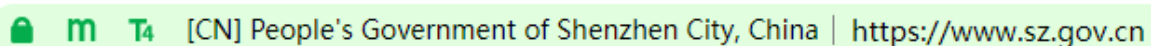
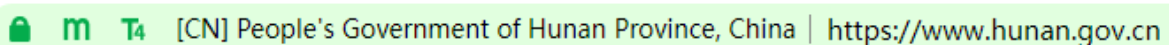


ZT Browser, A Free Browser with SM2 SSL Certificate Support

Browser is free, this is normal knowledge, and browser support RSA and ECC algorithm SSL certificate to realize HTTPS encryption is also a normal knowledge. But the normal browser does not support SM2 algorithm SSL certificate, this is the topic the author talks about in this blog post.

ZT Browser is a standard browser based on open-source Chromium project that not only supports RSA and ECC algorithm SSL certificate to realize HTTPS encryption, but also it supports SM2 algorithm SSL certificate to realize SM2 HTTPS encryption. This is a standout feature of ZT Browser. Not only does it handle the SM2 algorithm seamlessly, but it also enhances the user experience by visually highlighting websites that use SM2 SSL certificates. When you visit a site with an SM2 SSL certificate, ZT Browser adds a "m" icon in the address bar to show that the site uses SM2 algorithm encryption.

Here are some examples:



These sites all use dual RSA/SM2 SSL certificates for adaptive encryption. With ZT Browser, SM2 encryption takes priority, giving you a secure connection for China Cryptography Law compliance. Other browsers, however, won't offer this same level of compatibility.

1. The Problem with SM2 Browsers Today

Here's the catch: most browsers that support the SM2 algorithm have become paid products. This

pricing model hampers the widespread adoption of SM2 SSL certificates in China. For SM2 to take off, there needs to be a free browser option - because let's face it, people expect browsers to be free. Look at the big four globally - Chrome, Edge, Safari, Firefox - all free. ZT Browser fills this gap by offering a no-cost solution that fully supports SM2 algorithms and SM2 SSL certificates.

2. Four Key Features That Set ZT Browser Apart

Compared to other SM2 browsers, ZT Browser stands out with these four advantages:

(1) Completely Free, Forever

ZT Browser is a permanently free SM2 browser that supports both SM2 algorithms and SSL certificates. Built on Google Chromium kernel, it delivers the same performance and functionality as Chrome, with the bonus of SM2 algorithm support.

(2) Clear SM2 Encryption Indicator

Beyond just supporting SM2 SSL certificates for HTTPS encryption, ZT Browser adds a "m" icon right next to the padlock in the address bar. This tells you instantly that the site uses SM2 HTTPS encryption. Click the icon, and you'll see a message confirming "Cryptography Protection Compliant (SM2)." This simple visual cue lets anyone check if a site meets China Cryptography Law requirements at a glance.

(3) Global-First SM2 Certificate Transparency

ZT Browser is the only browser worldwide that supports SM2 certificate transparency. It checks in real time whether an SM2 SSL certificate includes a Signed Certificate Timestamp (SCT) list from the trusted certificate transparency logs. If it does, you'll see "Certificate Transparency (SM2)" along with CT log details; if not, it flags "Certificate NOT Transparency." This ensures the SM2 SSL certificates you rely on are secure and trustworthy.

(4) Adaptive Encryption with Dual Certificates

ZT Browser prioritizes SM2 algorithm encryption when connecting to a Web server. If a site supports SM2 algorithm, it uses the SM2 algorithm for key exchange, SM3 for message authentication, and SM4 for encryption - giving you top-tier security tailored to China's standards. If a site does not support SM2 algorithm, it uses RSA or ECC algorithm for

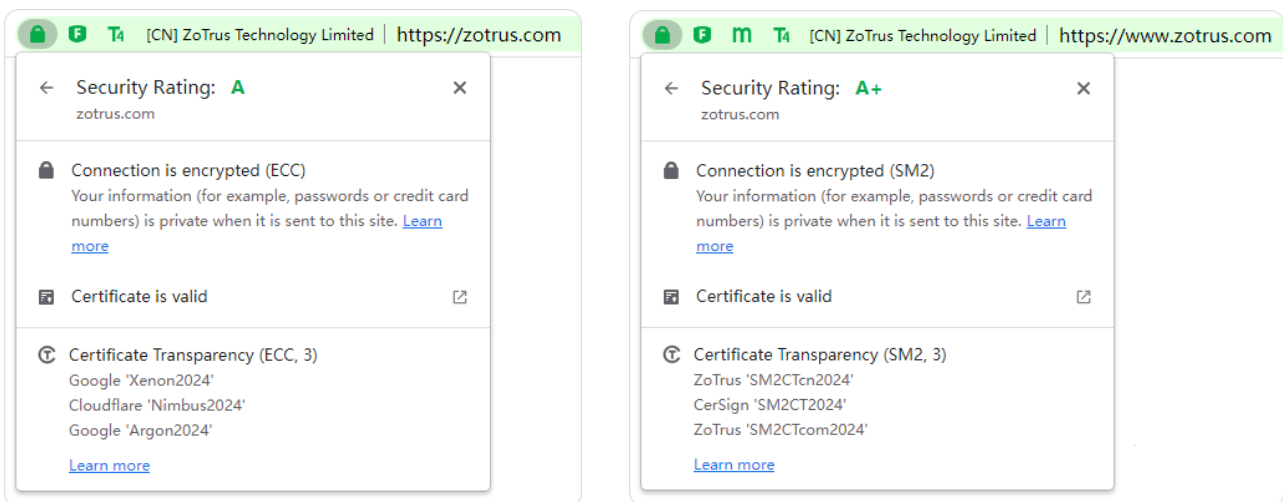
HTTPS encryption.

3. Why SM2 Certificate Transparency Matters

An SSL certificate's trustworthiness hinges on two things: whether the browser trusts the root certificate authority (CA) that issued it, and whether the certificate has been logged in a certificate transparency system. Miss either one, and browsers like Chrome will warn "Not Secure." Since 2013, over 12 billion SSL certificates (RSA/ECC) have embraced certificate transparency. ZT Browser goes further by supporting both ECC and SM2 certificate transparency, ensuring SM2 SSL certificates are just as secure and reliable.

When visiting a site, ZT Browser first tries to connect using the SM2 algorithm. If the site has an SM2 SSL certificate, it takes priority; otherwise, it falls back to ECC or RSA, depending on what's available. No SSL certificate? You'll get a "Not Secure" warning - just like any modern browser.

Not only this, ZT Browser makes certificate transparency more transparency. It displays the certificate transparency detail under the padlock icon details, tell users clearly which CT logs are included in the SSL certificate, both for RSA/ECC SSL certificates and SM2 SSL certificates.



4. Get Involved

ZT Browser has included the certified SM2 root CA certificates together with Chromium default trusted RSA/ECC root CA certificates, including the China Public SM2 Root CA and several China

CAs like Guizhou CA, CFCA and Shanghai CA. We're inviting all CAs with SM2 root certificates to join our ecosystem. By embedding your SM2 roots in ZT Browser, we can work together to build a robust HTTPS encryption ecosystem powered by SM2 algorithm - securing global Internet with another algorithm.

[Download](#) ZT Browser today and experience a free, SM2-ready browser that's fast, secure, and compliant.

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Sept. 22, 2022
In Shenzhen, China

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

