Customer Profile:

Sadad is a Qatari payment gateway platform which provides highly secure cashless payments across multiple online and offline merchants through integrated and diversified financial services.

The Challenge:

As the application was going to be dealing with the financial details of its end users, it was important for the underlying infrastructure to be highly secure, performance efficient and fault-tolerant. Though the application itself was being built keeping various compliances and security measures in mind, it was really important for the client to have the underlying infrastructure to also meet all the necessary security criteria.

The client was looking for a platform which could meet all the above requirements to ensure secure and error-free online transactions for his end users and to ensure data transfer between various components like the application, POS devices, end users and the bank is highly secure and contained.

The Solution:

Being an Amazon partner and having 12-years of experience as managed service provider in the field of server management, we took our experience along with our AWS expertise to deliver the best. Geeks Solutions' team of System Administrators AWS CSAA performed some comprehensive analysis on the application requirement and designed the architect best suited for the application taking into consideration the AWS well-architected practice.
Various AWS components were evaluated, its configurations, and internal components required were discussed along the way to the deployment.
We decided to go with AWS Cloud because it not only meets all the requirements put forth by the client but also has a highly secure and stable underlying infrastructure which is extremely crucial given the nature of the business.
By incorporating the agile tactic, our AWS CSAA's and 24x7 SA team safeguarded the applications availability in in a timely manner. Round-the-clock support was provided for the application and infrastructure.

Few of the notable operations that we performed for the client are as follows:

- Overall infrastructure architection in the pre-deployment phase of the application taking into consideration the requirements of the clients and his development team and balancing it with the AWS best practices.

- 24x7 proactive interaction with the client's development to help them build highly resilient solutions and ensure smooth deployment of their application and application changes to the cloud platform.
- Choosing the appropriate AWS services matching the client's requirements and setting it up for use with proper service configuration.

- Deploying and configuring various components of the infrastructure to ensure security of the data and the application infrastructure as a whole.
- Implemented overall infrastructure monitoring and alerting with CloudWatch and external monitoring tools.
- Weekly analysis and vulnerability assessment of the overall infrastructure and its various components.
- Working with the PCI DSS compliance officer and the development team to help make the application infrastructure compliant with the PCI DSS security standards.
- Setup encrypted AWS Site-2-Site VPN tunnels between the POS system, the Qatar Bank and the application servers hosted on the AWS Cloud platform to ensure the confidentiality, integrity, availability and security of the data travelling between these critical components.
- Auditing the whole infrastructure on a quarterly basis to maintain compliance.
- Setting up a centralized logging solution to securely store logs generated across all the components of the infrastructure.
- Post-deployment 24x7 monitoring and management of the infrastructure by a dedicated team of highly trained AWS certified professionals.

Benefits Gained:

- Data protection.
- Identity and access management.
- Infrastructure protection.
- Threat detection and continuous monitoring.
- Compliance and data privacy.
- Fault-tolerant and performance efficient infrastructure.
- Security of data in-transit and at rest.

AWS Services Used:

- EC2.
- S3.
- AWS Site-2-Site VPN.
- CloudTrail.
- AWS VPC
- Security Groups.

Infrastructure Diagram: