IAM Connect
Claim mappers
Version 1.0

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To the attention of: "IT expert" willing to integrate this service.

1. Document management

1.1 Document history

Version	Date	Author	Description of changes / remarks
1.0	28/05/2021	eHealth platform	Initial version

2. Introduction

IAM Connect allows registered clients to obtain tokens. Different tokens may be issued to the client depending on its configuration (access token, ID token , refresh token).

The ID token is a JSON Web Token (JWT) that contains information about the user such as username, given name, last name, and other profile information.

The access token is a JSON Web Token (JWT). It is digitally signed by the realm and contains access information (like user role mappings) that the client can use to determine what resources the user is allowed to access on the client application. Access token can be used by the client to make call REST invocations on other remote services on behalf of the user.

The refresh token can be used to obtain a renewed access token.

The goal of this document is to provide explanations on eHealth IAM Connect claims generated after the end user selected a profile (returned in ID token and/or access token) and to map them with the IAM Attributes used for web SSO solution.

Clients using client credentials flow are not affected by these mappers.

Currently it exists 2 types of claim mappers (both return the same information but in a different format):

- Claim mappers v0
- Claim mappers v1

Claim mappers v0 is deprecated but still in use for few clients.

3. Mappers v0

Claim mappers v0 is deprecated.

Depending on the profile selected by the end user, IAM attributes will be mapped into claims.

3.1 Claims

	Claim	IAM Attribute
All profile	profile_opt	urn:be:fgov:ehealth:1.0:profileOptionType
Individual profile	ssin	urn:be:fgov:person:ssin
Healthcare professional profile	professional.id	urn:be:fgov:person:ehealth:1.0:*:nihii11
	professional.type	urn:be:fgov:person:professional:type-code
Organization profile	org.id	urn:be:fgov:organization:id
	org.type	urn:be:fgov:organization:id-type
	org.name	urn:be:fgov:organization:name
Mandate profile	mandator.id	urn:be:fgov:mandator:id
	mandator.type	urn:be:fgov:mandator:id-type
	mandator.name	urn:be:fgov:mandator:name
	mandator.death_date	urn:be:fgov:ehealth:1.0:mandator:person:deathDate
	mandator.status	urn:be:fgov:ehealth:1.0:mandator:person:isAlive
Parent profile	child.id	urn:be:fgov:child:ssin
	child.given_name	urn:be:fgov:child:firstName
	child.family_name	urn:be:fgov:child:lastName

Claim interpretation :

- **profile_opt** : type of profile selected by the user to accessa protected resource (examples : USER, ORGANIZATION, MANDATE-USER)
- **ssin** : Social Security Identification number of the authenticated user
- **professional.id** : NIHDI (NIHII) number of the individual healthcare professional (11 digits identifier)
- **professional.type** : quality of the authenticated user (examples : PHYSICIAN, NURSE, DENTIST)
- **org.id** : Identifier of organization represented by authenticated user.
- **org.type** : Type of identifier of organization represented by authenticated user (examples : HOSPITAL, ENTERPRISE, LABO, EHP).
- **org.name** : Name of organization represented by authenticated user
- **mandator.id** : Identifier of the actor who gave a mandate to the authenticated user.
- **mandator.type** : Type of identifier of the actor who gave a mandate to the authenticated user (examples : CITIZE, NURSE, GROUPOFNURSES, LABO, ENTERPRISE).
- **mandator.name** : Name of the actor who gave a mandate to the authenticated user.
- **mandator.death_date** : Death date of the individual person who gave a mandate.
- **mandator.status** : Status of the individual person who gave a mandate (possible values : ALIVE, DEAD, UNKNOWN).

- **child.id** : Identifier (NISS/SSIN) of the actor being a child of the authenticated user
- **child.given_name** : Given name of the child selected by the authenticated user
- **child.family_name** : Family name of the child selected by the authenticated user

3.2 Access Token examples

3.2.1 Citizen

```
"profile_option": "USER",
"ssin": "69051012345",
"name": "John Doe",
"preferred_username": "6zx344vn6b7czollwl5j5y4ik5lhbcju",
"given_name": "John",
"family_name": "Doe",
"professional": {
  "type": "CITIZEN"
}
```

3.2.2 Parent profile

```
"profile_option": "USER",
"ssin": "69051012345",
"name": "John Doe",
"preferred_username": "6zx344vn6b7czollwl5j5y4ik5lhbcju",
"given_name": "John",
"family_name": "Doe",
"professional": {
  "type": "CITIZEN"
},
"child": {
  "ssin": "13020105141",
  "given_name": " John junior",
  "family_name": "Doe "
}
```

3.2.3 Mandate profile (Individual person having a mandate from a professional)

```
"profile_option": "MANDATE-USER",
"mandator": {
  "name": "Jane Doe",
  "id": "62051212345",
  "type": "PHYSICIAN",
},
"ssin": "69051012345",
"name": "John Doe",
"preferred_username": "6zx344vn6b7czollwl5j5y4ik5lhbcju",
```

```
"given_name": "John",
"family_name": "Doe",
"professional": {
  "type": "CITIZEN"
}
```

3.2.4 Mandate profile (Individual person having a mandate from an institution with NIHDI11)

```
"profile_option": "MANDATE-USER",
"mandator": {
  "nihii11": "94199965100",
  "name": "GROUP MOK 01",
  "id": "94199965",
  "type": "GROUPOFNURSES"
},
"ssin": "69051012345",
"name": "John Doe",
"preferred_username": "6zx344vn6b7czollwl5j5y4ik5lhbcju",
"given_name": "John",
"family_name": "Doe",
"professional": {
  "type": "CITIZEN"
}
```

3.2.5 Mandate profile (Individual person in an institution who received a mandate from another institution with recognised claim)

```
"profile_option": "MANDATE-ORGANIZATION",
"mandator": {
  "name": "Pharmacy Invoicing Office eHealth Mock 2",
  "id": "92199884",
  "type": "OTD_PHARMACY"
},
"ssin": "69051012345",
"org": {
  "name": "Pharmacy Invoicing Office eHealth Mock1",
  "id": "92199983",
  "type": "OTD_PHARMACY"
},
"name": "John Doe",
"preferred_username": "6zx344vn6b7czollwl5j5y4ik5lhbcju",
"given_name": "John",
"family_name": "Doe",
"professional": {
  "type": "CITIZEN"
}
```

3.2.6 Healthcare professional (physician with NIHDI number)

"profile_option": "USER",
"ssin": "69051012345",
"name": "John Doe",
"preferred_username": "6zx344vn6b7czollwl5j5y4ik5lhbcju",
"given_name": "John",
"family_name": "Doe",
"professional": {
  "id": "15964121001",
  "type": "PHYSICIAN"
}

3.2.7 Healthcare professional (physician without NIHDI number)

"profile_option": "USER",
"ssin": "69051012345",
"name": "John Doe",
"preferred_username": "6zx344vn6b7czollwl5j5y4ik5lhbcju",
"given_name": "John",
"family_name": "Doe",
"professional": {
  "type": "PHYSICIAN"
}

3.2.8 Healthcare professional (dentist with NIHDI number)

"profile_option": "USER",
"ssin": "69051012345",
"name": "John Doe",
"preferred_username": "6zx344vn6b7czollwl5j5y4ik5lhbcju",
"given_name": "John",
"family_name": "Doe",
"professional": {
  "id": "35964121001",
  "type": "DENTIST"
}

3.2.9 Member of an organization (enterprise – KBO/CBE)

"profile_option": "ORGANIZATION",
"ssin": "69051012345",
"org": {
  "name": "TEST PRESTATAIRE DE SERVICE FRRRRR",
  "id": "0999999427",
  "type": "ENTERPRISE"

```
  },
  "name": "John Doe",
  "preferred_username": "6zx344vn6b7czollwl5j5y4ik5lhbcju",
  "given_name": "John",
  "family_name": "Doe",
  "professional": {
   "type": "CITIZEN"
  }
```

3.2.10 Member of an organization (retirement – NIHDI)

```
 "profile_option": "ORGANIZATION",
 "ssin": "69051012345",
 "org": {
  "name": "RETIREMENT TEST",
  "id": "94000126",
  "type": "RETIREMENT"
  },
 "name": "John Doe",
 "preferred_username": "6zx344vn6b7czollwl5j5y4ik5lhbcju",
 "given_name": "John",
 "family_name": "Doe",
 "professional": {
  "type": "CITIZEN"
   }
```

3.2.11 Organization profile (hospital)

```
 "profile_option": "ORGANIZATION",
 "org": {
  "name": "HOSPITAL WILMAR",
  "id": "71089914",
  "type": "HOSPITAL"
   }
```

3.2.12 Organization profile (labo)

```
"profile_option": "ORGANIZATION",
"org": {
  "name": "Labo test",
  "id": "77777766",
  "type": "LABO"
 }
```

4. Mappers v1

Claim mappers v1 SHOULD be used for every client using WebAccess[1].

Depending on the profile selected by the end user, IAM attributes will be mapped into claims.

The information of the selected profile by the authenticated user is contained into one claim "userProfile" that has a JSON structure.

4.1 Claims

	Claim structure	IAM Attribute[2]

Individual profile	"userProfile": {
	    "firstName": "",
	    "lastName": "",
	    "ssin": ""
	    }
		urn:be:fgov:person:firstName
		urn:be:fgov:person:lastName
		urn:be:fgov:person:ssin

Healthcare professional profile	"userProfile": {
	    "firstName": "",
	    "lastName": "",
	    "ssin": "",
	    "*$ProfessionType*": {
	       "recognised":"",
	       "nihii11": ""
	      }
	    }
		urn:be:fgov:person:ehealth:1.0:*:nihii11
		urn:be:fgov:person:ehealth:1.0:fpsph:*:boolean
		urn:be:fgov:person:professional:type-code

Organization profile	"userProfile": {
	   "organizations": [
	    {
	       "*$OrgType*": {
	         "*$IdType* ": ""
	       },
	       "name": ""
	      }
	    ]
		urn:be:fgov:organization:id
		urn:be:fgov:organization:id-type
		urn:be:fgov:organization:name

---

[1] https://www.ehealth.fgov.be/ehealthplatform/fr/service-architectures
https://www.ehealth.fgov.be/ehealthplatform/nl/service-architectures

[2] The list of IAM attributes is not exhaustive

	},	

Mandate profile (Mandator = individual)	"userProfile": {
	    "firstName": "",
	    "lastName": "",
	    "ssin": "",
	    "mandators": [{
	        "ssin": "",
	        "lastName": "",
	        "firstName": "",
	        "name": "",
	        "*$ProfessionType* ": {
	
	"recognisednihii11": "",
	        }
	}]}
		urn:be:fgov:mandator:id
		urn:be:fgov:ehealth:1.0:mandator:person:ssin

		urn:be:fgov:mandator:id-type urn:be:fgov:mandator:lastName urn:be:fgov:mandator:firstName urn:be:fgov:mandator:name urn:be:fgov:ehealth:1.0:mandator:person:ssin:*:nihii11

Mandate profile (Mandator = organization)	"userProfile": {
	    "firstName": "",
	    "lastName": "",
	    "ssin": "",
	    "mandators": [{
	        "name": "",
	        "*$OrgType* ": {
	            "*$IdType* ": "",
	        }
	}]}
		urn:be:fgov:mandator:id
		urn:be:fgov:mandator:id-type
		urn:be:fgov:mandator:name
		urn:be:fgov:ehealth:1.0:mandator:*:nihii-number:*:nihii11

Parent profile	"userProfile": {
	    "firstName": "",
	    "lastName": "",
	    "ssin": "",
	    "children": [{
	        "ssin": "",
	        "lastName": "",
	        "firstName": ""
	        }]
	}
		urn:be:fgov:child:ssin
		urn:be:fgov:child:firstName
		urn:be:fgov:child:lastName

Claim interpretation (non-exhaustive list) :

- **userProfile.ssin** : Social Security Identification number of the authenticated user
- **userProfile.firstName** : Given name of the authenticated user
- **userProfile.lastName** : Last name of the authenticated user

- **userProfile.$ProfessionType[3].nihii11 :** NIHDI number of the individual healthcare professional (11 digits identifier)
- **userProfile.$ProfessionType[4].recognised :** Boolean value indicating if the healthcare professional is recognised by the authentic source (FPS Public Health)
- **userProfile.organizations[0].name** : Name of organization represented by authenticated user
- **userProfile.organizations[0].$OrgType[5].$IdType[6]** : Identifier, type of identifier and type of organization selected by the authenticated user.
- **userProfile.mandators[0].ssin :** Identifier of the individual actor who gave a mandate to the authenticated user.
- **userProfile.mandators[0].firstName :** Given name of the individual actor who gave a mandate to the authenticated user.
- **userProfile.mandators[0].lastName :** Last name of the individual actor who gave a mandate to the authenticated user.
- **userProfile.mandators[0].name :** Last name + first name of the individual actor who gave a mandate to the authenticated user.
- **userProfile.mandators[0].$ProfessionType[7].recognisednihii11 :** NIHDI number of the individual healthcare professional who gave a mandate to the authenticated user (11 digits identifier) if the healthcare professional is recognised by the authentic source (FPS Public Health)
- **userProfile.mandators[0].organizations.name :** Name of organization who gave a mandate to the authenticated user
- **userProfile.mandators[0].$OrgType.$IdType:** Id of the organization who gave a mandate to the authenticated user
- **userProfile.children[0].ssin** : Identifier (SSIN) of the actor being a child of the authenticated user
- **userProfile.children[0].firstName**: Given name of the child selected by the authenticated user
- **userProfile.children[0].lastName** : Family name of the child selected by the authenticated user

4.2 Access Token examples

4.2.1 Citizen

```
"userProfile": {
  "firstName": "John",
  "lastName": "Doe",
  "ssin": "69051012345"
}
```

4.2.2 Parent profile

```
"userProfile": {
  "firstName": "John",
  "lastName": "Doe",
  "ssin": "69051012345",
  "children": [{
```

---

[3] $ProfessionType represents the quality selected by the authenticated user (example of claim : userProfile.physician.nihii11).

[4] $ProfessionType represents the quality selected by the authenticated user (example of claim : userProfile.physician.recognised)

[5] $OrgType represents the organization type. Examples of organization types : retirement, hospital, enterprise, labo

[6] $IdType represent the identifier type. Examples of id types : cbe, nihii

[7] $ProfessionType represents the quality of the mandate giver selected by the authenticated user (example of claim : userProfile.mandators[0].nurse.nihii11).

```
          "ssin": "99051012345",
          "lastName": "Doe",
          "firstName": "John junior"
          }]
}
```

4.2.3   Mandate profile (Individual person having a mandate from a professional)

```
"userProfile": {
  "firstName": "John",
  "lastName": "Doe",
  "ssin": "69051012345",
  "mandators": [
   {
     "lastName": "Doe",
     "firstName": "Jane",
     "ssin": "62051212345",
     "name": "Doe Jane",
     "physician": {
       "recognisednihii11": "18334780004"
     }
   }
  ]
},
```

4.2.4   Mandate profile (Individual person having a mandate from an institution with NIHDI11)

```
"userProfile": {
  "firstName": "John",
  "lastName": "Doe",
  "ssin": "69051012345",
  "mandators": [
   {
     "name": "Group Test 2",
     "groupofnurses": {
       "nihii": "94178387",
       "nihii11": "94178387000"
     }
   }
  ]
},
```

4.2.5 Mandate profile (Individual person in an institution who received a mandate from another institution with recognised claim)

```
"userProfile": {
  "firstName": "John",
  "lastName": "Doe",
  "ssin": "69051012345",
  "mandators": [
   {
     "name": "Group Test 2",
     "groupofnurses": {
       "nihii": "94178387",
       "nihii11": "94178387000"
     }
   }
  ],
  "organizations": [
   {
     "name": "Group Test 1",
     "groupofnurses": {
       "nihii": "94199866"
     }
   }
  ]
},
```

4.2.6 Healthcare professional (physician with NIHDI number)

```
"userProfile": {
  "firstName": "John",
  "lastName": "Doe",
  "ssin": "69051012345",
  "physician": {
   "recognised": true,
   "nihii11": "15964121001"
    }
  }
```

4.2.7 Healthcare professional (physician without NIHDI number)

```
"userProfile": {
  "firstName": "John",
  "lastName": "Doe",
  "ssin": "69051012345",
  "physician": {
   "recognised": true,
  }
```

4.2.8 Healthcare professional (dentist with NIHDI number)

```
"userProfile": {
   "firstName": "John",
   "lastName": "Doe",
   "ssin": "69051012345",
   "dentist": {
    "recognised": true,
    "nihii11": "35964121001"
   }
}
```

4.2.9 Member of an organization (enterprise – KBO/CBE)

```
"userProfile": {
   "firstName": "John",
   "lastName": "Doe",
   "ssin": "69051012345",
   "organizations": [
    {
     "enterprise": {
      "cbe": "0422674827"
     },
     "name": "WILMAR BVBA"
    }
   ]
},
```

4.2.10 Member of an organization (retirement – NIHDI)

```
"userProfile": {
   "firstName": "John",
   "lastName": "Doe",
   "ssin": "69051012345",
   "organizations": [
    {
     "name": "Retirement Home eHealth Mock1",
     "retirement": {
      "recognised": true,
      "nihii": "73999914"
     }
    }
   ]
},
```

4.2.11   Organization profile (hospital)

```
"userProfile": {
 "organizations": [
  {
    "hospital": {
     "nihii": "71089914"
    }
  }
 ]
}
```

4.2.12   Organization profile (labo)

```
"userProfile": {
 "organizations": [
  {
    "labo": {
     "nihii": "77777766"
    }
  }
 ]
}
```