



# Square 9 Cloud: Infrastructure and Security Overview



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## Amazon S3 Buckets

Amazon S3 is the secure document repository for the Square 9 Cloud. All documents scanned or imported into the Square 9 Cloud are stored in Amazon S3, which provides the highest levels of durability, scalability, and availability. For more information on Amazon S3, please visit <https://aws.amazon.com/s3/>.

### The following guidelines are followed for setup and configuration:

- All customers are provisioned with one or more unique S3 buckets in Square 9's AWS account(s).
- The Bucket user is secured to only the customer-specific bucket(s).
- User policies are S3-specific and provide no other access to any AWS services.
- Access keys and secrets are for internal use only and are never shared outside of S9.
- Versioning and Encryption (AES256) are enabled by default on all buckets.

## Amazon EC2

Amazon Elastic Compute Cloud (EC2) provides the Server infrastructure for the cloud versions of Square 9 products. EC2 provides secure, resizable compute capacity allowing your Cloud usage to scale as your requirements evolve. For more information on Amazon EC2, please visit <https://aws.amazon.com/ec2/>. Depending on the configuration, each customer is provisioned with a dedicated server.

- Console access is available for authorized Square 9 personnel only. Customers never have access to the Square 9 server infrastructure directly.
  - Console access to servers is granted through RDP on a non-standard port.
  - RDP Access is restricted to only Square 9 IP addresses through firewall rules.
- AWS Security Groups restrict access to web ports (443).
  - At customer request, access can be restricted to a customer-approved list of source IP addresses.
- Client access to Square 9 applications is through the browser over HTTPS.
  - Square 9 websites and requisite web services are exposed over standard SSL ports (443). At the request of a customer, a non-standard port may be provisioned.

## Monitoring and Control Applications

In addition to the physical controls on servers and document repositories, Square 9 employs several supplemental monitoring and control applications to ensure the overall security of its cloud infrastructure.

### Web Application Firewall

Web Application Firewall (WAF) is an AWS service leveraged for traffic inspection at the load balancer level to provide traffic visibility and security. WAF helps protect against common exploits and attacks, including but not limited to SQL injection, DDoS, and cross-site scripting. For more information on the Web Application Firewall, please visit: <https://aws.amazon.com/waf/>

### Amazon GuardDuty

Amazon GuardDuty provides managed threat detection services across Square 9's cloud infrastructure. GuardDuty provides constant monitoring for all traffic in and out, allowing for Square 9's security team to react immediately to any reported anomalies impacting our infrastructure.

### Trellix Protection

All the infrastructure on which the Square 9 Cloud runs is protected with Trellix. This provides Virus, Malware, and an added layer of software-based Firewall and Intrusion Prevention services. Real-time updates are enabled by default. All Cloud infrastructure is constantly monitored for virus and malware activity.

## Physical Security

AWS provides the Square 9 Cloud with an application environment that is state of the art and leverages the experience that only Amazon has in operating large-scale data centers. These data centers include a full range of protection, including:



**Physical Access to the Data Center** - Access is strictly controlled at both perimeter and building egress points by both security personnel, video surveillance, and intrusion detection systems. All staff must pass through a two-factor authentication at least twice to access the data center floors.



**Fire Detection & Suppression** - Utilize smoke detection and a variety of sprinkler systems in all data center environments.



**24/7 Power Systems** - Includes redundant electrical systems, uninterrupted power supplies (UPS), and backup generators.



**Climate & Temperature Control—Data Centers are conditioned to maintain optimal atmospheric conditions**, which are monitored by both systems and personnel.

## Data Encryption

Square 9 Cloud administrators can consider different levels of encryption, including the encryption of documents at rest and data in transit.

### At Rest Document Encryption

Encryption at rest of any documents stored in the Square 9 Cloud repository is a standard security practice. At rest, your documents use strong multi-factor encryption, which uses a unique key. Server-side encryption uses the strongest block ciphers available, 256-bit Advanced Encryption Standard (AES-256), to protect your documents.

### In Transit Encryption

Finally, the encryption of your information in transit is managed through the Secure Socket Layer (SSL) protocol, which utilizes security certificates to establish a secure connection between the web server and the browser.

## Durability & Reliability

AWS provides the Square 9 Cloud with a highly durable infrastructure for storing your business-critical information with redundant data stores that synchronously store your data across multiple facilities. *This provides our Cloud users with 99.999999999 durability and 99.99 availability over any given 1-year period on the disk subsystems used to support the Cloud.* Square 9 further protects the durability of your Cloud instance by providing nightly backups of your application database, which are stored automatically for 90 days. Document storage in the Square 9 Cloud is fully backed by the Amazon S3 Service Level Agreement.

## Compliance

Compliance of regulatory mandates is a shared responsibility between AWS, Square 9, and the customer. AWS and Square 9 look to bring together governance-focused, audit-friendly service features that allow our customers to deploy compliant applications. Through the use of a highly

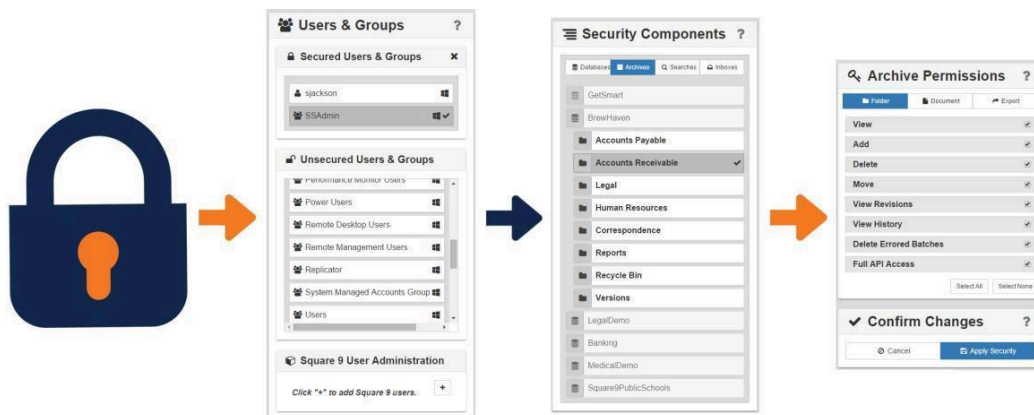
protected network infrastructure and a scalable and granular application security model, customers may design solutions to meet a variety of industry standards, including the following:

SOC 1/SSAE 16/ISAE 3402 (formerly SAS 70)	ISO 9001 / ISO 27001
SOC 2	ITAR
SOC 3	MTCS Level 3
FISMA, DIACAP, and FedRAMP	
DOD CSM Levels 1-5	Family Educational Rights and Privacy Act (FERPA)
PCI DSS Level 1	Health Insurance and Portability Accountability Act (HIPAA)

While Square 9 and AWS provide the tools for achieving regulatory compliance, it is the responsibility of the customer to design and test their use of the technology in a compliant manner.

## Square 9 Cloud Application Security

The Square 9 Cloud delivers a granular security model to protect your most sensitive information from unauthorized access. The security is set by the Square 9 Cloud Administrator.



## Database Security

Before users can access the Square 9 Cloud, they must first be granted access to a database, and permissions must be applied to the objects in the database. Each database within the Square 9 XCloud has its own set of user permissions.

## Archive Security

Within each database in the Square 9 Cloud, there are document repositories called Archives. The Archives each have specific attributes that describe how records stored within them will be indexed. The database administrator must grant a user permission before accessing an archive. Archives are (optionally) not visible to users who lack the necessary permissions to view them, allowing administrators to hide entire database sections if necessary.

## Search Security

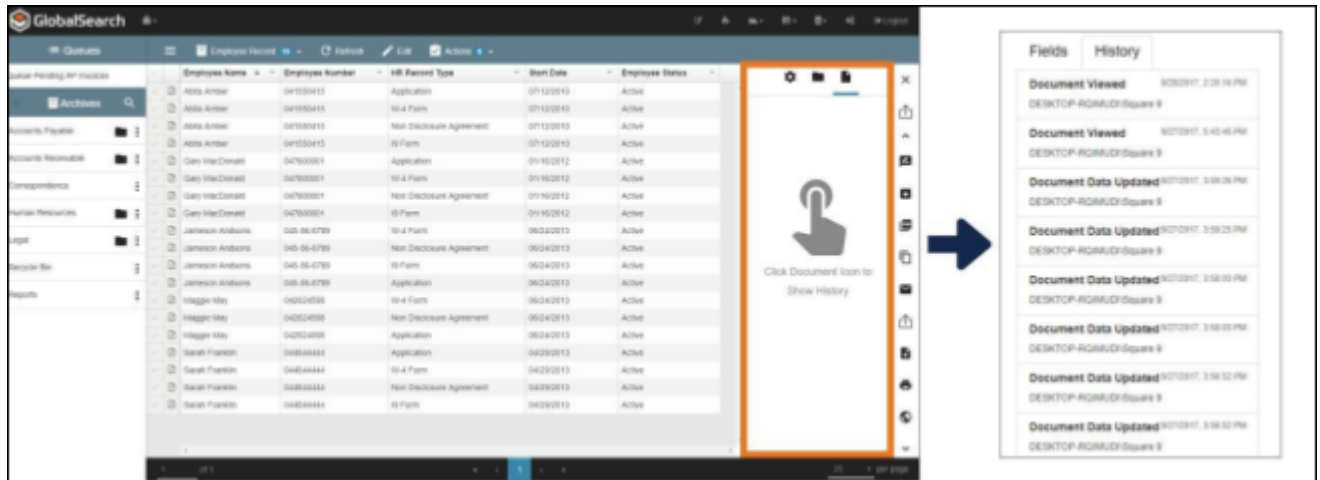
All documents within an archive are located and viewed using a stored search. Searches may be static or variable and may be set as a default for viewing documents whenever an Archive is selected. As with all other security options, a user must be added to the Secured Users and Groups list before assigning database permissions.

## Document Level Security

While a user may be granted permission to view a document, the Square 9 Cloud provides granular control over what can be done with or to the document once accessed. This includes editing a document (rotating, replacing, or deleting pages), modifying its index data, and adding annotations. Distribution of an accessed document is also controlled, including the ability to print, email, export, or launch a document from within the Square 9 Cloud.

## Audit Trail

With the audit trail capabilities included in the Square 9 Cloud, administrators cannot only control who can access or modify a document, they can also gain insight into these actions through the use of Audit Trail security. Administrators can easily see who viewed, edited, emailed, or moved a document. Audit trail reporting may be performed on a single document or the entire contents of an archive and exported for reporting.



## Conclusion

The Square 9 Cloud provides a strong, secure cloud-hosted platform that combines the industry-leading strengths of the Amazon Web Services cloud computing platform with our platform's granular application security model. Together these products deliver a highly scalable and dependable platform for managing content in even the most demanding environments.

Data durability and availability are ensured with industry best practices like geographic collocation and nightly application snapshots. Finally, using at-rest and in-transit encryption, the Square 9 Cloud leverages the highest security protocols to protect the sensitive information you care about most.

Together, Square 9 Softworks and Amazon Web Services provide organizations of every size with the tools needed to embrace a secure and compliant cloud-hosted Enterprise Content Management strategy.

We recognize the importance and the sensitivity of the information you have entrusted us with and have taken every precaution to protect it against the ever-changing threat of intrusion we all face. As cyber security evolves, we will evolve with it to bring you the most secure and protected cloud infrastructure available.