

# digiSeal®archive Ensuring long-term probative value of electronic documents

## Highlights

eIDAS ready

Ensures legally compliant, long-term probative value of electronic documents

Verifies manipulation of electronically archived documents

Basis: ArchiSig & international LTANS/ERS standard

Rapid processing of large document volumes thanks to efficient hash-tree process



## Requirement

Electronic signatures are generated using cryptographic algorithms that have a specific strength and security level. This strength gradually diminishes over time in line with technical advances, for instance as computers become more powerful.

Therefore in order to ensure that specific data and documents such as patient files retain their probative value in the long term, electronic signatures must be regularly updated using currently suitable algorithms. This process is generally described as 're-signing' or 'renewal'.

## Long-term probative value ensured on the basis of international standards

The digiSeal®archive software solution offered by secrypt GmbH enables existing data to be efficiently re-signed in good time based on the ArchiSig concept. This utilises the international LTANS/ERS standard (Long-Term Archive and Notary Services / Evidence Record Syntax) developed by the IETF (Internet Engineering Task Force).

For renewing signatures, digiSeal®archive uses official, legally compliant timestamps based on algorithms that the German Federal Office for Information Security (BSI) has classified as secure. In combination with archive and document management systems, digiSeal®archive therefore ensures the long-term probative value of digital data and its protection against manipulation.

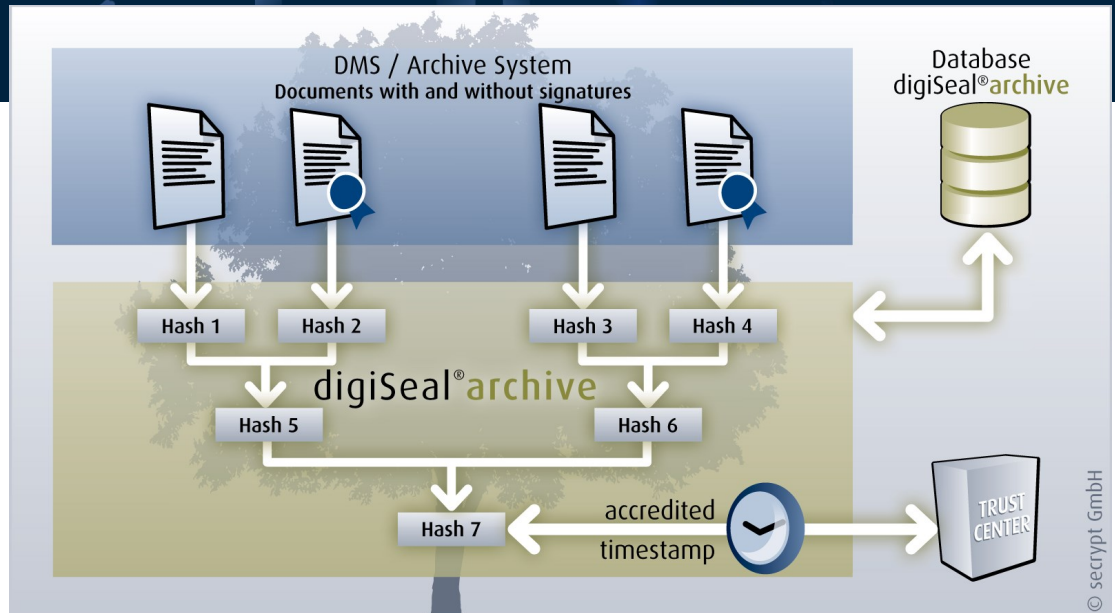
## Features

- Automatic background service
- Implementation of the international LTANS/ERS standard specified by the IETF
- Ensuring algorithm security by using a list of suitable algorithms
- Documentation of process steps in log file
- Application of timestamps from the following accredited providers, e.g.: D-TRUST (subsidiary of Federal Printing Office / Bundesdruckerei)
- Administration of hash-trees, (timestamp) signature information and data structures in a standard database

## Application areas (examples):

- Patient files
- Identity documents (e.g. pharmaceutical and aeronautical industries)
- Civil registers
- Land registers
- Patent applications
- Building and construction drawings

# digiSeal®archive Long-term probative value with digiSeal®archive



## Processes high document volumes using efficient hash-tree process

All documents whose signatures require renewal are arranged in an efficient tree structure. Unambiguous checksums (hash values) are generated above each respective document, which are bundled ever further so that the root of the tree consists of one single hash value. This value, which represents the overall tree with all documents, is furnished with a single timestamp.

This makes it possible to renew all signatures while retaining the probative value of the documents – with minimum timestamp costs.

digiSeal®archive administers all hash values, hash-trees and timestamp information in a separate standard database. The respective documents remain in the DMS or archive and are linked to the corresponding hash-trees with an unambiguous identification mark (Doc-ID).

## System requirements & technology

### Operating System Windows

Windows Server 2022 / 2019 / 2016 / 2014 / 2012 R2 / 2012  
Windows 11 / 10 / 8.1 / 8 / 7

### Operating System Linux

RedHat Linux Enterprise 7 / 8

### CPU

current processor

### Memory

4 GB (RAM) or higher

### Hard drive

at least 500 MB of hard drive capacity for the installation package

### Database

MySQL 5.6 / 8.0, Oracle 10g / 11g / 12c / 19c, Microsoft SQL Server 2005 / 2008 / 2012 / 2014 / 2016 / 2017 / 2019

### Interface

C- and JAVA-API-interface to the archive and document management system

### Communication with the timestamp services

via TSP with optional verification via HTTP, HTTPS, SSL and TLS; timestamp conform to RFC 3161 protocol

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