certificate**

1. Blackboard LMS must have a valid SSL certificate installed on its web server.
2. This ensures that LMS pages open over HTTPS, which is essential due to browser security policies that block camera and microphone access over HTTP.
3. Clients can use tools like SSLChecker.com to verify certificate validity and can opt for a free Let's Encrypt SSL certificate if needed.

**Installing the Proctoring Script**

1. Due to cross-domain restrictions, a proctoring launch script must be hosted within the Blackboard LMS domain.
2. Administrators should:
    - Log in to Blackboard LMS as an administrator.
    - Navigate to **Administrator Panel → Content Management → Manage Content**.
    - Choose the **Institution** collection and upload a custom proctoring.html file.



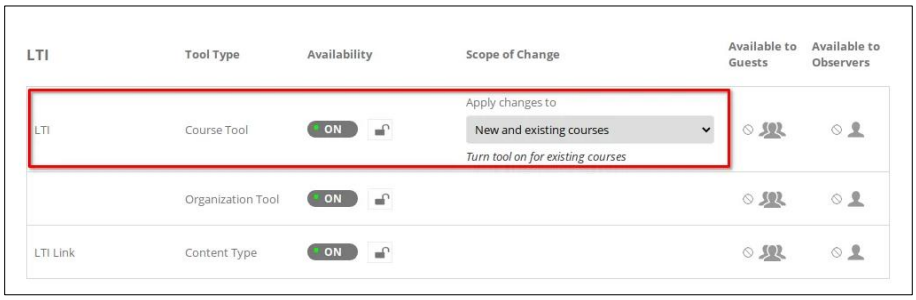
3. The file should include the following code structure:

```
html
CopyEdit
<!doctype html>
<html lang="en">
<head>
 <meta charset="utf-8">
 <title>Proctoring</title>
</head>
<body>
 <script src="//your-proctoring-server/sdk/supervisor.js" data-supervisor="sync"></script>
</body>
</html>
```

4. Replace your-proctoring-server with the client's YouTestMe proctoring server domain.
5. After uploading, copy the file's URL (e.g., https://your-lms-domain/bbcswebdav/institution/proctoring.html) ensuring all candidates have access rights to it.

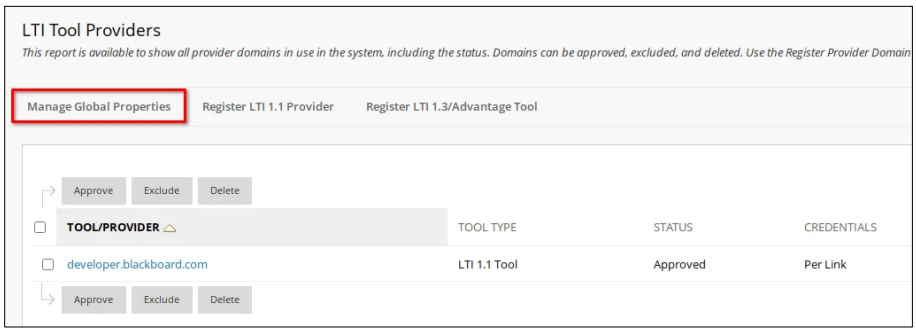
**Enabling the LTI Tool**

1. Log in as Blackboard LMS administrator and navigate to **Administrator Tools → Tools and Utilities → Tools**.
2. Locate the LTI (Course Tool) and ensure it is enabled for **New and Existing Courses**.
3. If already enabled, toggle it off and on again to refresh its configuration.

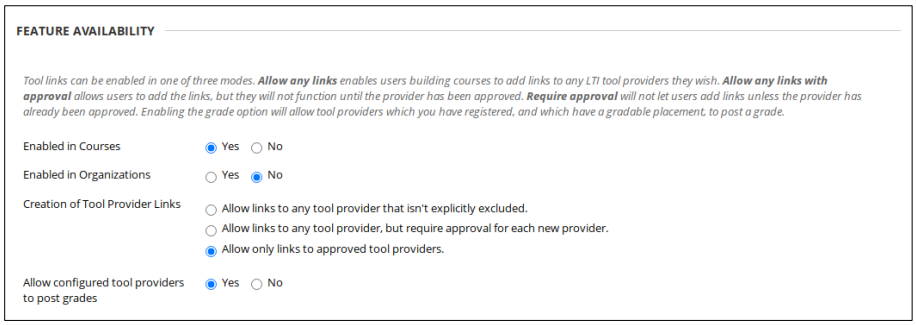



**Adding an LTI Provider**

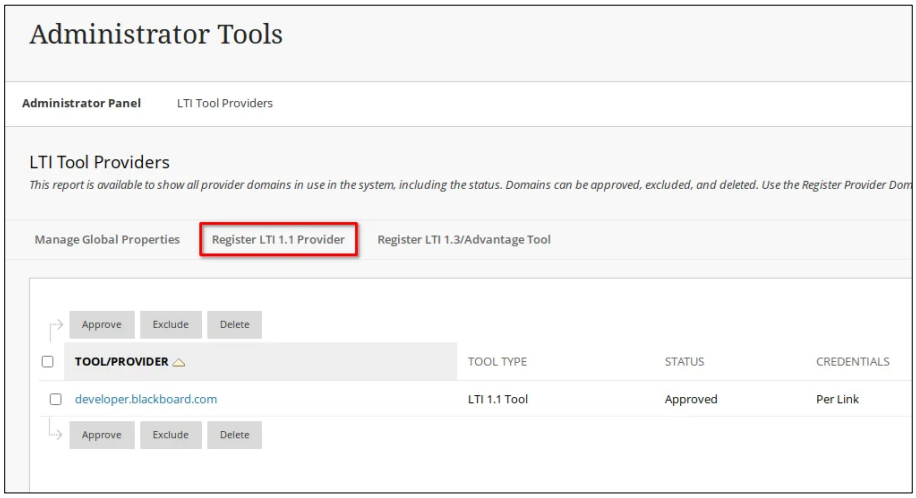
1. In **Administrator Tools → Integrations → LTI Tool Providers**, proceed to register a new LTI 1.1 provider.




2. Click **Manage Global Properties** and configure the following:
    - **Enabled in Courses**: Yes
    - **Creation of Tool Provider Links**: Allow only links to approved tool providers
    - **Allow configured tool providers to post grades**: Yes



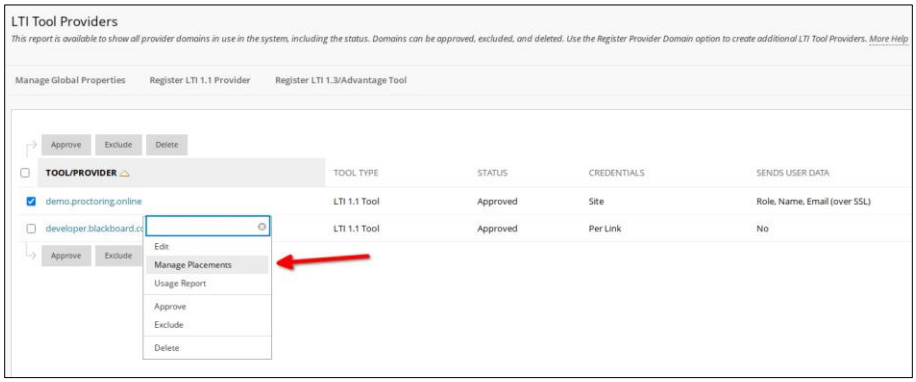

3. Register a new provider:
    - **Provider Domain**: Enter the client's YouTestMe proctoring server domain.
    - **Tool Provider Key** and **Tool Provider Secret**: Obtain these credentials from the YouTestMe proctoring system administrator.



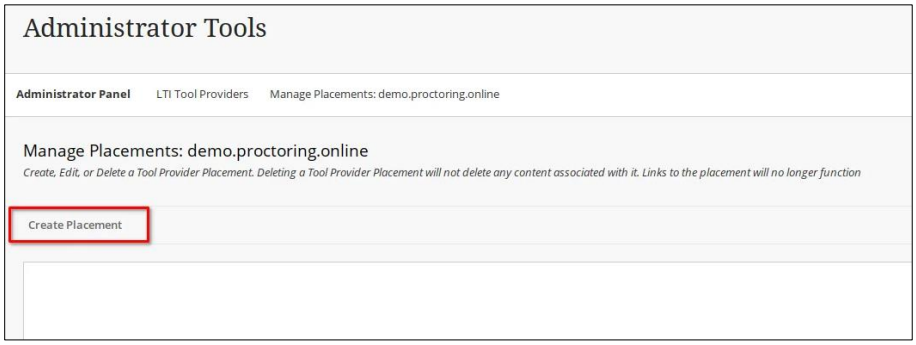
4. In the **User Fields to Send** section:
    - Send User Data: Only over SSL
    - Enable transmission of Role in Course, Name, and Email Address.

**Adding a Placeholder for the Tool**

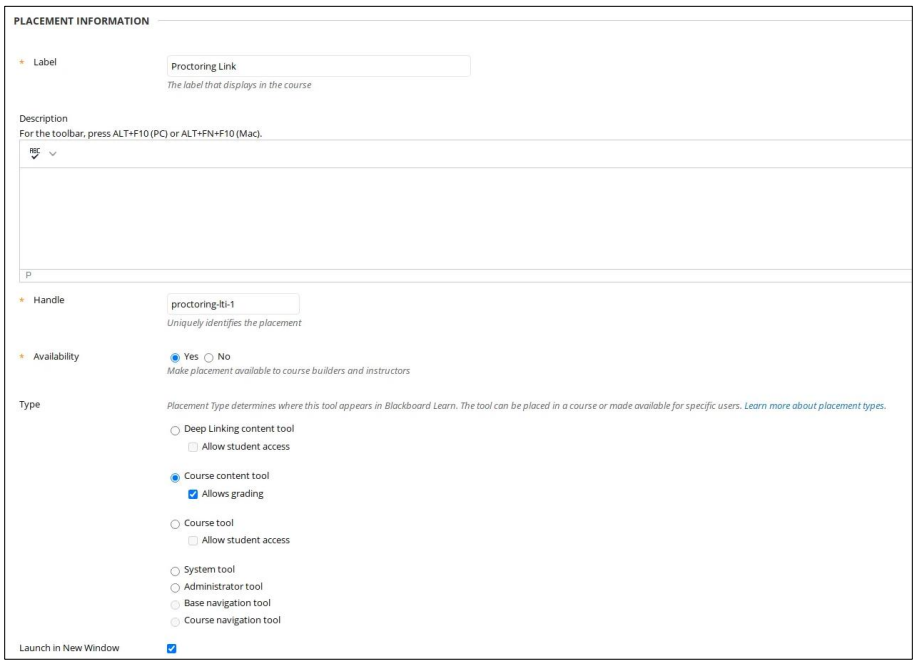
1. Under **LTI Tool Providers**, use the dropdown menu for the newly created provider and select **Manage Placements**.



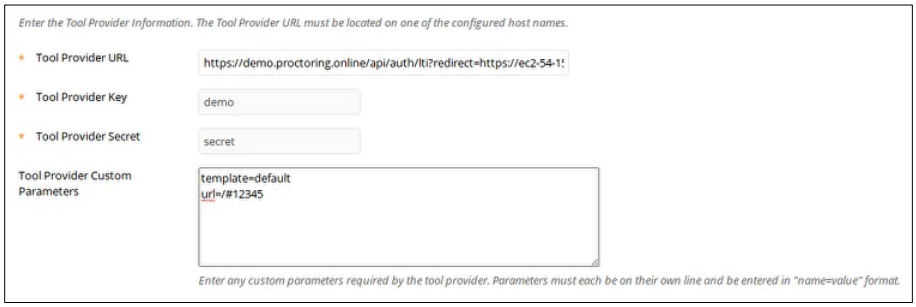

2. Click **Create Placement** and configure:




    - **Label**: Proctoring Link (or preferred title)
    - **Handle**: Any unique string
    - **Availability**: Yes
    - **Type**: Course content tool + Allows grading
    - **Launch in New Window**: Enabled




3. In **Tool Provider Information**:
    - **Tool Provider URL**: https://your-proctoring-server/api/auth/bb?redirect=https://your-lms-domain/bbcswebdav/institution/proctoring.html
    - Replace your-proctoring-server and your-lms-domain accordingly.
    - **Tool Provider Custom Parameters**:
        - template=default
        - members=@
        - url=<quiz_url>
        - code=<quiz_password>
4. Multiple placements can be configured with different parameter settings if required.

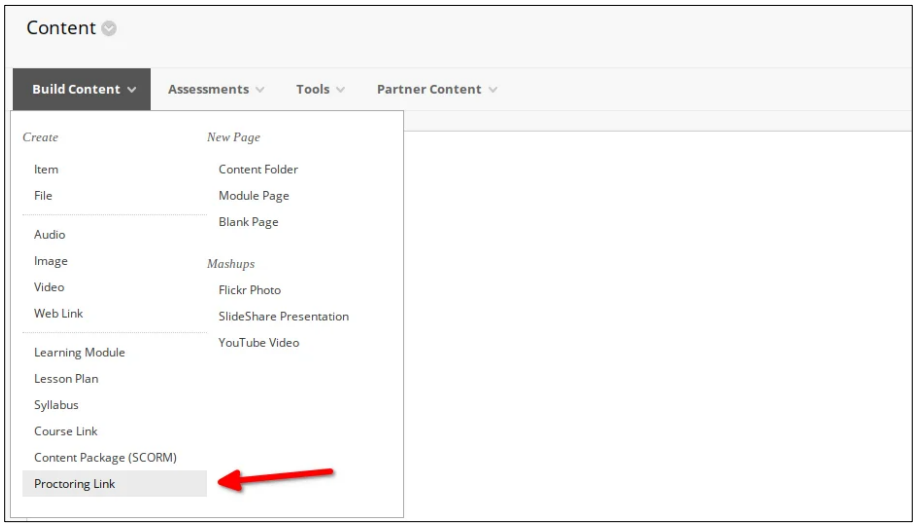



### 20.8.1.2 Proctoring Integration

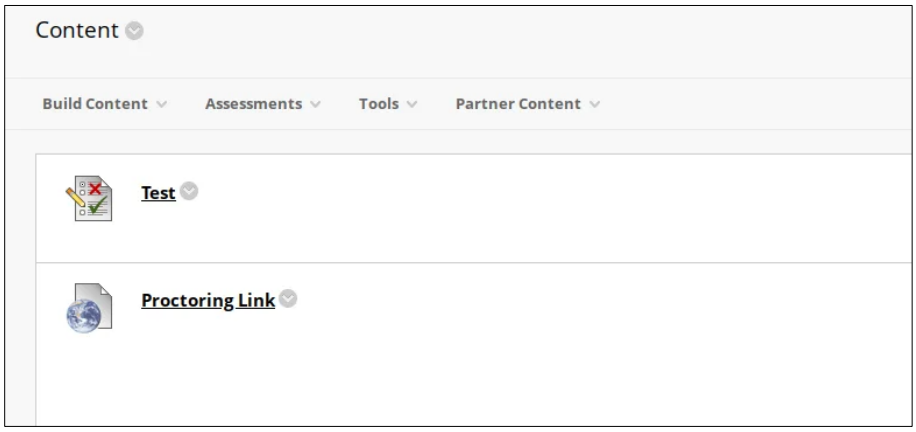
Once the LMS configuration is complete, instructors can proceed to integrate YouTestMe proctoring into their Blackboard courses.

**Adding a Proctoring Link to the Course**

1. Navigate to the desired course's **Content** section.
2. Select **Build Content → Proctoring Link** (the placement created earlier).




3. A proctoring link will now appear in the course content list.
4. Each link grants the candidate one attempt at the proctored session.



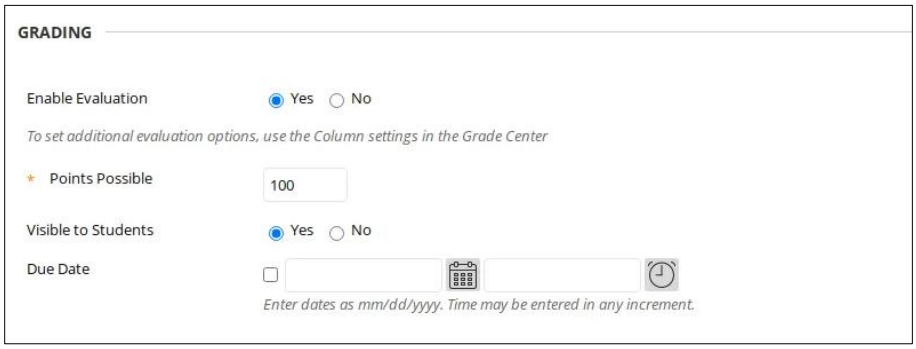

**Restricting Access to the Test Without Proctoring**

1. Instructors can link the proctoring element to a specific test by setting a password.
2. Navigate to the test item settings and enable password protection using the same password as the LTI tool's code parameter.
3. This ensures candidates cannot access the test without first completing the proctoring process.

4. Additionally, instructors should ensure that test links are accessible directly from the Blackboard portal's home page, bypassing course page limitations due to IFRAME restrictions.

**Receiving Proctoring Grades in Blackboard**

1. The YouTestMe proctoring system transmits a confidence score back to Blackboard upon session completion.
2. Scores range from **0 to 1**:
   - **1** indicates a positive evaluation by the proctor.
   - **0** indicates a negative evaluation.
3. Instructors can enable grading by:
   - Editing the proctoring item.
   - Activating **GRADING → Enable Evaluation**.




**Conducting and Monitoring Proctoring Sessions**

1. Candidates begin the proctored test by clicking the proctoring link within the course.
2. When instructors access the proctoring link, they are redirected to the proctor interface, where all active sessions are listed.
3. Each session is uniquely tied to one candidate and one test attempt.
4. Administrators can reset or extend proctoring sessions by adjusting session IDs or deadlines in the YouTestMe proctoring administrator interface.

**Setting up the Proctoring Host**

The integration also requires specific parameters to be configured on the YouTestMe proctoring host:

1. Load the following JSON configuration on the proctoring server:

```
json
CopyEdit
{
  "id": "<Host_ID>",
  "key": "<License_Key>",
  "params": {
    "webhooks": {
      "bb": {
        "authorizer": "lti",
        "integrator": "lti",
        "consumerKey": "<Generated_Key>",
        "consumerSecret": "<Generated_Secret>",
        "callbackURL": "query.redirect",
        "profile": {
          "username": "payload.user_id",
          "role": "payload.roles.find(v=>/Instructor/.test(v))?'proctor':'candidate'",
          "nickname": "payload.lis_person_name_full",
          "lang": "(payload.launch_presentation_locale||'').slice(0,2)",
          "group": "['G',payload.context_id,payload.resource_link_id].join('-')",
          "referrer": "payload.launch_presentation_return_url",
          "labels": "payload.lis_person_contact_email_primary"
        },
        "register": {
          "identifier": "[payload.user_id,payload.context_id,payload.resource_link_id].join('-').replace(/[^A-Za-
z0-9_-]+/g,'_')",
          "template": "payload.custom_template||'default'",
          "subject": "payload.resource_link_title",
          "members": "payload.custom_members===''@'?user.group:payload.custom_members",
          "url": "payload.custom_url||payload.launch_presentation_return_url",
          "code": "payload.custom_code",
          "tags": "payload.lis_person_contact_email_primary"
        },
        "start": true,
        "stop": true,
        "pause": true,
        "submit": true
      }
    }
  }
}
```

2. Replace <Generated_Key>, <Generated_Secret>, <Host_ID>, and <License_Key> with appropriate values provided by YouTestMe administrators.
3. This configuration ensures proper authentication, session management, grading, and secure data transfer between Blackboard LMS and YouTestMe.

# 21 Streamlined Grading Process in YouTestMe

In this chapter, we explore the robust grading mechanisms within the YouTestMe platform. These mechanisms are designed to offer flexibility, precision, and efficiency in evaluating candidate assessments. The YouTestMe grading process encompasses three key mechanisms:

## 21.1 Automatic Grading

Automatic grading is a fundamental feature of YouTestMe that ensures swift and consistent evaluation of assessments. This mechanism is particularly valuable when correct answers can be predefined by the question creator. Here's how it works:

- The system automatically evaluates each response based on predefined correct answers.
- Scores are calculated instantly, providing immediate feedback to candidates.
- This mechanism is ideal for assessments where answers are objective and can be objectively determined in advance.

## 21.2 Manual Grading by a Single Grader

In situations where assessments require subjective evaluation or where answers cannot be predetermined, manual grading by a single grader comes into play. This process allows for personalized assessment and feedback. Here's an overview of how it functions:

- A designated grader reviews each response individually.
- The grader assigns scores and provides comments for each question.
- This mechanism is highly effective for open-ended questions or assessments that demand qualitative evaluation.

## 21.3 Manual Grading by Multiple Graders

To enhance the accuracy and fairness of the grading process, YouTestMe offers manual grading by multiple graders. This mechanism streamlines grading through a dedicated grader's dashboard and automatically recalculates scores based on predefined rules. Here's how it operates:

- Multiple graders are assigned to assess the same set of responses.
- Each grader independently evaluates the responses, assigning scores and comments.
- The system automatically recalculates scores according to predefined rules, ensuring consistency and fairness.
- Graders' assessments are aggregated to derive a final score for each question and the overall assessment.

This mechanism is invaluable for assessments that benefit from multiple perspectives and for scenarios where consensus grading is required.

# 22 Communicating Test Results

## 22.1 Type of Reports Provided to the Candidates and Client's Staff

**Reports for candidates**

A personal report (scorecard) is the main source of information for candidates after the test.
Test managers can fully configure what the candidates see.
The main information a personal report can contain is:

1. **Pass/Fail status** - Summarizes if the candidate passed or failed.
2. **Achieved score** - Summarizes the percentage achieved on the test.
3. **Passing score** - Percentage required for passing the test.
4. **Time spent on the test** - Outlines how long was the candidate on the test.
5. **Score on each subject area (question pool)** - Summarizes how the candidate performed in different areas of the tests and helps them understand which areas they need to study more.
6. **Question details** - Typically used for practice tests, outlining the correct and incorrect answers and the ones the candidate selected.
7. **Certificate** - Downloadable and sharable certificate awarded for the passed test.
8. **Score report** - Downloadable custom PDF report with important information about the test and a bar chart explaining how the candidate performed on the test in comparison to the average.

**Reports for the client**

As an introduction to our response, please take a look at the following playlist of videos explaining the main YouTestMe reports.

The following information is important for all reports in YouTestMe:

1. All reports are **configurable**
2. The administrators have **full control over who sees what report**
3. All reports **can be exported** as Excel or PDF

The main information for instructors is:

1. **Summary report** - Specifies basic information about the test - How many candidates started and finished the test, how many candidates passed and how many failed, and what is the points distribution.
2. **Candidates report** - Exportable table of candidates assigned to the test with their scores and information on when they were taking the test.

3. Detailed candidate's report - Candidate's personal report with details on points achieved on each question and the answers they provided.
4. **Proctor's report** - List of suspicious behaviors that occurred during the test and when. This can be checked by accessing the video recording of the candidate's test attempt.
5. **Question statistics** - Success ratio and average time to answer each question in the test. Especially useful if you are looking to constantly update your tests.
6. **Comparative reports** - Tabular reports that allow comparing average scores achieved in different locations and testing sessions during a specific time period
7. **Report builder** - Powerful tool that allows generating the exact tabular information you need.

## 22.2 Communicating Reports to the Client's Staff

Depending on the report's purpose, they can be sent via different channels.

1. **Test results sent via email** - Typically sent to the candidates automatically by the system after the test results are published by the test manager. They can be fully customized and usually contain a link to a detailed in-app score report.
2. **In-app reports** - Reports that can be accessed at any time by logging in to the application (if you have the appropriate permissions).
3. **Scheduled reports sent via email** - Predefined tabular Excel reports sent to specified email addresses at specified intervals. Some examples are the following reports: Test results, Logins and logouts, and Monthly active users.
4. **Scheduled reports sent to a file system** - Predefined CSV reports dropped to a specific shared folder at specified intervals. Typical in case of integrations with other systems.
5. **Proctor's reports** - Written reports provided by YouTestMe proctors after each proctored session.

Note: The purpose of our application is automation. So instead of creating and sending reports manually, we ensure that all appropriate reports exist in the system and can be sent automatically by the system to the designated email addresses and locations.

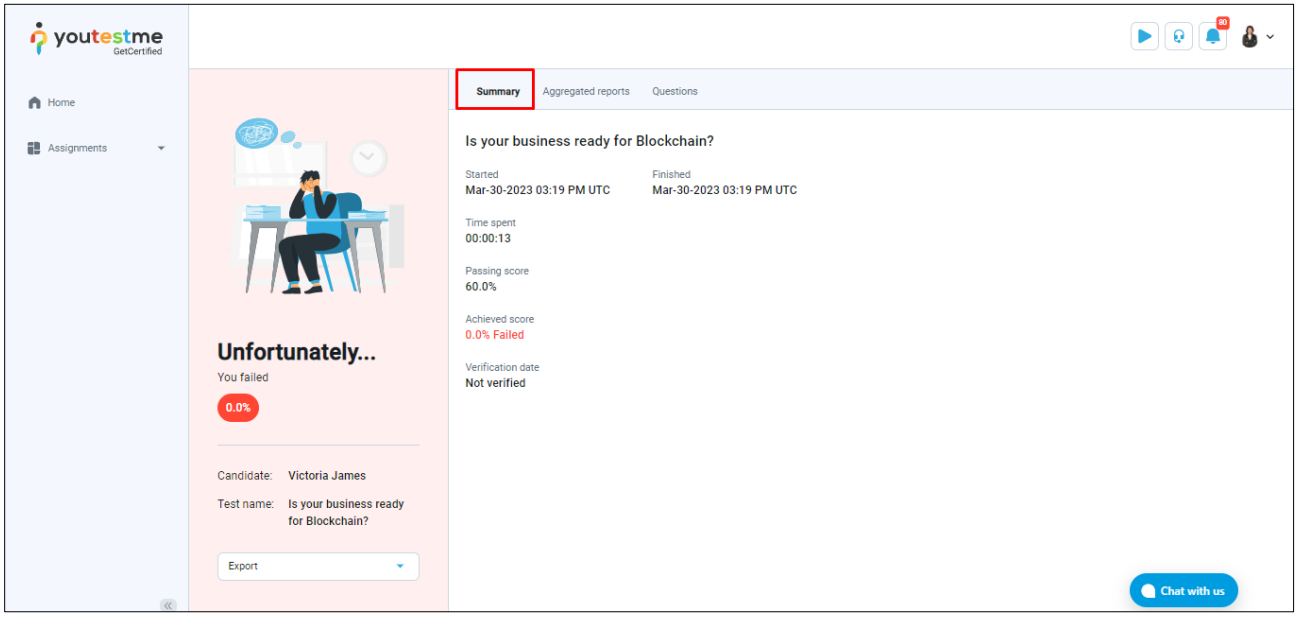
## 22.3 Communicating Test Results to Candidates

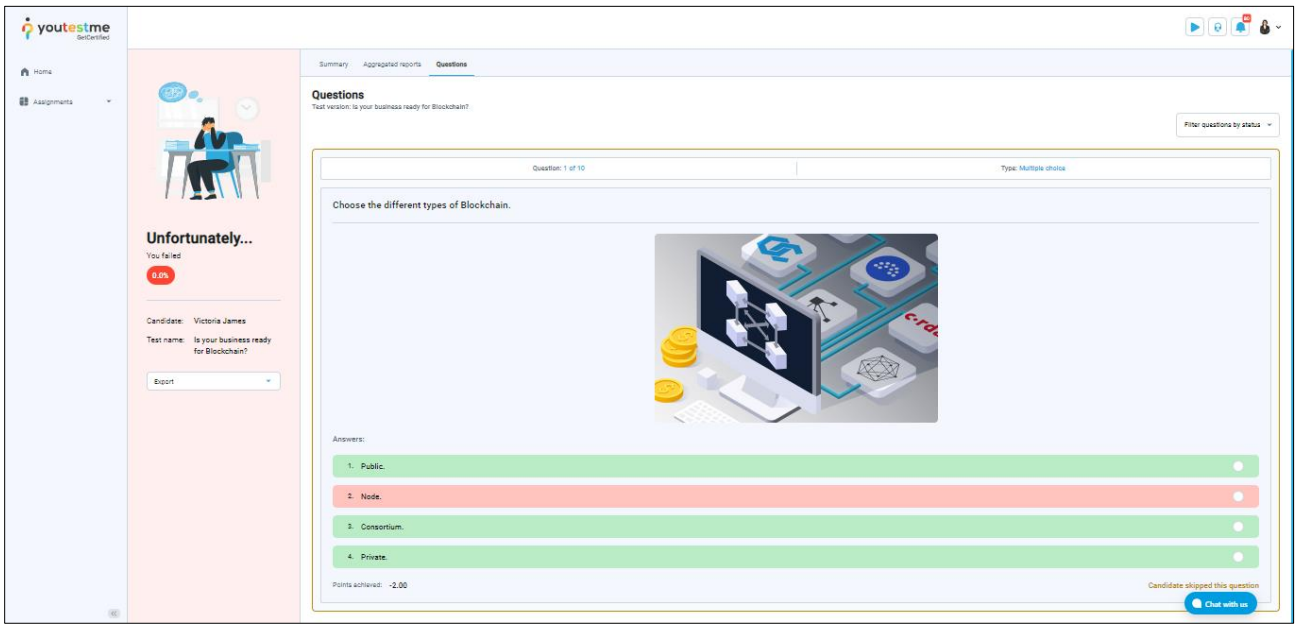
The process for communicating test results to candidates through the YouTestMe system is as follows:

1. The system automatically scores test questions and generates a score, but the results are not final until the proctor verifies whether candidates cheated on the test or not.
2. The system is configurable, allowing clients to decide if a candidate with negative feedback from the proctor automatically fails, regardless of the score achieved on the test. Alternatively, clients can ignore the proctor's feedback entirely and only consider correct or incorrect answers to create the final score.
3. The recommendation and the usual practice is that upon completing the test, candidates are immediately redirected to a screen with a message informing them that their results will be

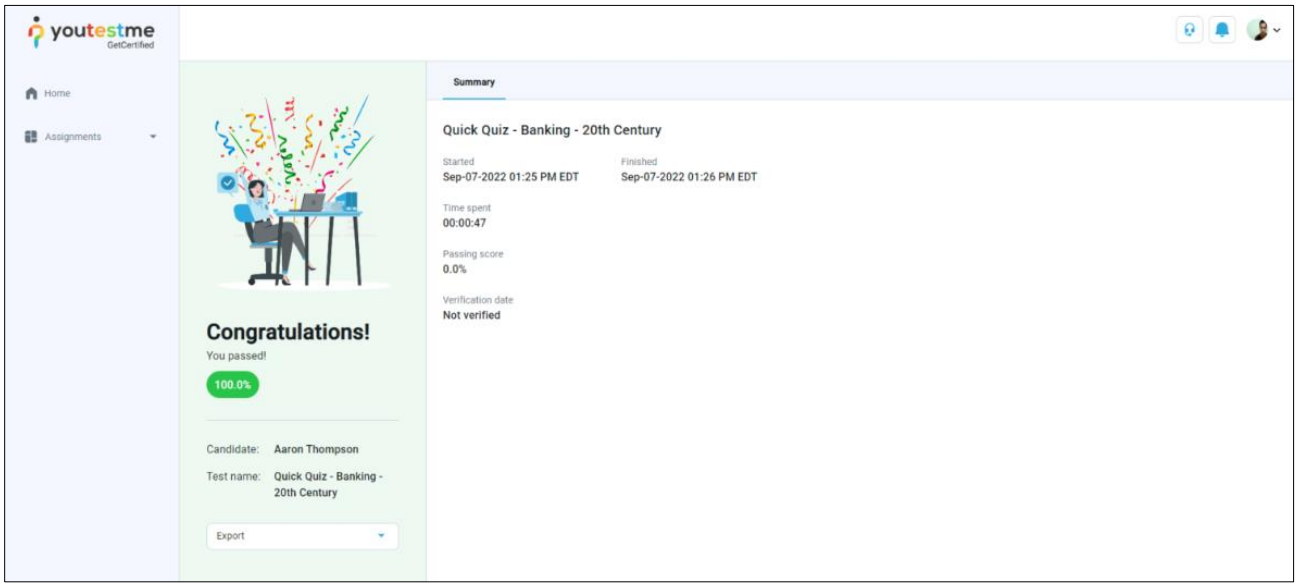
available once verified by the proctor. This message can be customized entirely, and the client can include a precise date and time for available test results.

4. Once results have been verified, candidates receive an email notification that their personal report, containing their results, is ready. This email notification can also be fully customized and may include a link to access the application and necessary additional information.
5. The information included in the personal report depends on the client, as it is entirely configurable. The test manager can choose either the score and details or the score-only option from the drop-down menu.
6. If the Score and details option is selected, the report will provide the candidate's score broken down by questions, including all possible answers, the chosen answers, and the correct answers.






7. Alternatively, if the score-only option is selected, the candidate's report will display only the final score.



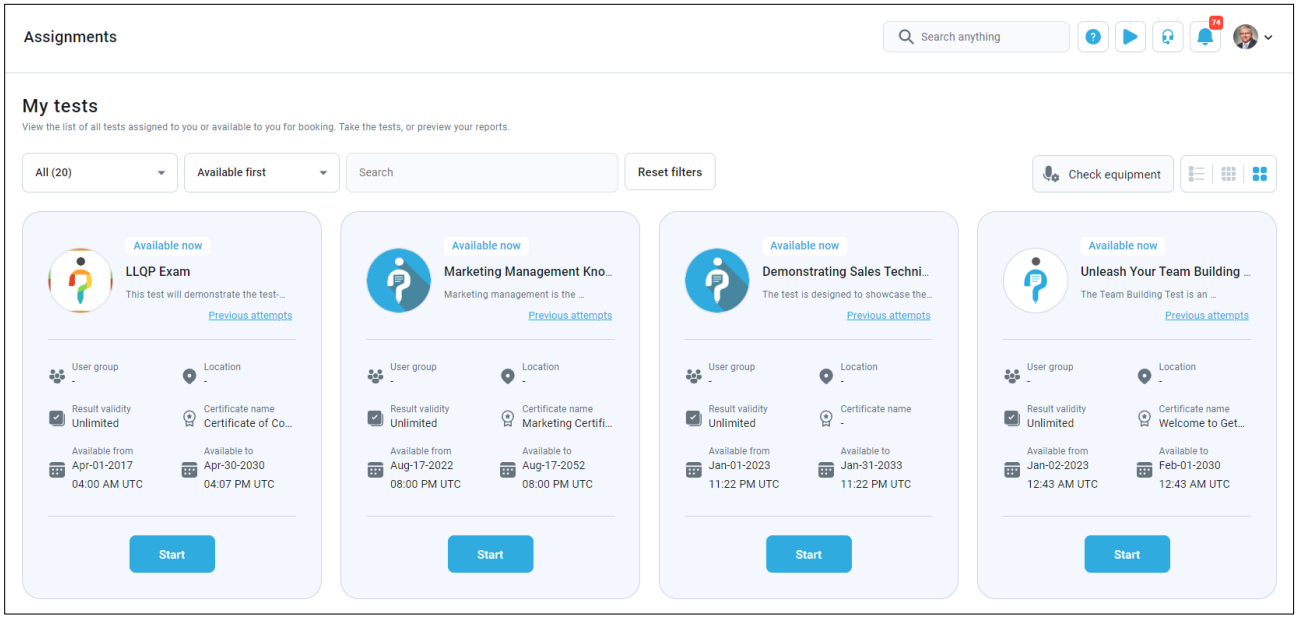

Note that the test manager will always see both the score and details. The report content option refers to the candidate's perspective, defining what candidates will see in the test report.

Overall, the YouTestMe system provides flexible and customizable options for communicating test results to candidates, allowing clients to tailor the process to their specific needs and preferences.

## 22.4 Accessing Test-Related Information as a Candidate

Depending on the way you prefer, candidates can access their test information in two ways.

1. **Logging in to the application**
    a. Candidate logs in to the application using their credentials
    b. On the My tests page, the candidate would choose a detailed personal report to examine their test information




2. **Using a link from an email**
    a. The test manager publishes test results (allows candidates to see them), which typically happens after they have reviewed the proctor's report
    b. Emails with a personalized link to test information is sent to each candidate
    c. Candidate uses the link to automatically log into the application and access their test information

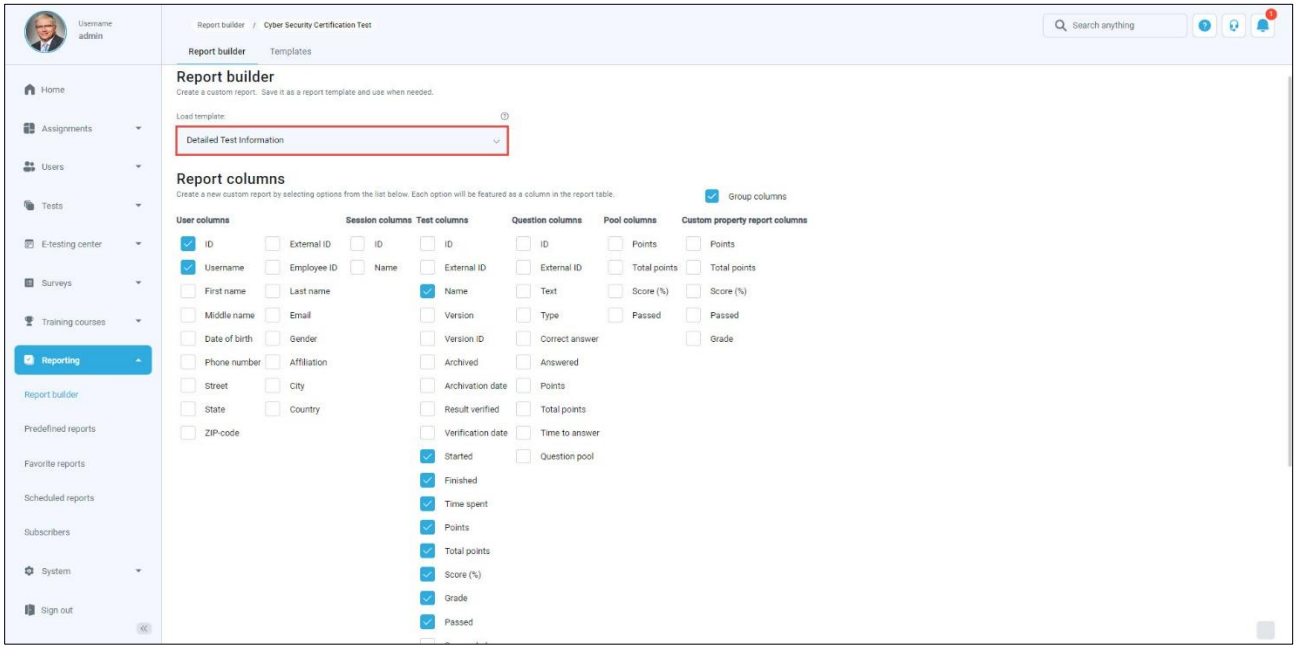
# 23 Reporting and Analytics

## 23.1 Report Builder

The Report Builder in YouTestMe is a powerful tool designed to provide instructors and administrators with detailed and customizable insights into test performance and survey statistics. This functionality offers unparalleled flexibility in creating tailored reports to meet specific client requirements, streamlining data analysis and decision-making processes.

**Key Benefits**

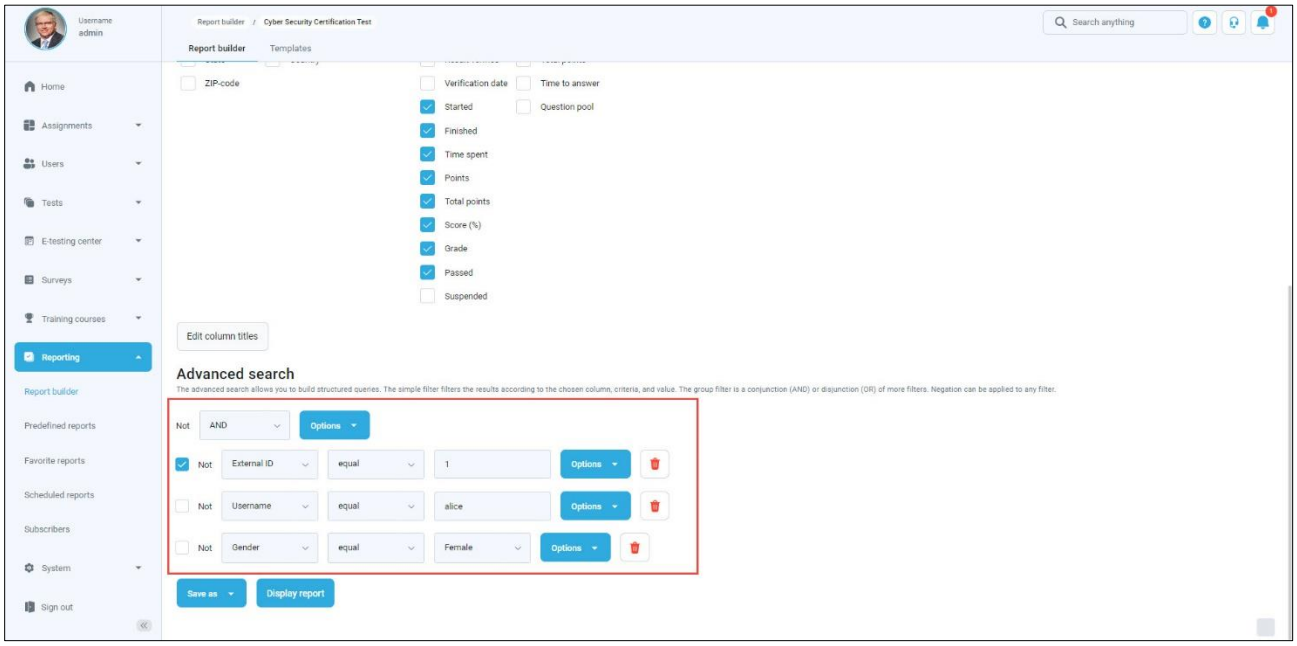
1. **Customizable Reporting**
   The Report Builder allows users to design unique reports by selecting specific data points and organizing them into customized columns. This flexibility ensures that instructors and administrators can focus on the metrics that matter most to their organization.
2. **Advanced Search and Filtering**
   With advanced search capabilities, users can build structured queries to filter data by column, criteria, and value. This enables a granular approach to analyzing test results and survey statistics. Additionally, group filters and negation options enhance the precision and depth of data queries, ensuring highly accurate reports.



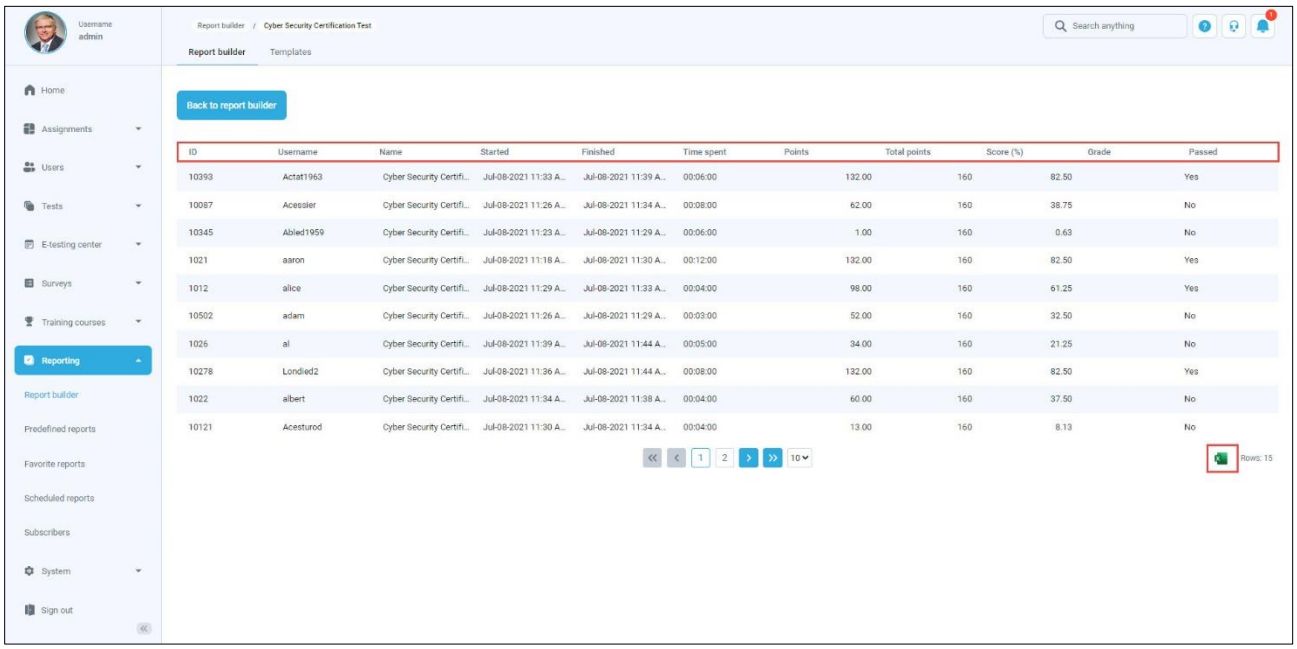

3. **Efficiency Through Templates**
   Reports can be saved as templates, allowing for quick reuse and easy modification. This feature is especially valuable for clients who require recurring reports with consistent formatting. By saving report configurations, administrators and instructors can reduce repetitive tasks and focus on insights.
4. **Exporting and Data Management**
   Reports generated in the Report Builder can be exported as Excel files, enabling users to save, share, and manage data seamlessly. This capability supports offline analysis and integration with other tools for a comprehensive data strategy.
5. **Enhanced Insight with Section Groups**
   For tests with multiple sections, the Report Builder provides an aggregated view of section results through the creation of section groups. This feature simplifies the evaluation of complex tests and offers a holistic view of performance metrics.

**How the Report Builder Works**

1. **Accessing the Report Builder**
    - Navigate to the **Reporting** tab in the left-side menu and select **Report Builder**.
    - Use the search box or scroll through the list of tests to find a specific test or survey.
2. **Creating a Report**
    - Click on the desired test name to access its Report Builder.
    - Select data points to include in the report and click **Display report** to generate a table featuring these options as columns.
    - Save report configurations as templates for future use or load previously saved templates to streamline report creation.
3. **Using Advanced Filters**
    - Apply simple or group filters to refine results based on defined criteria.
    - Negation options can be used to exclude specific data from the report, offering tailored insights.




4. **Exporting Reports**
    - Click the **Export as Excel** icon to save reports locally.
    - Exported reports maintain their structure, ensuring consistency and ease of use.




5. **Managing Report Templates**
    - Access all saved templates in the **Templates** tab.
    - Templates can be edited, loaded into the Report Builder, or deleted as needed.

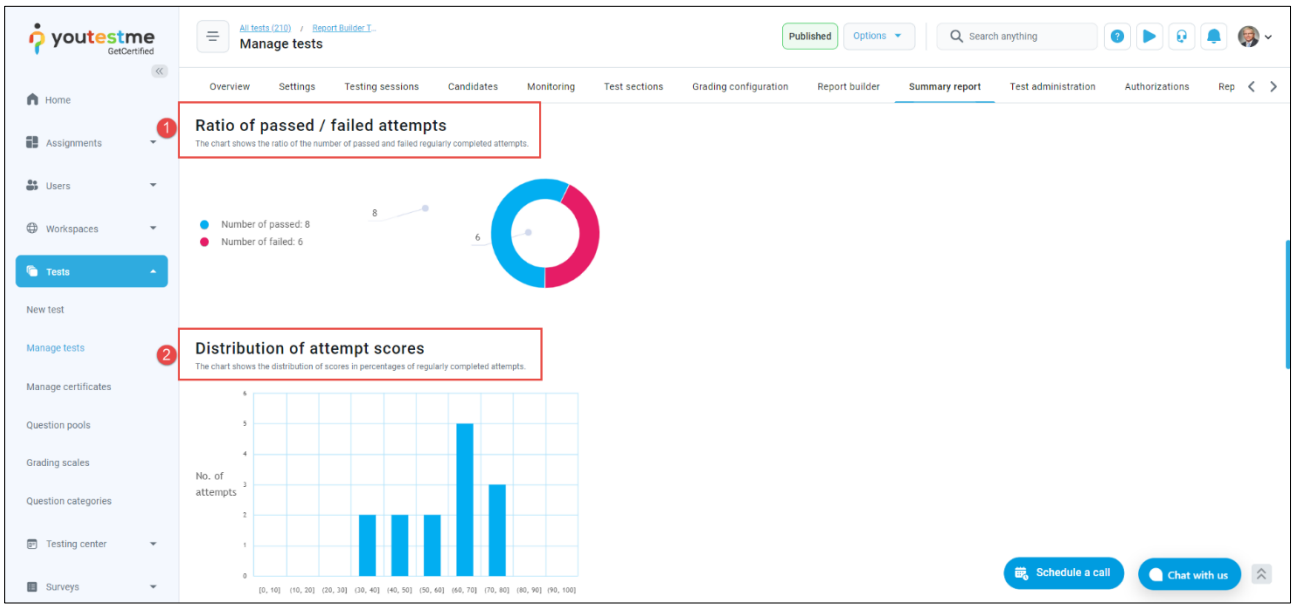
The Report Builder empowers YouTestMe users to create precise, data-driven reports that enhance the management and evaluation of tests, ensuring efficient operations and actionable insights.

## 23.2 Test Summary Report

The **Test Summary Report** in YouTestMe provides instructors and administrators with a detailed overview of test performance and progress. This report delivers global statistics, segmented insights by testing sessions, and location-based comparisons, ensuring a comprehensive analysis of test outcomes.

**Key Benefits**

1. **Comprehensive Test Analysis**
   The Test Summary Report consolidates critical data, including the total number of candidates, test completions, pass/fail rates, and attempts requiring grading. Key metrics such as average, lowest, highest, and median scores, as well as standard deviation, provide a robust understanding of overall test performance.



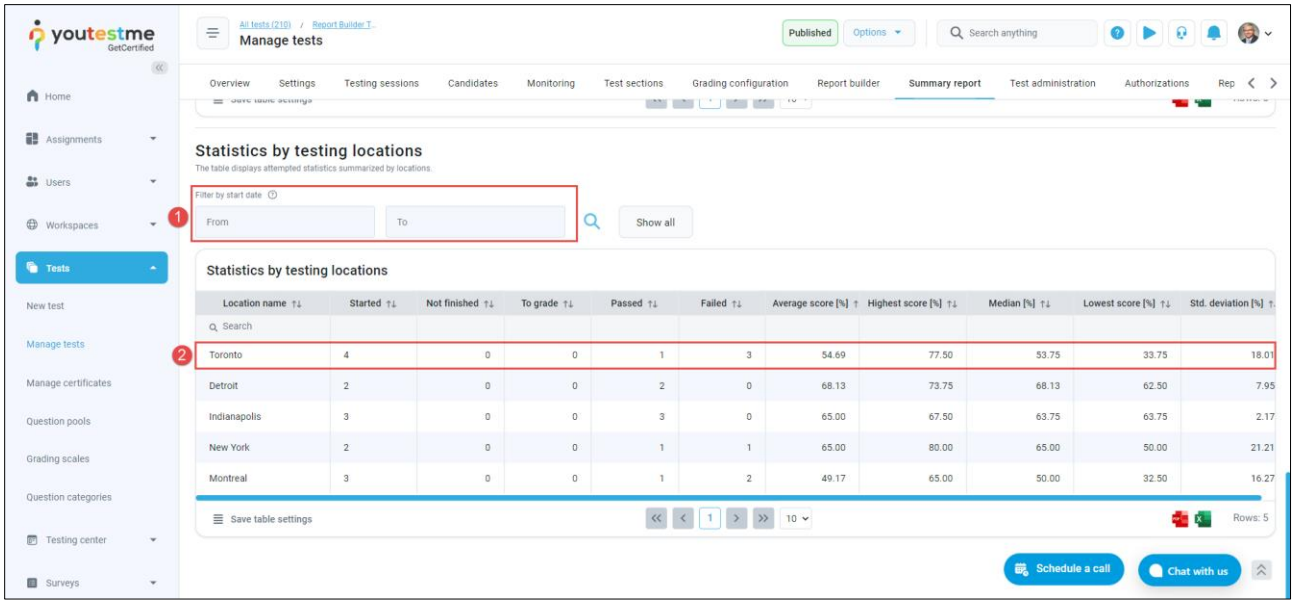

2. **Segmented Insights for Better Decision-Making**
   The report offers breakdowns by testing sessions and locations, allowing instructors and administrators to evaluate and compare performance trends across different contexts. This segmentation ensures that clients can pinpoint strengths and areas for improvement with greater precision.
3. **Visual Data Representation**
   Charts included in the report display the ratio of passed and failed candidates and the score distribution in percentages for completed attempts. These visual tools make it easier to interpret data at a glance and identify patterns or anomalies.
4. **Customizable Data Views**
   The ability to select and customize columns displayed in the report ensures users can focus on relevant metrics. Tailored views streamline data analysis and reporting processes, enhancing productivity.
5. **Export and Sharing Capabilities**
   Reports can be exported in PDF or Excel formats, enabling seamless sharing and offline analysis. This functionality supports data-driven decision-making and reporting consistency across teams and stakeholders.

**How the Test Summary Report Works**

1. **Accessing the Report**
   - Navigate to the **Tests** section in the main menu and select **Manage Tests**.
   - Click on the desired test and select **Summary Report**.
2. **Customizing the Report**
   - Choose to include or exclude suspended attempts by selecting or deselecting the checkbox labeled **Include Suspended Attempts**.

- Use the **Save Table Settings** option to add or remove columns by checking or unchecking the relevant boxes.

3. **Global Statistics**
   - View key metrics, such as the number of candidates who booked, initiated, completed, passed, or failed the test.
   - Analyze statistical measures like average and median scores for a comprehensive overview.
4. **Statistics by Sessions**
   - Filter data by specific time frames to review and compare progress and performance across individual sessions.
5. **Statistics by Locations**
   - Analyze location-specific statistics to compare performance trends in various testing environments.




6. **Exporting Reports**
   - Download the report in your preferred format (PDF or Excel) using the respective icons.

The Test Summary Report empowers YouTestMe users to make informed decisions through its detailed, customizable, and exportable insights, fostering improved test management and outcomes.

## 23.3 Analyzing Question and Answer Statistics

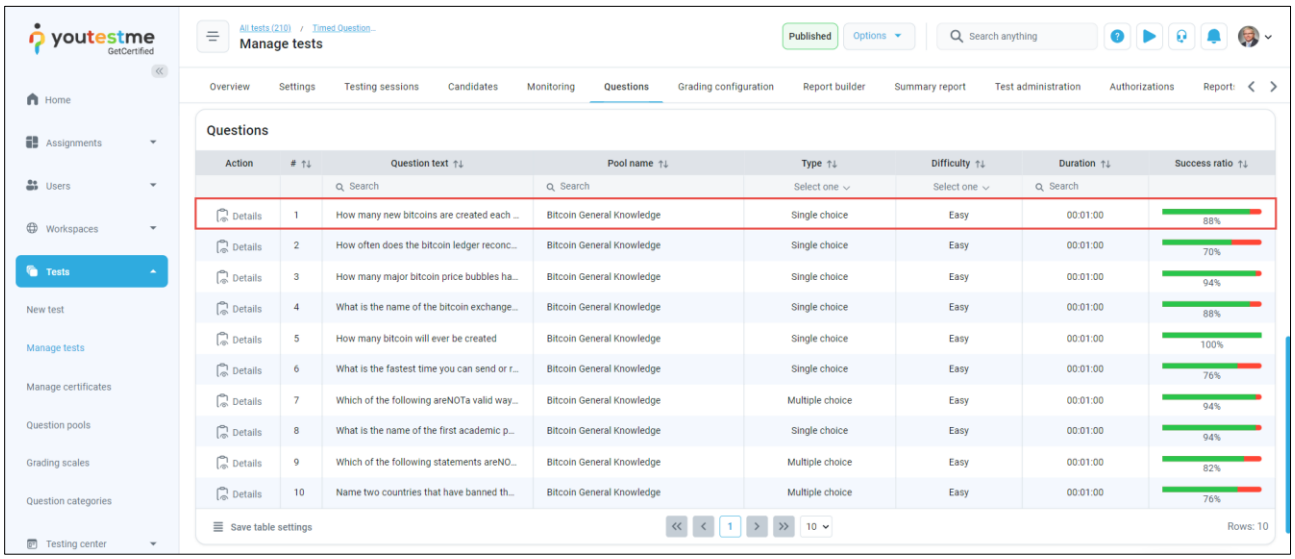
This feature in YouTestMe empowers instructors and administrators to evaluate test performance comprehensively, enhancing the quality and fairness of tests. This functionality provides detailed insights into candidate performance, question effectiveness, and answer quality, enabling data-driven decision-making.

**Key Benefits**

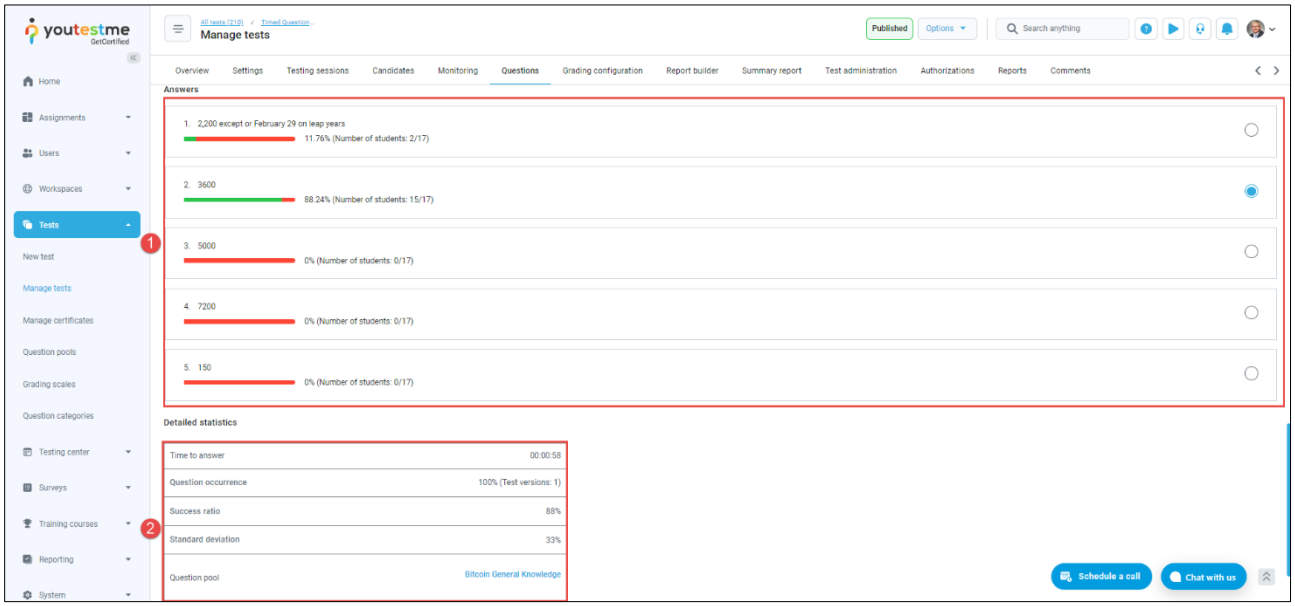
1. **Enhanced Question Performance Evaluation**
   The feature enables instructors and administrators to assess the performance of individual questions based on various metrics, such as success ratios, time to answer, and frequency of occurrence. This helps identify which questions are effective and which may require revision.
2. **Improved Test Quality**
   By analyzing answer statistics, instructors can determine the clarity and reliability of each question. For example, reviewing the percentage and number of candidates who selected each answer highlights ambiguities or biases in question design.
3. **Data-Driven Optimization**
   Access to global statistics such as success ratios and standard deviations allows for in-depth analysis of question difficulty and variability. This ensures that tests are well-balanced and aligned with the intended objectives.
4. **Customization for Test Versions**
   The ability to compare question statistics across different test versions enables clients to optimize test variations for consistency and fairness.
5. **Streamlined Test Structure Management**
   Reviewing the distribution of questions by difficulty, along with associated points, penalties, and durations, provides a comprehensive understanding of test composition. This ensures a balanced assessment tailored to diverse needs.

**How It Works**

1. **Accessing Question Statistics**
   - Navigate to **Tests** in the main menu and select **Manage Tests**.
   - Click on the desired test and go to the **Questions** tab.
2. **Reviewing Test Structure Information**
   - Analyze the number of questions for each difficulty level and review their points, penalties, and durations.
   - Enable or disable randomization of questions and answers for candidates to ensure test integrity.
3. **Comparing Questions**
   - Use the **Test Versions** drop-down menu to select the desired test version.
   - Choose comparison parameters such as success ratio, time to answer, or question occurrence from the **Compare Questions By** menu.




4. **Analyzing Answer Statistics**
   - Access detailed answer statistics by selecting a specific question and clicking the **Details** button.
   - View data such as the percentage of candidates selecting each answer and global metrics like success ratio and standard deviation.

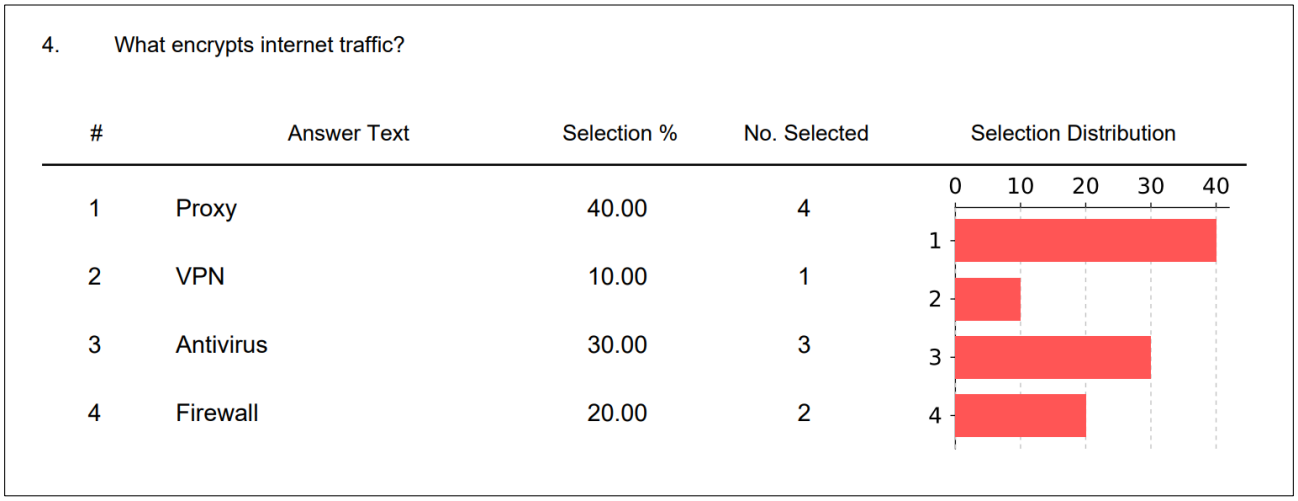



This feature in YouTestMe ensures that tests are not only effective but also equitable, offering actionable insights to continuously improve question and answer quality.

### 23.3.1 Answer Selection Details in a PDF Report

**Benefits of Checking Answer Selection Details**

1. **Enhanced Insight into Candidate Performance**
   Reviewing answer selection details provides instructors with a clear understanding of how candidates interact with test questions. This helps identify patterns, common misconceptions, and areas where candidates struggle.
2. **Data-Driven Decision Making**
   By analyzing selection percentages and answer distribution, instructors can refine test content, adjust question difficulty, and improve overall test quality.
3. **Improved Test Integrity and Fairness**
   Monitoring selection details helps detect anomalies in responses, ensuring a fair and accurate evaluation of candidates' knowledge.
4. **Comprehensive Test Reporting**
   The ability to review answer selections contributes to generating thorough test reports that support compliance, accreditation, and decision-making processes.



4. What encrypts internet traffic?

| # | Answer Text | Selection % | No. Selected |
|---|---|---|---|
| 1 | Proxy | 40.00 | 4 |
| 2 | VPN | 10.00 | 1 |
| 3 | Antivirus | 30.00 | 3 |
| 4 | Firewall | 20.00 | 2 |



*Example of a test question with answer selection statistics in a detailed PDF report*

**How to Check Answer Selection Details**

1. **Navigate to the Test Management Section**
   - Go to the *Tests* menu and select *Manage Tests*.
   - Choose the test for which you want to review answer selection details.
2. **Access the Question Statistics**
   - Click on the *Questions* tab.
   - Select *View* to open the question details.
3. **Export Answer Selection Data**
   - Click the *Export Statistics* button.
   - Review key metrics, including selection percentages, response distribution, and the number of candidates who chose each option.

This functionality ensures detailed tracking of candidate responses, leading to continuous improvements in testing and training strategies.

youtestme GetCertified

Statistics Report

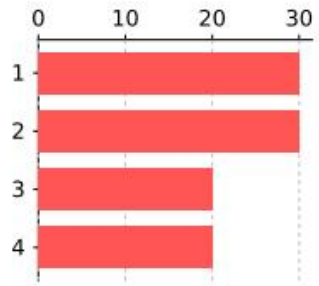
Test name: Test Your Cybersecurity Knowledge

Test version: Test version 1

| | | | | | |
|---|---|---|---|---|---|
| Mean: | 22.00 | Median: | 20.00 | Standard Deviation: | 11.35 |
| Low Score: | 0.00 | High Score: | 40.00 | | |
| Export date: | 3/12/25, 1:05 PM | | | | |

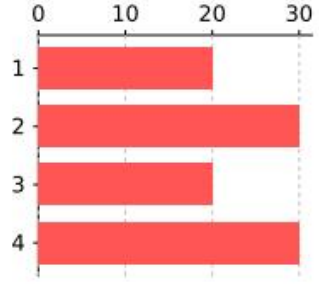
1. Choose the most secure password.

| # | Answer Text | Selection % | No. Selected | Selection Distribution |
|---|---|---|---|---|
| 1 | password | 30.00 | 3 | |
| 2 | Qwerty2025 | 30.00 | 3 | |
| 3 | ILoveCats | 20.00 | 2 | |
| 4 | gf8$kP!z7Qm | 20.00 | 2 | |




2. What can bypass a firewall?

| # | Answer Text | Selection % | No. Selected | Selection Distribution |
|---|---|---|---|---|
| 1 | Antivirus software | 20.00 | 2 | |
| 2 | Incognito mode | 30.00 | 3 | |
| 3 | VPN tunneling | 20.00 | 2 | |
| 4 | IP whitelisting | 30.00 | 3 | |



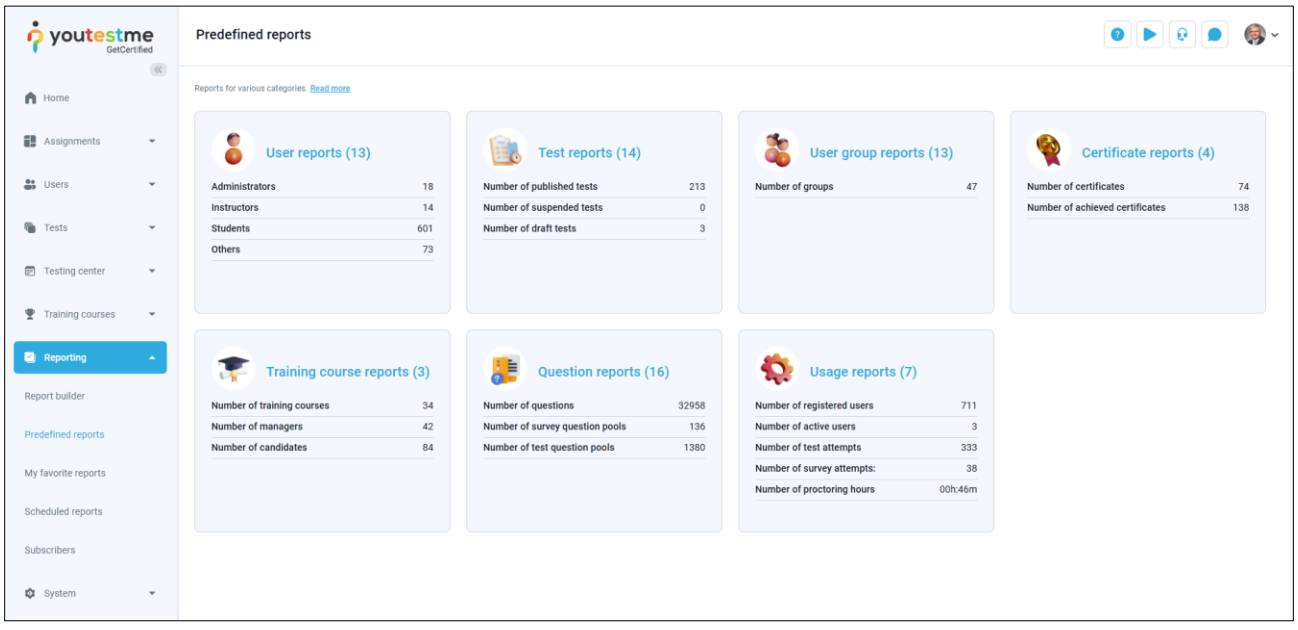

*Example of a PDF report displaying key test statistics and detailed question insights*

## 23.4 Predefined Reports

Predefined reports in YouTestMe provide instructors, proctors, and administrators with organized and aggregated insights from the system database. These reports are displayed primarily in tabular formats and, in some cases, include graphical representations for enhanced clarity. They serve as a vital tool for analyzing various aspects of system usage, candidate performance, and test quality. Reports can be easily exported as Excel or PDF files for further review or sharing.

**Benefits of Predefined Reports**

1. **Streamlined Access to Data**: Predefined reports consolidate relevant data, saving time and effort by presenting comprehensive insights at a glance.
2. **Enhanced Decision-Making**: The insights derived from these reports assist in evaluating the quality of tests, questions, and training courses, as well as identifying areas for improvement.
3. **Performance Analysis**: Instructors can use reports to assess candidates' progress, monitor test results, and track activity trends.
4. **Customization and Favorites**: Frequently used reports can be marked as favorites, enabling quick access from a dedicated favorites list.

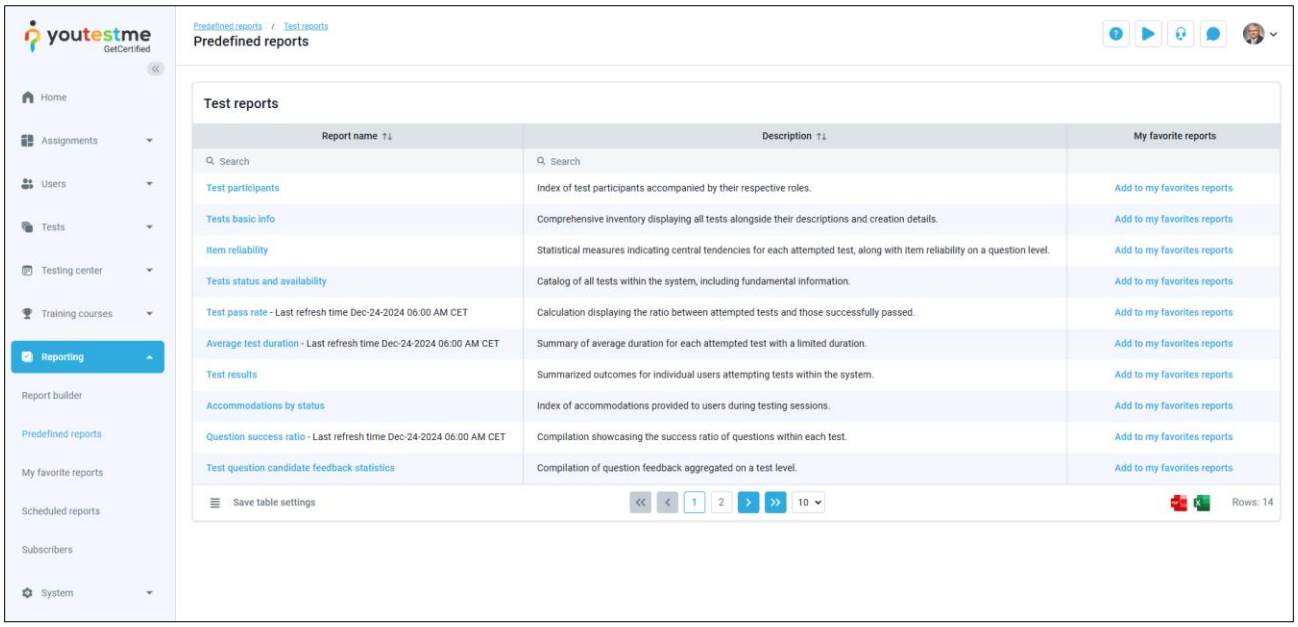



**How to Access Predefined Reports**

1. **Navigating to the Reports**:
   - Select the "Reporting" tab from the left-side menu.
   - Click on the "Predefined reports" tab.
2. **Choosing Report Categories**:

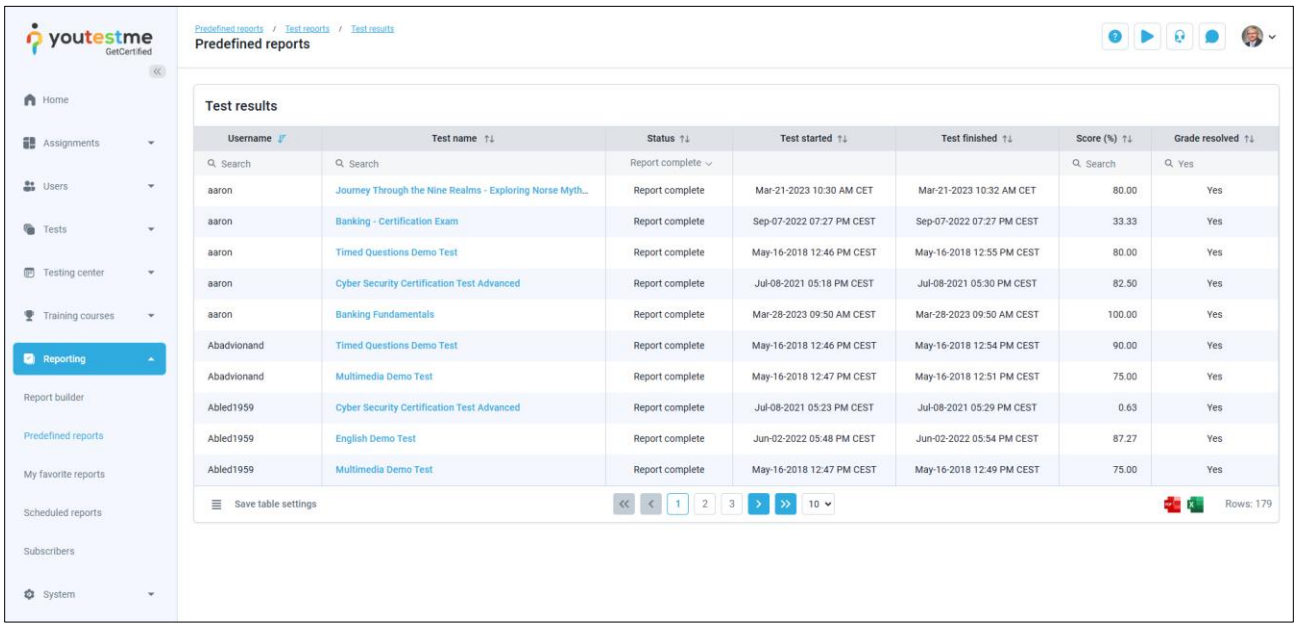
- A navigation page with nine report categories will appear, each containing multiple reports related to specific application modules such as tests, question pools, surveys, and accounts.
- Click on a category name to view all related reports.

3. **Opening and Favoriting Reports**:
   - Select a report by clicking on its name to view detailed information.
   - Mark important reports as favorites for easier access via the "Favorites" section in the Reporting tab.




**Previewing and Exporting Reports**

1. **Viewing Report Details**:
   - For instance, the "Test Results" report provides a comprehensive list of candidates, test names, start and finish times, scores, and more.
   - Additional test details can be accessed by clicking on the test name.
2. **Exporting Reports**:
   - All reports can be exported as Excel or PDF files by selecting the corresponding export option.



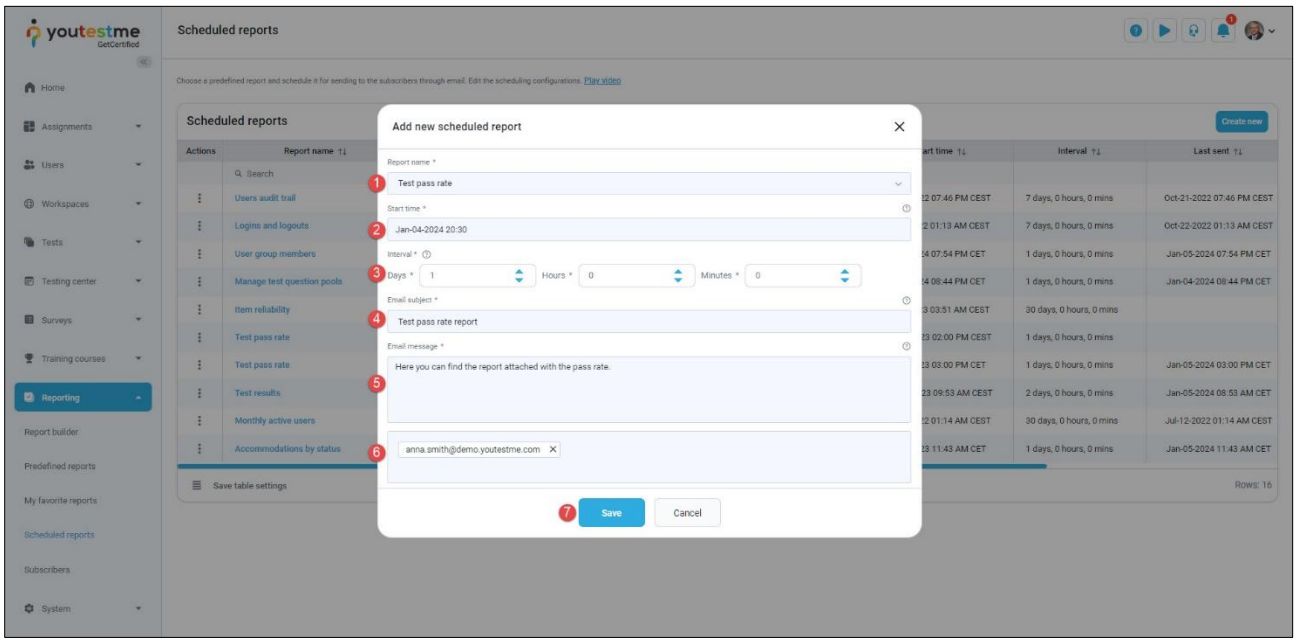

By leveraging predefined reports, clients can ensure effective monitoring and continuous improvement of their testing and training processes within YouTestMe.

## 23.5 Scheduled Reports

YouTestMe offers a "Scheduled Reports" functionality, enabling administrators and instructors to automate the sending of detailed reports via email at specified intervals. This feature significantly enhances efficiency, ensures timely access to critical information, and promotes seamless communication with stakeholders.

**Benefits of Scheduled Reports**

1. **Automation and Efficiency**: Scheduled reports eliminate the need for manual report distribution by automating the process. This saves time and ensures that recipients receive the information promptly and consistently.
2. **Customization and Flexibility**: Administrators and instructors can customize reports to include relevant data, such as test results, candidate performance metrics, or test participation summaries.
3. **Enhanced Communication**: By automating the delivery of reports to designated recipients, clients can maintain seamless and proactive communication across teams.
4. **Improved Planning**: The ability to define specific delivery times and intervals supports better planning and ensures that reports align with organizational needs.




**How Scheduled Reports Work**

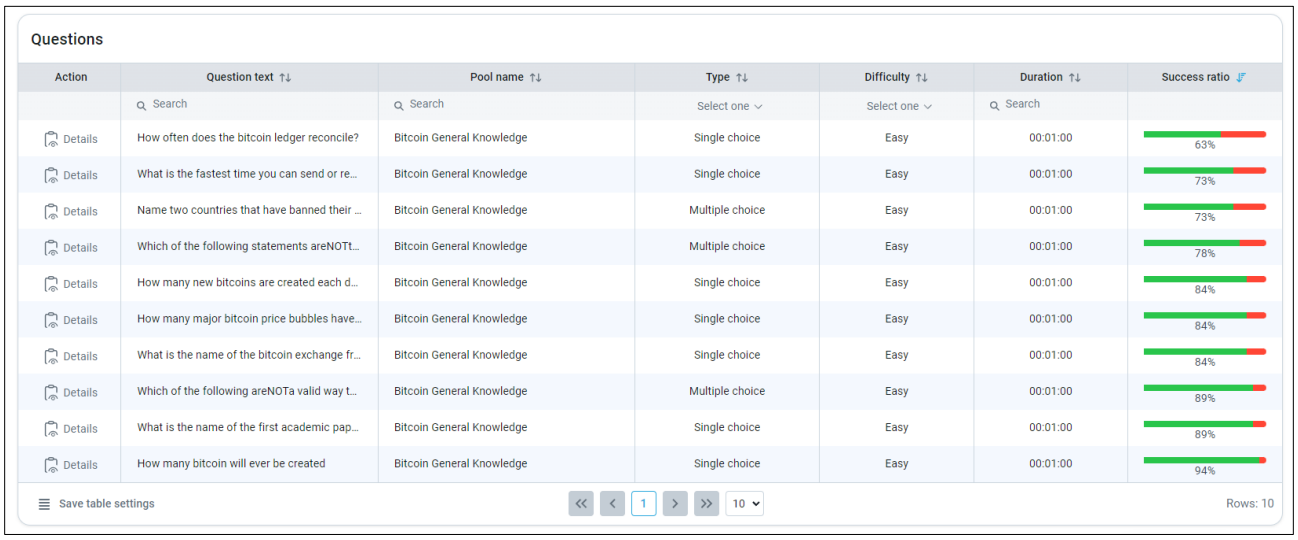
1. Access the "Scheduled Reports" tab within the "Reporting" section of YouTestMe.
2. Select the **Schedule Report** button.
3. Choose a predefined report from the drop-down menu.
4. Configure the start date, time, and interval for the report's automated delivery.
5. Enter the email subject, message, and recipients' email addresses.
6. Save the configuration to activate the schedule.

Administrators can enable or disable scheduled reports at any time, ensuring complete control over report delivery.

## 23.6 Improving Your Tests and Training Courses

To enhance the quality of your questions, tests, and training courses, YouTestMe offers an array of reports designed to facilitate data-informed decision-making.

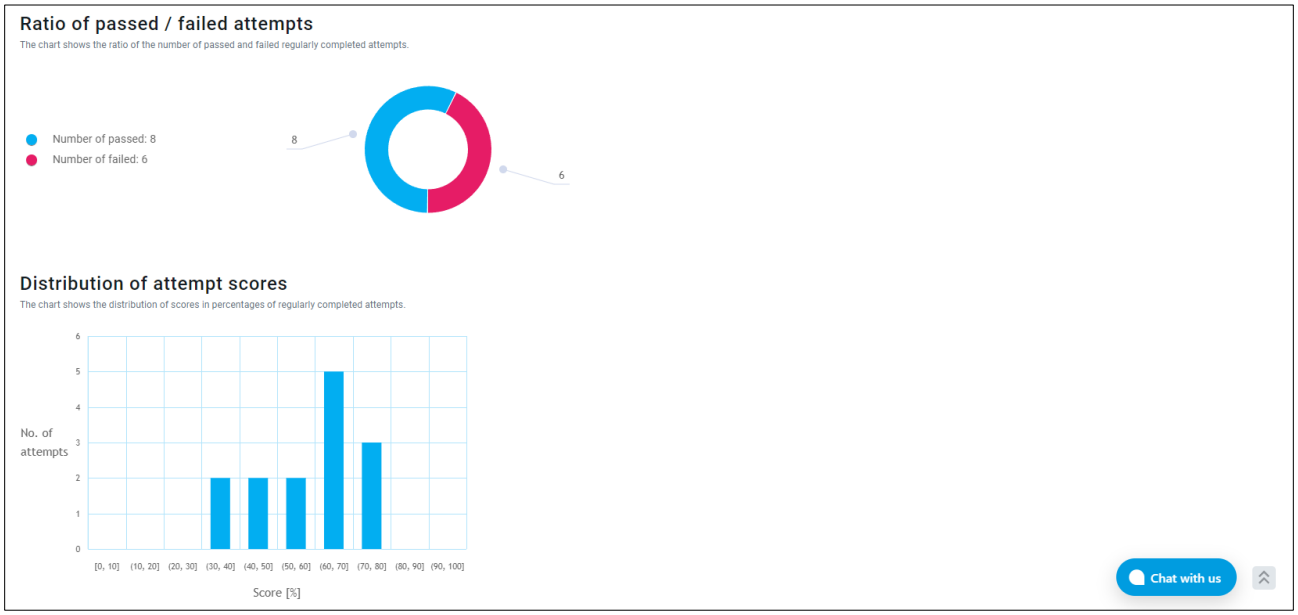
For a comprehensive assessment of test questions, instructors can analyze their success ratios, effectively pinpointing questions that might be excessively easy or difficult. This analysis extends to evaluating the average time taken to answer a question, aiding in the identification of potentially perplexing items.




Furthermore, instructors can delve into advanced reports like the "Item reliability" report, which examines how questions correlate with the overall test performance. This feature is particularly valuable for uncovering questions that exhibit unexpected behavior, such as instances where candidates with higher scores answer incorrectly while those with lower scores answer correctly.

Upon identifying problematic questions, instructors can promptly revise them, with the updates instantaneously propagating to all subsequent iterations of the test.

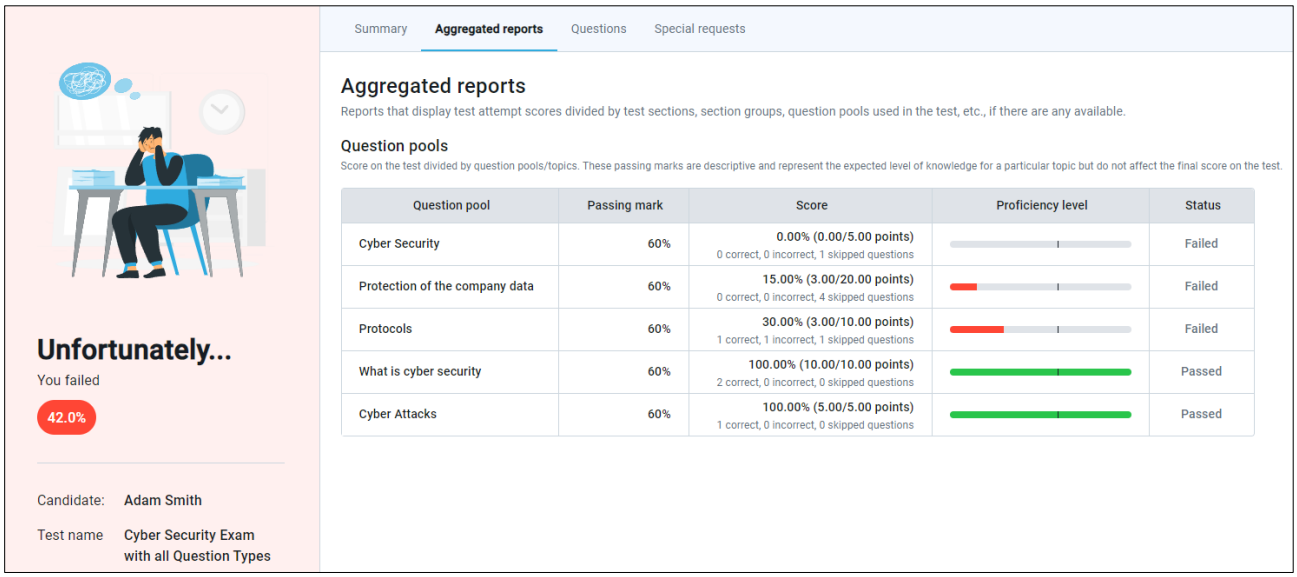
Comprehensive test statistics offer insights into the test's level of difficulty. Key metrics to focus on include the pass/fail ratio and the distribution of scores. Armed with these metrics, instructors can effectively fine-tune the test by incorporating more challenging or easier questions as deemed necessary.



For evaluating training courses, an effective strategy involves embedding short self-assessment tests at the conclusion of each step. The resultant pass/fail ratios from these tests furnish instructors with valuable insights into the more challenging segments of the training course. Subsequently, instructors can opt to enhance the associated learning materials or subdivide these sections into smaller, more manageable steps. Changes are promptly applied to the training course, ensuring immediate adaptation.

Alternatively, within the certification test marking the culmination of a training course, instructors can delve into the outcomes stratified by question pools or banks—repositories for questions categorized by subject matter. This analysis enables easy identification of the domains where candidates encountered the most challenges, guiding subsequent actions.

Additionally, the report showcasing a candidate's performance across different test domains can serve candidates themselves, offering insights into areas that require further study for future test success.




Additional metrics that facilitate the segmentation of test results based on specific criteria can be accessed through the report builder tool. This functionality empowers instructors to generate personalized reports, thereby enabling an analysis of results based on parameters such as ZIP code, age, gender, or any custom user properties that have been established.

## 23.7 Candidate Feedback on Test Questions

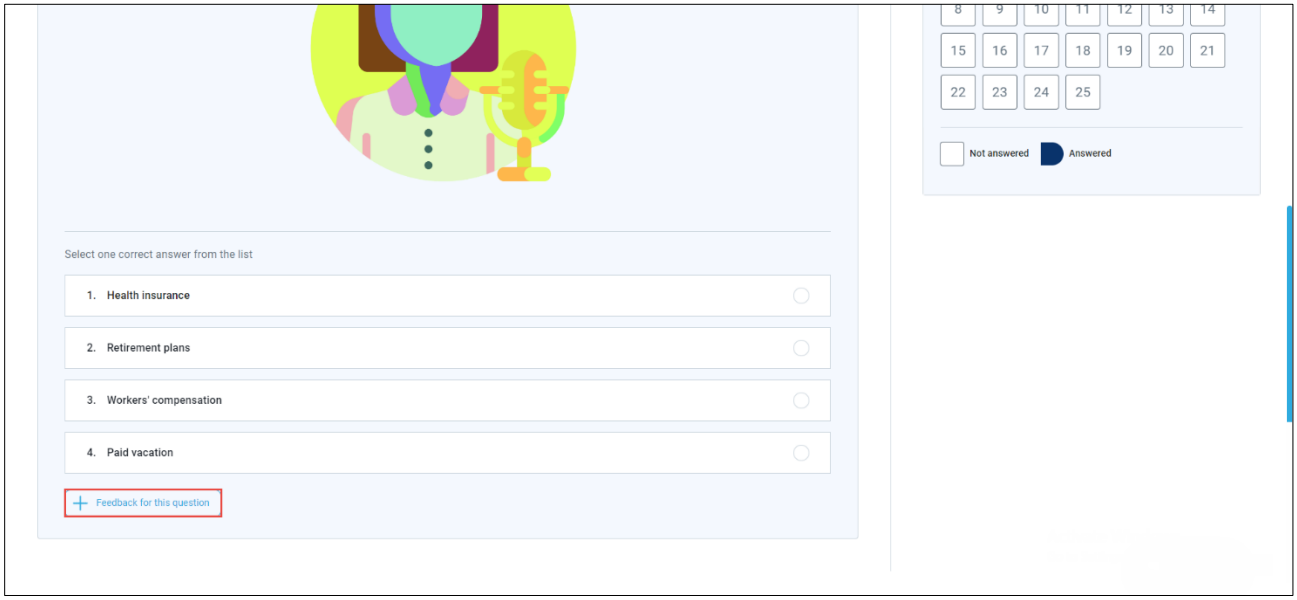
In the YouTestMe platform, we recognize the importance of candidate feedback in enhancing the quality of test questions and the overall testing experience. We have implemented a user-friendly mechanism that allows candidates to provide valuable feedback during their test-taking process.

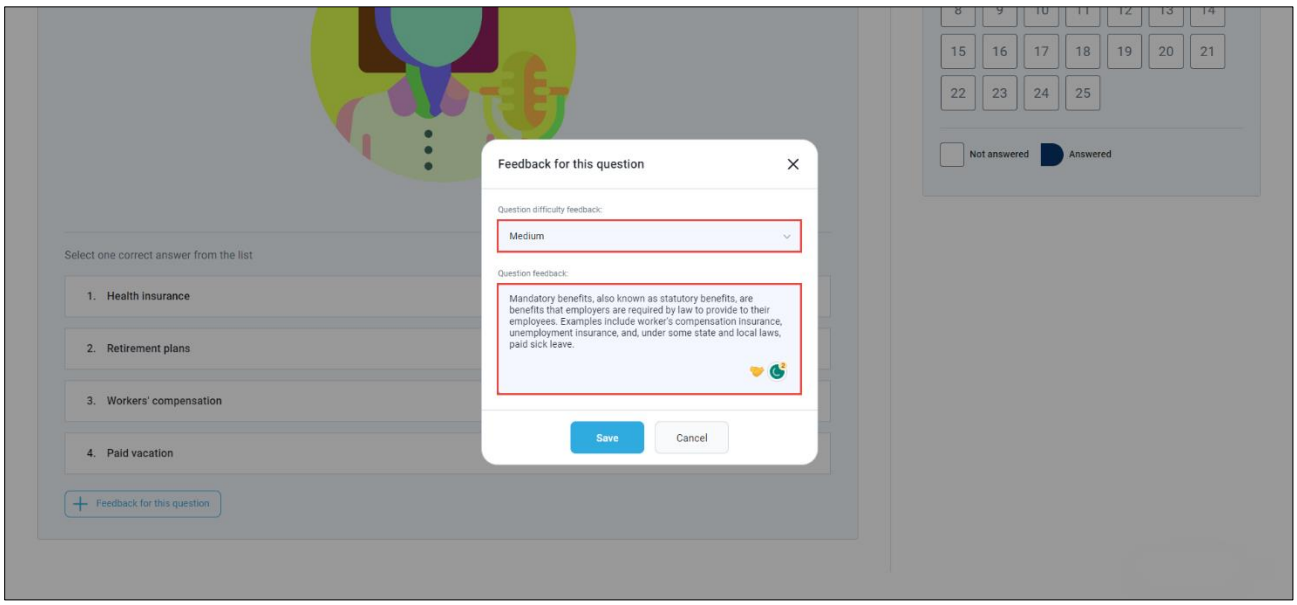
**Enabling Question Feedback**

To enable question feedback for candidates, administrators can access the relevant test settings. By choosing to "Enable candidates' feedback on all test questions," this feature becomes accessible to candidates throughout their assessments.

## Providing Question Feedback and Rating Difficulty

During the test, candidates will find an "Add feedback to this question" button beneath each question. By clicking on this button, candidates can submit feedback for the specific question and also rate the question's difficulty. They have the option to categorize questions as "hard," "medium," or "easy" based on their perception.



After providing feedback, candidates can review their input in the "Questions" tab. This allows them to revisit their feedback and, if necessary, make any edits or adjustments.

Candidates also have the privilege of editing their feedback in their personal report. This feature ensures that candidates can refine their feedback as needed, promoting accuracy and clarity.

**Administrator Oversight**

From an administrator's perspective, managing candidate feedback is straightforward. Administrators can access and review candidate feedback by selecting the relevant candidate's report. The "Questions" tab, under the "Grade" option, provides a clear overview of the feedback submitted by candidates. This includes the question difficulty rating chosen by the candidate and the specific feedback provided.

**Enhancing Assessment Quality**

This comprehensive feedback mechanism empowers candidates to actively contribute to the assessment process by sharing their insights and perceptions. It promotes transparency and fosters an environment of continuous improvement, ensuring that the test questions align with the intended learning outcomes and remain of the highest quality.

By incorporating candidate feedback into the assessment process, the YouTestMe platform not only encourages candidate engagement but also facilitates the refinement of assessment materials for more accurate and meaningful evaluations.

## 23.8 Personalized Test Reports in YouTestMe

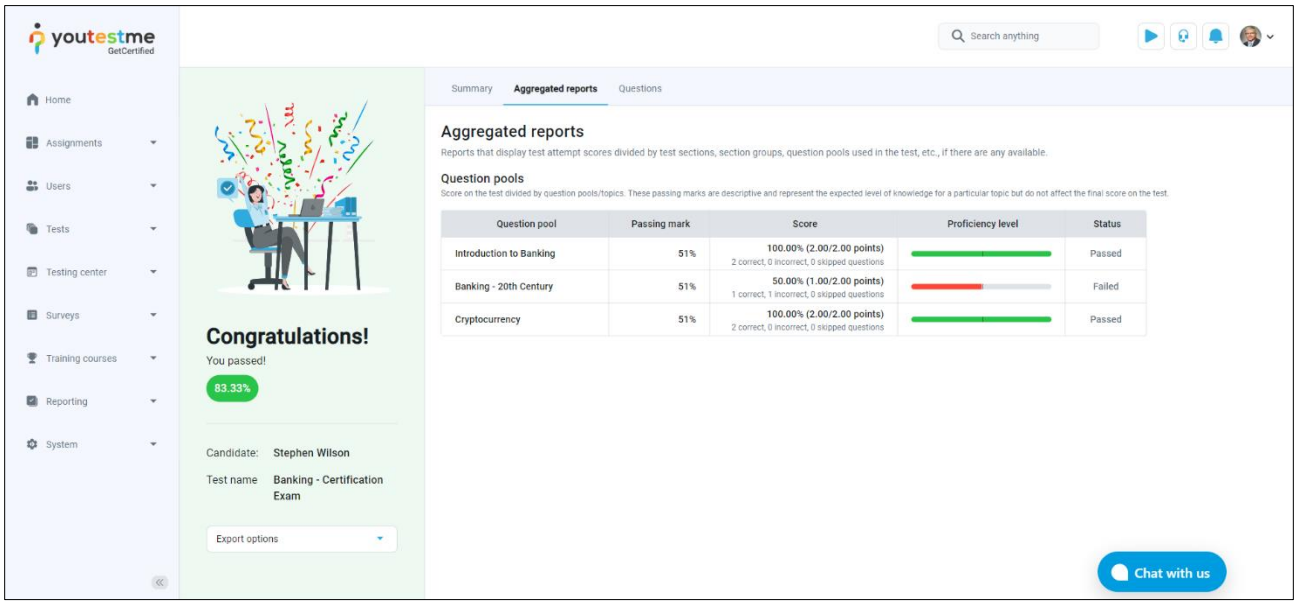
In this chapter, we delve into the Personalized Test Reports feature within the YouTestMe platform, which offers candidates a comprehensive and insightful overview of their performance on assessments. This report not only provides a detailed breakdown of proficiency levels in various subjects (question pools) but also includes a visual representation of competency levels through a radar chart.

**Personal Test Report Overview**

After completing a test in YouTestMe, candidates are presented with a personalized test report. This report is a valuable resource that allows candidates to gauge their strengths and areas for improvement. It is designed to offer transparency and encourage self-assessment. Here's what candidates can expect to find in their personalized test report:

- **Overall Score**: The report begins with the candidate's overall score on the test, providing an immediate snapshot of their performance.

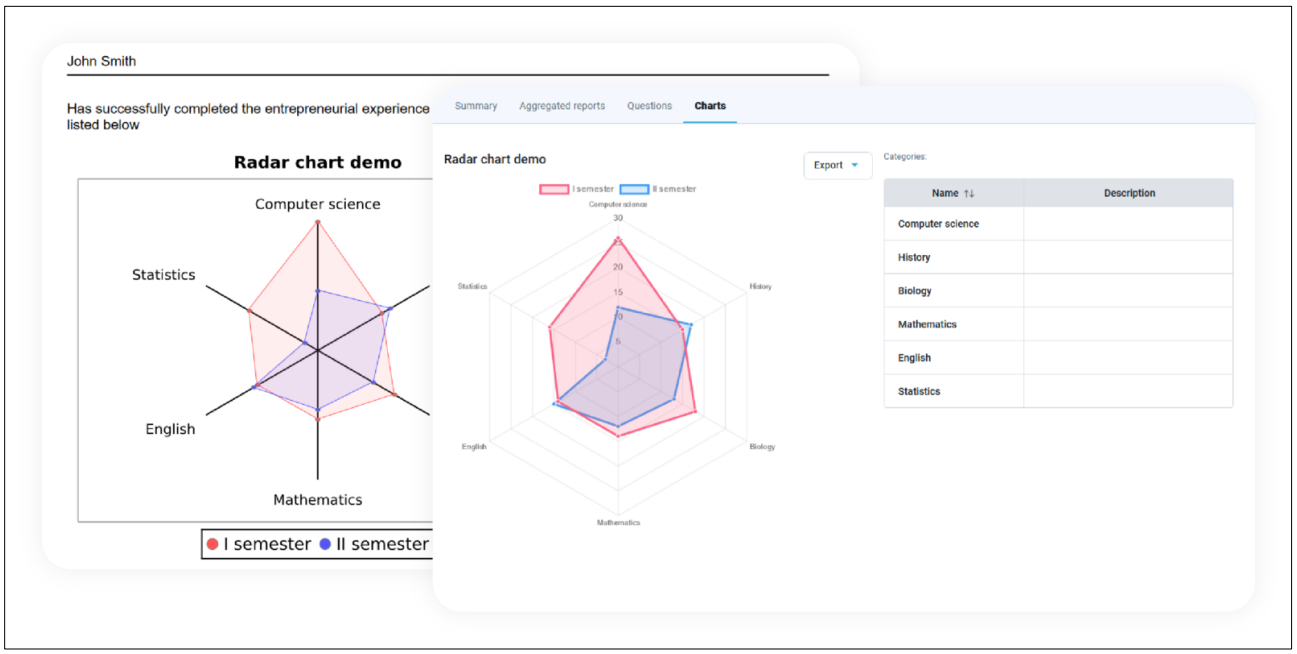
- **Subject Proficiency Levels**: The report provides a detailed breakdown of proficiency levels in all subjects (question pools) included in the test. Each subject is assessed independently, enabling candidates to identify their strengths and weaknesses in specific areas of knowledge.




**Radar Chart: A Visual Representation of Competency**

A standout feature of the personalized test report is the inclusion of a radar chart. This visually engaging representation offers candidates a holistic view of their competency levels across different subjects. Here's how the radar chart works:

- **Subject Areas**: The radar chart displays subject areas along the axes, with each axis corresponding to a specific subject or question pool.
- **Competency Levels**: The chart uses a series of data points to plot the candidate's competency level in each subject. The levels are represented as data points along each axis, forming a polygon shape.
- **Visualization**: The radar chart provides an at-a-glance visual representation of the candidate's strengths and weaknesses. The shape of the polygon indicates the overall distribution of competencies across subjects.




**Benefits of the Personalized Test Report**

The personalized test report in YouTestMe offers several advantages to candidates:

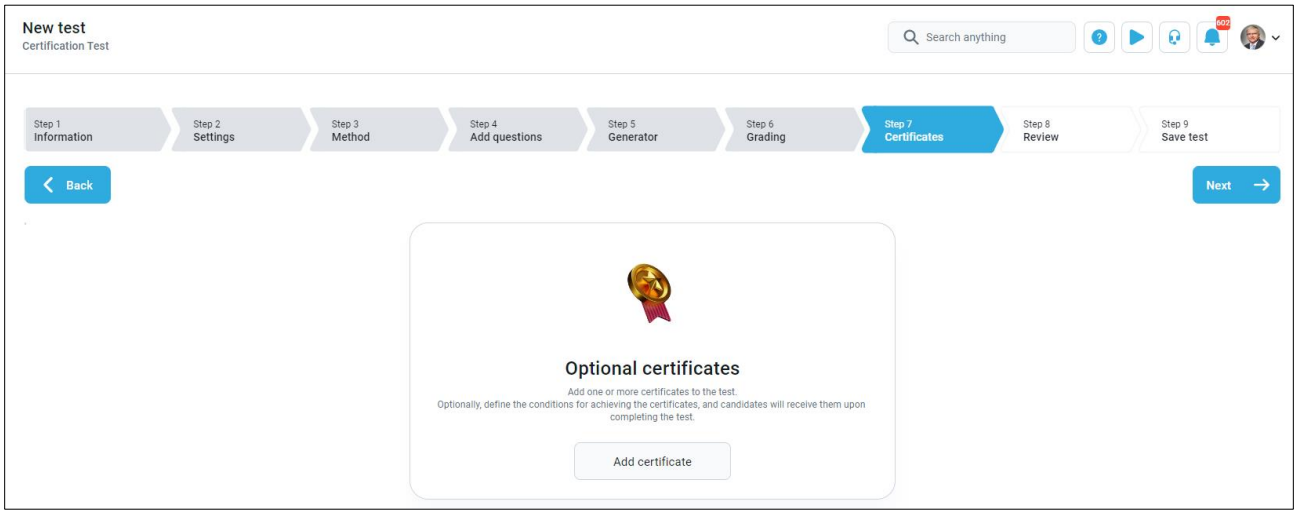
- **Self-Assessment**: Candidates can use the report to assess their performance objectively, gaining insights into their knowledge gaps and areas of expertise.
- **Focused Study**: Armed with a detailed breakdown of proficiency levels, candidates can tailor their study efforts to target specific subjects that need improvement.
- **Motivation**: Seeing progress and improvement reflected in the report can motivate candidates to strive for better results in future assessments.
- **Transparency**: The report promotes transparency in the evaluation process, providing candidates with a clear understanding of how their scores were determined.

**Conclusion**

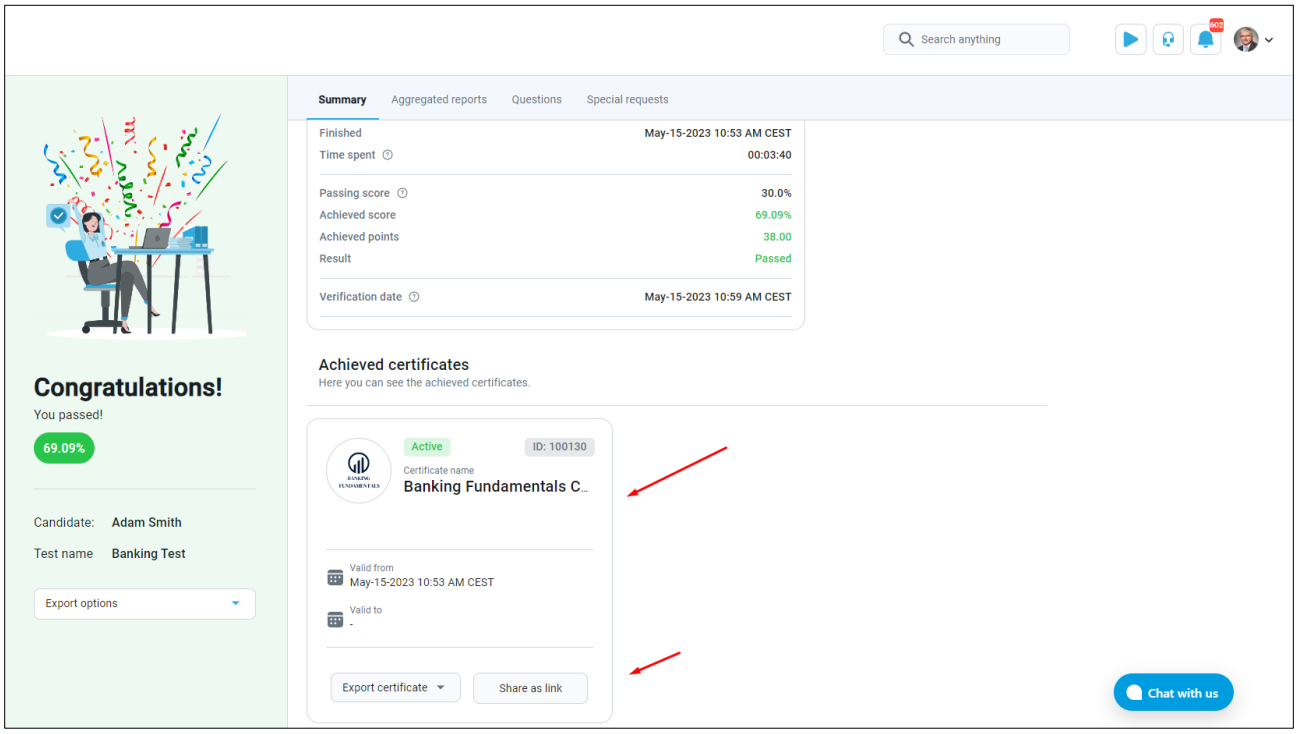
The Personalized Test Report in YouTestMe goes beyond traditional assessment feedback. It empowers candidates with a comprehensive view of their performance, highlighting proficiency levels in various subjects and presenting these insights through an intuitive radar chart. This feature fosters a data-driven and self-improvement-oriented approach to learning and assessment. In our next chapter, we will explore additional capabilities within the YouTestMe platform to further enhance the assessment and certification experience.

# 24 Certificates

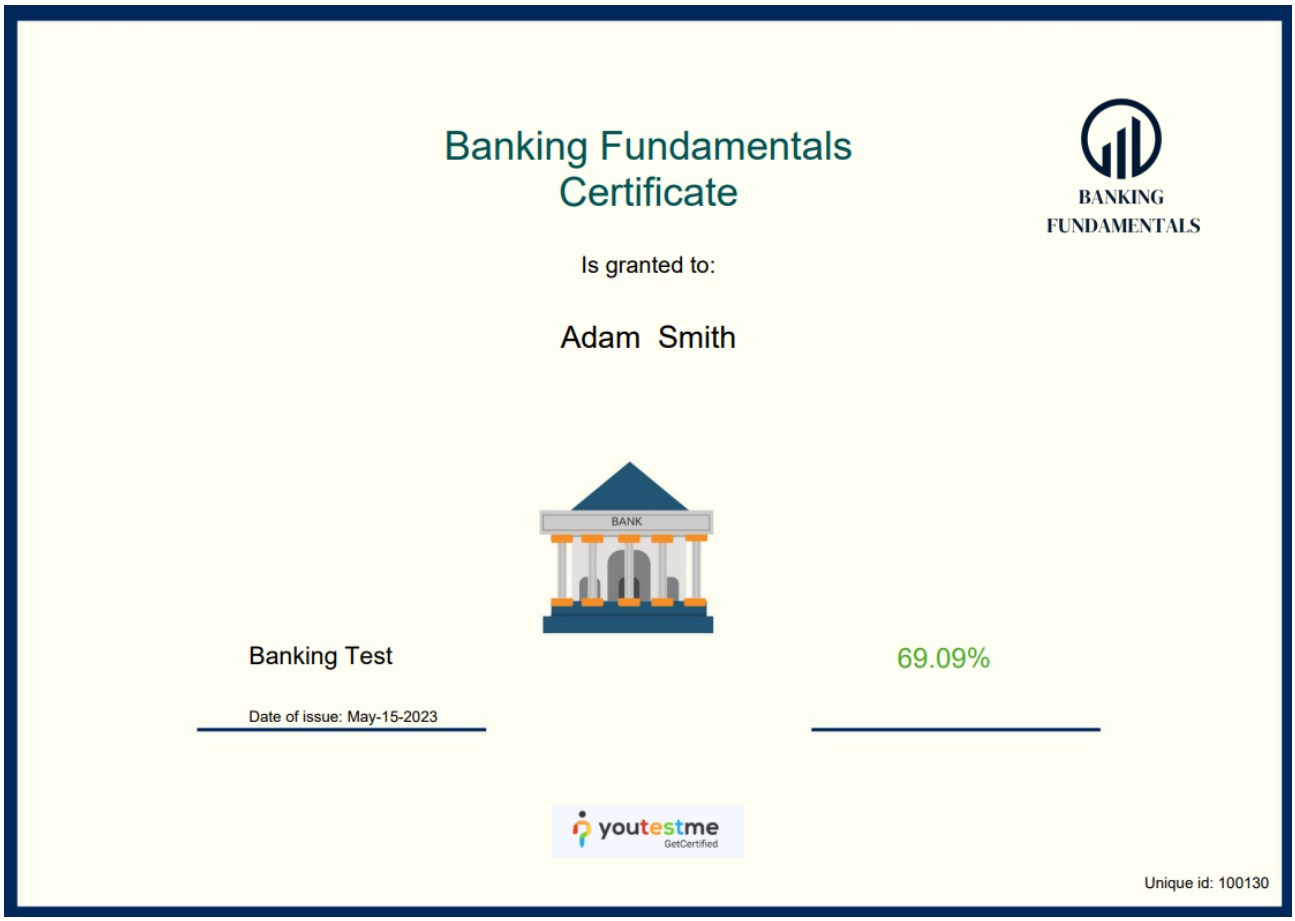
Certificates hold the capacity to be affiliated with either tests or training courses, most notably achieved through the inclusion of certification tests within the ultimate course phase.




Upon a candidate's successful completion of a test, an automatic conferment of the pertinent certificate takes place.



Certificates can be readily obtained as PDFs or images and are shareable via external links beyond the YouTestMe platform.

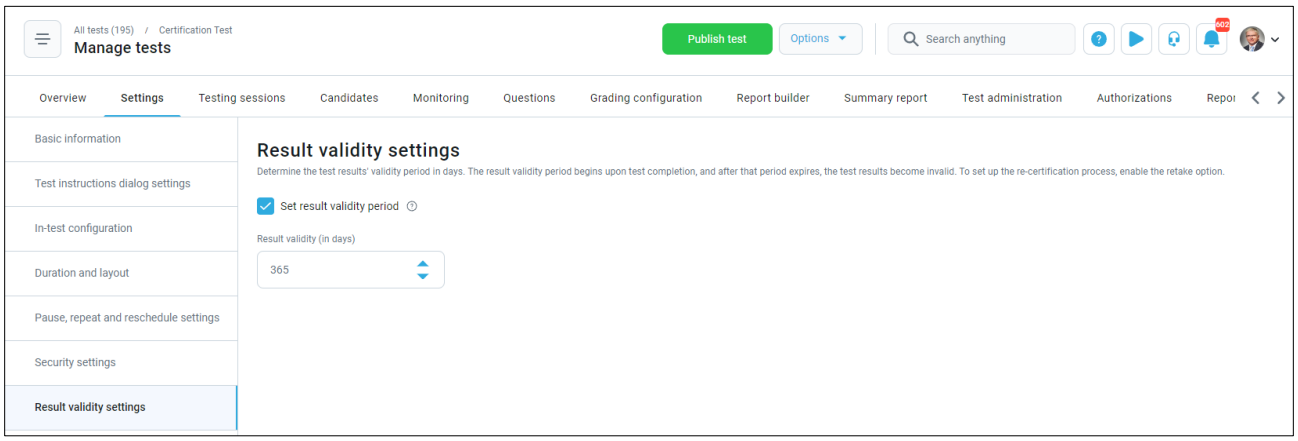



The YouTestMe certificate designer furnishes the means to craft a wide-ranging visual portrayal of the certificate.

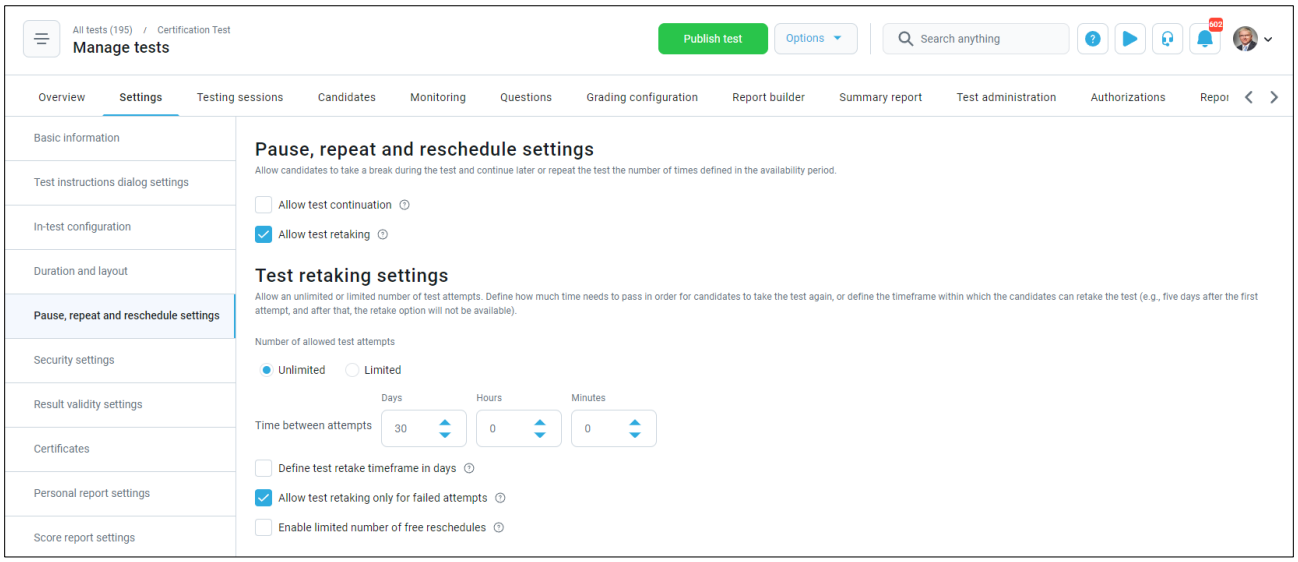
Instructors retain the autonomy to curate the information exhibited, with the system proficiently completing the data fields via suitable placeholders, encompassing elements like first and last names, issuance and expiration dates, company name, and certificate ID.

Instructors are vested with the prerogative to define the duration of the certificate's validity before re-certification becomes obligatory, a detail that can be included on the certificate itself.

The operational framework involves the seamless dispatch of automated email notifications to candidates as the expiration date of their certificate approaches. This streamlined process operates autonomously, absolving instructors of the need for hands-on management of candidate re-certification procedures.




Additionally, instructors are enabled to configure specific protocols dictating the retaking of certification tests following candidate test failures. One illustrative provision could involve imposing a stipulated interim period between consecutive test attempts, fostering a revisitation of learning materials prior to another testing endeavor.



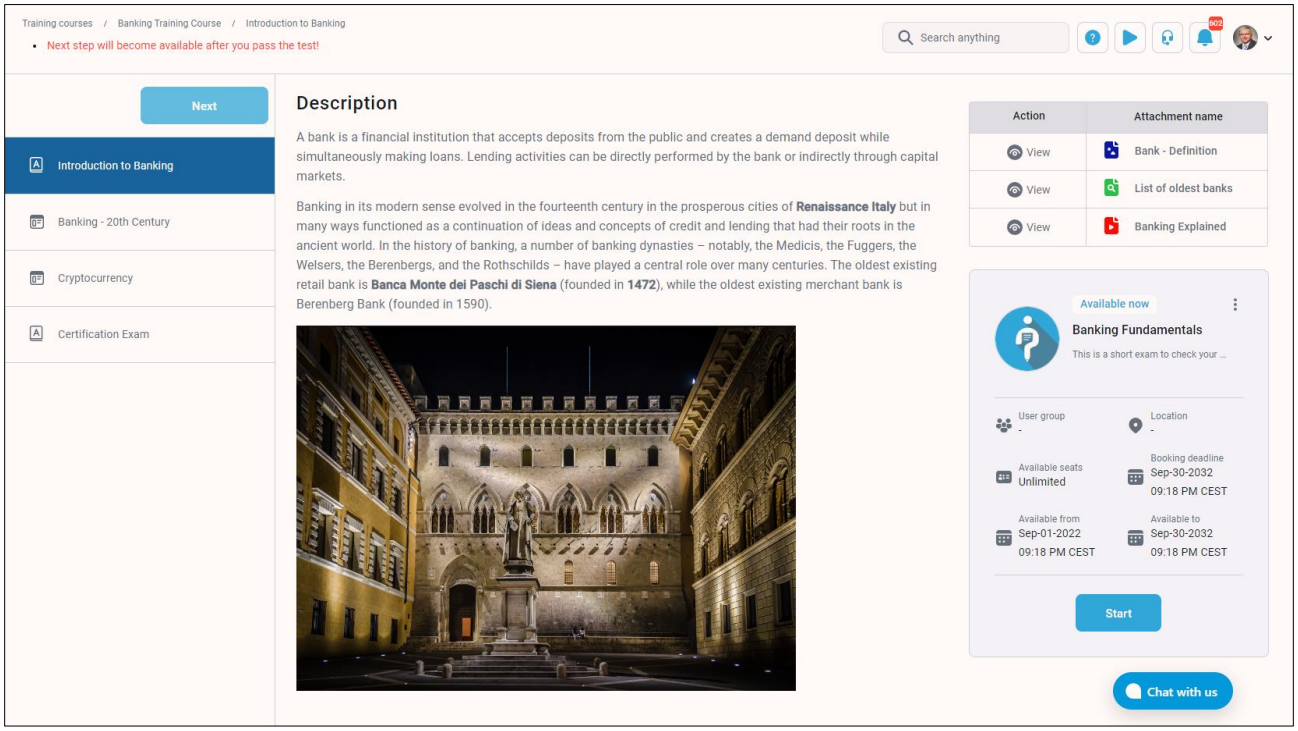

Moreover, instructors possess the capability to stipulate divergent certificates contingent upon a candidate's score in the certification test. For example, a candidate achieving scores between 71 and 90 might be granted a Certificate of Proficiency, while a candidate garnering a score ranging from 91 to 100 could receive a Certificate of Excellence.

# 25 Training Courses

YouTestMe facilitates the structuring of the learning journey for clients' candidates through the implementation of training courses.

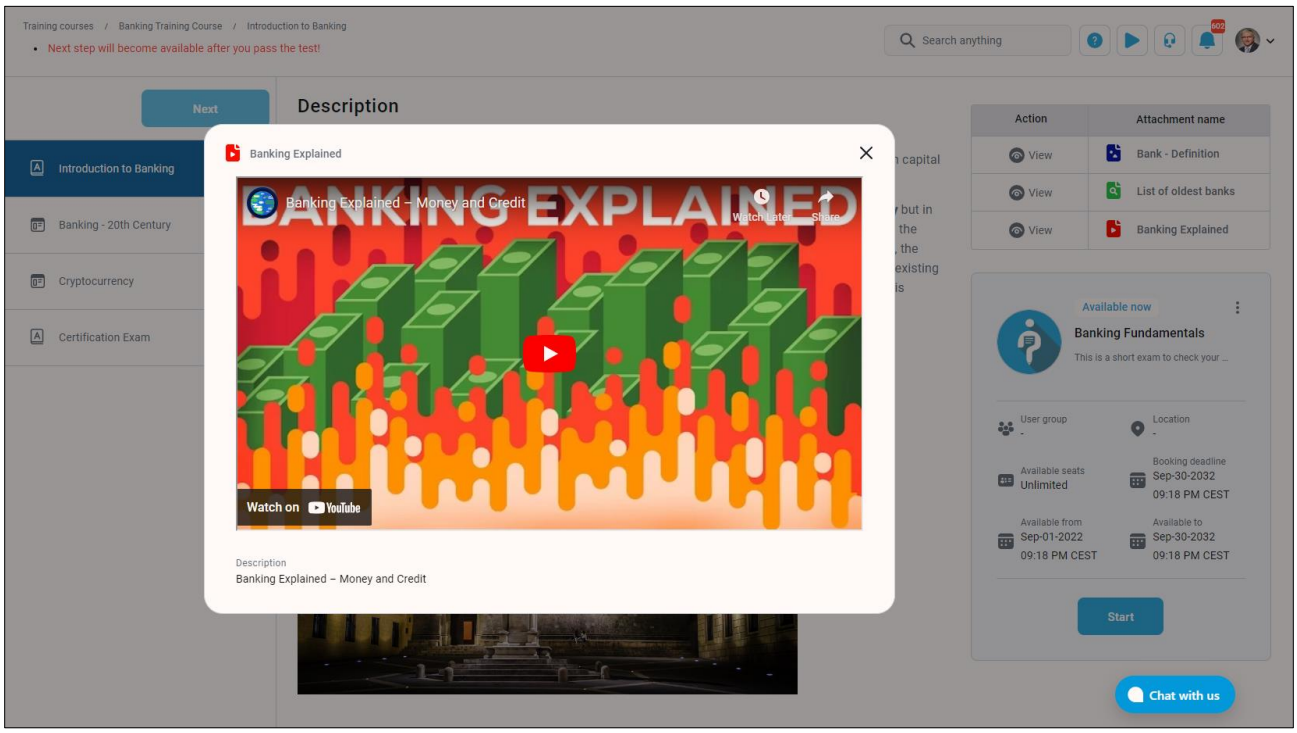
These training courses are composed of multiple sequential steps, offering clients the flexibility to decide whether candidates should progress through them in a predefined order or if candidates can freely navigate between steps according to their preferences.

Instructors hold the capability to integrate an arbitrary number of steps into a training course, each step enriched with a range of learning resources (attachments).



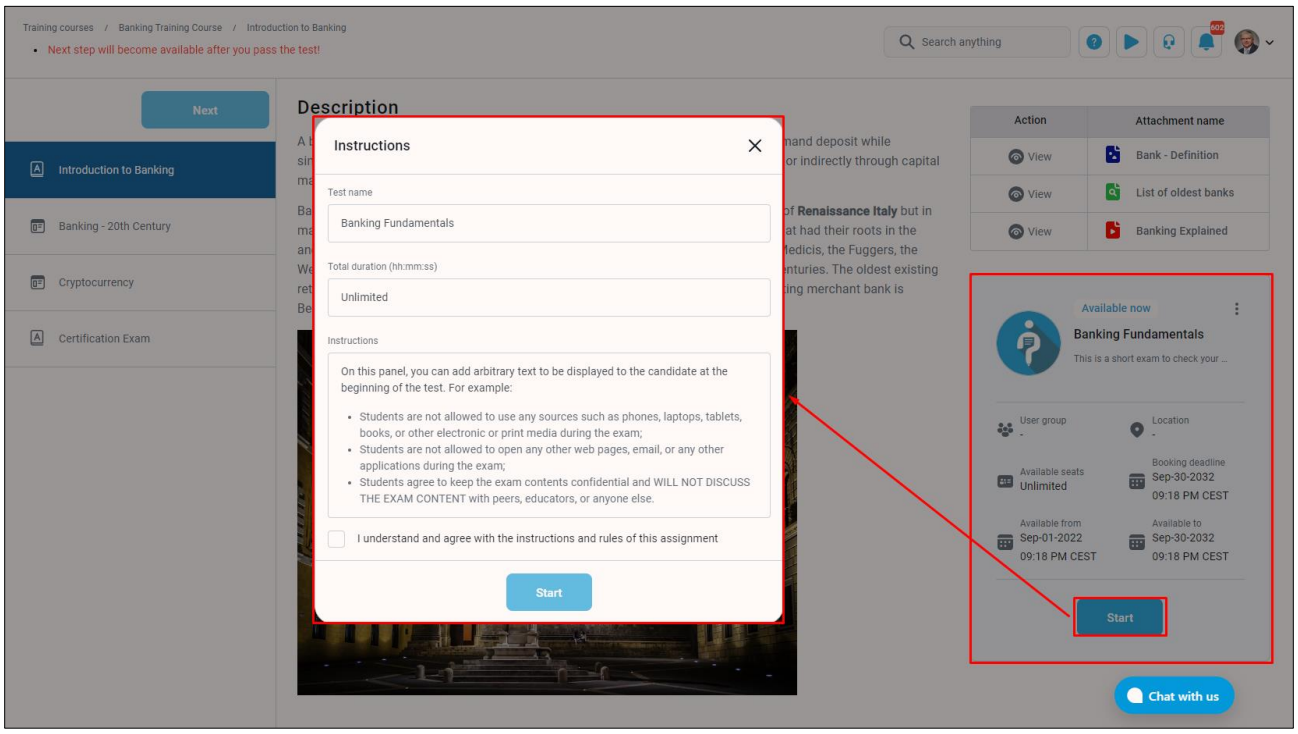

These learning resources encompass a variety of multimedia file formats, including:

1. Video
    a. MP4
    b. YouTube
    c. Vimeo
2. Audio (MP3)
3. Picture
4. PDF
5. Google Docs
6. External links
7. Files of diverse formats (designed for downloading)




Upon completion of each step, instructors can incorporate a self-assessment test aimed at evaluating the candidates' understanding.

Furthermore, instructors possess the authority to mandate successful completion of a test prior to allowing candidates to progress to the subsequent step.




As the culminating point of a training course, instructors commonly include a certification test that comprehensively covers all topics addressed throughout the course. Successful completion of this certification test leads to the conferral of a completion certificate, signifying the candidate's successful mastery of the training course.

# 26 YouTestMe API

YouTestMe offers robust support for seamless integrations and the exchange of data through its comprehensive Application Programming Interface (API).

The YouTestMe API provides a range of endpoints tailored for technical interactions, enabling efficient utilization of its functionalities.

Below is an overview of key API endpoints available within the YouTestMe ecosystem:

- **Login Endpoint**: The Login endpoint encompasses operations designed to authenticate users by prompting them for their credentials. Successful verification grants access to the broader API functionalities.
- **Pool Questions Endpoint**: Focused on questions grouped by a shared unique identifier, this API segment is dedicated to tasks such as querying questions from specific pools, inserting new questions into pools, and removing questions from pools.

- **Pools Endpoint**: The Pools API revolves around question pools, which store collections of questions often pertaining to specific subject areas. It facilitates operations such as listing existing pools, creating new ones, updating pool details, and deleting pools.
- **Questions Endpoint**: At the core of assessments, questions play a pivotal role. This API section deals with tasks related to question management, including insertion, modification, deletion, and listing of questions.
- **Quizzes Endpoint**: Quizzes encompass sets of questions guided by specific rules. This API offers the means to list quizzes or test sessions, query quiz instances, and introduce new quiz instances.
- **Single Sign-On (SSO) Links Endpoint**: The SSO Links feature empowers registered users to access the YouTestMe page seamlessly, bypassing traditional sign-in requirements. These unique links, individually encrypted and authorized, facilitate frictionless navigation from external web pages to the YouTestMe page. Careful distribution and usage are advised, as each link has a predefined expiration time.
- **Test Results Endpoint**: Test results encapsulate quantifiable and objective outcomes derived from evaluations, often presented as scores, percentages, and identified conditions. This API module primarily handles listing of test results and submitted test answers.
- **Testing Locations Endpoint**: Geared towards scheduled tests based on physical locations and geographical data, this API oversees testing location management. Its scope includes insertion, updating, and listing of locations, as well as allocation and removal of proctors.
- **Testing Sessions Endpoint**: Testing sessions facilitate the organization of assessments for diverse user groups, accommodating variations in time zones, geographical regions, and more. Utilize this API to introduce, modify, and retrieve testing sessions.
- **Tests Endpoint**: Tests, akin to quizzes, comprise question sets governed by specific guidelines. This API component serves for test listing, retrieval of user-specific test attempts, and test configuration.
- **Training Courses Endpoint**: Training courses encompass structured sequences of lessons, each potentially accompanied by tests and supplementary materials. This API supports tasks like listing, updating, and deleting training courses, as well as user assignments to training courses.
- **Users Endpoint**: Users encompass registered individuals utilizing the system. This API section manages user-related data.
- **Webhooks Endpoint**: Webhooks enable inter-application communication by triggering callback POST requests upon specific events. This API segment facilitates listing webhook events, managing webhook subscriptions (including creation, deletion, and updates), and retrieving payload data associated with events. For instance, suppose you wish to receive notifications upon user creation within the system. First, confirm event support through the "List events" operation. Subsequently, create a webhook using the "Create a webhook" operation, specifying the resource, event, and destination URL for callback requests. Additional parameters such as "secret" and "active" can be configured as required.

Through these technical endpoints, the YouTestMe API empowers streamlined integration and advanced data interactions, tailored for precise and controlled usage scenarios.

# 27 LTI Support

YouTestMe offers a comprehensive integration option through the application of the Learning Tools Interoperability (LTI) framework. This robust integration allows for a seamless connection with external systems, presenting a technically refined solution for harmonizing educational platforms.

Within the LTI framework, the dynamic between your Learning Management System (LMS) and YouTestMe is orchestrated in precise terms. Your LMS assumes the role of a consumer, serving as the primary interface, while YouTestMe functions as the provider, extending its interface exclusively for testing purposes.

Integration Mechanism:

1. Candidates initiate examinations directly from your LMS, employing deep linking to seamlessly access YouTestMe without necessitating separate logins. A unified single-sign-on mechanism ensures a fluid transition from the LMS to YouTestMe.
2. The application orchestrates the candidate through the entirety of the test-taking process. By adopting the LMS theme through white-labeling, candidates experience a seamless journey, with the platform transition remaining inconspicuous.
3. Upon test completion, candidates are smoothly guided back to the LMS environment.
4. Notably, achieved grades on the examination are automatically relayed and stored within the LMS grade book, eliminating the need for instructor intervention.

This integration negates the necessity for candidates to manage distinct credentials across multiple platforms. Instead, a cohesive and uninterrupted journey across learning tools is realized, bypassing repetitive logins.

LTI serves as the foundation for uniting data seamlessly and securely within a few clicks. The outcome is a cohesive educational experience, skillfully intertwined for both candidates and educators.

Key Advantages for Instructors and Candidates

- Streamlined Automation: The integration process operates autonomously.
- Information Security: Data exchange is conducted with heightened security.
- Frictionless Navigation: Seamless transitions between learning platforms enhance usability.
- Unified Experience: Users benefit from a coherent and integrated educational journey.
- Cost-Efficient Solution: The need for costly custom programming is averted.
- Efficient Data Management: Cumbersome data handling is effectively mitigated.

In conclusion, the seamless YouTestMe integration through LTI reflects a technical solution that delivers a refined and harmonized educational environment, optimizing the experience for both educators and learners.

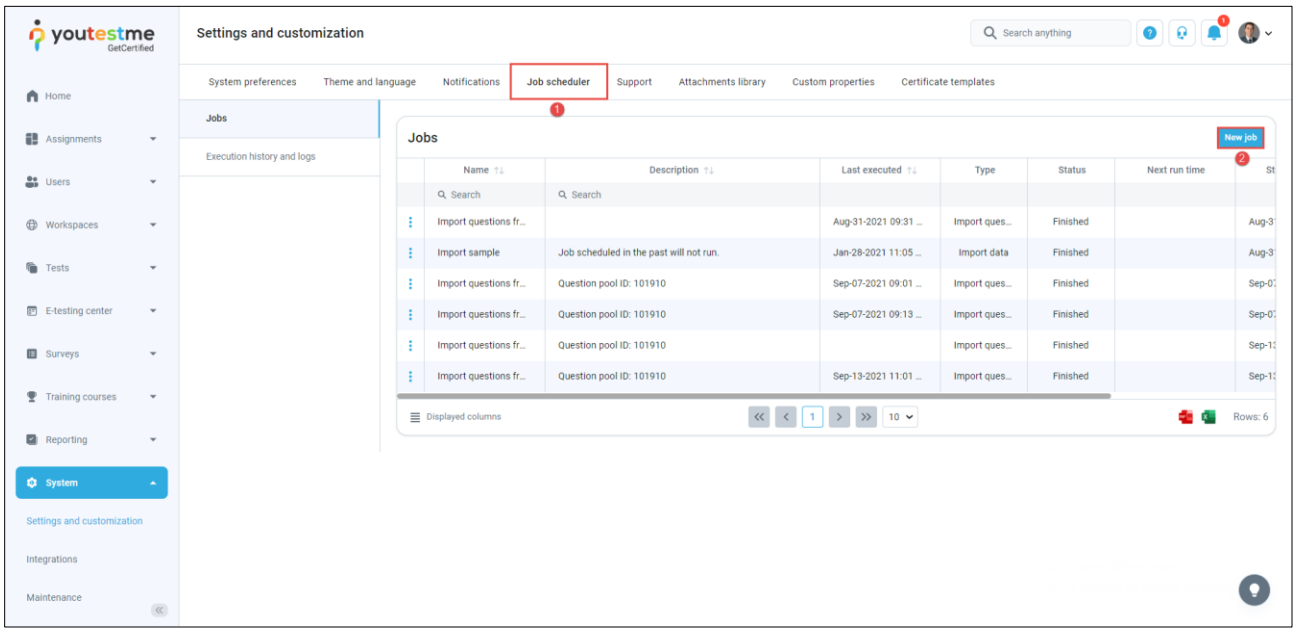
# 28 Automated Job Scheduling for Imports and Exports

Automated job scheduling in YouTestMe enables seamless data exchange between external systems and YouTestMe, improving operational efficiency and reducing manual intervention. This feature is integral to streamlining administrative workflows and ensuring timely and accurate data handling.

**Benefits of Automated Job Scheduling**

Automated job scheduling for imports and exports offers numerous advantages:

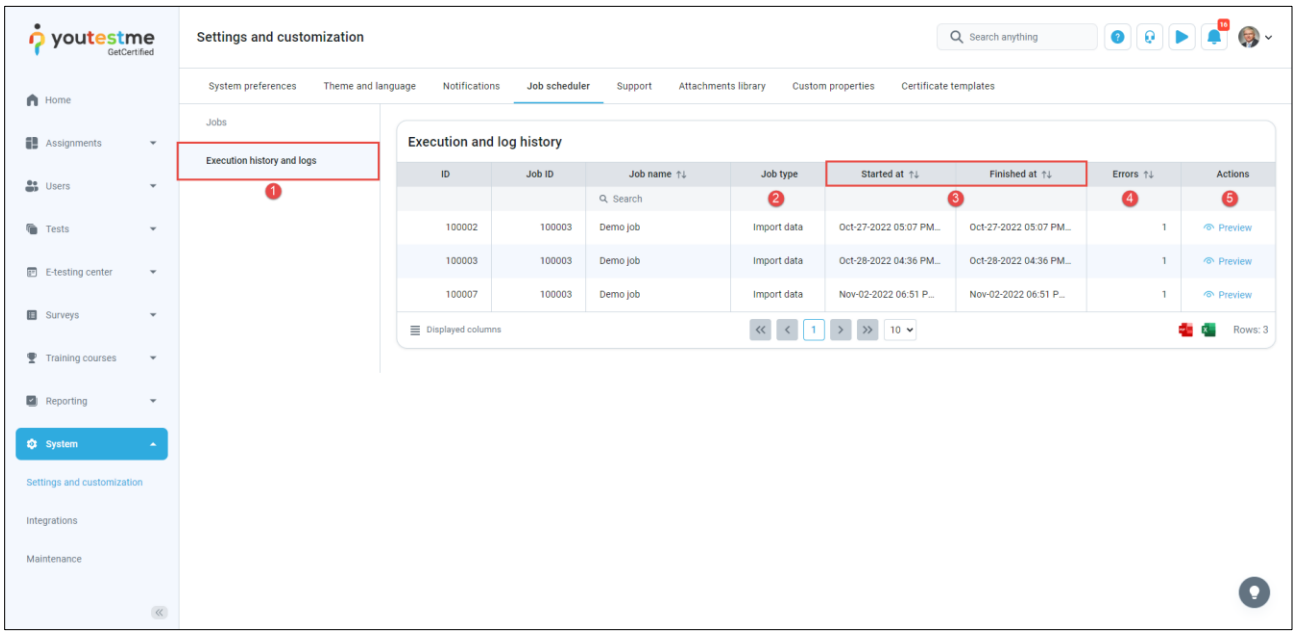
1. **Efficiency and Time-Saving**
    - Administrators can schedule recurring jobs to automatically execute data transfers at predefined intervals, eliminating the need for manual imports or exports.
    - Jobs can be configured to run indefinitely or terminate after a specific duration.
2. **Improved Accuracy and Consistency**
    - The system uses predefined parameters to ensure data is imported or exported consistently, reducing human error.
    - Support for regex-based file matching further enhances precision by targeting specific files for data processing.
3. **Enhanced Security**
    - Data can be exchanged securely via SFTP servers with configurable credentials and access parameters.
    - Notifications alert administrators after each job execution, enabling prompt responses to errors or issues.
4. **Flexibility and Customization**
    - Jobs can handle various data types, including candidates, tests, testing sessions, and enrollments, tailored to the client's requirements.
    - Scheduling settings, such as repeat intervals and conditions, offer granular control over job execution.




**How Automated Job Scheduling Works**

Setting up an automated job in YouTestMe is intuitive and customizable to meet diverse client needs.

1. **Creating a New Job**
   - Administrators navigate to the Jobs dashboard and click the "New job" button.
   - A configuration window appears, allowing input of job-specific details, schedule parameters, and data transfer settings.
2. **Job Information**
   - Define the job type (import/export) and provide a descriptive name and optional details for clarity.
3. **Schedule Settings**
   - Specify the start time, whether the job repeats, and if it should continue indefinitely or end at a set time.
4. **Job Parameters**
   - For imports, choose the data type (e.g., candidates, tests) and configure file locations and formats.
   - For exports, define the resource, file location, and naming conventions, including timestamps.
5. **Execution and Monitoring**
   - Once configured, jobs appear in a dashboard, providing visibility into execution history and logs.
   - Administrators can execute jobs on demand, edit settings, or duplicate jobs for similar tasks.




**Notifications and Monitoring**

YouTestMe supports real-time monitoring of job execution:

- Notifications alert administrators of job statuses, including completion time and errors.
- Logs provide detailed execution history for analysis and troubleshooting.
- Notification templates can be customized, ensuring relevant information is conveyed efficiently.

Automated job scheduling empowers instructors and administrators to focus on strategic tasks while ensuring data integrity and operational reliability.

# 29 YouTestMe Cloud Hosting

YouTestMe cloud hosting provides a robust foundation for secure server deployment tailored to the client's preferred location.

Our hosting infrastructure relies on Microsoft Azure, a recognized industry leader, chosen for its unparalleled reliability and comprehensive adherence to global security standards:

- Microsoft Azure security and compliance standards

We assure a robust service availability of 99.95%, with provisions for special credits in the rare event that availability falls below this threshold during a given month.

For clients opting for our cloud-based solution, YouTestMe takes charge of end-to-end deployment, monitoring, and system maintenance. This eliminates the need for client system administrators to be involved in these operational aspects, allowing them to focus on other critical tasks.

Our adaptive resource allocation system ensures that hosting resources are scaled up by our dedicated team in response to usage patterns detected through comprehensive system monitoring. This scalability guarantees seamless accommodation of varying user volumes and data loads.

A cornerstone of our service is the Data Processing Agreement, wherein all data-related concerns are meticulously addressed. Under this agreement, clients maintain full ownership of their data, and well-defined procedures and mechanisms for data destruction are already in place.

In conclusion, YouTestMe cloud hosting presents a technically robust and security-oriented solution, underpinned by stringent standards and effective data governance practices.

## 30 No Installation Required: Web-Based System

YouTestMe is a completely web-based solution, meaning no installation is necessary for candidates, instructors, proctors, or administrators to access and use the platform. The system operates entirely through a web browser and requires only an internet connection to function seamlessly.

Below are the key features of this setup:

1. **No Software Installation**
   Candidates do not need to install any software, add-ons, or extensions to participate in tests. All actions can be completed through a browser, providing ease of use and accessibility.

2. **Accessibility**
   Instructors and proctors can manage testing sessions from anywhere without needing to download any software. This also applies to administrators, who have full system access through their browser.

3. **Cross-Platform Compatibility**
   As long as candidates have a functioning web browser and internet connection, they can take tests on any operating system or device.

This approach simplifies the testing process, eliminates the need for technical support, and ensures that YouTestMe can be used without additional software.

## 31 Supported Operating Systems and Web Browsers

YouTestMe is engineered to accommodate diverse preferences, offering extensive compatibility across a broad spectrum of devices, operating systems, and web browsers. This robust support ensures that our clients can seamlessly engage in test-taking activities utilizing their chosen devices and software solutions.

The core tenet of our system design revolves around accessibility and user-friendliness, aiming to cater to the needs of all users.

Our platform is primed to function seamlessly on both desktop and laptop computers, regardless of whether they operate on Windows or Mac operating systems.

In alignment with our commitment to comprehensive compatibility, we prioritize the latest iterations of widely-used web browsers. These include Google Chrome, Mozilla Firefox, Microsoft Edge, Apple Safari, and Opera. This meticulous optimization ensures a cohesive experience, promoting operational smoothness and adherence to compatibility standards.

Furthermore, our system extends its reach to mobile devices and tablets, seamlessly integrating with mobile web browsers. Our design philosophy ensures full compatibility with varying screen dimensions and resolutions, fostering a seamless user experience across devices of differing form factors.

## 32 Equity, Diversity, and Inclusion (EDI)

No discrimination is possible in the system since all tests are generated using the same criteria regardless of the candidate that is taking them.

Each version of the test will have the same ratio of easy, medium, and hard questions.

YouTestMe is dedicated to providing high-conscious content, practice questions, and rationale that embodies the principles of equity, diversity, and inclusion (EDI). We believe in the transformative power of education and the importance of building a community that embraces diversity and empowers individuals from equity-seeking groups.

Within our organization, we actively promote equity by fostering an inclusive environment that values diverse perspectives. We ensure equal opportunities for career advancement, professional development, and decision-making processes for all employees. In our recruitment and employment practices, we strive to attract a diverse pool of candidates through inclusive language and unbiased selection processes.

Our teaching tools and content reflect EDI by incorporating diverse perspectives, cultural backgrounds, and identities. We actively avoid stereotypes and work to promote inclusivity in our educational resources. By doing so, we aim to create a learning environment that celebrates diversity and helps candidates develop a broader understanding of the world.

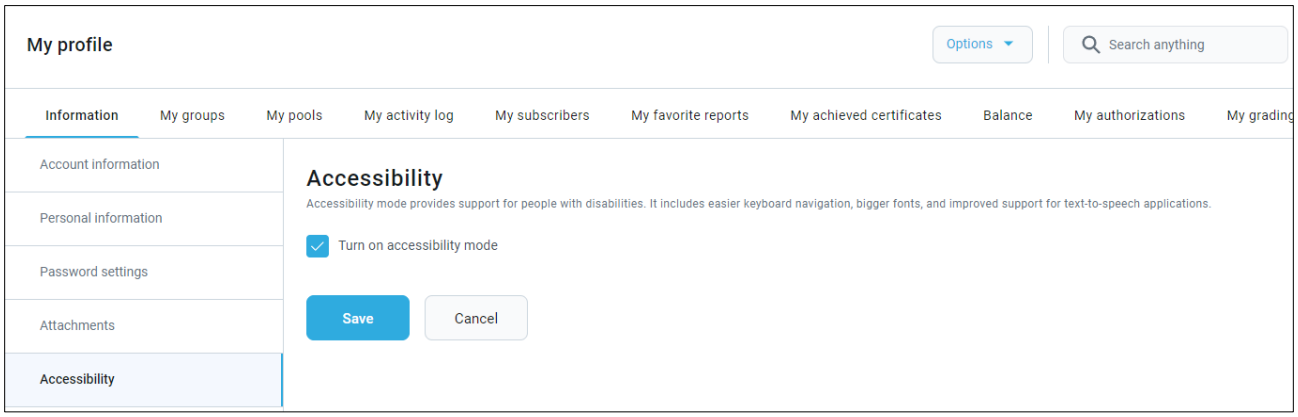
At YouTestMe, our commitment to equity, diversity, and inclusion is unwavering. We strive to be a catalyst for positive change, promoting inclusivity within our organization, recruitment practices, and educational materials.

## 32.1 Accessibility

YouTestMe stands as a testament to our commitment to providing a user-friendly and accessible experience for all users, including those with disabilities. Our platform is thoughtfully designed to accommodate individuals with varying impairments, allowing them to engage seamlessly. To achieve this, we've taken steps such as ensuring compatibility with assistive technologies like screen readers, incorporating alternative text for images, and enhancing the navigability and comprehensibility of forms.

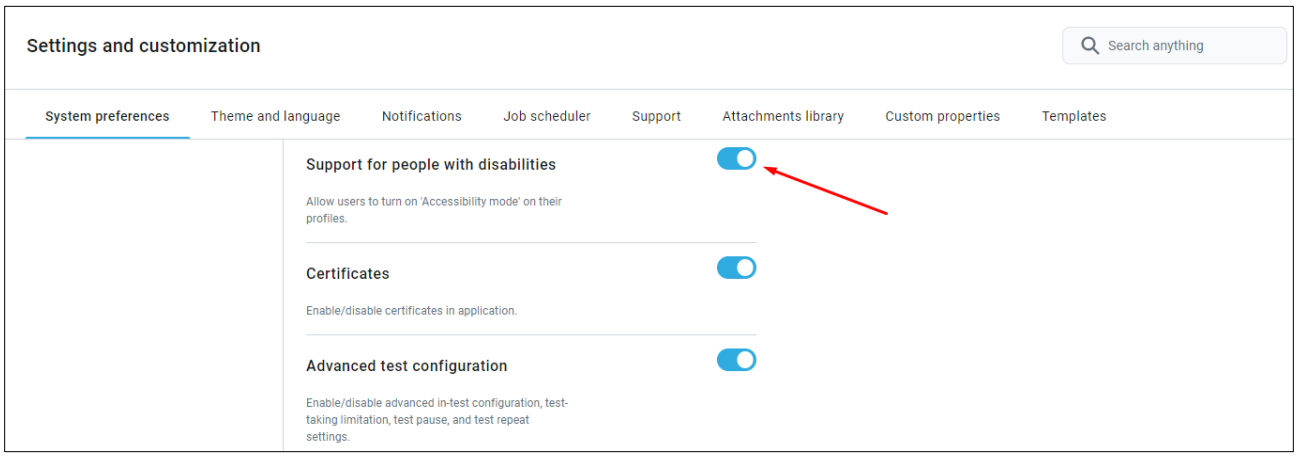
At YouTestMe, we uphold a steadfast adherence to key accessibility standards, thereby guaranteeing equal access to our technology solutions for everyone. Our system is fully compliant with several major accessibility standards, including:

- WCAG (Web Content Accessibility Guidelines): These guidelines serve as a cornerstone for online accessibility. We diligently adhere to WCAG principles to create an inclusive environment.
- Section 508: This standard, a requirement for federal agencies, ensures that our platform meets the needs of users with disabilities.
- EN 301 549: Our dedication to accessibility extends to the European realm, aligning with the European accessibility standard.




We firmly believe that users with visual, auditory, cognitive, motor disabilities, and other impairments should experience technology without limitations. Our commitment to accessibility results in a range of features designed to provide an inclusive user experience, including:

- For visually impaired users: Text-to-speech capabilities, high-contrast themes, enlarged cursors, and large fonts enhance usability.
- For users with hearing impairments: Closed captioning ensures comprehension and engagement.
- For users with limited mobility: Keyboard shortcuts provide an alternative means of interaction.




Our accessibility efforts are succinctly summarized in the Accessibility Conformance Report, based on the VPAT 2.4. This report outlines the extent to which YouTestMe conforms to the Web Content Accessibility Guidelines (WCAG) 2.1 standards, reaffirming our commitment to accessibility.

In essence, YouTestMe's accessibility mode stands as a testament to our commitment to inclusivity, ensuring that our technology is not just available, but truly accessible to all.

## 32.2 Accommodation Request and Review Process

Before diving into the accommodation request and review process, we must mention that YouTestMe has been developed according to the Web Content Accessibility Guidelines (WCAG) and ensures equitable access to web, document, and print for people with disabilities by offering:

1. **Text-to-speech, high-contrast theme, enlarged cursor, large fonts** - for visually impaired users
2. **Closed captioning** - for low-hearing users
3. **Keyboard shortcuts** - for users with limited mobility

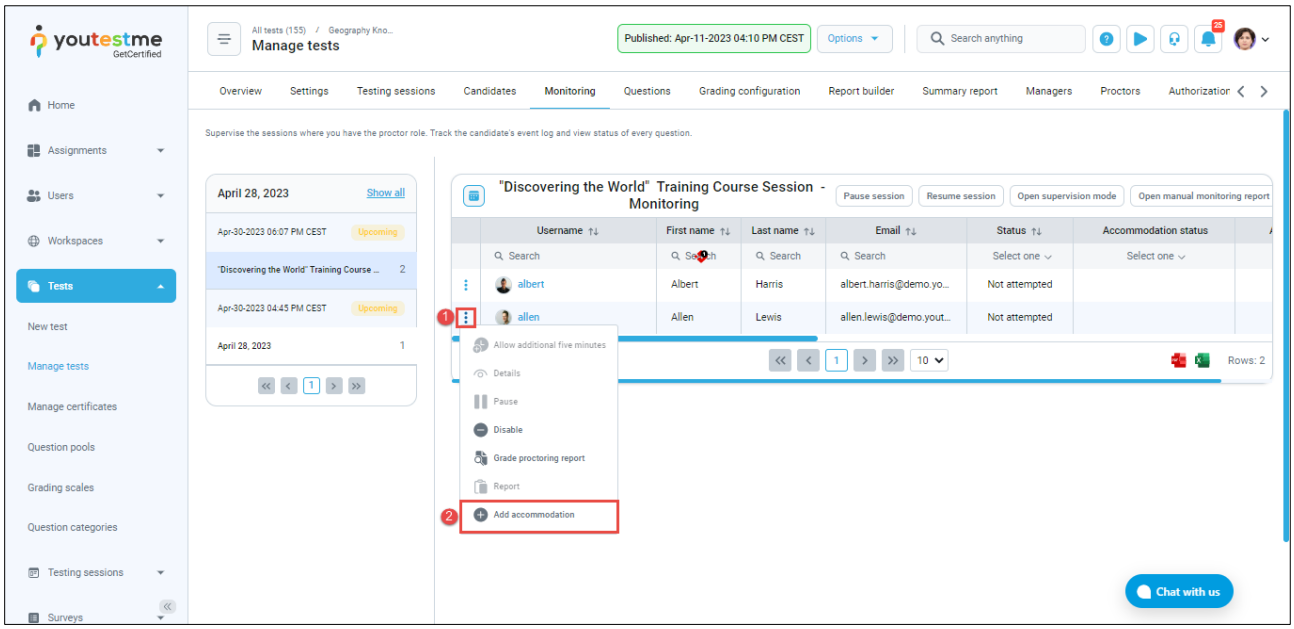
Also, as an introduction to our response, please take a look at our accommodations video.

Depending on the candidate's needs, there are several accommodation types including:

1. **Required 1-1 session with a proctor** - this is a more personalized experience. For example, the candidate would need assistance from the proctor to read the questions and answers.
2. **Time accommodations** - these provide additional time for candidates to complete the test. There are several options available, including:
    a. Extra time - 50% of the original test time.
    b. Extra time - double the amount of original test time.
    c. Extra time - 1 hour.
    d. Manually defined time - this allows for a customized amount of additional time.
3. **Other accommodations** - this category includes a range of additional accommodations, such as allowing food and drink during the test. These accommodations are determined on a case-by-case basis, depending on the individual needs of the candidate.

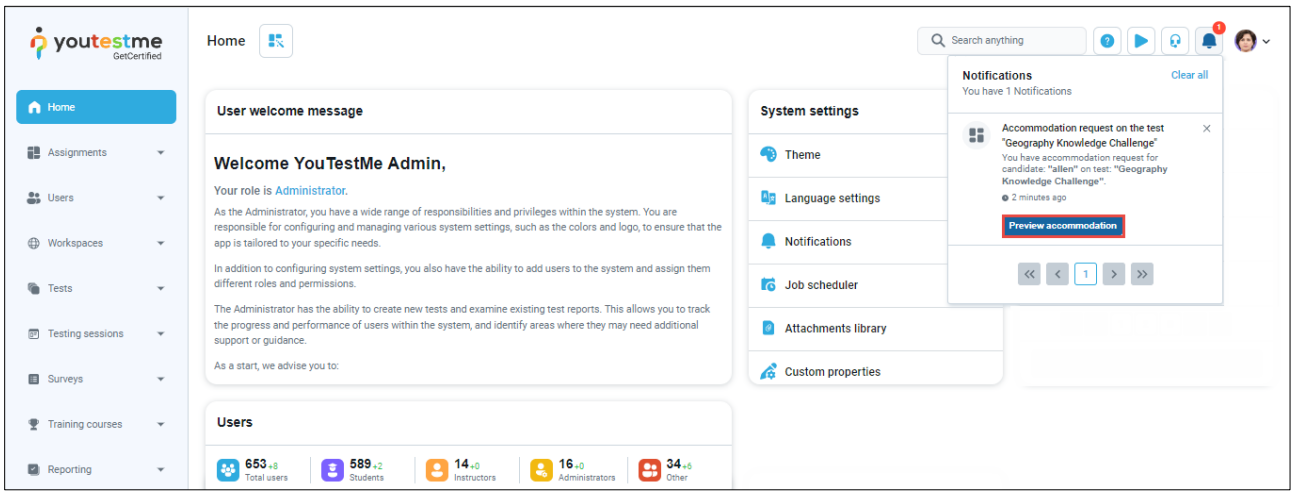
While the test organizer can add accommodations to a user, the proctor must accept it before the candidate is notified of anything. After submitting the request to the proctor, they will receive an email and application notification. The proctor reviews it and changes the status from pending to approved.

On the Manage tests page within the Tests module, the test organizer can add accommodations for individual candidates with the **Add accommodations** option.



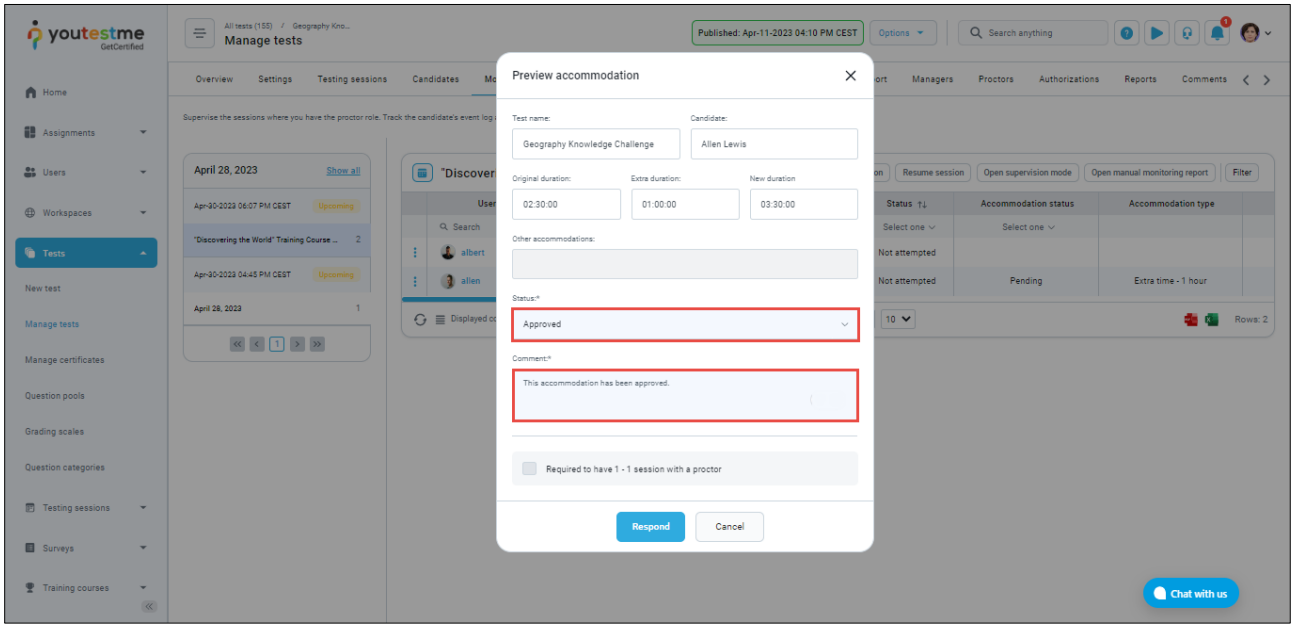

As soon as the test organizer adds a special accommodation, the proctor receives a **notification via email** and app, informing them of the new request.

When the proctor clicks on the Preview button, a pop-up dialog appears, giving them the opportunity to approve the accommodation.




Until the proctor takes action on the request, the candidate's accommodation status remains Pending, awaiting a resolution. This process ensures that every candidate receives fair and equal access to the testing experience, with accommodations tailored to their individual needs.

When a proctor is presented with a special accommodation request, they can take action by selecting the Respond button. This will bring up a pop-up dialog where the proctor can review the details of the accommodation and approve the request. Additionally, the proctor can add a comment to provide additional context and information about their decision.




## 32.3 Screen Reader Software in YouTestMe

YouTestMe is committed to providing an inclusive testing experience for all candidates, including those who use screen reader software. This functionality enables candidates with visual impairments to effectively

navigate and complete their tests, ensuring equitable access to assessment tools. By supporting screen reader compatibility, YouTestMe enhances accessibility, promoting a fair testing environment that meets diverse needs.

**Benefits of Screen Reader Functionality**

The primary benefit of using screen reader software with YouTestMe is the increased accessibility it provides. Candidates can utilize popular screen readers, such as JAWS and ChromeVox, to navigate through tests seamlessly. This compatibility empowers candidates to access instructions, questions, and options independently, fostering a sense of autonomy during the assessment process. Moreover, the use of screen reader software aligns with global accessibility standards, reinforcing YouTestMe's commitment to inclusivity.

Screen reader software enhances usability by allowing candidates to interact with the testing interface through keyboard shortcuts. This streamlined navigation process simplifies the experience, enabling candidates to focus on the content rather than technical difficulties. For example, candidates can log in to YouTestMe using their credentials and navigate to their assigned tests using the keyboard. This feature not only enhances the user experience but also boosts confidence among candidates as they engage with the testing platform.

**How Screen Reader Functionality Works**

Using screen reader software with YouTestMe is straightforward. Candidates need to download their preferred screen reader, such as JAWS or ChromeVox, which is compatible with YouTestMe. Once installed, candidates can log into YouTestMe using the application link. Navigating through the platform involves using predefined keyboard shortcuts to access the Assignments panel and locate the desired test.

Once a test is selected, candidates can initiate it using the appropriate keyboard shortcut upon hearing the Start button. After confirming the test settings and instructions, candidates can answer the questions by pressing the designated keys. To complete the test, they simply need to press the shortcut associated with the Finish test button. This efficient process not only facilitates accessibility but also ensures that candidates can complete their assessments confidently and independently.

**Conclusion**

In conclusion, YouTestMe’s compatibility with screen reader software significantly enhances the testing experience for candidates with visual impairments. By providing easy access to tests and fostering a supportive environment, YouTestMe demonstrates its dedication to inclusivity in assessments. Candidates can confidently navigate the platform and engage with the content, knowing they have the tools necessary for success.

### 32.3.1 Automatic Text-to-Audio

YouTestMe enhances accessibility and inclusivity by offering automatic text-to-audio functionality in all supported languages. This feature is especially beneficial for candidates with visual impairments or those who prefer audio-based learning and testing. By converting text into high-quality audio, YouTestMe ensures a seamless experience for diverse user needs.

**Benefits**

1. **Enhanced Accessibility**: The automatic text-to-audio feature provides equal opportunities for candidates with visual impairments, ensuring they can access and complete tests independently.
2. **Multilingual Support**: The functionality supports multiple languages, catering to global clients and diverse candidate groups.
3. **Improved Candidate Experience**: Audio-based content delivery enhances engagement and comprehension, particularly for those who rely on auditory processing.

**How It Works**

1. **Integration with Screen Readers**:
    - YouTestMe is compatible with popular screen readers such as JAWS and ChromeVox.
    - Candidates use predefined keyboard shortcuts to navigate content and listen to audio output.
2. **Text-to-Audio Conversion**:
    - The platform automatically converts textual content into audio in the candidate's preferred language.
    - This ensures all test elements, including questions and instructions, are accessible in an audio format.

## 32.4 Randomization

In addition to the comprehensive features already discussed, YouTestMe's unwavering commitment to ensuring fairness and equity in assessments is exemplified through the full randomization of questions in tests and the automatic generation of unique test versions. These functionalities are pivotal in ensuring that no candidate can be favored in any way, as everything is randomized. By randomly selecting questions from a predefined question pool and automatically generating test versions, we eliminate any possibility of candidates receiving identical sets of questions, thereby ensuring absolute fairness and impartiality throughout the assessment process.

## 32.5 Reports to identify discrimination

Beyond these assessment-specific features, YouTestMe's reporting capabilities are designed to promote equity and inclusivity. The platform provides detailed reports that enable organizations to examine their assessments for any potential bias or discrimination against specific demographics, such as gender or age groups. By analyzing candidate performance data in conjunction with demographic information,

organizations can gain valuable insights into the effectiveness and fairness of their assessments. This information empowers decision-makers to make data-driven adjustments to ensure that assessments are free from any unintended biases, thereby fostering a more equitable learning and evaluation environment.

# 33 Information Security & Compliance Overview

## 33.1 GDPR

YouTestMe effectively upholds GDPR compliance by addressing the specific rights granted to users within the EU. This approach ensures that the personal information of EU citizens is safeguarded in accordance with the GDPR requirements.

**The Right to be Forgotten**
Users can exercise the Right to be Forgotten, triggering the immediate deletion of their personal information from the YouTestMe platform. Administrators and relevant roles possess the authority to initiate this process, thereby erasing all associated user data.

**The Right to Object**
Transparency is paramount in upholding the Right to Object. Our Terms and Conditions and Privacy Policy provide clients with comprehensive insights into the data required for the platform's operation. End-users are required to adhere to these terms during registration. Consent is also sought through a customizable Terms and Conditions message upon initial sign-in. Users can opt-out of communications and disable email notifications. Administrators hold control over data collection, user profiles, and deactivation. Inactive profiles undergo no data processing.

**The Right to Rectification**
Post-purchase, clients possess full access to their profiles and those of their users, enabling information correction. End-users with the necessary permissions can edit their profiles or contact administrators for updates.

**The Right to Access**
Transparency is ingrained in our system. Our Privacy Policy outlines data collection and usage. For detailed inquiries, clients and end-users can reach us at privacy@youtestme.com to obtain requested information. Comprehensive single-user and all-user reports offer quick access to personal and test-related data.

**The Right of Data Portability**
Data Portability is enabled through export features. Clients and end-users can export YouTestMe data into various formats, including XLS, PDF, CSV, XML, and SCORM.

While prioritizing privacy, access to client platforms may be required for support purposes. Basic client data is used to enhance personalized support. Similarly, engineers accessing platforms to troubleshoot technical issues follow a principle of least access, ensuring minimal data exposure relevant to issue resolution.

## 33.2 Return and deletion of data

Return and deletion of data are defined in the data processing agreement (DPA) signed with YouTestMe under the chapter - Return of Property and Data:

*"YouTestMe agrees to return to the Client the Client's Data at the termination or expiration of the Service-Level Agreement, upon the Client's written request made within thirty (30) days after such termination or expiration, as provided herein. This provision applies to all the Client's Data that is the possession of subcontractors, agents, or auditors of YouTestMe Within fifteen (15) days after the date of the Client's request, YouTestMe will make available to the Client for downloading a file of the Client's Data in an agreed-upon machine-readable (a commercially reasonable standard such as comma separated value (.csv) or extendible markup language (.xml)) format along with attachments in their native format as stored on the SaaS. Such service shall be done at no cost to the Client. Once YouTestMe has received written confirmation from the Client that all the Client's Data has been successfully transferred to the Client, YouTestMe shall within thirty (30) days, unless legally prohibited, purge or physically destroy all the Client's Data from its hosted servers or files."*

## 33.3 Insurance coverage policy in an event of a cyber attack

YouTestMe insurance policy includes:

- **Commercial general liability insurance** in an amount of three million ($3,000,000) Canadian dollars per occurrence.
- **Professional liability insurance** in amount of three million ($3,000,000) Canadian dollars per claim.
- **Cyber liability insurance** in amount of three million ($3,000,000) Canadian dollars.

Certificate of insurance can be provided on demand.

YouTestMe Cyber Liability Insurance policy includes coverage for legal costs and damages related to the following coverage areas:

- **Incident Response Cost**: Coverage for the cost of access to a 24/7 cyber incident response hotline and a dedicated team to assist you in coordinating an incident response following a cybercrime.
- **Legal, Forensic, and Breach Management Costs**: Coverage for legal advice, notification fees, crisis management services, and credit monitoring.
- **System Damage and Restoration Costs**: Repairs and restoration of the software systems damaged due to the cyber event.
- **System Business Interruption**: Coverage for losses sustained due to a system outage resulting from a cyber attack.
- **Social Engineering (optional coverage)**: Coverage should an employee be tricked into providing access to a system or sending funds to a fraudulent bank account

# 34 Customer Support

YouTestMe is committed to delivering comprehensive, reliable, and prompt customer support to ensure a seamless experience for all users. Our customer service is designed to assist candidates, instructors, administrators, and proctors at every stage of their engagement with YouTestMe.

## 34.1 Support Availability

1. **24/7 Availability:** YouTestMe support is available 24 hours a day, 7 days a week, 365 days a year. Both candidates and client staff can rely on continuous assistance, regardless of time zones or working hours.
2. **Real-Time Assistance:** During online proctored sessions, proctors and technical support resolve any technical issues immediately, ensuring uninterrupted testing sessions and maintaining the integrity of the test.
3. **Beyond Business Hours:** Our commitment extends beyond traditional business hours. All requests are handled promptly, ensuring timely solutions even outside regular working periods.

## 34.2 Support Channels

To accommodate various needs, YouTestMe offers multiple communication channels:

1. **In-App Chat:** Accessible to all end-users, the in-app chat provides instant assistance. It is particularly recommended for candidates during tests to quickly resolve technical difficulties without disrupting the test flow.
2. **Phone Support:** Available to client administrators and staff, phone support ensures immediate resolution of technical issues requiring quick intervention.
3. **Email Support:** Clients can submit detailed requests or inquiries via email. Our standard response time is within 24 hours, ensuring thorough and comprehensive replies.
4. **Web Meetings:** Upon request, Webex meetings can be scheduled with client staff to address strategic topics, customizations, or specific concerns.
5. **Dedicated Phone Line (Optional):** A dedicated phone line can be provided to meet specific client requirements.

## 34.3 Support Resources and Accessibility

1. **Knowledge Base:** YouTestMe maintains an extensive knowledge base containing step-by-step articles and guides, enabling all end-users to find solutions independently.
2. **User Manuals:** Comprehensive user manuals are available to support administrators, instructors, proctors, and candidates in efficiently navigating and utilizing YouTestMe features.
3. **Bilingual Support Agents:** Support is provided in both English and French, ensuring clear communication and assistance for a wider user base.

## 34.4 Regular Upgrades

YouTestMe is designed to continuously evolve by incorporating new features, performance improvements, and security enhancements. The upgrade process is carefully structured to ensure minimal disruption while providing clients with the latest advancements.
Every three months, YouTestMe releases a new version that includes new features, system enhancements, and optimizations. Clients are promptly informed about the release and provided with detailed documentation outlining all changes.

**Benefits:**

- Access to the latest features and improvements without additional effort
- Continuous enhancement of security, performance, and user experience
- Step-by-step guidance to ensure seamless adoption

### 34.4.1 Sandbox Environment Testing

To maintain system stability and client confidence, each new version is first offered in a sandbox environment:

1. The client receives a full set of instructions for deploying and testing the new version in their sandbox environment.
2. This approach allows administrators, instructors, and other users to familiarize themselves with the new features without affecting production data.
3. Any questions or feedback can be addressed before proceeding with the production upgrade.

### 34.4.2 Production Environment Upgrade

Once the client approves the upgrade:

1. For **cloud-hosted deployments**, the production upgrade is performed during night hours based on the client's selected time zone, ensuring no active candidate or user sessions are interrupted.
2. The process is coordinated directly with the client to align with their preferred schedule.
3. YouTestMe's technical team handles the entire upgrade, ensuring system integrity and continuity.

For **on-premise deployments**:

1. The client receives a simple upgrade package containing all necessary files and instructions.
2. The upgrade package is designed for easy upload within YouTestMe.
3. The system automatically executes the upgrade process at a time chosen by the client, requiring minimal manual intervention.

### 34.4.3 Security Patches and Hotfixes

In addition to scheduled upgrades, YouTestMe periodically delivers security patches and hotfixes to address vulnerabilities in line with the latest industry standards:

1. Security patches are applied to the client's current version.
2. These updates are propagated during off-peak hours in the client's selected time zone.
3. The process ensures there is no interference with active sessions, preserving test integrity.

# 35 Client Feedback and Reviews

Frequent user satisfaction surveys serve as a pivotal instrument within the YouTestMe framework, shaping the trajectory of our upcoming development endeavors.

At the heart of our business model lies the symbiotic growth between our clients and ourselves. As our clients progress, so do we. We eagerly welcome any insights aimed at refining and streamlining our clients' operational workflows, as automation and optimization remain constant focal points.

Our commitment to excellence is underscored by the acclaim we've garnered across diverse review platforms, including Capterra, GetApp, and Software Advice. The positive ratings and reviews that we have garnered on these platforms stand as a testament to our dedication and serve as a source of pride.

# 36 Success Stories

## 36.1 US Government - FBI and Defence Intelligence Agency

Our online examination solution has been trusted by high-security organizations such as the US Defence Intelligence Agency and the US Federal Bureau of Investigation for multiple years. We have proven our ability to meet the stringent security requirements of these organizations and are confident in our ability to provide secure solutions to all types of organizations.

We understand that security is a top priority for any organization. That's why we have implemented multiple security measures to ensure that our platform is secure and protected from any vulnerabilities. We undergo rigorous security checks with each upgrade we provide to our clients, including the Department of Defense Risk Management Framework (DoD RMF), to ensure that our platform meets the highest security standards.

In addition to security, we recognize the importance of accessibility for all users. Our platform is compliant with Section 508 for accessibility, which is based on the Web Content Accessibility Guidelines. We have designed our platform with accessibility in mind and have implemented features such as keyboard navigation, alternative text for images, and closed captions for videos to make our platform accessible to all users.

We are proud of our ability to provide customized solutions to meet the unique needs of our clients. We have completed numerous customization requests for our clients, which is our specialty. Our platform is designed to be flexible and customizable, allowing us to tailor our solution to meet the specific needs of

each organization. We offer a range of features, including customizable assessments, automated grading, and real-time analytics, that can be customized to fit the unique needs of each organization.

Our team is composed of experienced professionals who are dedicated to providing the best possible service to our clients. We have a proven track record of successful implementations and have received positive feedback from our clients. Our team is composed of experts in software development, security, accessibility, and project management, ensuring that we can handle any challenge that comes our way.

In conclusion, our team has the expertise and experience necessary to provide the best possible online examination solution to any organization. We understand the importance of security, accessibility, and customization in any organization's operations and have implemented multiple measures to ensure that our platform meets these requirements. Our team is dedicated to providing the best possible service to our clients and has a proven track record of successful implementations. We look forward to the opportunity to work with any organization to provide them with the best possible solution for their online examination needs.

## 36.2 City of Surrey of British Columbia

Our team is proud to have the City of Surrey in British Columbia as one of our esteemed clients. Since 2018, the City Hall has been utilizing our online examination platform to facilitate their examination processes.

We have provided them with our Enterprise Edition, which is the most advanced version of our platform, and we are delighted to offer this to you as part of our proposal. This edition includes high availability, the highest security protocols, and advanced functionalities, providing them with a seamless and efficient examination experience.

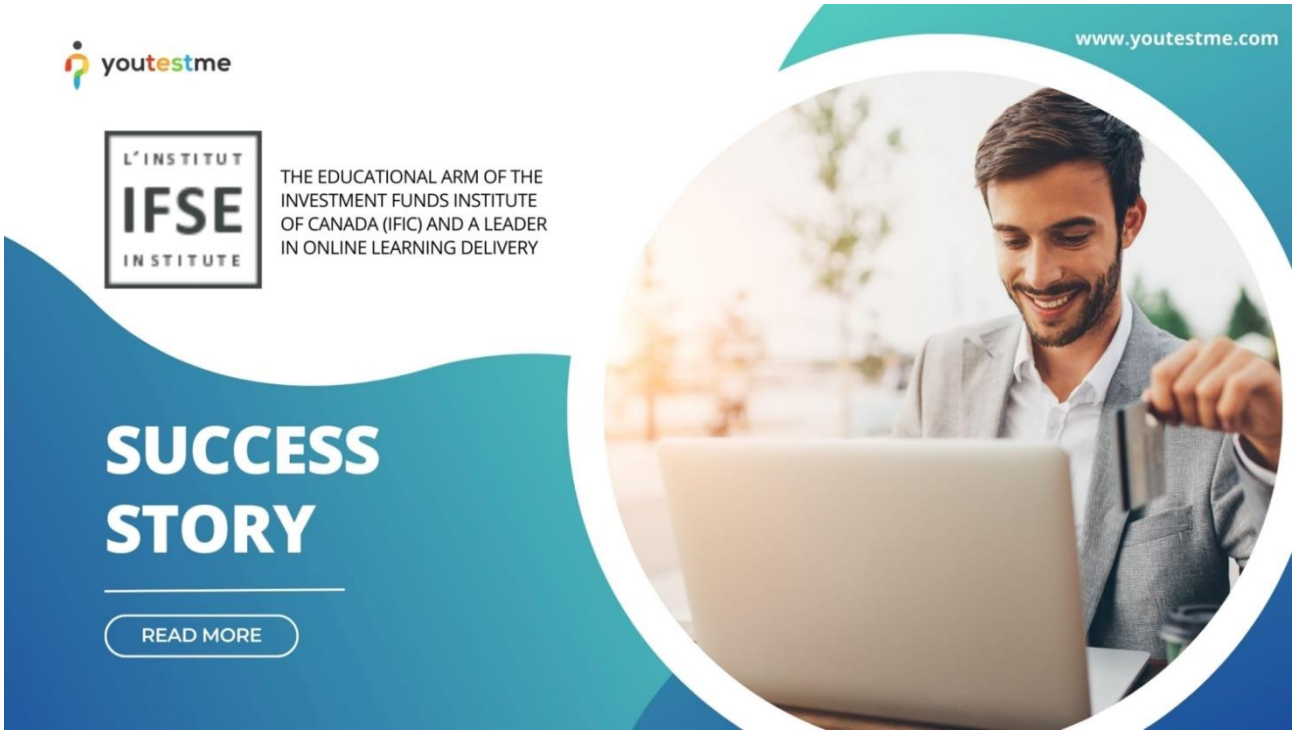
We understand that transitioning to a new platform can be overwhelming, and that's why we ensured that the onboarding process for the City of Surrey was smooth and hassle-free. We provided live training sessions for all their personnel to ensure they could navigate the platform confidently and efficiently.

Our platform is cloud-based, and as such, we had to go through rigorous security checks required by the City of Surrey to ensure we met their security requirements. We are proud to have met and surpassed these standards, and we can confidently state that we are their cloud provider.

We host their system on a dedicated server located in Canada, which guarantees that their data is kept safe and secure at all times. We are also committed to ensuring that data transmitted to and from their platform is fully encrypted both in transit and at rest.
Our team of experts understands the importance of data security and privacy, and we have invested significantly in ensuring that our platform is compliant with the latest industry standards. With our platform, the City of Surrey has a reliable and secure examination solution that is scalable and adaptable to their needs.

In conclusion, our experience working with the City of Surrey in British Columbia has provided us with the expertise needed to deliver an exceptional online examination platform that guarantees the highest level of security, efficiency, and scalability. We are confident that our solution will be an invaluable asset to your organization, and we look forward to the opportunity to work with you.

## 36.3 IFSE Institute




IFSE Institute (IFSE), the educational division of The Investment Funds Institute of Canada (IFIC), is a recognized leader in financial services education. Managing proficiency tests across multiple registration categories, IFSE administers tens of thousands of tests annually across Canada and in multiple time zones.

To address the complexities of their testing requirements, IFSE sought a comprehensive solution capable of supporting a bilingual user interface, offering both automated and live proctoring, and enabling secure online test delivery.

After a thorough evaluation, IFSE selected YouTestMe as its test administration and delivery provider.

YouTestMe provides a robust suite of features, including advanced automated and live proctoring, multilingual capabilities, a seamless testing experience, and the flexibility to support high-, medium-, and low-stakes tests in a fully remote setting.

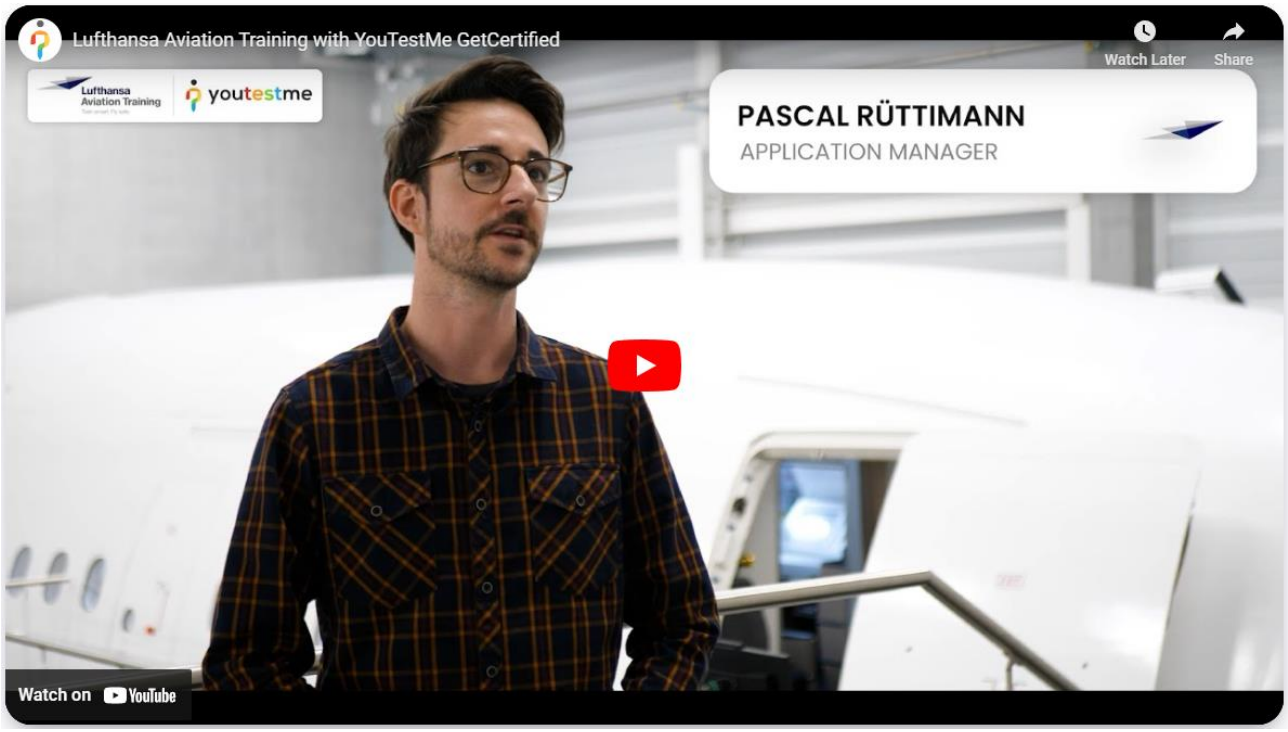
During the onboarding phase, YouTestMe implemented system configurations to accommodate all specific use cases, developed user training materials, and integrated with the learning management system.

The production phase involved transitioning IFSE's automated and live proctored tests to YouTestMe, ensuring a smooth and efficient migration.

Candidates can complete their tests from any location, eliminating the need to travel to test centers. Prior to their scheduled test, they can perform a system compatibility check, and YouTestMe provides 24/7 technical support to assist candidates throughout the process.

The solution encompasses system integrations, data migration, test preparation, scheduling, e-commerce functionality, a secure testing environment, proctoring by certified professionals, advanced reporting, and full localization support.

## 36.4 Lufthansa Aviation Training




Lufthansa, one of Europe's leading airlines, is committed to maintaining the highest standards in aviation training and certification. To modernize and optimize its pilot evaluation process, Lufthansa partnered with YouTestMe, implementing a scalable and customizable testing solution that meets the rigorous demands of the industry. Since adopting YouTestMe, Lufthansa has successfully administered over 120,000 test attempts using the platform, ensuring efficient and secure candidate assessments.

Assessing pilots requires a comprehensive approach that evaluates technical proficiency, decision-making, and real-world scenario responses. Traditional testing methods were resource-intensive and logistically complex, prompting Lufthansa to seek a more efficient alternative. YouTestMe provided an advanced platform that streamlined test administration while maintaining strict security and regulatory compliance.

With YouTestMe, Lufthansa gained the ability to develop customized pilot assessments that simulate real-life flight scenarios, ensuring relevance and accuracy in evaluations. The system supports diverse question formats, scenario-based testing, and competency tracking, aligning with Lufthansa's high training standards.

Real-time analytics and performance tracking allow Lufthansa's instructors to assess individual strengths, identify skill gaps, and make data-driven decisions for continuous training improvements. The automated platform also enables remote testing, significantly reducing logistical challenges while maintaining security through AI-powered proctoring and strict compliance measures.

YouTestMe's cloud-based solution seamlessly scales to accommodate Lufthansa's growing pilot training needs, ensuring efficient test administration across multiple locations and time zones. The platform's flexibility allows pilots to complete assessments remotely, improving accessibility and reducing downtime.

By integrating YouTestMe into its training programs, Lufthansa has successfully optimized its pilot testing process, reinforcing safety, efficiency, and compliance. This collaboration demonstrates how innovative testing solutions can enhance aviation training, providing a model for other organizations seeking to modernize their evaluation processes.

## 36.5 Calgary Police Service

The Calgary Police Service (CPS) has long been committed to maintaining the highest standards of integrity and excellence in its recruitment process. To ensure that candidates meet these rigorous standards, CPS needed a robust online examination platform capable of organizing and administering proctored exams effectively.

CPS partnered with YouTestMe to streamline their examination processes and enhance security measures for their recruit examinations.

CPS required a solution that could handle multiple security protocols to protect sensitive information and ensure the integrity of the recruitment process, including high-security standards, proctored examinations to prevent cheating, a user-friendly interface to accommodate candidates of varying technical proficiencies, and 24/7 technical support to assist candidates and administrators throughout the testing process.

YouTestMe offered a comprehensive, off-the-shelf solution that met all of CPS's requirements.

The platform provided advanced proctoring features to maintain the integrity of the examination process.

To prevent cheating and ensure fair evaluation, YouTestMe used YouTestMe proctoring solution utilizing AI to monitor candidates during the exam, detecting and flagging suspicious behaviors, and conducting post-exam analysis with detailed reports and recordings to ensure the integrity of the examination process.

YouTestMe worked closely with CPS to ensure a smooth transition and effective implementation of the new examination platform. With YouTestMe, CPS successfully enhanced the security and efficiency of their recruitment examinations.

Candidates can now take exams from their homes, ensuring accessibility for all and eliminating travel expenses, while maintaining exam integrity through online proctoring.

This partnership has enabled CPS to uphold high standards in their recruitment process, ensuring that only the most qualified candidates advance.

The Calgary Police Service's partnership with YouTestMe exemplifies the ability to provide secure, reliable, and efficient online examination solutions for high-stakes and high-security environments, and YouTestMe is proud to support CPS in their mission to uphold excellence in law enforcement recruitment.

## 36.6 CCVA - Council for Certification in Volunteer Administration

CCVA, or the Council for Certification in Volunteer Administration, is a company with a strong commitment to advancing excellence in volunteer administration. Their mission is to deliver professional certification and advocate ethical practices, making it easier to recruit passionate and powerful volunteer leaders. They provide certifications on an international level, making it easier for volunteers to showcase their skills and advance their careers. In this proposal, we would like to highlight our experience working with CCVA and providing them with a reliable and secure online examination solution.

One of the main challenges that CCVA faced was finding a software engine that would ensure a 100% secure solution for preventing cheating among candidates taking tests remotely. Given the global distribution of candidates across different states and time zones, live remote proctoring was not the most efficient option. Additionally, CCVA was looking for a process that would remain simple and accessible for technically uneducated individuals.

That's where YouTestMe came in. By implementing our solution, CCVA was able to transfer to a completely automated process that eliminated the need for manual certificate assignment, suspension after certification expires, and reassignment. YouTestMe made certification and recertification entirely automated, with the number of test retakes and schedule predefined. The solution also offered a trial test option for candidates to get familiar with the process. Additionally, YouTestMe premium support service was available via phone line or e-mail. Finally, cheating on tests was prevented due to AI proctoring software that recognizes suspicious behaviors and provides the final result as positive or negative.

With our solution in place, CCVA saved a significant amount of time. Our team performed technical support for CCVA staff, data load, test creation, and organization of a trial test. Faiza Venzant, CCVA Executive Director, expressed her satisfaction with our solution, saying, *"The Council for Certification in Volunteer Administration is pleased to be using YouTestMe as our online testing platform and proctor. YouTestMe is an incredibly user-friendly product that evolves to meet customer needs. The client support we receive, the quick response times, and guidance have allowed us to focus more time on preparing test-takers. We recommend YouTestMe to organizations considering an online testing product."*

In conclusion, our experience working with CCVA shows that our online examination solution is a reliable, secure, and user-friendly tool that can help organizations automate their certification process and prevent cheating. With our solution, organizations can save time and focus on what matters most: preparing test-takers and advancing excellence in their field.

## 36.7 JA Europe

JA Europe, the largest provider of entrepreneurship education programs in Europe, has integrated YouTestMe into its Educational Success Program (ESP) to streamline certification and skill development. Since implementing the platform, over 60,000 students worldwide have completed tests through YouTestMe, ensuring a standardized and efficient assessment process.

To support JA Europe's international reach, YouTestMe enables automated translation of test content, removing language barriers and ensuring fairness for all candidates. The system also provides regional autonomy, allowing individual country branches and schools to manage participants while maintaining compliance with ESP standards.

The scalability of YouTestMe has been instrumental in JA Europe’s growth, allowing for seamless participant management, certification issuance, and performance tracking across multiple locations. This structured approach ensures that JA Europe can expand its impact while maintaining quality and consistency in testing.

With YouTestMe, JA Europe benefits from:

- Standardized certification across all participating countries.
- Automated workflows that improve efficiency and accessibility.
- Flexible management tools that empower regional branches to operate independently.
- Scalable infrastructure that supports network growth and long-term sustainability.

By leveraging YouTestMe, JA Europe has successfully optimized its certification programs, reinforcing its mission to prepare young people for success in the modern world. This collaboration highlights the power of digital solutions in advancing education and skill development on a global scale.

# 37 Special Offers

## 37.1 Cruise Control Testing and Course Management Service

In this chapter, we present Cruise Control, a comprehensive service designed to simplify and optimize your testing and course management processes. Cruise Control offers a hands-free, streamlined approach, complemented by the guidance of a dedicated Personal Assistant. This service empowers educators to focus on education, learning outcomes, and assessments, while we take care of the rest.

### 37.1.1 Key Features of Cruise Control

#### 37.1.1.1 Effortless Test and Course Setup

Our priority is to minimize the burden of configuring tests and courses. Cruise Control's team takes the lead in automating the creation of tests and courses, including the setup of questions, formats, and criteria. This automation saves you valuable time and effort.

#### 37.1.1.2 Item and Course Content Management

With specialized content authors at your service, we can create items and courses tailored to your specific requirements. Additionally, we offer seamless data import capabilities, ensuring that our solution aligns seamlessly with your content strategy.

#### 37.1.1.3 Automated User Management

Cruise Control simplifies user management by automating the assignment of users to specific tests within courses. We also handle profile maintenance, ensuring a smooth and efficient process.

#### 37.1.1.4 Personalized Reports

Our reporting system is highly adaptable. We tailor reports to your preferred format and delivery schedule, ensuring that your reporting needs are met precisely and efficiently.

#### 37.1.1.5 Dedicated Personal Assistant

As part of the YouTestMe team, you will have access to a dedicated Personal Assistant. This assistant is available to help you define procedures and fulfill specific requests, ensuring a personalized and responsive experience.

#### 37.1.1.6 Organizing and Monitoring Testing Sessions/Windows

In addition to the core features mentioned above, Cruise Control excels in organizing and monitoring testing sessions and windows. This essential component ensures the seamless execution and supervision of assessments. Key functionalities in this domain include:

- **Efficient Session Scheduling**: Cruise Control allows you to effortlessly schedule testing sessions, ensuring that assessments are conducted at optimal times. The system can automatically allocate users to sessions based on your predefined criteria, simplifying the allocation process.
- **Real-time Session Monitoring**: Keep a watchful eye on ongoing testing sessions in real-time. Cruise Control provides live monitoring capabilities, allowing you to track user progress, identify potential issues, and intervene when necessary.
- **Proactive Issue Resolution**: Our system is equipped to detect and flag potential issues during testing sessions. This proactive approach ensures that problems are identified and addressed promptly, minimizing disruptions.
- **Customized Session Reports**: Cruise Control offers customizable session reports, allowing you to review session data in a format that suits your needs. These reports can include user performance metrics, session durations, and any anomalies that require attention.
- **Session Security**: We prioritize the security of testing sessions. Cruise Control employs robust security measures to protect the integrity of assessments, including secure user authentication and session encryption.

The inclusion of these features underlines our commitment to providing a comprehensive testing and course management solution that caters to all aspects of the assessment process. Cruise Control empowers educators with the tools needed to organize, monitor, and optimize testing sessions effectively.

### 37.1.2 Service Process

#### 37.1.2.1 Initial Configuration

At the outset, our team customizes Cruise Control to align with your unique needs. Simultaneously, your Personal Assistant familiarizes themselves with your preferences to provide a tailored service.

#### 37.1.2.2 Automated Processes

Cruise Control's team takes charge of overseeing test and course management, content imports, user support, and reporting. This comprehensive oversight guarantees a seamless experience, allowing you to focus on your core educational goals.

#### 37.1.2.3 Continuous Improvement

Cruise Control evolves based on user patterns and feedback, ensuring optimal performance. Your Personal Assistant is there to support you throughout this journey, making adjustments and enhancements as needed.

## 37.2 Remote Test Center Service

YouTestMe Test Center represents a top-tier remote test center service. With us, you not only obtain application license but also gain access to our team of professionals who provide comprehensive test administration, proctoring, and test delivery services - all available around the clock, 365 days a year. Whether you're already running a program, just getting started, or operating a testing center without the necessary software and service support, our solutions are here to meet your needs.

Below, you'll find a summary of our test administration and delivery service, showcasing a portion of the fundamental features that make our support for your online examination processes the best on the market.

### 37.2.1 Content Creation

Welcome to YouTestMe, where crafting assessments is tailored to your preferences. We offer three options:

- **YouTestMe Professionals**: Our expert psychometricians create questions based on consultations and materials you provide. Benefit from their experience to ensure the highest quality.
- **Self-Creation**: Use our platform, item banks, and team support to craft assessments yourself. Enjoy full control over your assessment content and structure.
- **AI Innovation**: Chat GPT powered AI generates questions from uploaded materials. Embrace cutting-edge technology to streamline your assessment process.

### 37.2.2 How and where your test content is stored

YouTestMe provides two clear choices: cloud-based or on-premise deployment. These options offer flexibility and security, tailored to your specific needs.

- **Secure Cloud Hosting Services with Regulatory Compliance**: YouTestMe emphasizes robust security, aligning with US Department of Defense's framework and encryption standards. Compliant with GDPR, Section 508, FedRAMP, ISO/IEC 27001, ISO 9001, your data's privacy is ensured via encryption, pseudonymization, and policies, backed by resilient security and continuity planning for top security and availability.
- **Exclusive On-Premise Test Solutions**: In a constrained market, YouTestMe is the sole provider of on-premise test and proctoring solutions. Using plug-and-play virtual machines, institutions, including governments, can host secure services seamlessly. This assures in-house control, strong data protection, and rigorous security protocol compliance.

### 37.2.3 Flexible test delivery options

We are specialized in delivering tests online.

- **Any Time Remotely**: Enable candidates to begin high-stakes tests at their convenience, across time zones and languages, while upholding integrity. Our proctors are available around the clock for reviewing recordings or live monitoring. Our scalability accommodates any number of candidates.
- **Booking in Advance**: For synchronized sessions with uniform equipment checks, personalized greetings, and tailored monitoring, our solution is simple: create a session calendar, set seat limits, and allow candidates to book their test times.
- **Purchase Tests**: Customers set test-taking and retake fees, with optional discount coupons, smoothly processed through our Stripe integration, supporting various currencies. YouTestMe maintains a fee-free policy, with only standard Stripe charges.

- **Dedicated Physical Locations**: If you seek testing-center level control, our system offers a suite of premier features. From specifying location details, and contact information to restricting test-taking outside the designated building, our software is the optimal choice for testing centers.

### 37.2.4 Different Proctoring Options

We guarantee the integrity of your tests and ensure an exceptional experience for your candidates.

- **AI and Lockdown Browser**: By utilizing artificial intelligence (AI) technology, the system itself records and monitors test attempts using behavioral trackers. Once the test is finished, the system generates a credibility report and stores the test footage for the optional subsequent human validation and review. System prevents using other application using the lockdown browser.
- **Live by YouTestMe proctors**: Our certified proctors remotely oversee tests in real time 24/7 on top of AI monitoring. We provide English and French-speaking proctors, and our monitoring adapts to client preferences, including personalized greetings and conduct rules. Our candidate-to-proctor ratio is 8:1, ensuring effective supervision.
- **Record and Review**: Through the Record&Review proctoring model, test-takers can select any time to complete their tests. Driven by AI-powered proctoring, this solution pinpoints suspicious actions for subsequent evaluation. Our team operates 24/7, diligently reviewing hundreds of daily recordings. Every candidate's session is carefully analyzed, resulting in a detailed conduct report. This presents a cost-effective and versatile alternative to live proctoring.
- **Bring Your Own Proctors**: Our platform enables you to seat your own staff in the proctor position. You can flag suspicious situations, monitor candidates in real-time, and maintain control whether online or by securing the test location in your test center. Take charge of test day rules and ensure a secure testing environment.

### 37.2.5 Test Results Delivery

We guarantee the integrity of your tests and ensure an exceptional experience for your candidates.

- **Automatic Delivery**: System handles grading, including proctor-assigned grades. Results can be auto-sent to an SFTP location in CSV format.
- **Hold and Release**: System and proctor grades are held until you decide to verify and release them. Verification can be done using an auto-process based on criteria.

## 37.3 Map and GPS Position Tracking for Practical Driving Tests (Roadmap Feature)

YouTestMe integrates industry-standard GPS and map technology to support practical driving tests. This functionality allows instructors to monitor candidate routes in real-time, ensuring a structured and transparent evaluation process. It also provides a seamless mechanism for recording and addressing deviations from predefined routes.

**Benefits**

1. **Enhanced Monitoring**: Instructors can view the candidate's current position and track their progress along predefined routes, ensuring compliance with test requirements.
2. **Route Verification**: Any deviations from the planned route are automatically recorded, offering precise data for post-test analysis.
3. **Transparency and Accountability**: Candidates can provide comments on route deviations, creating a fair and transparent testing environment.
4. **Real-Time Navigation**: Both candidates and instructors can follow the route in real-time, minimizing confusion and ensuring efficient navigation.

**How It Works**

1. **Route Predefinition**:
    - Administrators define routes in the system before the test begins.
    - Each route includes checkpoints for structured evaluations.
2. **Real-Time Tracking**:
    - During the test, GPS tracks the candidate's position and displays it on the map for instructors.
    - Missed checkpoints are flagged, prompting the candidate to provide comments after the test.
3. **Test Recording**:
    - The entire driving session is saved in the system for future reference and analysis.

This feature ensures structured evaluations, accurate reporting, and an enhanced testing experience.