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ISO/IEC 25791-2

Information technology — OpenID connect FAPI security profile 1.0 —

Part 2: Advanced

Technologies de l'information — Profil de sécurité 1.0 basé sur le protocole OpenID Connect conçu pour les API financières, FAPI —

Partie 2: Niveau avancé

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This document was prepared by the OpenID Foundation (OIDF) (as FAPI Security Profile 1.0 - Part 2: Advanced) and drafted in accordance with its editorial rules. It was adopted, under the JTC 1 PAS procedure, by Joint Technical Committee ISO/IEC JTC 1, *Information technology*.

A list of all parts in the ISO/IEC 25791 series can be found on the ISO and IEC websites.

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Introduction

FAPI is a highly secured OAuth profile that aims to provide specific implementation guidelines for security and interoperability. The FAPI security profile can be applied to APIs in any market area that requires a higher level of security than provided by standard OAuth or OpenID Connect. Among other security enhancements, this specification provides a secure alternative to screen scraping. Screen scraping accesses user's data and functions by impersonating a user through password sharing. This brittle, inefficient, and insecure practice creates security vulnerabilities which require institutions to allow what appears to be an automated attack against their applications.

This document is Part 2 of FAPI Security Profile 1.0 that specifies an advanced security profile of OAuth that is suitable to be used for protecting APIs with high inherent risk. Examples include APIs that give access to highly sensitive data or that can be used to trigger financial transactions (e.g., payment initiation). This document specifies the controls against attacks such as: authorization request tampering, authorization response tampering including code injection, state injection, and token request phishing. Additional details are available in the security considerations section.

Although it is possible to code an OpenID provider and relying party from first principles using this specification, the main audience for this specification is parties who already have a certified implementation of OpenID Connect and want to achieve a higher level of security. Implementers are encouraged to understand the security considerations contained in Section 8.7 before embarking on a 'from scratch' implementation.

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Information technology — OpenID connect FAPI security Profile 1.0 —

Part 2:
Advanced

1. Scope

This part of the document specifies the method of

- applications to obtain the OAuth tokens in an appropriately secure manner for higher risk access to data;
- applications to use OpenID Connect to identify the customer; and
- using tokens to interact with the REST endpoints that provides protected data.

This document is applicable to higher risk use cases which includes commercial and investment banking and other similar industries.

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2. Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

FAPI, *Security Profile 1.0 – Part 1: Baseline*

ISO/IEC 29100, *Information technology – Security techniques – Privacy framework*

RFC 6749, *The OAuth 2.0 Authorization Framework*

RFC 6750, *The OAuth 2.0 Authorization Framework: Bearer Token Usage*

RFC 7636, *Proof Key for Code Exchange by OAuth Public Clients*

OIDC, *OpenID Connect Core 1.0 incorporating errata set 2*

RFC 8705, *OAuth 2.0 Mutual-TLS Client Authentication and Certificate-Bound Access Tokens*

JARM, *JWT Secured Authorization Response Mode for OAuth 2.0 (JARM)*

RFC 9101, *OAuth 2.0 Authorization Framework: JWT-Secured Authorization Request (JAR)*

RFC 9126, *OAuth 2.0 Pushed Authorization Requests (PAR)*

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