CASE STUDY

CREST

Modernising Exam Delivery with CREST's AWS-Powered Exam Platform

ABOUT CREST

CREST International, a globally recognised not-for-profit organisation, has been a cornerstone of the cybersecurity industry since 2006. Known for accrediting over 400 member companies and certifying individuals through rigorous technical examinations, CREST works to elevate standards in cybersecurity services. Its flagship certifications, combining theory and hands-on practical assessments, are trusted by governments, regulators, and industry bodies worldwide.

CREST became the first UK National Cyber Security Centre (NCSC) approved delivery partner for Cyber Incident Response Level 2 (CIR L2), assuring service providers who have the capability to support cyber incident response. They partnered with the Center for Internet Security (CIS) in the US to help strengthen the assurance behind consultants performing assessments based on the CIS Controls suite and supported the Dubai Electronic Security Center (DESC) to rollout a programme enabling CREST-accredited companies to register as cyber security service providers to the Dubai government, semi-government, and critical information infrastructure (CII) entities.

CREST's mission is to ensure the highest levels of professional competence and to promote confidence in cybersecurity services. Through the recent transformation of its exam and results platform, delivered in partnership with CirrusHQ, CREST has achieved an 80% reduction in the time and effort required for exam provisioning and realised a 33% cost saving compared to its previous infrastructure, demonstrating its commitment to innovation and efficiency.

THE CHALLENGE

For years, CREST relied on a legacy private cloud infrastructure to host its practical exams, which were delivered through manual processes and assessor-led operations. The legacy setup was designed to support test centres globally but had limitations in efficiency, cost-effectiveness, and scalability, only being able to deliver in 3 countries. Maintaining private data centres involved significant fixed costs, regardless of usage, while the infrastructure's geographic concentration restricted access to certifications for many aspiring professionals.

As demand for certifications grew worldwide, the organisation recognised the need for a more flexible and scalable platform. Additionally, the manual processes involved in exam development slowed down innovation and introduced challenges in streamlining exam delivery.

Recognising these limitations, CREST sought to modernise its exam delivery through a cloud-based solution, prioritising scalability, automation, and cost efficiency.

CIRRUSHQ AT A GLANCE

- +93 Outstanding Customer Satisfaction NPS score
- 100+ Staff Certfications
- Operate in 21 AWS regions providing client support
- 16 years' experience of taking organisations to the cloud
- 100% AWS experts - exclusively AWS
- 17 AWS Partner Accreditations

> Working with Cirrus has been a highly positive experience. They quickly grasped our unique needs and demonstrated a deep understanding of our objectives. Throughout the project, Cirrus consistently went above and beyond to ensure successful delivery. Their proactive approach and ability to propose creative, effective solutions to challenges made them a reliable and invaluable partner.

Mark Grigg
Operations Director, CREST

CASE STUDY

THE SOLUTION

CREST partnered with CirrusHQ to migrate its examination platform to AWS, building a robust, scalable and cost-effective solution tailored to its unique requirements. The project began with the development of a foundational AWS Landing Zone which provided a secure, compliant, and flexible environment for hosting future workloads. This foundational architecture was designed with security, compliance, and flexibility in mind, ensuring it could support CREST's global ambitions.

The new exam platform introduced centralised authentication through AWS IAM Identity Center, enabling role-based access control (RBAC) that simplified user management while enhancing security of sensitive exam data. Automation was a key feature of the project, with AWS Step Functions, Lambda, and CodePipeline employed to create and deploy exam environments more efficiently, resulting in an 80% reduction in time and effort required. The platform also introduced a scalable multi-account structure in AWS, ensuring that exam resources were isolated to enhance security and reduce risks.

To enhance the candidate experience, CirrusHQ provided AWS-hosted public Amazon Machine Images for mock exam environments, enabling candidates to practice under realistic conditions. Additionally, the design and build of a dedicated file-upload platform enabled candidates to securely submit files required for their exams, with files stored in Amazon S3 and indexed via DynamoDB for efficient retrieval during exam sessions.

By integrating with Pearson VUE test centers, CREST expanded its exam delivery capabilities from three countries to over 70 countries and 1,000 test centres globally, drastically increasing accessibility for candidates.

THE BENEFITS

- The transformation of CREST's exam platform has delivered remarkable benefits. Automation reduced exam creation and deployment times by 80%, enabling CREST Assessors to focus on innovation rather than manual processes.
- Operational costs were also dramatically reduced by transitioning from a fixed-cost legacy private cloud model to a pay-as-you-go hyperscale infrastructure hosted in AWS. By paying only for the resources used during exam sessions, CREST achieved a 33% reduction in costs while simultaneously decommissioning expensive legacy data centres.
- Scalability was another key outcome, with the ability to deliver exams across 70+ countries and 1,000 centres, dramatically increasing accessibility for candidates worldwide. The introduction of mock environments also enhanced the candidate experience, improving performance and ensuring a seamless examination process. This expansion improved accessibility for candidates worldwide and positioned CREST as a global leader in cybersecurity certifications. The new capability enables CREST to more rapidly update exam content, deliver exams to thousands of locations globally and ensure that candidates get the fantastic experience they deserve.
- Overall, the project delivered a modern, resilient platform that not only met CREST's current needs but also positioned it for future growth. By combining innovation with cost efficiency, the AWS solution has empowered CREST to uphold its mission of advancing cybersecurity standards on a global scale.