

Amazon Web Services Hosting FAQs

Q-interactive® and Q-global® have moved to the cloud.





What happened?

Q-global and Q-interactive moved out of the current Centurylink brick-and-mortar data center and into the Amazon Web Services (AWS) cloud. The systems and data will remain in Canada.

What is AWS?

AWS Cloud Services is a secure cloud services platform offering computing power, database storage, content delivery, and a variety of other services designed for scalability, resiliency, and security. More information about AWS's cloud computing can be found here: https://aws.amazon.com/what-is-cloud-computing/.

Does this mean that we're now using the Cloud?

Yes. Amazon is one of the largest cloud providers in the world, with multiple service regions across the globe. https://aws.amazon.com/about-aws/global-infrastructure/

Why did we do this?

Q-global and Q-interactive have moved to the cloud in support of Pearson's broader strategy for increasing security of client data, as well as the systems that host it. We're also striving to improve recoverability and resiliency, increase scalability, and provide additional layers of resiliency against cyberattacks, such as Distributed Denial of Service (DDoS) attacks.

Why is it more secure than the previous solution?

The migration to AWS Cloud services constitutes a significant step forward in our efforts to continue to improve our information security and data privacy controls profile. As the information privacy regulatory landscape continues to advance, our own ability to meet data protection guidelines must also evolve.

We selected AWS based on Pearson's success and experience with its cloud-based deployments and because Amazon's cloud infrastructure meets a multitude of industry regulatory standards. Amazon's AWS solutions

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are GDPR-ready for those clients who are subject to it. Here is a small sample of AWS's other industry and regulatory certifications:

- <u>ISO 27001</u> <u>SOC 1, 2, and 3</u>
- PCI DSS Level 1 FedRAMP
- FERPANIST

For a full list, please visit Amazon's <u>AWS Compliance Programs</u> web page.

What about encryption?

Storage services and functions now come with AES-256 encryption capability as a default feature, making it easier to maintain and enable.

The AWS Cloud environment facilitates the ability to enable AES-128 encryption over current versions of transport layer security (TLS) encryption technology while moving between components within the cloud-based network. This functionality is also available to us for encrypting the data when it is in transit between our systems and our users.

In short, we have a much-enhanced capability to provide the highest level of security and encryption to protect the confidential and personal information you trust us with. This includes such measures as FIPS-compliant encryption and strong public/private secret keys and key management.

What about data isolation capability?

In the AWS Cloud environment, isolation is achieved through the use of a virtual private cloud (VPC). It becomes a secure network, distinct and separate from the network where our desktop workstations and users on our internal network reside. This makes it much harder for viruses to reach or impact our production network.

In the typical brick-and-mortar setting, a firewall is the single point of entry for the entire company network (e.g., user workstations, development and test environments, production systems, and data repositories). Since they are all on the same network, the risk of malware infection is greatly increased.

In AWS, the use of VPCs allows us the ability to isolate the production network and restrict access at a much more granular level through Amazon's <u>Identity and Access Management</u> (IAM) system. The AWS IAM manages access to each VPC separately, adding a layer of security not found outside of the cloud.

Are there other benefits?

Without a doubt, scalability is another huge benefit! One of the challenges with any brick-and-mortar data center is the ability to scale resources to meet the demands of the services provided, and avoiding incidences of degraded performance and system outages.

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With the increased ability to scale up quickly in response to changes in load and demand, our ability to ensure better and more consistent service levels dramatically increases. Through standardized server builds, called Amazon Machine Images (AMI), upon detecting a significant change in performance and load, we can now address much more quickly.

Will there still be a disaster recovery site separate from the primary data center?

The AWS cloud service lends itself to disaster recovery and business continuity through an architecture built for disaster avoidance. Amazon's global services make use of multiple Availability Zones (AZ), which are separate data centers spread across a given geographic region. This allows us to deploy and replicate services across multiple AZs to ensure high availability of services and resiliency against outages and cyberattacks that might otherwise impact service performance. Should any individual instance of the service in a given AZ experience a failure, the other AZs in the architecture can take over its functions. The AZs we will be using are all located in the AWS Canada region, which currently has two AZs.

What does this mean for customers?

Customers will not notice any change in their use of Q-global or Q-interactive. They will enjoy a variety of benefits, including:

- · Improved reliability, stability, and performance
- Enhanced security
- Greater ability to meet regulatory compliance requirements

Is customer data still stored in Canada?

Yes. Customer data will still be stored in Canada. Client data is transferred over an encrypted connection and stored in an encrypted database within AWS Cloud Services AZs in Canada, the exact data center locations for which are not disclosed to the general public—or even to us as their customer.

Are Pearson cloud sites in any other parts of the world?

At this point in time, Q-global and Q-interactive will only use the AWS regions in Canada. As Q-global and Q-interactive service customers in other regions of the world, our attention to compliance and regulatory requirements will ensure data resides in the country of residence where such requirements exist. Canadian data will remain in Canada. If this were to ever change, appropriate notification and regulatory compliance reviews would precede any actual change.