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## Polish Identity Federation PIONIER.Id Technical Terms

1. The key words used in the text
  - 1.1. "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" used in this chapter are to be interpreted as described in RFC 2119 (<http://www.ietf.org/rfc/rfc2119.txt>)
2. Purpose and Scope
  - 2.1. This document defines the lowest common level of technical requirements for all members of the Polish Identity Federation PIONIER.Id (further called PIONIER.Id Federation)
3. User registration and credentials
  - 3.1. End User identifier MUST be issued to a physical person affiliated to a PIONIER.Id Federation Identity Provider.
  - 3.2. The registration procedure MUST be constructed so as to be able to establish that the interacting subject is a human. Using CAPTCHAs or relying on an identity proofing process that uses CAPTCHAs (or a technical control of comparable reliability) is a minimally acceptable way of controlling this.
  - 3.3. It is RECOMMENDED that registration procedure contains an element of a face-to-face contact between the End User and an employee representing the Identity Provider.
4. Credentials issuance
  - 4.1. Each End User MUST be represented by an identifier ("username") which MUST be unique for the Identity Provider.
  - 4.2. End Users MUST NOT share their credentials with other persons.
  - 4.3. Identity Providers MUST take measures reducing the risk of credentials theft.
5. Identification of the communication parties
  - 5.1. Identity Providers and Service Providers are identified by unique identifiers assigned by the PIONIER.Id Operator.
  - 5.2. Identity Providers and Service Providers secure the transmission by encryption and electronic signature
  - 5.3. Keys used to secure transmission MUST NOT be weaker (in the sense of NIST SP 800-57) than a 2048 bit RSA key and MUST be changed at least every 3 years.
6. Security of the Authentication process
  - 6.1. Transmission of protected data (identifiers, encryption keys etc.) MUST be secured by encryption in a way complying with Personal Data Protection regulations, unless the transmission is restricted to a secured internal network.
  - 6.2. Any authentication protocols used when authenticating subjects MUST require a proof-of-possession step for subject credentials. For regular passwords this involves validating that the user knows her/his password.
  - 6.3. Any session tokens MUST be generated by safe cryptographic methods and based on earlier authentication.

- 6.4. Authentication mechanisms MUST be protected against common attacks such as man-in-the-middle attacks, eaves-dropper attacks and off-line password guessing.
7. Technical requirements
  - 7.1. The servers and other infrastructure involved in the operation of identity providers or relying parties MUST be maintained according to best practice.
8. Technical requirements of the SAML WebSSO implementation
  - 8.1. The service is based upon SAML V2.0 Web Browser SSO Profile (<http://docs.oasisopen.org/security/saml/v2.0/saml-profiles-2.0-os.pdf>) – a standard that enables Identity Providers and Relying parties to create and use web Single Sign on services using SAML.
  - 8.2. All SAML metadata MUST fulfil the SAML V2.0 Metadata Interoperability Profile Version 1.0.
  - 8.3. All entities (service providers and identity providers) SHOULD fulfil either the Interoperable SAML 2.0 Profile or the ShibbolethSAML 1.1 Profile. Interoperable SAML 2.0 Profile is RECOMMENDED.
  - 8.4. All SAML attributes SHOULD be represented using the urn:oasis:names:tc:SAML:2.0:attrname-format:uri NameFormat.
  - 8.5. All SAML attribute Names SHOULD be represented using either the urn:oid or urn:mace:dir:attribute-def namespace.
  - 8.6. All SAML Identity Providers SHOULD implement the Shibboleth Scope Extension.
  - 8.7. If the Shibboleth Scope Extension is implemented by an Identity Provider then it MUST be declared in the metadata as defined in the Shibboleth Metadata Schema. The Scope value MUST be a string equal to a domain owned by the organisation that owns the Identity Provider.
  - 8.8. All SAML Service Providers SHOULD implement the Shibboleth Scope extension.
9. Identity Assertion
  - 9.1. Authentication Response supplied by the Identity Provider MUST contain a permanent identifier of the subject. This identifier MAY be specific to a single Service Provider.
  - 9.2. The permanent identifier used SHOULD be one of the recommended in chapter 7 of Interoperable SAML 2.0 Profile. It is RECOMMENDED that permanent identifier should hide End User's true identity.
  - 9.3. The Identity Provider MAY supply a true End User's identity, however this option should be carefully analysed taking into account Personal Data Protection law, acceptability and necessity with respect to a given Service Provider.
10. Logs
  - 10.1. Identity Providers MUST keep logs of all identity assertions
  - 10.2. Information kept MUST be sufficient for unique identification of End Users
  - 10.3. All relevant logs MUST be created with synchronisation to a reliable NTP time source
  - 10.4. The minimum log retention is 6 months
  - 10.5. Authentication logs must and properly secured and released only to authorized authorities
  - 10.6. Bilateral agreements with Service Providers MAY specify additional conditions on log content and/or retention.