Introduction to Digital Signatures

Strengthening the trust in your test reports, certificates and other documents provided by TÜV Rheinland

In the business world today, digital signatures are widely used in sensitive electronic documents. It enables any recipient of electronically signed documents to verify in a convenient way the integrity and authenticity which increases trust with the issuing source. To further value-add, we have integrated digital signatures into your documents to add an additional layer of trust for your business.

With this improved feature, you will be able to:

1. Verify the authenticity of the documents online in just a few clicks.

2. Reduce the hassle of verifying and filing hard-copy documents with wet ink signature.

3. Trust the document integrity of test reports, certificates and others, be assured that it has not been subject to tampering. Any unauthorized modifications (e.g. forgery, falsification of data) will invalidate the authenticity of the document.

At TÜV Rheinland, we work tirelessly to deliver efficiency in our service delivery to safeguard your organization's innovation. We strongly believe this initiative to modernize the last step of report and certificate processing will add certainty to our documents. With that, you can focus on growing your business and not worry about the credibility and validity of the reports and certificates.

To ease your transition to the new process, we have prepared some frequently asked questions for your reference.

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WHAT IS A DIGITAL SIGNATURE?

Digital signature is electronic and an encrypted information in a file. It serves to prove the authenticity and integrity of any document issued by TÜV Rheinland. Further, it assures you that the document is unchanged and corresponds to the original version created by TÜV Rheinland.

HOW WILL THIS AFFECT YOU?

Test reports, certificates and other documents sent digitally by TÜV Rheinland contain a digital signature. The content and scope of the documents is independent of the digital signature.

## HOW CAN YOU VERIFY THE AUTHENTICITY OF DIGITAL SIGNATURES?

The easiest way to verify the authenticity is by leveraging on PDF readers' signature verification function.

Example

In Adobe Acrobat Reader DC, you may verify a digitally signed PDF by viewing the toolbar on the top of the document. A valid Trust-Center certificate is indicated as "Signed and all signatures are valid".
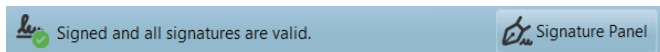
To view the signature properties in your test report or certificate, click on "Signature Panel" , followed by as below
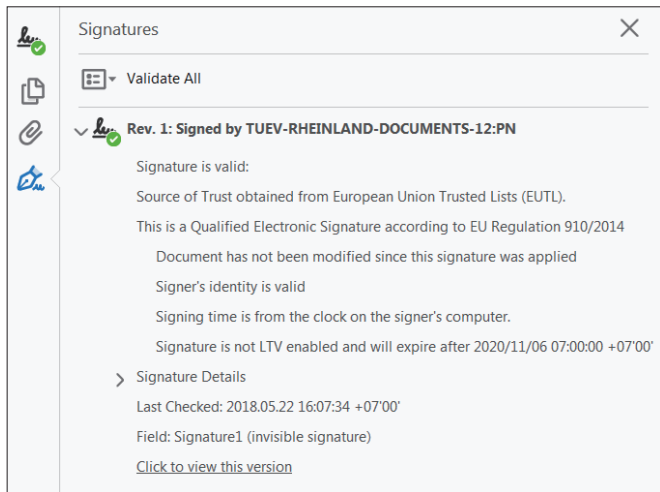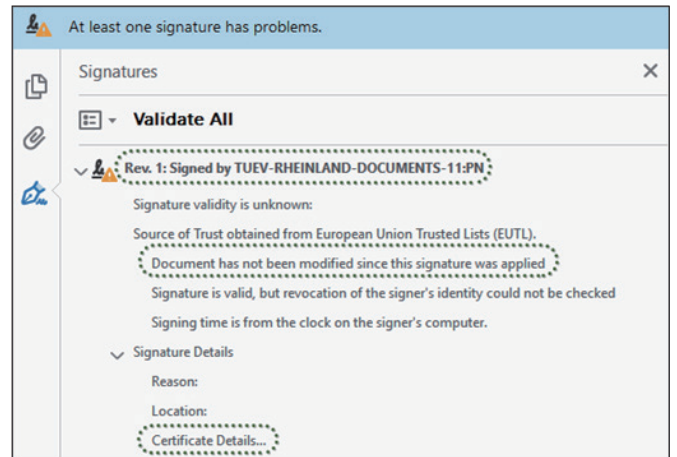

Picture1: Screenshot from Adobe Reader DC showing information on the authenticity

Picture 2: Details on the assurance level of the given digital signature

SOFTWARE MESSAGE: "AT LEAST ONE SIGNATURE HAS PROBLEMS"

If this message appears in the Trust-Center certificate section, it does not necessarily mean that the document from TÜV Rheinland is invalid overall. First, please check the scope of the remaining validity as mentioned in above example and determine whether this is sufficient for your purposes.

In most cases, this message is caused by:
i. Usage of an older and/or trial version of PDF reader software for verification.
ii. Existing firewall rules in your network.

This warning can also indicate that one or more digital signatures are expired. However, an expired signature does not render the document invalid.

The document may be accepted if following criteria are TRUE.
1. Signed by TUEV-RHEINLAND-DOCUMENTS or EBILLINGTUEVRHEINLAND
2. Document has not been modified after the signature placed into the document.

Further information can be found also under "Certificate details…"

## VERIFICATION OF THE AUTHENTICITY OF DIGITAL SIGNATURES

Certain legal/regulatory requirements impose on manufactures, legal representatives, importers, traders, etc. to verify the authenticity of test report and certificates which accompany a product and to document the verification. With the incorporation of digital signatures into the test reports and certificates, the verification process will become much simpler for you.

A document with an authentic digital signature by TÜV Rheinland is signed by one of the following qualified electronic signers:
1. TUEV-RHEINLAND-DOCUMENTS
2. EBILLINGTUEVRHEINLAND
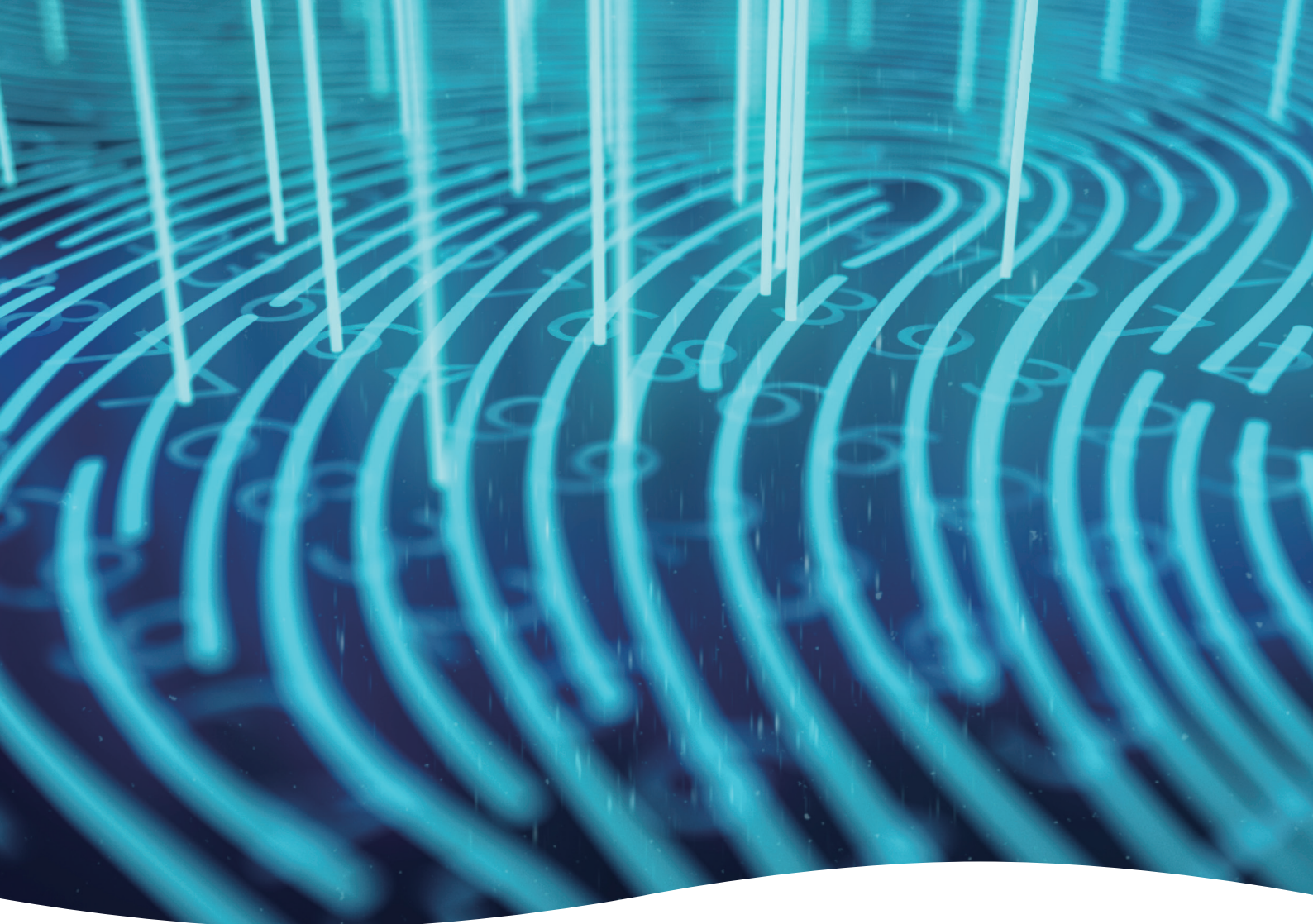
IDENTIFY INVALID SIGNATURES & WHAT TO DO?
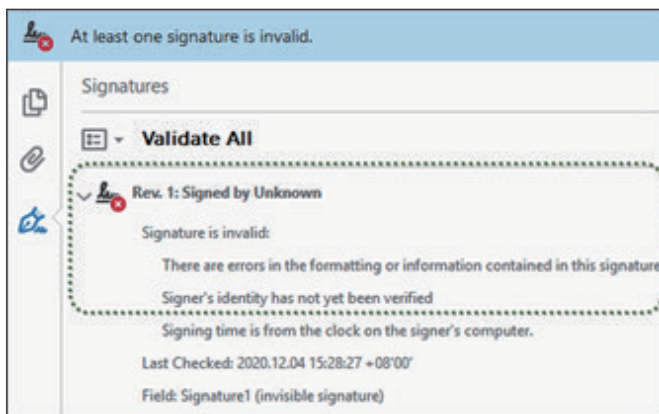
Documents missing a validated digital signatures or showing the message "At least one signature is invalid" should not be used.
- Signature validity is unknown
- Signed by Unknown
- Signature Is invalid
- No signature

If you encounter missing or invalid signatures, you should not use the document. Please contact your TÜV Rheinland representative.

We hope to have answered your most pressing questions. Please do not hesitate to contact us if you have any further questions. We truly believe that your business will benefit greatly with the significant reduction in turnaround time for reports and certificates, so that you can focus on growing your core business.

QR Code-Based Online Verification System, Enhancing Document Security and Authenticity

At TÜV Rheinland, we understand the importance of ensuring the authenticity and integrity of our test reports. To augment our digital signature features, we are introducing a QR code-based online verification system. This innovative addition allows for a quick and reliable method to verify the authenticity of your TÜV Rheinland documents.

On-Demand QR Code Printing

Upon request by customers or as required by specific accreditation schemes, TÜV Rheinland will incorporate a QR code on test reports. This QR code is your gateway to verifying the document's authenticity through a simple online process.

SIMPLE AND SECURE VERIFICATION PROCESS:

1. Scan to Verify:
   By scanning the QR code, you will be directed to our exclusive verification website, www.certipedia.com. This process is efficient and user-friendly, ensuring that you can quickly authenticate the document's validity.
2. Secure Online Access with QR Codes:
   Our QR codes are designed with a highly secure, unique ID featuring billions of possible combinations, which makes duplicating or guessing these codes almost impossible. To access the online report and verification, the physical report with its QR code must be available. This requirement ensures that only individuals with the actual report can access and verify its contents online, effectively preventing anyone from trying to find reports on Certipedia by randomly guessing QR code IDs.
3. Printed or Digital Compatibility:
   The system is designed to work seamlessly, whether the report is in digital format or printed. Even if the digital signature is lost in a printed copy, the QR code remains a reliable verification tool.

WHAT YOU WILL SEE ON CERTIPEDIA:

- Comprehensive Report Information:
  The Certipedia page displays crucial details such as the customer name, standard, tested product, test specification, laboratory, and page number. This feature allows you to compare the physical report with the original TÜV Rheinland report online.
- Access to Digital Original:
  For added convenience and security, you can view a digital version of the original report online. This capability is particularly useful in identifying any unauthorized alterations to the report.

Test Report No. 123456	
Valid	
Order Number	987654321
Client	CustomerName Ltd. Mainstreet 123 4711 Cologne
Test Item	Toaster
Date of Issue	2023-10-31
Status	Valid
Identification / Type No.	Model 4711 MK2
Test Specification	ISO / IEC 0815:2021
Test Laboratory	TUV Rheinland Yokohama Laboratories
Test Report Page Count	42
	VIEW REPORT

At TÜV Rheinland, we continuously strive to enhance our services and provide you with reliable and convenient tools to verify the authenticity of your documents. This QR code-based verification system is a testament to our commitment to document security and customer satisfaction.

TÜV Rheinland
Corporate Headquarter
Cologne, Germany

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