

The E-Signature Security Relay Race

How AssureSign Leaps Over Cyber Hurdles



Introduction

Read the headlines of any major news publication on the planet and you'll be reminded of two realities shaping our daily lives: one, that we're all conducting more and more of our day-to-day activities online and two, that more people and organizations are seeking our digital data. The benefits of doing more online are many: we're saving time, making tasks easier, reducing costs, cutting down on physical waste (like paper), communicating easily (from anywhere) and much more. These are the very same draws attracting more people than ever to electronic signature; analyst firm Forrester Research reports a 53 percent annual growth in the use of e-signature since 2012 and predicts further adoption during the next two years.

As electronic signature continues to race ahead to becoming a mass-market necessity, security – in particular the integrity of the signature throughout a document's circuit – remains a major hurdle to overcome for both "average Joe" users and experts alike. These hurdles exist today because cyber criminals have tremendous incentive to disrupt the passage of data. Online data breaches increased by 23 percent from 2013 to 2014, according to antivirus software provider, Symantec Corporation. The same report indicates that the number of breaches caused by attackers is also up by 44 percent.

These increases in breaches and attackers emphasize the importance of putting robust security safeguards in place in order to bypass threats and ensure that the document reaches the finish line safely and securely. AssureSign ensures that all documents initiated through the electronic signature platform maintain their integrity, from start to finish.

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A Document's Full Circuit: From Starting Block to Finish Line

Starting Line

AssureSign customers – from the owner of a “Mom & Pop” shop, to the large enterprise executive – gain peace-of-mind by knowing that their documents will maintain integrity at each interval of a e-document’s course. When a user sits down to create an AssureSign document or form, a unique mathematical hash value is placed on the document. This hash value, which can never be changed or modified, prevents AssureSign documents from ever being tampered with. If unauthorized changes are attempted at any point, the unique hash mark will indicate such, deeming any variation from the original document initiated as invalid.

Passing the Baton

After initiating or starting a document, it’s critical to keep this safe while the document is in motion. When passing documents, AssureSign uses 256-bit encryption to keep data secure while in transit from the originator to the signer and back. Each and every document also has a digital audit trail that records unique identifying information such as IP address, geo coordinates, browser, OS information and time stamp. The audit trail ensures that each document is technically and legally unassailable, holding up in courts of law. This digital audit trail is held in perpetuity, even if AssureSign isn’t storing the document. This means that documents signed using AssureSign have electronic proof points, making them irrefutable and more secure than any signed paper document.



Final Stretch

The next step in an e-document's lifecycle is the actual signing, known as the execution or "final stretch", of the document – the digital equivalent of "pen to paper." At this point, the unique hash marks and digital audit trail keep the document intact. During signing, a signer cannot save, copy or paste their signatures – each section of the document must be signed individually. AssureSign does not allow modification to the document, meaning the only action that can take place during the final stretch is completing the form and executing signatures.

Finish Line

Once a document is signed, a certificate of completion is added and the certificate and the document itself are sent to all parties. During submission, AssureSign's 256-bit encryption keeps the document secure while it reaches each party. The document originators can use the AssureSign validator function to check the PDF of the signed document to ensure the integrity of the unique hash, and that the document has not been tempered with at any point during its circuit.

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At Rest

Finally, signed documents always contain sensitive personal and/or business information. For this reason, it is imperative that documents are secured when at rest, whether they are stored in the cloud, as part of a hybrid cloud approach, or on-premise. AssureSign secures all data with a regularly rotating key management system, protecting all stored data. If customers prefer to have their own private Windows Azure cloud or their own storage on-premise, AssureSign turns over the keys to the customer, giving them exclusive access and control over their own data. In the case of on-premise, customers have complete control and no information whatsoever resides in the cloud. In this way, AssureSign allows for optimal control and flexibility over securing critical data that is at rest.



AssureSign's Winning Security Relay Training & Team

Technology is only as good as the people behind it and the processes and trainings to maintain it. It's like a sports team – everyone may have top-of-the-line gear, but if the team members don't train regularly and don't work together – the group will lose against opponents and will be tripped up by hurdles. The AssureSign team is committed to training long and hard in order to stay on course and leap over cyber threat hurdles. All staff members are required to take and pass annual security certification exams. New staff members undergo rigorous background checks so that only trust-worthy experts work on our technology. Our processes include regular security audits of the AssureSign code base, as well as third party penetration testing. From the CTO to junior staff, the people behind the AssureSign electronic signature platform are keeping up with the latest security threats and making updates to the platform to maintain integrity against ever-changing web threats.

The crux of electronic signature security is maintaining the latest certifications and best practices, and keeping abreast and responding to the latest security threats. As increasing numbers of individuals and businesses adopt e-sign capabilities, the more important it becomes to secure all of the new digital paperwork, from the starting block, to the finish line.





www.assuresign.com | 407.670.0440 | @assuresign