

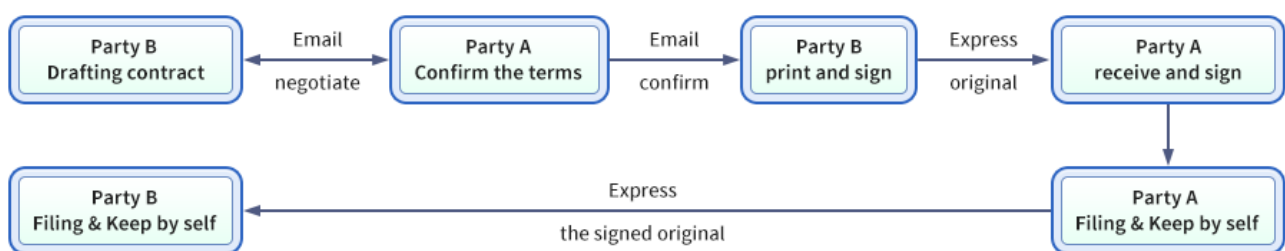
Electronic contract signing requires zero trust

Using online electronic contract signing services to complete contract signing has become the first choice for signing contract agreements required in personal life and work. At present, it has almost reached the level of popularization around the world, including in China. This article discusses whether there is room for improvement in the commonly used electronic contract signing services, and how to make it convenient to use while protecting the confidential information security of electronic contracts.

1. What is an electronic contract? What is an electronic contract signing service?

To answer these two questions, we need to first talk about how the traditional contract signing method that most people probably use every day works. This will help us understand what the ideal electronic contract signing method should be like, to help us understand the shortcomings of the current electronic contract signing method.

When Party A and Party B want to sign a contract, the oldest way is of course for both parties to handwrite the contract in person and sign it on the spot. Now, what everyone may do every day is that both parties send the draft contract Word file to each other via email for confirmation or modification, forming an electronic version of the formal contract. Party B prints out and sign the paper contract, then expresses it to Party A. After receiving it, Party A also signs it and sends a signed original copy back to Party B. This contract is signed and kept by both parties.

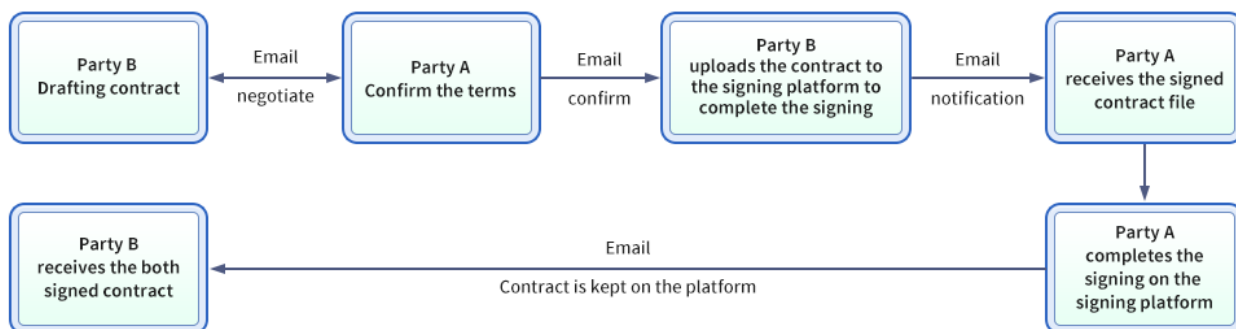


An electronic contract is the electronic process of printing and delivering the original paper document

in the second step. The delivery of this process takes time and money, and printing the contract wastes paper, which is not environmentally friendly. In fact, the contract that the two parties have negotiated is an electronic document. It only needs to be signed electronically. The existing mature technology is digital signature, which can be used to digitally sign the electronic document using a digital certificate. To ensure that the signing time of the electronic contract is authentic, a timestamp signature must be added when digitally signing.

Since 2003, DocuSign was the first in the world to launch an online contract signing service, and it has been widely welcomed by users. Adobe also acquired EchoSign in 2011 and provided document electronic signature services, which can of course also be used to sign electronic contracts. It was later renamed Adobe Sign, and the current product name is Acrobat Sign. DocuSign's advantage is that it provides one-stop electronic contract management and signing services, while Adobe's strengths lie in the editing, generation and signing of PDF files. The similarities between the two are that electronic signatures are the main method, and digital signatures are the auxiliary. Digital signatures use platform signing certificates to ensure the authenticity and non-tamper ability of electronic signatures. Most of electronic contract signing platforms in China use digital signatures, and the signatories of the contract have their own signing certificates for digitally signing contract documents. This is a reliable digital signature required by the "China Electronic Signature Law".

Currently, the signing process of all electronic contract signing service providers is shown in the figure below. What is different from the traditional paper contract signing process is that the printing, handwritten signing and express delivery of paper contract documents are eliminated. It is faster and convenient to get it done with one click. Therefore, once it is launched on the market, it is very popular with users, especially during the epidemic. Electronic contract signing has almost reached the level of global popularity, because paper contract signing sometimes becomes impossible.



However, the author wonders if any users have noticed a problem. In the traditional way, contract signing is a private matter between the two parties. If each party keeps the contract well, the contract's commercial confidential information can be preserved. However, once the electronic contract signing service is used, the original contract document must be given to an unrelated third party. How can users be assured that the contract's confidential information will not be illegally leaked? When users use the electronic contract signing service, they unconsciously hand over the contract's confidential information to the unrelated party!

Some users must say that there is no other way. If you want to use someone else's service, you have to upload the contract to them. You can't have your cake and eat it both. Is this true? Is there a solution to have both?

2. Electronic contract signing requires zero trust

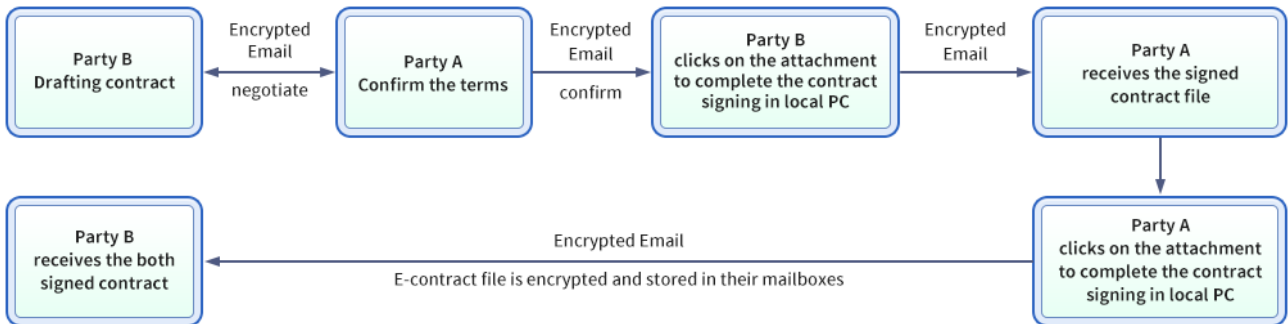
Electronic contract signing service is a cloud service, and people are indeed inseparable from cloud services now. However, the times are progressing, and people will think about how to eat well when they have enough food. While enjoying the convenience of electronic contract signing, everyone must think about how to protect the security of contract confidential information. After all, business is difficult now, and it is very important to protect business secrets.

This is the main idea of this article: electronic contract signing requires zero trust. The electronic contract service provider requires you to upload the original electronic contract to the signing platform, and you need to think about it: what if the platform leaks the confidential information of the contract? What if they can't keep confidential contract information secure? Is there any other way to complete the electronic contract signing without uploading the original contract to the signing platform? The answer is yes!

3. How does ZoTrus protect the security of contract confidential information?

ZoTrus Technology has another innovative solution for e-contract signing, which is the e-contract signing service based on email encryption automation. It not only allows users to complete the

electronic contract signing without relying on any electronic contract signing platform, but also does not need to submit the contract documents to be signed to any third-party platform. Users can directly complete the e-contract signing by sending an encrypted email to the other party using ZT Browser, and it is free of charge. The signing process is shown in the figure below.



You can also compare it with the traditional paper contract signing process. It is almost the same process that the two parties to the contract can handle by themselves. There is no third party involved, and there is no need to upload the contract documents to an irrelevant third party. And it is as convenient to use as the traditional electronic contract signing service and has the same legal effect. More importantly, this is an accompanying service of the email encryption service of ZT Browser, a completely free value-added service. Not only that, compared with the traditional paper contract signing process, encrypted emails are used during the negotiation stage of the contract terms to ensure the full life security of the contract documents, and the encrypted file transmission and encrypted stored in the email server. Compared with the traditional electronic contract signing method, both parties not only do not need to upload the contract documents to be signed to an irrelevant third party, but also do not need to pay for their contract signing services. They sign and keep their own contracts, which can ensure the security of contract confidential information just like traditional paper contract signing.



In short, electronic contract signing is an inevitable trend, because traditional contract signing is time-consuming, labor-intensive and costly. However, electronic contract signing has been developed for 21 years since 2003, and there must be progress. After eating a full meal, people will think about how to eat well and eat healthily. The same is true for electronic contract signing. It's time to change! Zero trust to solutions that require uploading the original electronic contract to the signing platform! Choose a solution that does not require uploading the original electronic contract to an unrelated third party and can better protect the confidential information of the contract.

ZT Browser electronic contract signing solution based on email encryption automation can not only implement electronic contract signing, but also implement zero trust in the signing mechanism. It does not upload the original document to be signed, but only provides the user with a signing tool to allow the user to complete the electronic contract signing locally. Only in this way can the zero trust security of electronic contract documents be effectively guaranteed, allowing users to use the electronic contract signing service with confidence.

Richard Wang

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In Shenzhen, China**

Follow ZT Browser at X (Twitter) for more info.

The author has published 82 articles in English (more than 105K words) and 195 articles in Chinese (more than 559K characters in total).

