

The Italian eIDAS Node

Paolo Smiraglia

IDEM DAY 2021

Feb 26th, 2021



Paolo Smiraglia

- Was cyber security researcher @ PoliTO
- Currently IT consultant @ AgID

- paolo.smiraglia@gmail.com
- github.com/psmiraglia



linkedin.com/in/paolosmiraglia



Outline

- What the Italian eIDAS Node is
- What the Italian service providers
 - Have to know
 - Have to do
- What the Italian identity providers have to do



What the Italian eIDAS Node is



A bridge between SPID/CIE and eIDAS



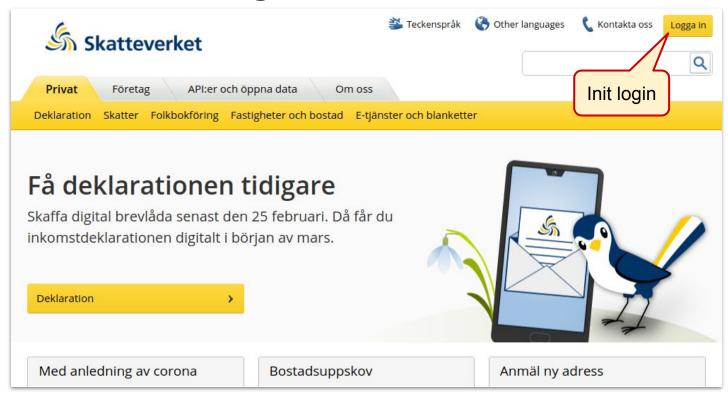
A bridge between SPID/CIE and eIDAS

- Italian citizen can access EU online services
 - Sistema Pubblico di Identità Digitale (SPID)
 - Carta di Identità Elettronica (CIE)
- EU citizen can access Italian online services
 - notified national eID scheme
 - https://bit.ly/3pudX9l (list of notified eID schemes)



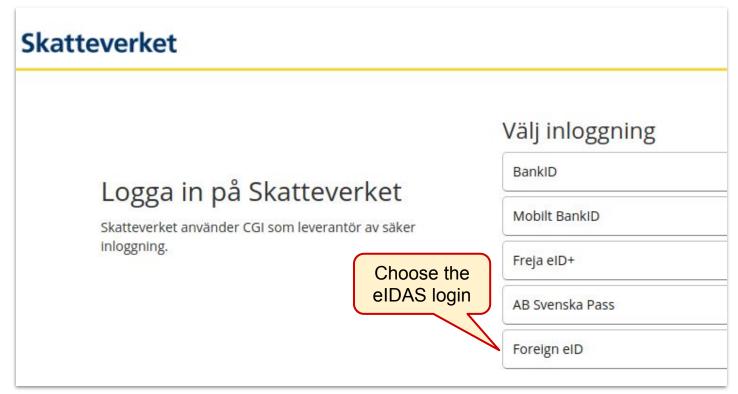




















SWEDISH EIDAS CONNECTOR

IS REQUESTING THE
FOLLOWING ATTRIBUTES

Step 1 | 3

YOUR BASIC INFORMATION

NATURAL PERSON

- ✓ Uniqueness Identifier ?
- ✓ Date of Birth
- Family Name
- ✓ First Name

SWEDISH EIDAS CONNECTOR WITH LEVEL OF ASSURANCE substantial 2 IS REQUESTING THE **FOLLOWING ATTRIBUTES** Step 2 | 3 YOUR ADDITIONAL INFORMATION If you don't provide information you may be denied. CANCEL BACK NEXT Authorise the request





Entra con SPID

SPID è il Sistema Pubblico di Identità Digitale italiano. Se sei già in possesso di una identità SPID accedi con le credenziali del tuo gestore. Per maggiori informazioni su SPID consulta il sito www.spid.gov.it.



Use my national elD

Entra con CIE

La Carta di Identità Elettronica consente l'accesso ai servizi digitali della PA italiana e dei paesi membri aderenti al regolamento elDAS. Per maggiori informazioni consulta il sito del Ministero dell'Interno.





SWEDISH EIDAS CONNECTOR WITH LEVEL OF ASSURANCE substantial IN REQUESTING THE FOLLOWING ATTRIBUTES	
	Step 3 3
YOUR	RESUME
NATURAL PERSON	
First Name Paolo	Confirm the
Family Name Smiraglia	submission
Date of Birth	
Uniqueness Identifier	

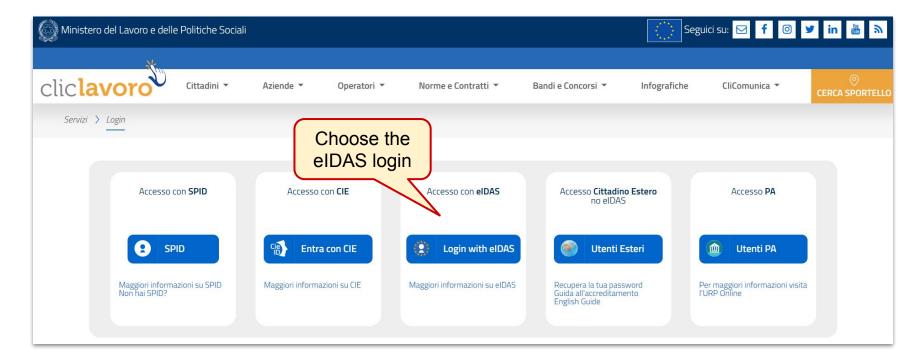






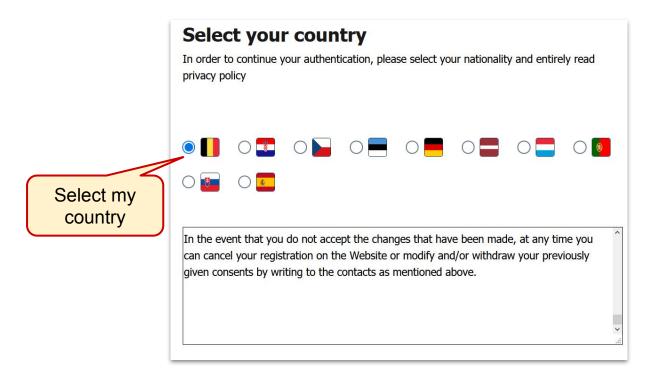




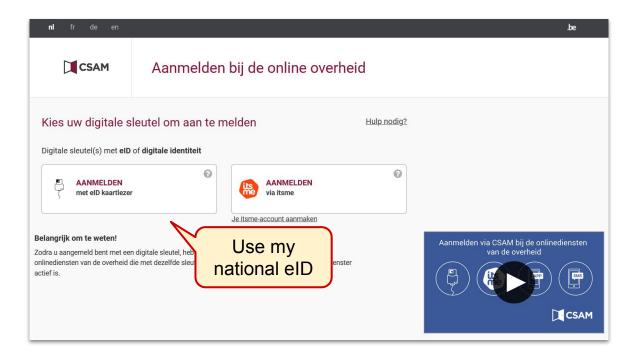






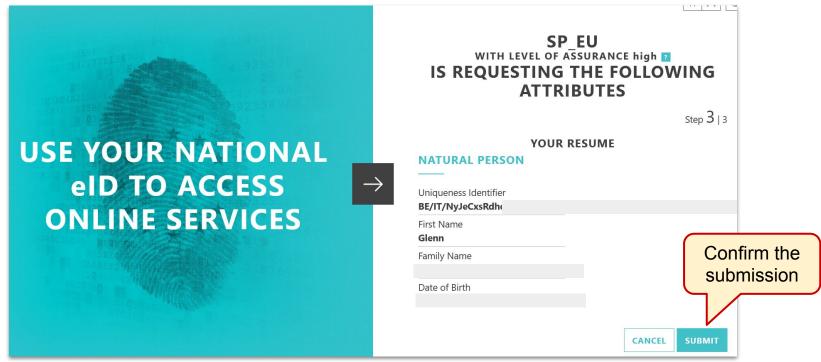












eIDAS Node architecture

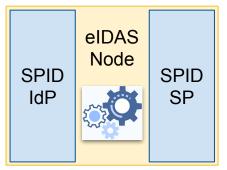














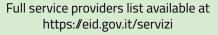


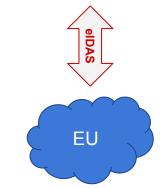
















FICEP - First Italian Crossborder eIDAS Proxy

- Agenzia per l'Italia Digitale
- Politecnico di Torino
- InfoCert
- TelecomItalia

What a service provider have to know

eIDAS attributes



Mandatory

- Must be always requested
- Always supplied by Member States

Optional

- Requesting is optional
- Can be answered with an empty/null value

Related to

- Natural person
- Legal person



Natural Person



Mandatory

- FamilyName
- FirstName
- DateOfBirth
- PersonIdentifier

- BirthName
- PlaceOfBirth
- CurrentAddress
- Gender



Natural Person in SPID



Mandatory

- FamilyName (familyName)
- FirstName (name)
- DateOfBirth (dateOfBirth)
- PersonIdentifier (spidCode)

- BirthName
- PlaceOfBirth (placeOfBirth)
- CurrentAddress (address)
- Gender (gender)



Legal Person

theory

Mandatory

- LegalName
- LegalPersonIdentifier

- LegalAddress
- VATRegistration
- TaxReference
- BusinessCode
- LEI
- EORI
- SEED
- SIC



Legal Person in SPID



Mandatory

- LegalName (companyName)
- LegalPersonIdentifier (spidCode)

- LegalAddress (registeredOffice)
- VATRegistration (ivaCode)
- TaxReference
- BusinessCode
- LE
- EORI
- SEED
- SIC



PersonIdentifier format



- Three fields separated by "/"
 - Citizen country code (ISO 3166-1 alpha-2)
 - Service provider country code (ISO 3166-1 alpha-2)
 - Alphanumeric string

SE/IT/198611062384

BE/IT/1Ydnvv8thVHtXFmzOWTmcWhWjuojyLipJtc2Cu7



spidCode format



- Two fields without separator
 - identity provider identifier (4 chars)
 - credential identifier (10 digits)

AIDP0001007562

- When it comes from eIDAS login
 - PersonIdentifier format



SE/IT/198611062384



What a service provider have to do

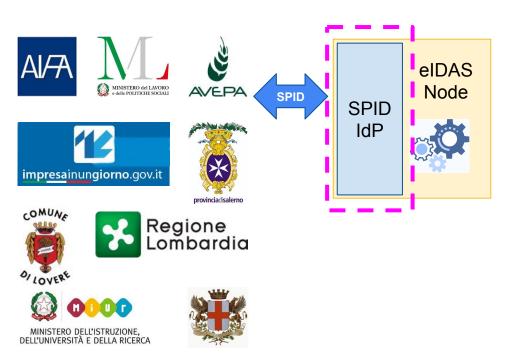
Just another SPID identity provider

Action 1

- Load SAML metadata
- Trust some X509 certificates
- Implement some UX directives



screenshot from https://servizi.lavoro.gov.it



```
17 lines (17 sloc)
                    832 Bytes
                                                                                     Blame
                                                                               Raw
      <md:AttributeConsumingService index="99">
          <md:ServiceName xml:lang="it">eIDAS Natural Person Minimum Attribute Set</md:ServiceName>
        <md:RequestedAttribute Name="dateOfBirth"/>
         <md:RequestedAttribute Name="familyName"/>
          <md:RequestedAttribute Name="name"/>
                                                   MANDATORY I
         <md:RequestedAttribute Name="spidCode"/>
      </md:AttributeConsumingService>
      <md:AttributeConsumingService index="100">
          <md:ServiceName xml:lang="it">eIDAS Natural Person Full Attribute Set</md:ServiceName>
          <md:RequestedAttribute Name="address"/>
          <md:RequestedAttribute Name="dateOfBirth"/>
          <md:RequestedAttribute Name="familyName"/>
          <md:ReguestedAttribute Name="gender"/>
          <md:RequestedAttribute Name="name"/>
 14
          <md:RequestedAttribute Name="placeOfBirth"/>
          <md:RequestedAttribute Name="spidCode"/>
      </md:AttributeConsumingService>
```

```
17 lines (17 sloc)
                    832 Bytes
                                                                                      Blame
                                                                               Raw
      <md:AttributeConsumingService index="99">
          <md;ServiceName xml:lang="it">eIDAS Natural Person Minimum Attribute Set</md;ServiceName>
          <md:RequestedAttribute Name="dateOfBirth"/>
          <md:RequestedAttribute Name="familyName"/>
          <md:RequestedAttribute Name="name"/>
          <md:RequestedAttribute Name="spidCode"/>
      </md:AttributeConsumingService>
      <md:AttributeConsumingService index="100">
          <md:ServiceName xml:lang="it">eIDAS Natural Person Full Attribute Set</md:ServiceName>
         <md:RequestedAttribute Name="address"/>
          <md:RequestedAttribute Name="dateOfBirth"/>
         <md:RequestedAttribute Name="familyName"/>
         <md:RequestedAttribute Name="gender"/>
          <md:RequestedAttribute Name="name"/>
 14
         <md:RequestedAttribute Name="placeOfBirth"/>
                                                            OPTIONAL
         <md:RequestedAttribute Name="spidCode"/>
      </md:AttributeConsumingService>
```



```
17 lines (17 sloc)
                    832 Bytes
                                                                                    Blame
                                                                             Raw
      <md:AttributeConsumingService index="99">
         <md;ServiceName xml:lang="it">eIDAS Natural Person Minimum Attribute Set</md;ServiceName>
         <md:RequestedAttribute Name="dateOfBirth"/>
         <md:RequestedAttribute Name="familyName"/>
         <md:RequestedAttribute Name="name"/>
         <md:RequestedAttribute Name="spidCode"/>
      </md:AttributeConsumingService>
      <md:AttributeConsumingService index="100">
         <md:ServiceName xml:lang="it">eIDAS Natural Person Full Attribute Set</md:ServiceName>
         <md:RequestedAttribute Name="address"/>
         <md:RequestedAttribute Name="dateOfBirth"/>
                                                                              Must include
         <md:RequestedAttribute Name="familyName"/>
         <md:RequestedAttribute Name="gender"/>
                                                                             the mandatory
         <md:RequestedAttribute Name="name"/>
 14
                                                                                attributes
         <md:RequestedAttribute Name="placeOfBirth"/>
                                                          OPTIONAL
         <md:RequestedAttribute Name="spidCode"/>
      </md:AttributeConsumingService>
```



```
17 lines (17 sloc)
                    832 Bytes
                                                                                    Blame
                                                                             Raw
      <md:AttributeConsumingService index="99">
          <md;ServiceName xml:lang="it">eIDAS Natural Person Minimum Attribute Set</md;ServiceName>
          <md:RequestedAttribute Name="dateOfBirth"/>
          <md:RequestedAttribute Name="familyName"/>
          <md:RequestedAttribute Name="name"/>
          <md:RequestedAttribute Name="spidCode"/>
      </md:AttributeConsumingService>
      <md:AttributeConsumingService index="100">
         <md:ServiceName xml:lang="it">eIDAS Natural Person Full Attribute Set</md:ServiceName>
         <md:RequestedAttribute Name="address"/>
         <md:RequestedAttribute Name="dateOfBirth"/>
                                                                            Can include only
         <md:RequestedAttribute Name="familyName"/>
                                                                            attributes with a
         <md:RequestedAttribute Name="gender"/>
                                                                               SPID/eIDAS
          <md:RequestedAttribute Name="name"/>
 14
                                                                                 mapping
         <md:RequestedAttribute Name="placeOfBirth"/>
         <md:RequestedAttribute Name="spidCode"/>
      </md:AttributeConsumingService>
```

Compare LoA as eIDAS likes



Request the "minimum" comparison for LoA



Able to manage all the EU charsets

- ISO-8859-2 (eastern Europe)
- ISO-8859-7 (greek alphabet)

Able to manage "both" the spidCode formats

- SPID format (AIDP0001007562)
- elDAS format (SE/IT/198611062384)

Able to manage empty/null responses for optional attributes

- Attribute with empty/null value
- Attribute not included in the response



Be ready to manage eIDAS responses



- Able to manage multiple "spidCode" for the same user
 - If the Member State notified more than one eID scheme
 - FYI, an Italian citizen can be recognised with **ten different "unique" personIdentifier**
 - Nine (9) SPID identity providers
 - Carta d'Identità Elettronica

What about Codice Fiscale?

- eIDAS can't manage it
- If really needed, it's in charge of the service provider
- Valid for any other attribute not managed by eIDAS

Obtaining Codice Fiscale (proposal 1)

During the first login...

- Make an elDAS authentication
- Obtain Codice Fiscale in the form of self-declaration
- If needed, verify Codice Fiscale in the back-office

During the following logins...

- Make the eIDAS authentication
- Codice Fiscale already present in the user profile



Obtaining Codice Fiscale (proposal 2)

During the first login...

- Make an elDAS authentication
- Assign a "fake" Codice Fiscale (e.g. generated from elDAS attributes)

During following logins...

- Make the eIDAS authentication
- Codice Fiscale already present in the user profile

If you need further help

- https://helpdesk.eid.gov.it
- https://eid.gov.it

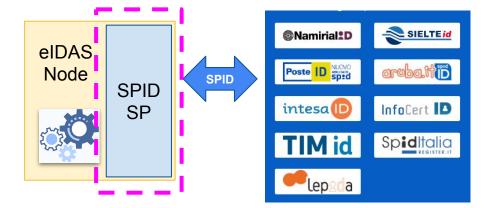
What an identity provider have to do



Just another SPID service provider

action

- Load a SAML metadata
- Trust some X509 certificates







Thanks for your attention! Any question?