

Draft high level guidance for use of Verifiable Credentials

1. Background

The aim of this draft guidance document is to support the interoperability of digital identity and attribute solutions covered by the [UK digital identity and attributes trust framework alpha](#).

This guidance can be used for a number of identity verification and attribute validation use cases and is of particular relevance to the delivery of services in the public and private sector. The guidance has been developed in alignment with the Verifiable Credentials open standard for digital credentials from the [World Wide Web Consortium \(W3C\)](#).

We are inviting interested parties to submit feedback on this initial draft to digitalidentityalpha@dcms.gov.uk by 30 September.

2. Key design principles

This guidance has been designed to be aligned with and published as part of the UK Government's digital identity and attributes trust framework, where the intention is that it is recommended but not mandated for future trust framework participants. It has a particular focus on describing assured identity attributes as defined in [Good Practice Guide 45](#), which is incorporated into the trust framework.

It builds on and reuses existing work taking place across industry. This is an initial draft and we are encouraging feedback from a range of interested parties from industry, academia, the public sector, civil society and international partners. We plan to have a finalised version by March 2022.

3. Scope

This draft technical guidance uses the current [Verifiable Credentials Data Model 1.0](#).

4. Regulatory considerations

It is the responsibility of participants to consider applicable regulatory obligations and ensure that they have been appropriately met for any of the use cases they are engaging in.

5. API Specification

This guidance document will:

- Be developed in collaboration trust framework engagement partners, government and regulatory stakeholders, W3C and other industry partners
- Consider other initiatives for secure data sharing
- Aim to support use cases for both personal and business use cases
- Support use cases that require data from multiple sources

6. Data model

In the context of the Verifiable Credentials this guidance can be used in a flexible fashion.

It is based on:

1. The entity that generates the credential is called the Issuer
2. The credential is then given to the Holder who stores it for later use.
3. The Holder can then prove something about themselves by presenting their credentials to a Verifier

This guidance is being developed with a data model of:

1. Claims
2. Credentials
3. Presentations

This guidance has considered Verifiable Credentials basic concepts including:

1. Contexts
2. Identifiers
3. Types
4. Credential subject
5. Issuer
6. Issuance date
7. Proofs (Signatures)
8. Expiration
9. Status
10. Presentations

Attributes

Natural person attributes

Description	Attribute name	Verifiable description	Credential
Full Name	name	Claim	
	given_name	Claim	
	middle_name	Claim	
	family_name	Claim	
Phone_number	phone_number	Claim	
Cell phone number	phone_number_cell	Claim	
	msisdn	Claim	
Phone number(s)	phone_numbers	Claim	
e-mail address	email	Claim	
e-mail addresses	emails	Claim	
Date of birth	birthdate	Claim	
Age	age	Claim	
Age verification	age_is_at_least	Claim	
Age verification	age_is_at_most	Claim	
Previous/maiden name	birth_family_name	Claim	
Previous names	previous_names	Claim	
Current Address	address	Claim	
Previous address(es)	previous_addresses	Claim	
Post code	postal_code	Claim	
Country code	country_code	Claim	
Locality	locality	Claim	
End-User's place of birth	place_of_birth	Claim	
End-User's nationalities	nationalities	Claim	
End-User's salutation, e.g. "Mr."	salutation	Claim	

End-User's title, e.g. "Dr."	title	Claim
Stage name, religious name or any other type of alias/pseudonym	also_known_as	Claim
Gender of end user	gender	Claim

Identity assurance attributes

Trust framework and Attribute GPG 45 Description	Attribute type/value		Verifiable Credential description
UK Digital Identity and Attribute Trust framework	"trust_framework"	"uk_tfida"	Claim
Confidence level -	"identity_assurance_level"	"low" "medium" "high" "very_high"	Claim
Identity evidence profiles	id_verification/procedure	L1A	Evidence
Identity evidence profiles	id_verification/procedure	L1B	Evidence
Identity evidence profiles	id_verification/procedure	L1C	Evidence
Identity evidence profiles	id_verification/procedure	L2A	Evidence
Identity evidence profiles	id_verification/procedure	L2B	Evidence
Identity evidence profiles	id_verification/procedure	L3A	Evidence
Identity evidence profiles	id_verification/procedure	M1A	Evidence
Identity evidence profiles	id_verification/procedure	M1B	Evidence
Identity evidence profiles	id_verification/procedure	M1C	Evidence
Identity evidence profiles	id_verification/procedure	M1D	Evidence

Identity evidence profiles	id_verification/procedure	M2A	Evidence
Identity evidence profiles	id_verification/procedure	M2B	Evidence
Identity evidence profiles	id_verification/procedure	M2C	Evidence
Identity evidence profiles	id_verification/procedure	M3A	Evidence
Identity evidence profiles	id_verification/procedure	H1A	Evidence
Identity evidence profiles	id_verification/procedure	H1B	Evidence
Identity evidence profiles	id_verification/procedure	H1C	Evidence
Identity evidence profiles	id_verification/procedure	H2A	Evidence
Identity evidence profiles	id_verification/procedure	H2B	Evidence
Identity evidence profiles	id_verification/procedure	H2C	Evidence
Identity evidence profiles	id_verification/procedure	H2D	Evidence
Identity evidence profiles	id_verification/procedure	H2E	Evidence
Identity evidence profiles	id_verification/procedure	H3A	Evidence
Identity evidence profiles	id_verification/procedure	V1A	Evidence
Identity evidence profiles	id_verification/procedure	V1B	Evidence
Identity evidence profiles	id_verification/procedure	V1C	Evidence
Identity evidence profiles	id_verification/procedure	V1D	Evidence
Identity evidence profiles	id_verification/procedure	V2A	Evidence
Identity evidence profiles	id_verification/procedure	V2B	Evidence
Identity evidence profiles	id_verification/procedure	V2C	Evidence

Identity evidence profiles	id_verification/proc edure	V2D	Evidence
Identity evidence profiles	id_verification/proc edure	V3A	Evidence
Identity evidence and strength			
Passport	document_details	passport	Evidence
ID cards	document_details	idcard	Evidence
Northern Ireland electoral identity card	document_details	voter_id	Evidence
Driving licences	document_details	driving_permit	Evidence
armed forces identity card	document_details	military_id	Evidence
proof of age card recognised under PASS with a unique reference number	document_details	proof_of_age_id	Evidence
a Home Office travel document (convention travel document, stateless person's document, one-way document or certificate of travel)	document_details	home_office_travel_docume nt	Evidence
birth certificate	document_details	birth_certificate	Evidence
adoption certificate	document_details	adoption_certificate	Evidence
an older person's bus pass	document_details	bus_pass	Evidence
an education certificate from a regulated and recognised educational institution (such as an NVQ, SQA, GCSE, A level or degree certificate)	document_details	education_certificate	Evidence
rental agreement for a residential property	document_details	rental_agreement	Evidence
purchase agreement for a residential property	document_details	purchase_agreement	Evidence
proof of age card recognised under the	document_details	pass_card	Evidence

Proof of Age Standards Scheme (PASS)			
a Freedom Pass	document_details	freedom_pass	Evidence
marriage certificate	electronic_record	marriage_certificate	Evidence
civil partnership certificate	electronic_record	civial_partnership_certificate	Evidence
gas account	electronic_record	gas_account	Evidence
electric account	electronic_record	electric_account	Evidence
a firearm certificate	electronic_record	firearm_certificate	Evidence
National insurance number	electronic_record	social_security_register	Evidence
bank	electronic_record	bank_account	Evidence
building society account	electronic_record	building_society_account	Evidence
credit union account	electronic_record	credit_union_account	Evidence
student loan account	electronic_record	student_loan_account	Evidence
credit account	electronic_record	credit_account	Evidence
mortgage account	electronic_record	mortgage_account	Evidence
loan account (including hire purchase accounts)	electronic_record	loan_account	Evidence
birth register	electronic_record	birth_register	Evidence
electronic identity from a notified eIDAS scheme	electronic_record	eidas_eid	Evidence
Vouch - A written/printed statement/letter from a recognised person or authority regarding the identity of the user.	vouch	written_attestation	Evidenced
Vouch - A statement from a recognised person or authority regarding the identity of the user that was made and stored electronically.	vouch	digital_attestation	Evidence
Identity evidence score	procedure	score_1	Evidence
Identity evidence score	procedure	score_2	Evidence
Identity evidence score	procedure	score_3	Evidence
Identity evidence score	procedure	score_4	Evidence
Validity			

VALID - valid	electronic_record	As above	Evidence
VALID - Visible security features are genuine in person	validation_method	vpip	Evidence
VALID - Visible security features are genuine in person including its optical characteristics under non-visible light.	validation_method	vpiruv	Evidence
VALID - Validation that physical evidence is genuine through the inspection of an image taken remotely under visible light	validation_method	vri	Evidence
VALID Identity process - Cryptographic features are genuine	validation_method	vcrypt	Evidence
Validation score	procedure	score_1	Evidence
Validation score	procedure	score_2	Evidence
Validation score	procedure	score_3	Evidence
Validation score	procedure	score_4	Evidence
Verification			
Manual comp in person	verification_method	pvp	Evidence
Manual comp remote video or image	verification_method	pvr	Evidence
Face biometric in person	verification_method	bvp	Evidence
Face biometric remote image or mobile app	verification_method	bvr	Evidence
Fingerprint biometric in person	verification_method	bvr	Evidence
Knowledge Based Verification	verification_method	kbv	Evidence
Code/token to postal address via secure mail	verification_method	postal_address_secure	Evidence
Token to postal address	verification_method	token	Evidence

Verification score	procedure	score_1	Evidence
Verification score	procedure	score_2	Evidence
Verification score	procedure	score_3	Evidence
Verification score	procedure	score_4	Evidence
Activity history			
account activity seen in last 3 month period	account_activity_3 months	account_activity_3months	Evidence
account activity seen in last 6 month period	account_activity_6 months	account_activity_6months	Evidence
account activity seen in last 12 month period	account_activity_12 months	account_activity_12months	Evidence
account activity seen in last 2 year period	account_activity_2 years	account_activity_2years	Evidence
account activity seen in last 3 year period	account_activity_3 years	account_activity_3years	Evidence
Activity history score	procedure	score_1	Evidence
Activity history score	procedure	score_2	Evidence
Activity history score	procedure	score_3	Evidence
Activity history score	procedure	score_4	Evidence
Identity fraud type			
has had its details stolen (even if those details have not been used fraudulently yet)	TBC	TBC	Evidence
has been reported as stolen	TBC	TBC	Evidence
is suspected to be a synthetic identity	TBC	TBC	Evidence
belongs to someone who's still alive	TBC	TBC	Evidence
is known by an organisation that should have a record of that person (for example an Electoral Registration Office in a local authority)	TBC	TBC	Evidence
is at a usual risk of being impersonated (for example a 'politically	TBC	TBC	Evidence

exposed person' like a politician or judge is at a higher than usual risk of being impersonated)			
more than one authoritative source to do all the checks needed to get a score of 2	TBC	TBC	Evidence
Identity fraud score	procedure	score_1	Evidence
Identity fraud score	procedure	score_2	Evidence
Identity fraud score	procedure	score_3	Evidence

Legal entity attributes

N.B. For legal entities scenarios we would expect a combination of legal entity and natural person attributes to be used.

Description	attribute name	Verifiable Credential description
Company name	organization_name	Claim
	organization_type	Claim
	trading_as	Claim
Previous company name	previous_organization_name	Claim
Registered address	registered_address	Claim
Trading address(es)	trading_addresses	Claim
Company Registration Number	registration_number	Claim
VAT Reg Number	tax_details	Claim
Legal Entity Identifier (LEI)	lei	Claim
Name of regulatory Jurisdiction under which the legal entity is registered	registered_jurisdiction	Claim
Legal status of legal entity	organization_status	Claim
Date of incorporation of the legal entity	incorporation_date	Claim

Date last accounts were submitted	last_accounts_date	Claim
Turnover	last_annual_turnover	Claim
Standard Industrial Classification (SIC) code	uk.sic_code	Claim
Economic Operators Registration and Identification (EORI) number	eu.eori_code	Claim
Excise Authorisation Verification (SEED) number	eu.seed_number	Claim
Data Universal Numbering System (DUNS) number	uk.duns_number	Claim
data protection registration number	dprn	Claim