



# PETs control matrix

## Annex 1: Assessment questionnaires



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# 1. Maturity and Stability

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## A. Maintenance

**1. Is the tool currently maintained?**

[Yes/No]

**2. When was the tool's latest update?**

[Less than 6 months ago/Between 6 months and 2 years ago/Other (please specify)]

**3. Is there any information available on the tool's version history (e.g. list of updates and bug fixes)?**

[Yes/No]

**If Yes:**

**3.1. Please provide more information** [Free text field]

**4. What is the frequency of updates?**

[Less than 6 months/Between 6 months and 2 years/Other (please specify)]

**5. Does the tool offer automatic notification of updates to the user?**

[Yes/No]

**6. Have there been any publicly known bugs/vulnerabilities of the tool affecting security and/or privacy of users?**

[Yes/No]

**If Yes:**

**6.1. Have the publicly known bugs/vulnerabilities been addressed by the tool's provider?**

[Yes/No]

**If Yes:**

**6.1.1. Please provide more information** [Free text field]

**If No:**

**6.1.2. Is the user informed or advised on what to do in order to minimise the effects of the non-fixed bugs/vulnerabilities (e.g. recommended alternate configurations)?**

[Yes/No]

**If Yes:**

**6.1.2.1. Please provide more information** [Free text field]

## **B. Privacy protection**

- 7. Have any features been added/removed/updated in the tool during the last year to enhance its security and privacy preserving functionalities?**

[Yes/No]

**If Yes:**

**7.1. Please provide more information** [Free text field]

- 8. Are there any known limitations of the tool (with regard to privacy protection)?**

[Yes/No]

**If Yes:**

**8.1. Please provide more information** [Free text field]

**8.2. Does the tool provide any information/advice to the user on how to overcome these limitations?**

[Yes/No]

**If Yes:**

**8.2.1. Please provide more information** [Free text field]

- 9. Should the tool be used in a specific environment (e.g. OS, specific settings) and/or in conjunction with other PETs/tools?**

[Yes/No]

**If Yes:**

**9.1. Please provide more information** [Free text field]

## **C. Community support**

- 10. Is there any active online community or forum for users of the tool?**

[Yes/No]

**If Yes:**

**10.1. Please provide more information** [Free text field]

- 11. Is there any active community or forum for developers maintaining/supporting the tool?**

[Yes/No]

**If Yes:**

**11.1. Please provide more information** [Free text field]

**12. How is the tool distributed?**

[Closed source/Open source/Other (please specify)]

**If Open Source:**

**12.1. What is the type of license?**

[Proprietary/GNU-GPL/GNU-LGPL/BSD/MIT/Hybrid/Other (please specify)]

**12.1.1.1. Please provide more information on the licensing type** [Free text field]

#### **D. Audit and review**

**13. Are there any reviews and/or security/privacy audit reports available?**

[Yes/No]

**If Yes:**

**13.1. Please provide more information** [Free text field]

**14. Are there any publications of scientific papers, expert reports or external certifications related to the tool?**

[Yes/No]

**If Yes:**

**14.1. Please provide more information** [Free text field]

## 2. Privacy protection

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### A. Access of personal data stored on the user's device

#### 1. Does the tool access any personal data stored on the user's device?

[Yes/No]

##### **If Yes:**

##### **1.1. What types of personal data are being accessed?** (more than one choices)

[User profile information/User accounts/Device identifiers/List of contacts/Calendar events/Text & multimedia messages (SMS/MMS)/Call logs/Photos/Videos/Audio files/Documents/Bookmarks and browsing history/Network-based location data/GPS data/Cellular data settings/Wi-Fi connection information/Bluetooth connection information/Wearable sensors/activity data/Other (please specify)]

##### **1.2. How frequently are the personal data being accessed?**

[Several times per day/Several times per week/Several times per month/Several times per year/Other (please specify)]

##### **1.3. What is the purpose of the access?** (more than one choices)

[Basic tool's functionality (e.g. establishing contacts for a messaging app)/Provision of added value services (e.g. offering a location-based service to registered users)/Analytics/Other (please specify)]

##### **1.4. Is the user informed about the tool gaining access to his/her personal data stored on the device?**

[Yes/Yes, in some cases (please specify)/No]

##### **If Yes or Yes in some cases:**

##### **1.4.1 How is the information provided?** (more than one choices)

[Pop-up window (e.g. upon installation or opening of the tool)/Banner/Privacy policy/Other (please specify)]

##### **1.5. Is the user asked for consent before access to his/her personal data is performed?**

[Yes/Yes, in some cases (please specify)/No]

##### **If Yes or Yes in some cases:**

##### **1.5.1 Is the user asked to consent for each specific access to data (permission)?**

[Yes/Yes in some cases (please specify)/No]

##### **1.6. Does the tool provide the same functionality if consent is not granted?**

[Yes/No]

##### **If No:**

##### **1.6.1 Please provide more information** [Free text field]

## **B. Transfer of personal data stored on the user's device**

### **2. Does the tool transfer any personal data from the user's device to any party (including the developer/vendor of the tool)?**

[Yes/No]

#### **If Yes**

#### **2.1 Which are the recipients of the data? (more than one choices)**

[Tool's provider/developer/OS developer/Device manufacturer/Third party service provider (e.g. cloud service provider)/Analytics company/Advertising company/Other (please specify)]

#### **2.2 What types of personal data are being transferred? (for each selected recipient - more than one choices)**

[User profile information/User accounts/Device identifiers/List of contacts/Calendar events/Text & multimedia messages (SMS/MMS)/Call logs/Photos/Videos/Audio files/Documents/Bookmarks and browsing history/Network-based location data/GPS data/Cellular data settings/Wi-Fi connection information/Bluetooth connection information/Wearable sensors/activity data/Other (please specify)]

#### **2.3 Where are the recipients of the data located? (for each selected recipient)**

[European Union, Other (please specify)]

#### **2.4 What is the purpose of the transfer? (for each selected recipient – more than one choices)**

[Basic tool's functionality (e.g. establishing contacts for a messaging app)/Provision of added value services (e.g. offering a location-based service to registered users)/Analytics/Other (please specify)]

##### **2.4.1 Describe in detail the purpose of the transfer for each particular recipient**

[Free text field]

#### **2.5 Is the user informed about the transfer of his/her personal data?**

[Yes/Yes, in some cases (please specify)/No]

#### **If Yes or Yes in some cases:**

##### **2.5.1 How is the information provided to the user? (more than one choices)**

[Pop-up window (e.g. upon installation or opening of the tool)/Banner/Privacy policy/Other (please specify)]

#### **2.6 Is the user asked for consent before the transfer of his/her personal?**

[Yes/Yes, in some cases (please specify)/No]

#### **If Yes or Yes in some cases:**

##### **2.6.1 Is the user asked for consent before each specific transfer?**

[Yes/Yes in some cases (please specify)/No]

**2.6.2 Does the tool provide the same functionality if consent is not granted?**

[Yes/No]

**If No:**

**2.6.2.1 Please provide more information** [Free text field]

### **C. Profiling**

**3. Does the tool access or store any data on the user's device (e.g. cookies) for the purpose of profiling (e.g. for advertising)?**

[Yes/No]

**If Yes:**

**3.1 Is the user informed about possible profiling or tracking?**

[Yes/No]

**If Yes:**

**3.1.1 How is the information provided? (more than one choices)**

[Pop-up window/Banner/Privacy policy/Other (please specify)]

**3.2 Is the user asked for consent before profiling/tracking is activated?**

[Yes/No]

**3.2.1 Does the tool provide the same functionality if consent is not granted?**

[Yes/No]

**4. Does the tool use any third party libraries (e.g. for profiling and/or advertising purposes)?**

[Yes/No]

**If Yes:**

**4.1 Please provide more information** [Free text field]

### **D. Documented privacy policy**

**5. Has a data protection impact assessment been performed before putting the tool into operation?**

[Yes/No]

**6. Is there a documented privacy policy regarding the tool's operation?**

[Yes/No]

**If Yes:**

**6.1 Please provide more information** [Free text field]

**6.2 Does the privacy policy cover all cases of personal data processing related to the tool's operation?**

[Yes/No]



**If Yes:**

**6.2.1 Are retention periods of personal data indicated?**

[Yes/No]

**6.2.2 Are the recipients of personal data indicated?**

[Yes/No]

**6.2.3 Are security measures for safeguarding personal data indicated?**

[Yes/No]

**6.2.4 Does the policy indicate any accountability mechanisms (e.g. log files) that are in place?**

[Yes/No]

**6.2.5 Does the policy indicate any specific quality control mechanisms that are in place?**

[Yes/No]

**6.2.6 Does the policy indicate the procedures for the user's access to and modification of his/her personal data?**

[Yes/No]

**If Yes:**

**6.2.6.1 Please provide more information** [Free text field]

**7. Is the user clearly informed in case of any change of the privacy policy or the terms and conditions of the tool/service?**

[Yes/No]

**If Yes:**

**6.1. Please provide more information or link to relevant policy document** [Free text field]

**8. Is it clearly indicated (e.g. in the privacy policy or other document) how the user's personal data will be treated in case that the tool/service is no longer provided?**

[Yes/No/N/A]

**If Yes:**

**8.1 Can the user access and modify/delete this data?**

[Yes/No]

**8.2 What is the retention period?** [Free text field]

## 3. Usability

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### A. Installation process

**1. Where can the tool be downloaded from?**

[Official store/Developer website/Other (please specify)]

**2. Is there any available documentation about the installation of the tool?**

[Yes/No]

**If Yes:**

**2.1. What type of documentation is available?** (more than one choices)

[Manual/Tutorial/FAQ/Other (please specify)]

**3. What is the level of difficulty for installing the tool?**

[Easy: e.g. the tool is installed directly by clicking a button/Moderate: e.g. the user might be asked to take some actions or perform some tasks upon installation/Difficult: e.g. the user might need to consult additional or external documentation to complete the installation].

**4. Are there any minimum system requirements for the tool's installation?**

[Yes/No]

**If Yes**

**4.1. Please describe the minimum system requirements** [Free text field]

**5. Does the tool require that the user provides any personal data upon installation (e.g. for registration purposes)?**

[Yes/No]

**If Yes:**

**5.1. What types of personal data are required?** (more than one options)

[Password/Email account/Phone number/Other (please specify)]

**5.2. Can the tool be installed without the user providing any personal data?**

[Yes/No]

**If Yes:**

**5.2.1 Does the tool offer the same functionality/service if the required personal data are not provided by the user?**

[Yes/No]

**If No:**

**5.2.1.1 Please provide more information** [Free text field]

**6. Is the installation of any additional software required (in order for the tool to provide the expected functionality)?**

[Yes/No]

**If Yes:**

**6.1. Is the user informed prior to the tool's installation?**

[Yes/No]

**7. Are there any changes performed to the user's device or to applications on the device upon the installation process of the tool (e.g. changes in the selected search engine, homepage, tool bars, etc.)?**

[Yes/No]

**If Yes:**

**7.1. Please provide more information** [Free text field]

**7.2. Is the user informed about these changes prior to the tool's installation?**

[Yes/No]

**7.3. Is the user asked for consent prior to the changes?**

[Yes/No]

## **B. Uninstallation process**

**8. Is there any available documentation about the uninstallation of the tool?**

[Yes/No]

**If Yes:**

**8.1. What type of documentation is available?** (more than one options)

[Manual/Tutorial/FAQ/Other (please specify)]

**9. What is the level of difficulty for uninstalling the tool?**

[Easy: e.g. the tool is uninstalled directly by clicking a button/Moderate: e.g. the user might be asked to take some actions or perform some tasks upon uninstallation/Difficult: e.g. the user might need to consult additional/external documentation to uninstall the tool]

**10. Are there any application data maintained at the user's device after uninstallation?**

[Yes/No]

**If Yes:**

**10.1. What types of data are maintained?** (more than one options)

[Configuration files/Log files/Other (please specify)]

**10.2. Is the user informed about these data?**

[Yes/No]

**10.3. Can the user delete these data?**

[Yes/No]

**C. Use and configuration of the tool**

**11. What is the expected level of expertise of the user (for correctly using the tool)?** (more than one options)

[Low: e.g. no special expertise is needed; the use of the tool is straight forward and all features are clearly indicated/Medium: e.g. the user might need to take some actions (e.g. initial configuration or modification of settings) in order to make use of certain features/High: e.g. the user might need to consult additional/external documentation in order to correctly use the tool/service]

**12. Does the default configuration of the tool provide the highest level of privacy protection (privacy by default)?**

[Yes/No]

**12.1. Please explain** [Free text field]

**13. Can the user configure the privacy/security features of the tool?**

[Yes/No]

**If Yes:**

**13.1. What is the level of difficulty of configuration?**

[Easy: e.g. there is a simple configuration wizard/panel/Moderate: e.g. the user might need to change a set of settings in different tabs/windows/Difficult: the user might need to consult additional/external documentation in order to make the desired configuration]

**14. Can the user customize the user interface?**

[Yes/No]

**If Yes:**

**14.1. What features of the tool can be customized?** [Free text field]

**14.2. What is the level of difficulty of customization?**

[Easy: e.g. with the use of specific buttons/Moderate: e.g. the user might need to change a set of settings in different tabs/windows/Difficult: the user might need to consult additional/external documentation in order to make the desired customization]

**15. Is there any available documentation about the use and configuration of the tool?**

[Yes/No]

**If Yes:**

**15.1. What type of documentation is available?** (more than one options)

[Manual/Tutorial/FAQ/Other (please specify)]

**16. Does the tool provide a support service for the users?**

[Yes/No]

**If Yes:**

**16.1. In what way is the support service provided?** (more than one options)

[Email list/Users forum/Contact information (e.g. email address)/Other (please specify)]

## 4. Secure messaging applications

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### A. End-to-end encryption

1. **Can the tool provide end-to-end encryption (i.e. no third party, including the tool's provider, can have access to the content of the communication)?**

[Yes/No]

**If Yes:**

- 1.1. **Please provide encryption and key distribution algorithms and key lengths** [Free text field]

- 1.2. **Can the user configure the encryption algorithm and the key length?**

[Yes/No]

- 1.3. **Is end-to-end encryption enabled by default?**

[Yes/No]

**If No:**

- 1.3.1. **Is the user informed (e.g. on the tool's front panel or menu) on how to enable end-to-end encryption?**

[Yes/No]

- 1.4. **Is the user notified when end-to-end encryption has not been established or has failed?**

[Yes/No]

- 1.5. **Is the content of past encrypted communications protected if a key is compromised (forward secrecy)?**

[Yes/No]

- 1.6. **Is the content of future encrypted communications protected if a key is compromised (backward secrecy)?**

[Yes/No]

- 1.7. **Where are the encryption keys generated and temporarily stored?** (more than one options)

[User's device/Tool provider's server/Server of third party service provider (e.g. cloud service provider)/Other, please specify]

- 1.8. **Which parties have access to the encryption keys?** (more than one options)

[User/Tool's provider/Third party service provider (e.g. cloud provider)/Other, please specify]

- 1.9. **What types of communication content are protected by end-to-end encryption?** (more than one options)

[Voice calls/Video calls/Text messages/File attachments (e.g. audio/video files, documents, etc.)/Other (please specify)]

**1.10. Are communication metadata protected by end-to-end encryption?**

[Yes/No]

**If Yes:**

**1.10.1. Please explain which types of metadata are not protected by end-to-end encryption** [Free text field]

**1.11. Does the tool inform the user about the types of communication data that are not protected by end-to-end encryption?**

[Yes/No]

**1.12. Are group chats protected with end-to-end encryption?**

[Yes/No/NA]

**If Yes:**

**1.12.1. Is the level of protection offered to group messages the same as the one offered to individual messages?**

[Yes/No]

## **B. Client-server encryption**

**2. Does the tool connect to any remote servers?**

[Yes/No]

**If Yes:**

**2.1. What remote servers does the tool connect to?** (more than one options)

[Tool provider's servers/Third party service provider's servers (e.g. cloud service provider)/Other (please specify)]

**2.2. Where are the remote servers physically located?** (for each remote server – more than one options)

[European Union/Other (please specify)]

**2.3. What is the purpose of the connection to the remote servers?** (for each remote server – more than one options)

[Basic tool's functionality (please specify)/Backup/Analytics/Other (please specify)]

**2.4. Is the communication between the tool and the remote servers encrypted (e.g. by using TLS or other similar protocol)?**

[Yes/Yes, in some cases (please specify)/No]

**If Yes:**

**2.4.1. Please provide information about the encryption protocol/algorithms/key lengths used**  
[Free text field]

**2.4.2. Is the user notified when client-server encryption has not been established or has failed?**

[Yes/No]

## C. Security of stored data

### C1. Data storage on user's device

**3. Does the tool store any personal data related to a communication session on the user's device?**

[Yes/No]

**If Yes:**

**3.1. What types of communication data are stored?** (more than one options)

[Content/Metadata/Backup – content/Backup – metadata/Other (please specify)]

**3.2. Is the user informed in case that data back-ups (content/metadata) are automatically stored on the device?**

[Yes/No]

**3.3. Is the user informed about the exact location of the communication data on the device?**

[Yes/Yes, in some cases (please specify)/No]

**3.4. Can the user choose not to have his/her communication data stored on the device?**

[Yes/Yes, in some cases (please specify)/No]

**3.5. Can the user access all of his/her communication data stored on the device?**

[Yes/No]

**If No:**

**3.5.1. Please specify which types of data cannot be accessed by the user**

[Free text field]

**3.6. How long are the communication data stored on the user's device?** [Free text field]

**3.7. Can the stored data be permanently erased by the user?**

[Yes (for all types of data)/Yes for content/Yes for metadata/Yes for backup – content/Yes for backup – metadata/Yes for some types of content/metadata (please specify)/No]

**If Yes:**

**3.7.1. How can the user request the deletion?** (more than one options)

[Through a tool's option (e.g. in settings or using a specific button)/By uninstalling the application/With the use of other tools (e.g. by using a file explorer or another application)/Other (please specify)]

**3.8. Are the data stored (on the user's device) in an encrypted form?**



[Yes (for all types of data)/Yes for content/Yes for metadata/Yes for backup – content/Yes for backup – metadata/Yes for some types of content/metadata (please specify)/No]

**If Yes:**

**3.8.1. Please provide encryption algorithm and key length** [Free text field]

**3.8.2. Which parties can access and decrypt the stored communication data from the user's device?** (more than one options)

[User/Tool's provider/Third party service provider (e.g. cloud service provider)/Other (please specify)]

**3.8.3. In case that the encryption key is lost, can the user retrieve his/her communication data from the device?**

[Yes/No]

**If Yes:**

**3.8.3.1. Please provide more information** [Free text field]

## **C2. Data storage on remote servers**

**4. Does the tool store any personal data related to a communication session on remote servers?**

[Yes/No]

**If Yes:**

**4.1. What remote servers are used for the storage of data?** (more than one options)

[Tool provider's servers/Third party service provider's servers (e.g. cloud service provider)/Other (please specify)]

**4.2. What is the purpose of the data storage on the remote servers?** (for each remote server – more than one options)

[Basic tool's functionality (please specify)/Backup/Analytics/Other (please specify)]

**4.3. What types of data are being stored?** (for each remote server – more than one options)

[Content/Metadata/Backup – content/Backup – metadata/Other (please specify)]

**4.4. Where are the remote servers physically located?** (for each remote server – more than one options)

[European Union/Other (please specify)]

**4.5. How long are the data stored on the remote servers?** (for each remote server)

**4.6. Is the user informed about the types of communication data stored on remote servers?**

[Yes/Yes, in some cases (please specify)/No]

**4.7. Can the user choose not to have his/her communication data stored on remote servers?**

[Yes/Yes in some cases (please specify)/No]

**4.8. Can the user access his/her communication data on all remote servers?**

[Yes/Yes in some cases (please specify)/No]

**If Yes in some cases or No:**

**4.8.1. Please explain in which cases the user cannot access his/her data and why**

[Free text field]

**If Yes or Yes in some cases:**

**4.8.2. What is the process followed by the user to access his/her data? (more than one options)**

[Selecting specific options/buttons on the tool's user interface/Contacting the tool's provider/Contacting a third party service provider (please specify)/Other (Please specify)]

**4.9. Can the communication data be permanently erased from all remote servers upon user's request?**

[Yes/Yes, in some cases (please specify)/No]

**If Yes in some cases or No:**

**4.9.1. Please explain in which cases the data cannot be erased and why.**

Free text field

**If Yes or Yes in some cases:**

**4.9.2. How can the user request the deletion? (more than one options)**

[By selecting specific options/buttons on the tool's user interface/By contacting the tool's provider/By contacting a third party service provider (please specify)/Other (please specify)]

**4.9.3. When does the deletion take place?**

[Immediately after the user's request for deletion/Other (please specify)]

**4.10. Does the tool verify the integrity of the communication data stored on remote servers (upon data retrieval from the servers)?**

[Yes/No]

**4.11. Are the communication data stored on remote servers in an encrypted form? (for each remote server)**

[Yes (for all types of data)/Yes for content/Yes for metadata/Yes for backup – content/Yes for backup – metadata/Yes for some types of content/metadata (please specify)/No]

**If Yes:**

**4.11.1. Please provide encryption algorithm and key length [Free text field]**

**4.11.2. Which parties can access and decrypt the stored communication data from the remote servers? (for each remote server)**

[User/Tool's provider/Third party service provider (e.g. cloud service provider)/Other (please specify)]

**4.11.3. In case that the encryption key is lost, can the user retrieve his/her communication data from the remote server?**

[Yes/No]

**If Yes:**

**4.11.3.1 Please provide more information** [Free text field]

## **D. Authentication**

### **5. Does the tool support user authentication?**

[Yes/No]

**If Yes:**

**5.1. Please specify the authentication protocol used** [Free text field]

**5.2. Are users authenticated automatically (in-band) during the initialization of a communication session?**

[Yes/No]

**If No:**

**5.2.1. Does authentication take place in a non-automated way (out-band), i.e. manually via a separate channel?**

[Yes/No]

**5.3. Does the tool support any manual verification technique?** (more than one options)

[Yes, encryption key fingerprints/Yes, QR code scanning/Yes, other technique (please specify)/No]

**5.4. Does the tool provide deniable authentication?**

[Yes/No]

### **6. Does the tool support message authentication during end-to-end communication?**

[Yes/No]

### **7. Does the tool support client-server authentication?**

[Yes/No]

**If Yes:**

**7.1. Please specify the authentication protocol used** [Free text field]

### **8. Does the tool support message authentication during client-server communication?**

[Yes/No/NA]

### **9. Is the use of “public key pinning” or “certificate pinning” supported for client-server authentication?**

[Yes/No]

### **10. Does the tool support the use of self-signed certificates?**

[Yes/No/NA]

**If Yes:**

**10.1. Please provide more information** [Free text field]

## E. Anonymous communication

**11. Can the tool provide anonymous end-to-end communication (i.e. no third party, including the tool's provider, can identify the communicating parties)?**

[Yes/No]

**If Yes:**

**11.1. What specific measures are in place in order to support anonymity?** [Free text field]

**11.2. Are communications protected against traffic analysis?**

[Yes/No]

**11.3. Does any remote server (involved in the communication) process any metadata relating to the user (e.g. server of the tool's provider or third party service provider)?**

[Yes/No]

**If Yes:**

**11.3.1. Please indicate what metadata are being processed** (more than one options)

[Contact information/Location/Device identifiers (e.g. IMEI or MEID, MSISDN, IMSI, ICC-ID, etc.)/Time of received or sent messages/IP address/Information linked to the length of the interaction (i.e. the length of the message or the duration of a phone call)/Other (please specify)]

**If No (to question 11):**

**11.4. Can the tool be used in conjunction with other tools to provide anonymous end-to-end communication?**

[Yes/No]

**If Yes:**

**11.4.1. Please provide more information** [Free text field]

**11.5. Does the tool allow the use of pseudonyms upon user registration?**

[Yes/No]

## 5. Virtual Private Networks (VPNs)

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### A. Identity protection

#### A1. General information

**1. What types of use case scenarios can the VPN service/tool be applied for?**

[Protecting confidentiality of communications when using untrusted networks (e.g., public WLANs)/Bypassing blocking of internet access (e.g., from specific networks/countries)/Protection from internet surveillance (e.g., by private/public organizations )/Other (Please specify)]

**2. What are the most important attributes and advantages of the VPN service/tool?**

[Free text field]

**3. Under which jurisdiction does the VPN provider operate? (more than one options)**

[European Union (please specify country/ies)/Other (please specify country/ies)]

**4. Are the VPN servers hosted by the VPN provider or by a third party provider? (more than one options)**

[VPN provider/Third party provider (please specify)]

**5. Are the VPN servers operated by the VPN provider or by a third party provider? (more than one options)**

[VPN provider/Third party provider (please specify)]

**6. Where are the VPN servers located? (more than one options)**

[European Union (please specify country/ies)/Other (please specify country/ies)]

**7. Can the user select and/or change the country where the VPN server (used for the tunnelling of communication) is located?**

[Yes/No]

**8. How is the VPN service financed?**

[Annual/monthly subscription fees/Advertisements /Donations/Other (Please specify)]

**8.1. Please provide more information on the VPN financial model [Free text field]**

**8.2. Is the financial model based on the processing of users' personal data (e.g., based on behavioural advertising)?**

[Yes/No]

**If Yes:**

**8.2.1. Please provide more information [Free text field]**

**9. Does the VPN service support anonymous payment methods?**

[Yes/No]

**If Yes:**

**9.1 Which are these methods?**

[Cryptocurrency (e.g., Bitcoins)/Store gift cards/Other (Please specify)]

**10. Are the users allowed to connect to anonymous (e.g. 'hidden') services?**

[Yes/No]

**If Yes:**

**10.1 Please provide more information [Free text field]**

**A2. IP address management**

**11. Does the VPN service provide the possibility for multiple users to share the same IP address?**

[Yes/No]

**If Yes:**

**11.1. What is the average number of users that share the same IP address within an hourly timeslot on a daily basis?**

[1-20/21-50/51-100/101-500/501-5000/5000<]

**11.2. Is the number of connected users sharing the same IP address known to the user?**

[Yes/No]

**11.3. Is there a minimum/maximum threshold set for the number of users sharing the same IP address?**

[Yes/No]

**If Yes:**

**11.3.1. What is this threshold and what is its purpose? [Free text field]**

**12. Do all user's devices (same account) that are connected to the VPN service share the same IP address?**

[Yes/No]

**13. Does the IP address allocated to the user's device by the VPN service change automatically?**

[Yes/No]

**If Yes:**

**13.1. How often does the IP address change? [Free text field]**

**13.2. Does the change always result to a new allocated IP address in the same country (e.g., if a preferred country was originally selected by the user)?**

[Yes/No]

**13.3. Can the user prevent the IP address from changing automatically?**

[Yes/No]

**14. Can the user change the allocated IP address on demand?**

[Yes/No]

**15. Over how many IP addresses per country can the user request a change?** [Free text field]

### **A3. Protection against abuse of service**

**16. What actions are considered as an “abuse” of the VPN service?** (more than one options)

[Incoming/Outgoing cyber-attacks/Illegal content (e.g., child pornography)/Torrent/ file sharing/Spam e-mails/Other (Please specify)]

**17. What measures are in place to monitor, detect and mitigate an “abuse” of the VPN service?**

[Free text field]

**18. Has the VPN client built-in DNS leakage protection?**

[Yes, by default/Yes, as an option (for the user)/No]

**If Yes (by default or as an option):**

**18.1. Please provide more information** [Free text field]

**19. Is a VPN kill switch available (feature to instantly switch off the internet connection in case the VPN connection fails)?**

[Yes, by default/Yes, as an option (for the user)/No]

**If Yes:**

**19.1. Please provide more information** [Free text field]

**20. Is a VPN firewall available?**

[Yes, by default/Yes, as an option (for the user)/No]

**If Yes:**

**20.1. What are the ports/services blocked by default?** [Free text field]

**21. Is protection against fingerprinting provided?**

[Yes/No]

**If Yes:**

**21.1. Please provide more information** [Free text field]

**22. Is protection against traffic analysis provided?**

[Yes/No]

**If Yes:**

**22.1. Please provide more information** [Free text field]

**A4. Log files**

**23. Does the VPN provider maintain any logs which could allow matching an IP address or other identifier to a user of the service?**

[Yes/No]

**If Yes:**

**23.1. What types of logs are maintained?** [Free text field]

**23.2. Where are the logs maintained?** (more than one options)

[VPN provider/Third party service provider (please specify)/Other (please specify)]

**23.3. How long are the logs maintained?**

[Less than a week/Less than a month/Less than six months/Less than a year/Indefinitely/Other (please specify)]

**23.4. Can the user choose not to have the logs maintained?**

[Yes/No]

**If Yes:**

**23.4.1. Is this applicable to all types of logs in all servers' locations?**

[Yes/No]

**If No:**

**23.4.1.1. Please provide more information** [Free text field]

**23.5. Can the user ask for the permanent deletion of logs from all servers (before the end of the retention period)?**

[Yes/No]

**If No**

**23.5.1. Please provide more information** [Free text field]

**If No (to question 23):**

**23.6. Are there any other types of logs maintained?** [Free text field]

**A5. Limitations**

**24. Are there any known limitations of the VPN tool/service that could affect the user's privacy?**

[Yes/No]

**If Yes:**

**24.1. Please provide more information** [Free text field]

**25. Can the protection of the user's privacy be enhanced with the combined use of other tools?**

[Yes/No]



**If Yes:**

**25.1. Please provide more information on possible tools that can be used.**

[Free text field]

**B. Encryption**

**24. Is the connection between the VPN client (user's device) and the VPN server protected by encryption?**

[Yes/No]

**If Yes:**

**24.1. What is the VPN protocol used? (more than one options)**

[OpenVPN/L2TP- IPsec/PPTP/Other (please specify)]

**24.2. Please provide encryption algorithms/key lengths [Free text field]**

**24.3. Is it possible for the user to select among different VPN protocols?**

[Yes/No]

**24.4. Does the tool notify the user when encryption has not been established or has failed?**

[Yes/No]

**24.5. Where are the encryption keys generated? (more than one options)**

[VPN client (user's device)/VPN provider's server/Third party service provider's server (please specify)/Other (please specify)]

**24.6. Are the encryption keys stored?**

[Yes/No]

**If Yes:**

**24.6.1. Where are the encryption keys stored? (more than one options)**

[VPN client (user's device)/VPN provider's server/Third party service provider's server (please specify)/Other (please specify)]

**24.6.2. Who has access to the encryption keys? (more than one options)**

[User/VPN provider/Third party service provider (please specify)/Other (please specify)]

**C. Side effects**

**25. Are there any known cases where the use of the VPN tool/service has resulted to the blocking of user's communication (e.g. due to censorship or technical reasons like enterprise WiFi or firewall policies)?**

[Yes/No]

**If Yes:**

**25.1 Please provide more information or links to known cases of blocking [Free text field]**

**25.2. Does the tool provide any blocking circumvention mechanism? (more than one options)**

[Yes, by connecting to a different server/Yes, by forcing TCP 80 or 443 ports/Yes, other (please specify)/No]

**26. Does the tool limit the use of any service or protocol?**

[Yes/No]

**If Yes:**

**26.1. Please provide more information** [Free text field]

**27. Are there any known performance issues related to the use of the tool/service?**

[Yes/No]

**If Yes:**

**27.1. Please provide more information on known performance issues** [Free text field]

## 6. Anonymizing networks

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### A. Anonymity/Identity protection

#### A1. General information

**1. What types of use case scenarios can the anonymizing network be applied for? (more than one options)**

[Protecting confidentiality of communications when using untrusted networks (e.g., public WLANs)/Bypassing blocking of internet access (e.g., from specific networks/countries)/Protection from internet surveillance (e.g., by private/public organizations )/Protection of anonymity of users (e.g. when communicating or browsing online)/Other (Please specify)]

**2. What are the most important attributes and advantages of the anonymizing network?**

[Free text field]

**3. What is the adversarial model that the anonymizing network is protecting against? Please provide examples (i.e., types of attackers/attack scenarios).**

[Free text field]

**4. Which are the typical operators of the network's nodes? [Free text field]**

**5. Is any party in the network able to restrict/control the operation of certain network's nodes?**

[Yes/No]

**If Yes:**

**5.1. Please provide more information [Free text field]**

**6. Does the user have the option to select specific nodes in the network (e.g. a list of entry/exit nodes)?**

[Yes/No/NA]

**If Yes:**

**6.1 Please provide more information [Free text field]**

**7. Does the user have the option to exclude/avoid specific nodes in the network?**

[Yes/No/NA]

**If Yes:**

**7.1. Please provide more information [Free text field]**

**8. Does the user have the option to request a change of nodes/circuit in the network?**

[Yes/No/NA]

**If Yes:**

**8.1 Please provide more information [Free text field]**

## A2. Protection against abuse of service

9. **What actions are considered as an “abuse” of the anonymizing network?** (more than one options)  
[Incoming/Outgoing cyber-attacks/Illegal content (e.g., child pornography)/Torrent/ file sharing/Spam e-mails/Other (Please specify)]
10. **What measures are in place to monitor, detect and mitigate an “abuse” of the anonymizing network?**  
[Free text field]
11. **Has the user’s client built-in DNS leakage protection?**  
[Yes, by default/Yes, as an option (for the user)/No]  
**If Yes:**  
11.1 Please provide more information [Free text field]

12. **Is protection against fingerprinting provided?**

[Yes/No]

**If Yes:**

12.1 Please provide more information [Free text field]

13. **Is protection against traffic analysis provided?**

[Yes/No]

**If Yes:**

13.1 Please provide more information [Free text field]

## A4. Log files

14. **Does any party in the network maintain logs that could allow matching an IP address or other identifier to a user of the service?**  
[Yes/No/Cannot be verified]  
**If Yes:**  
14.1. Please provide more information [Free text field]
15. **Can the combination of logs residing at various nodes in the network lead to the user’s identification?**  
[Yes/No/Cannot be verified]  
**If Yes:**  
15.1. How can the user be protected in this case? [Free text field]

## A5. Limitations

16. **Are there any known limitations of the tool/service that could affect the user’s anonymity (i.e. regarding the defined adversarial models)?**

[Yes/No]

**If Yes:**

**16.1.** Please provide more information [Free text field]

**17. Can the protection of the user's anonymity be enhanced with the combined use of other tools?**

[Yes/No]

**If Yes:**

**17.1.** Please provide more information on possible tools that can be used.

[Free text field]

**18. Is there any set of guidelines advising the user how to maximize his/her protection when using the tool/service?** [Free text field]

**19. Is there any set of guidelines advising the user of actions that must not be performed when using the tool/service (as they could lessen the protection it offers)?**

[Free text field]

## **B. Encryption**

**20. Does the tool/service encrypt the communication between the user's device and the destination (e.g., a webpage the user wants to access)?**

[Yes/No]

**If Yes:**

**20.1.** Please provide more information [Free text field]

**If No:**

**20.2.** Are there any parts of the network where communications are encrypted (e.g., between different nodes)?

[Yes/No]

**If Yes:**

**20.2.1** Please provide more information [Free text field]

**20.3.** Can the tool be used in conjunction with other tools to provide encrypted communications?

[Yes/No]

**If Yes:**

Please provide more information [Free text field]

### C. Side effects

**21. Are there any known cases where the use of the tool/ service has resulted to the blocking of user's communication (e.g. due to censorship or technical reasons like enterprise WiFi or firewall policies)?**

[Yes/No]

**If Yes:**

**21.1. Please provide more information or links to known cases of blocking**

[Free text field]

**21.2. Does the tool provide any blocking circumvention mechanism? (more than one options)**

[Yes, by connecting to a different node/Yes, other (please specify)/No]

**22. Does the tool limit the use of any service or protocol?**

[Yes/No]

**If Yes:**

**22.1. Please provide more information [Free text field]**

**23. Are there any known performance issues related to the use of the tool/service?**

[Yes/No]

**If Yes:**

**23.1. Please provide more information on known performance issues.**

[Free text field]

## 7. Anti-tracking tools (for online browsing)

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### A. Blocking

#### A1. General info

**1. What types of (tracking) elements can the tool block? (more than one options)**

[Advertisements (e.g. in the form of a banner, images, etc.)/Scripts (e.g. Java, JavaScript, and Flash scripts)/Cookies (first party - third party)/WebGL fingerprinting/Canvas-based fingerprinting/Social buttons (such as Facebook, Google, Twitter, etc.)/Domains listed in a black list/Other elements (please specify)]

**2. What is the blocking mechanism the tool is based on?**

[Tracker detection algorithm-heuristics/White-black list/Filtering rules/Other (please specify)]

**If based on tracker detection algorithm/heuristics:**

**2.1 What is the tracker detection algorithm/heuristics applied? [Free text field]**

**If based on white/black lists:**

**2.2 How are the lists established? [Free text field]**

**If based on filtering rules:**

**2.3 On which criteria are the rules established? [Free text field]**

**3. Has the tool built-in Do Not Track protection?**

[Yes, by default/Yes, as an option (for the user)/No]

#### A2. Default settings

**4. Is blocking enabled by default for all types of (tracking) elements?**

[Yes/No]

**If No:**

**4.1 Which types of elements does the tool not block by default? [Free text field]**

**4.2 Is the user informed when specific elements are not blocked by default?**

[Yes/No]

**If Yes:**

**4.2.1 How is the information provided to the user? (more than one options)**

[Pop-up (e.g. at the beginning of the browsing session)/Banner/Privacy policy/Other (please specify)]

**4.3 How can the user activate blocking? (more than one options)**

[By clicking a button on the screen/Through the settings menu/Other (please, specify)]

**5. Does the tool exempt specific trackers from blocking by default (e.g. acceptable ads list)?**

[Yes/No]

**If Yes:**

**5.1 Please provide more information** [Free text field]

**5.2 Is the user informed about this exception?**

[Yes/No]

**5.3 Can the user activate blocking for the exempted trackers?**

[Yes/No]

**If Yes:**

**5.3.1 How can blocking for exempted trackers be activated?** (more than one options)

[By clicking a specific button on the screen/Through the settings menu/Other (please, specify)]

### **A3. History**

**6. Does the tool provide information to the user about the blocked elements/trackers (in a browsing session)?**

[Yes/No]

**If Yes:**

**6.1 What type of information is provided?** (more than one options)

[Identity of tracker/Type of element blocked/Active processes/Networking information (ports, hosts, etc.)/Other (please, specify)]

**7. Does the tool maintain a history of blocked elements/trackers?**

[Yes/No]

**If Yes:**

**7.1 How can the user access the history of blocked elements/trackers?** (more than one options)

[By clicking a button on the screen/Through the settings menu/Other (please, specify)]

**7.2 How is the information presented to the user?** (more than one options)

[Collusion graph/List/Other (please, specify)]

### **A4. User configuration**

**8. Does the user have the possibility to configure what is blocked?**

[Yes/No]

**If Yes:**

**8.1 Please provide more information** [Free text field]

**9. Does the tool offer the possibility of activating/deactivating the blocking of specific trackers?**



[Yes/No]

**If Yes:**

**9.1. How can the user activate/deactivate the blocking of specific trackers?** (more than one options)

[Per tracker/For all trackers in a page/For all trackers in opened tabs/Per domain/Per tracking category (e.g. analytics, social buttons, etc.)/Other (please, specify)]

**9.2. Does the tool inform the user about possible risks when deactivating blocking of certain types of elements?**

[Yes/No]

**If Yes:**

**9.2.1 How is this information provided?** (more than one options)

[Warning notice/User's manual/Other (please, specify)]

## **B. Data Collection**

**10. Does the tool's provider collect any personal data of the user?**

[Yes/No]

**If Yes:**

**10.1 What types of personal data are collected?** (more than one options)

[Contact information/Device/browser identifier/IP address/URLs visited/Other (please specify)]

**10.2 For what purpose are personal data collected?** (more than one options)

[Analytics (e.g. for improving the performance of the tool or providing statistics on its usage)/Commercial activity (please specify)/Added value services (please specify)/Other (please specify)]

**10.3 Is the user asked for consent before the collection personal data?**

[Yes/No]

**If Yes:**

**10.3.1 Can consent be withdrawn?**

[Yes, by unchecking a box in the settings menu/Yes, by contacting the tool's provider/Yes, by other means (please specify)/No]

**10.4 Does the tool offer the same functionality if consent is not granted?**

[Yes/No]

**If No:**

**10.4.1 Please provide more information** [Free text field]

**10.5 Does the tool's provider transfer any personal data to third parties?**

[Yes/No]

**If Yes:**

**10.5.1 Which are the recipients of the data? (more than one options)**

[Advertising company/Analytics company/Other (please specify)]

**10.5.2 What types of personal data are being transferred? (more than one options)**

[Contact information/Device/browser identifier/IP address/URLs visited/Other (please specify)]

**10.5.3 For what purpose are personal data being transferred? (more than one options)**

[Analytics (e.g. for improving the performance of the tool or providing statistics on its usage)/Commercial activity (please specify)/Added value services (please specify)/Other (please specify)]

**10.5.4 Is the user asked for consent before the transfer of his/her personal data?**

[Yes/No]

**If Yes:**

**10.5.4.1 Can consent be withdrawn?**

[Yes, by unchecking a box in the settings menu/Yes, by contacting the tool's provider/Yes, by other means (please specify how)/No]

**10.5.4.2 Does the tool offer the same functionality if consent is not granted?**

[Yes/No]

**If No:**

**10.5.4.2.1 Please provide more information.**

[Free text field]

**11. Does the tool collect and/or transfer to third parties any pseudo-anonymised or anonymized data related to the user's activity (while using the tool)?**

[Yes/No]

**If Yes:**

**11.1 Please explain the purpose of the collection/transfer, the types of data, the recipients of data and the algorithm of pseudo-anonymisation/anonymization.**

[Free text field]

**12. Has the tool's provider any business relationship with any advertising/analytics company?**

[Yes/No]

### **C. Side effects**

**13. Are there any known cases where the use of the tool has negatively affected the user's online activity (e.g. blocking of certain websites/content)?**

[Yes/No]

**If Yes:**

**13.1 Please provide more information** [Free text field]

**13.2 Is there any relevant information/advice provided to the user?**

[Yes/No]

**If Yes:**

**13.2.1 In what form is the information/advice provided?** (more than one options)

[User's manual/FAQ/Other (please, specify)]

**14. Are there any known performance issues related to the use the tool (e.g. slowing down page loading)?**

[Yes/No]

**If Yes:**

**14.1 Please provide more information** [Free text field]



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