

# Sharing good Practices for European mobility Activities Development



Erasmus+ KA2 – Strategic Partnerships

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## Document processing, signing and sharing

LTTA-4: 16th October – 20th October 2017

Rzeszów, Poland



# Topics covered

## DOCUMENT PROCESSING SIGNING AND SHARING

- Sharing documents using email, online drives (Dropbox, OneDrive, iCloud, Google Drive)
- Security and privacy considerations when sharing data
- Signing and encrypting documents
- Considerations when working with shared data, overwriting, versioning, recovering
- New app: OneNote and why it might be useful

# Introduction

Cloud sharing services goes back to 2007 when Dropbox was unveiled.

Today there are over 50 various services on the market, with different purposes, features and prices.

Arguably, the biggest three are Google Drive, Dropbox and OneDrive – not necessarily in this order.

Less known ones are iCloud, Box, Sync, pCloud, idrive, SpiderOak, Zoolz, keepit, Carbonite and many more.

Some of them are actually very good.

# Pricing

All of those services provide some amount of data storage for free, but also paid, upgraded plans.

Dropbox: 2GB free, with referrals up to 15GB. Premium plan – 1TB of storage, \$99 yearly.

Google Drive: 15GB free, 100GB plan - \$19.99, 1TB plan - \$99. When getting G Suite, those prices are lower.

OneDrive: 5GB free, 50GB - \$29 yearly, 5TB - \$99 yearly. Paid plans allows you to use Office 365 Personal or Home at no additional cost.

# File synchronisation

## Dropbox:

- Platforms supported: Windows, iOS, Android, Linux
- Offers block level transfers
- LAN sync is available – enabled by default

# File synchronisation

## Google Drive:

- Platforms supported: Windows, iOS, Android
- Current client allows you to choose whatever folders you would like to sync
- Very fast, but not always reliable (sync failures), can be annoying with removable storage
- You can send invitations to work with others from desktop

# File synchronisation

## OneDrive:

- Platforms supported: Windows, iOS, Android
- From Windows 10, client is integrated into OS
- Allows direct sharing
- Allows collaboration from MS Office apps
- Depends on location, but can be very fast, faster than competition

# File sharing

## Dropbox:

- Both folders and files can be shared
- Only Pro users can set passwords and expiration dates
- Edit and read-only options
- Links accessible to anyone – without login



# File sharing

## Google drive:

- Both folders and files can be shared
- Both view and edit permissions at file and folder level
- Edit and read-only options
- Links accessible to anyone – without login
- No password protection for links
- No expiring links
- No way to audit shares

# File sharing

## OneDrive:

- Both folders and files can be shared
- Both view and edit permissions at file and folder level
- Edit and read-only options
- Links accessible to anyone – without login
- No password protection for links

# Collaborative editing

## Dropbox

- Unlike others, Dropbox does not offer own editing software
- Being technology partner with Microsoft, Office integration is good
- Not all features are supported for non-premium users

# Collaborative editing

## Google Drive

- Excellent integration with Google Docs suite, which is maybe not perfect, but good for most users
- Files can be opened in MS Office suite if installed on local PC
- Some unique features supported – e.g. Forms
- There is also a plugin which allows direct use of Office Online from Google Drive

# Collaborative editing

## OneDrive

- Arguably offers the best integration with current versions of MS Office, including very well done collaborative editing
- Files can be edited in Office Online, although not all options are supported

# Security

- Dropbox: encrypted all the way with AES, file versioning supported. Known recent issues: August 2016 – 68 million emails and hashed password leaked online – but data was old, from 2012. In January 2017 technical problem caused restoring large amount of old data into users' folders.
- In the past, there were some issues with privacy, but for now they seem to be fixed

# Security

## Google Drive:

- encrypted using TLS standard in transit, 128-bit AES used data in rest, including metadata
- Two-factor authentication supported
- They do scan and analyse everything what is uploaded
- “a worldwide license to use, host, store, reproduce, modify, create derivative works [...], communicate, publish, publicly perform, publicly display and distribute” your data
- This applies also to third-party associated with Google

# Security

## OneDrive:

- encrypted using TLS standard in transit, NOT encrypted while on disks – excluding business accounts (but not much documentation available)
- Two-factor authentication supported
- File versioning is supported only for MS Office files
- Microsoft has not the best reputation when it comes to privacy



# Security

Bottom line:

If it is really secret, don't put it into any of those. Use so called "zero-knowledge-security" clouds – which means only you can decrypt the data and provider has no means to access it.

Alternatively, encrypt files yourself before uploading.

# Real-life notes

## Dropbox:

- when you join shared folder, it's size eats up your space. E.g. if you have standard 2GB account, joining shared folder which has 1GB, eats immediately 1GB from your account – and everyone else as well.
- Editing file on two computers at the same time created two separate files
- Standard sharing gives all rights to everyone – also rights to delete everything (albeit un-delete is available)
- No way to stop sync if using mobile data
- Very easy photo sharing
- 2GB is really small amount for serious use

# Real-life notes

## Google Drive:

- Users are aware of Google approach to privacy – and often reluctant to use it, especially for sensitive data, e.g. timesheets, payslips, etc
- Sharing files and working with them seems to cause more trouble than with other services
- Google native docs are not exactly compatible with MS Office docx format, for complex documents it causes issues
- No way to stop sync if using mobile data
- Desktop client is resource-hungry and annoying as \*\*\*\*
- If some folder is shared as read only, you can still copy file on desktop client but it will NOT be synced – and you will not be notified
- While in general uploads are quick – but there is considerable delay e.g. for photos

# Real-life notes

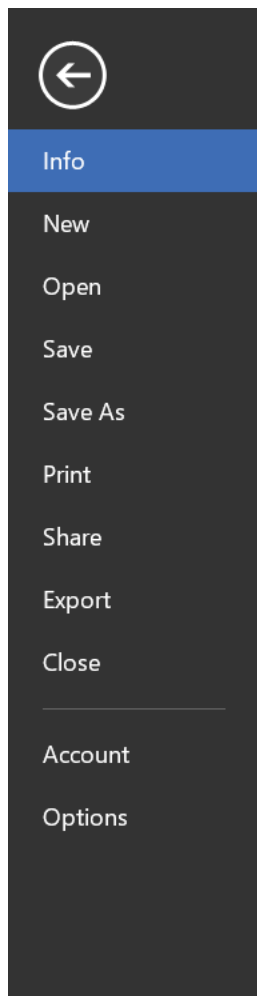
## OneDrive:

- Comes with OS and is activated automatically if licence is registered online
- If using mobile data it will stop synchronisation
- Requires all group members to have recent versions of Windows and Office – problem especially for Mac users
- Very fast when dealing with big amount of data

# Signing and encrypting documents

- In MS Office, signing is available for Word, Excel and PowerPoint
- After signing, document is marked as final (modifications invalidate the signature)
- Certificate-based encryption was promised long time ago – but still is not available
- Password based encryption uses 128-bit AES algorithm which is very secure with complex password (from Office 2007)
- Document can be locked completely or allow viewing

# Signing and encrypting documents

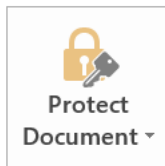


My very important document starts here.docx - Word

## Info

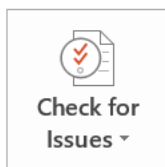
My very important document starts here

Dokumenty



### Protect Document

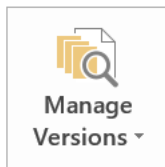
Control what types of changes people can make to this document.



### Inspect Document

Before publishing this file, be aware that it contains the following issues:

- Document properties and author's name

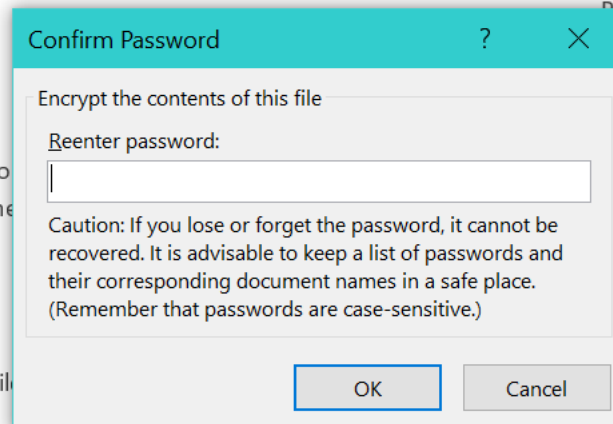


### Versions

There are no previous versions of this file.

### Properties

Size	18,0KB
Pages	1
Words	6
Total Editing Time	5 Minutes
Add a title	
Add a tag	
Add comments	
Related Dates	
Last Modified	Today, 20:32
Created	Today, 20:30
Last Printed	



# Signing and encrypting documents

Document1 - Word

- ←
- Info
- New
- Open
- Save
- Save As
- Print
- Share
- Export
- Close
- Account
- Options

## Info

**Protect Document**  
Control what types of changes people can make to this document.

**Protect Document**

- Mark as Final**  
Let readers know the document is final and make it read-only
- Encrypt with Password**  
Password-protect this document
- Restrict Editing**  
Control the types of changes others can make
- Restrict Access**  
Grant people access while removing their ability to edit, copy, or print.
- Add a Digital Signature**  
Ensure the integrity of the document by adding an invisible digital signature


### Properties

Size	Not saved yet
Pages	1
Words	6
Total Editing Time	1 Minute
Title	Add a title
Tags	Add a tag
Comments	Add comments

### Related Dates

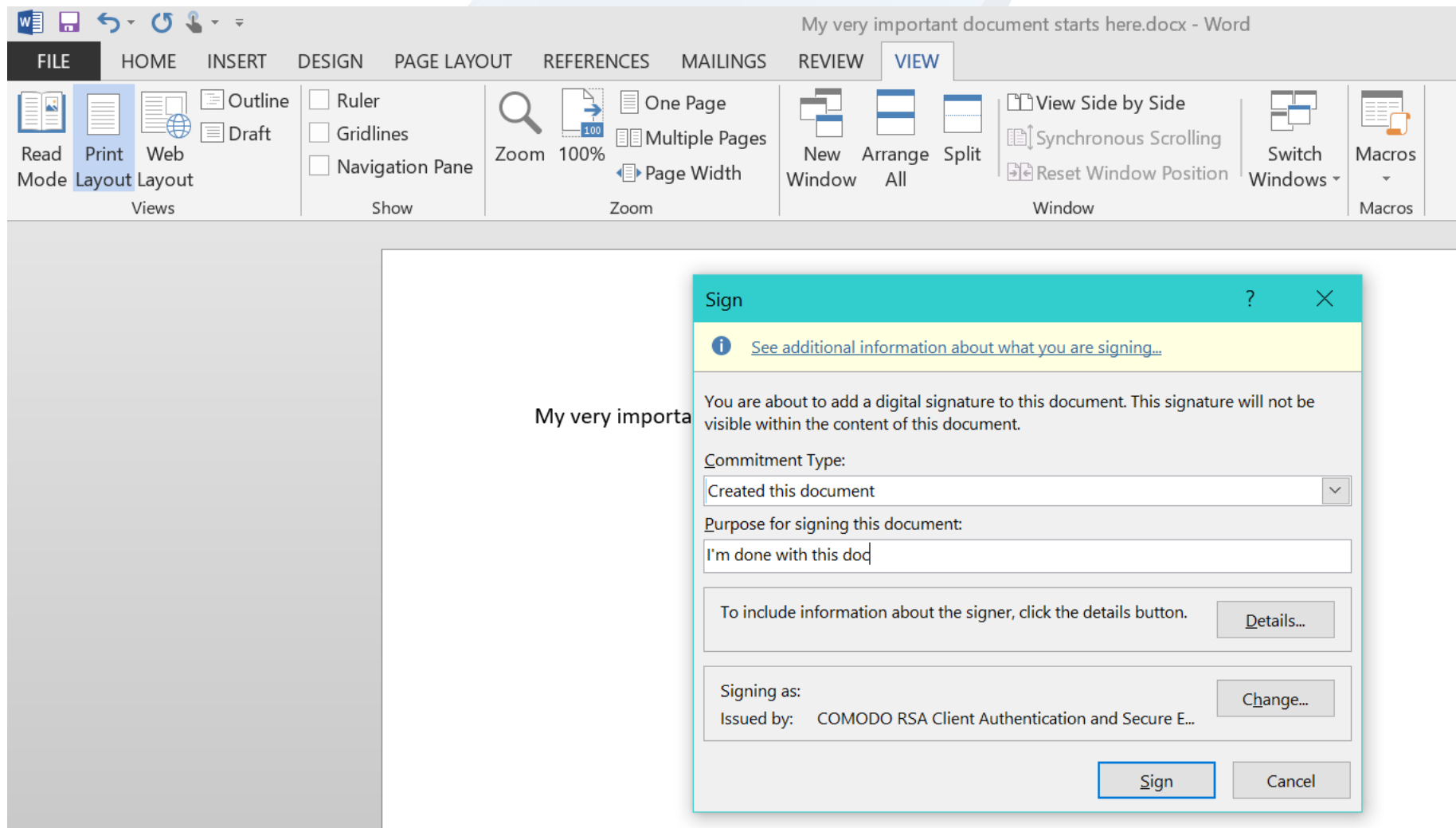
Last Modified	
Created	Today, 20:30
Last Printed	

### Related People

Author	 Chris Ciapala
	Add an author
Last Modified By	Not saved yet

[Show All Properties](#)

# Signing and encrypting documents



My very important document starts here.docx - Word

FILE HOME INSERT DESIGN PAGE LAYOUT REFERENCES MAILINGS REVIEW VIEW

Read Mode Print Layout Web Layout Draft

Views

Ruler Gridlines Navigation Pane

Show

Zoom 100%

One Page Multiple Pages Page Width

Zoom

New Window Arrange All Split

Window

View Side by Side Synchronous Scrolling Reset Window Position

Switch Windows

Macros

Macros

**Sign** ? X

[See additional information about what you are signing...](#)

You are about to add a digital signature to this document. This signature will not be visible within the content of this document.

Commitment Type:  
Created this document

Purpose for signing this document:  
I'm done with this doc

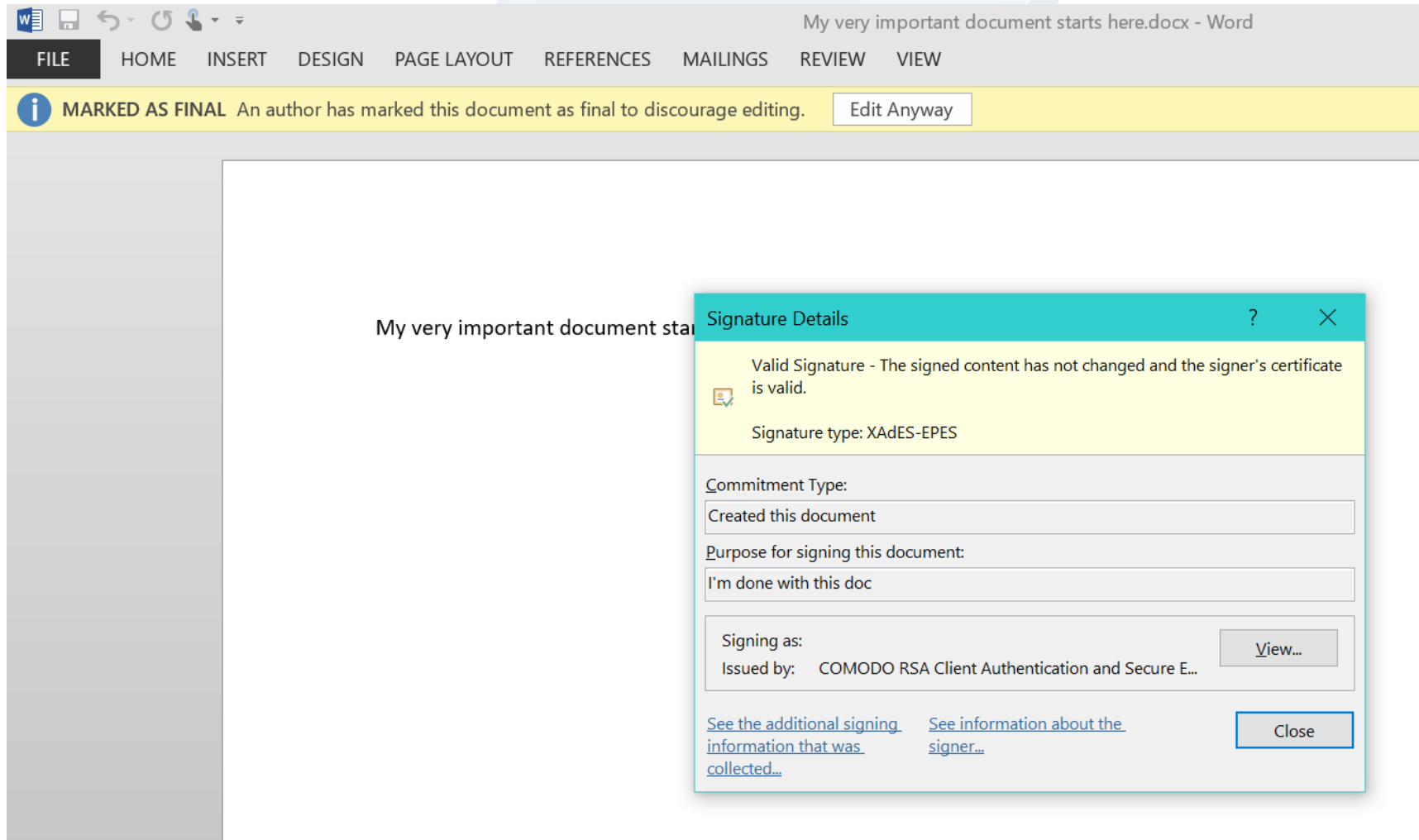
To include information about the signer, click the details button. [Details...](#)

Signing as:  
Issued by: COMODO RSA Client Authentication and Secure E... [Change...](#)

[Sign](#) [Cancel](#)



# Signing and encrypting documents



The screenshot shows the Microsoft Word ribbon interface with the 'FILE' tab selected. A yellow banner at the top indicates the document is 'MARKED AS FINAL' with the message 'An author has marked this document as final to discourage editing.' and an 'Edit Anyway' button. The main document area contains the text 'My very important document starts here.docx'. A 'Signature Details' dialog box is open, displaying the following information:

- Signature Details** (Title bar)
- Valid Signature - The signed content has not changed and the signer's certificate is valid.
- Signature type: XAdES-EPES
- Commitment Type:** Created this document
- Purpose for signing this document:** I'm done with this doc
- Signing as:** Issued by: COMODO RSA Client Authentication and Secure E... (with a 'View...' button)
- Links: [See the additional signing information that was collected...](#) and [See information about the signer...](#)
- Buttons: 'Close' and 'View...'

# OneNote

- The purpose is simple: to take notes
- To make it more confusing, there are three versions available: OneNote online, OneNote – free (preinstalled in Windows 10) and OneNote 2016, which comes as part of MS Office
- It allows you to put nearly any kind of media, text, images, drawings, recorded audio, clipped web pages, videos
- Allows tagging with 27 tag types, e.g. to do, question, important, etc
- If you have touch-screen device (like MS Surface), it allows you to hand write

# Thanks for listening!

Questions? Thoughts?

