# Korean National Protection Profile for

# Single Sign On V1.0

# Certification Report

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This document is the certification report for Korean National Protection Profile for Single Sign On V1.0 of National Security Research Institute (NSR) and Telecommunications Technology Association (TTA).

<u>The Certification Body</u>

<u>IT Security Certification Center (ITSCC)</u>

<u>The Evaluation Facility</u>

<u>Telecommunications Technology Association (TTA)</u>

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# 1. Executive Summary

This report describes the certification result drawn by the certification body on the results of the APE evaluation of Korean National Protection Profile for Single Sign On V1.0 ("PP" hereinafter) [1] with reference to the Common Criteria for Information Technology Security Evaluation ("CC" hereinafter) [2]. It describes the evaluation result and its soundness and conformity. The authors of the PP [1] are National Security Research Institute (NSR) and Telecommunications Technology Association (TTA).

The Target of Evaluation (TOE) in the PP [1] is the Single Sign On (SSO) designed to enables the user to access various business system in the organization through a single user login based on the authentication token. Also, the TOE shall provide a variety of security features: security audit, the user identification and authentication including mutual authentication between TOE components, security management, the TOE access session management, and the TSF protection function, etc.. In addition, the TOE shall provide cryptographic support functions including the cryptographic key management and cryptographic operation for the authentication token. These TOE Security Functional Requirements (SFRs) are outlined in the PP [1].

The evaluation of the PP [1] has been carried out by Telecommunications Technology Association (TTA) and completed on 13 June 2017. This report grounds on the evaluation technical report (ETR) TTA had submitted [6]. The evaluation of the PP [1] was performed in accordance with the APE (Protection Profile Evaluation) requirements in CC Part 3 and the Common Methodology for Information Technology Security Evaluation ("CEM" hereinafter) [3].

The PP [1] does not claim conformance to any other Protection Profile. All Security Assurance Requirements (SARs) in the PP [1] are based only upon assurance component in CC Part 3, and the assurance package is EAL1 augmented by ATE_FUN.1. Therefore the PP [1] is CC Part 3 conformant. The Security Functional Requirements (SFRs) are based upon both functional components in CC Part 2 and newly defined components in the Extended component definition chapter of the PP [1]. Therefore the PP [1] is CC Part 2 extended. The PP [1] requires strict conformance.

The operational environment of the Single Sign On is as shown in [Figure 1].
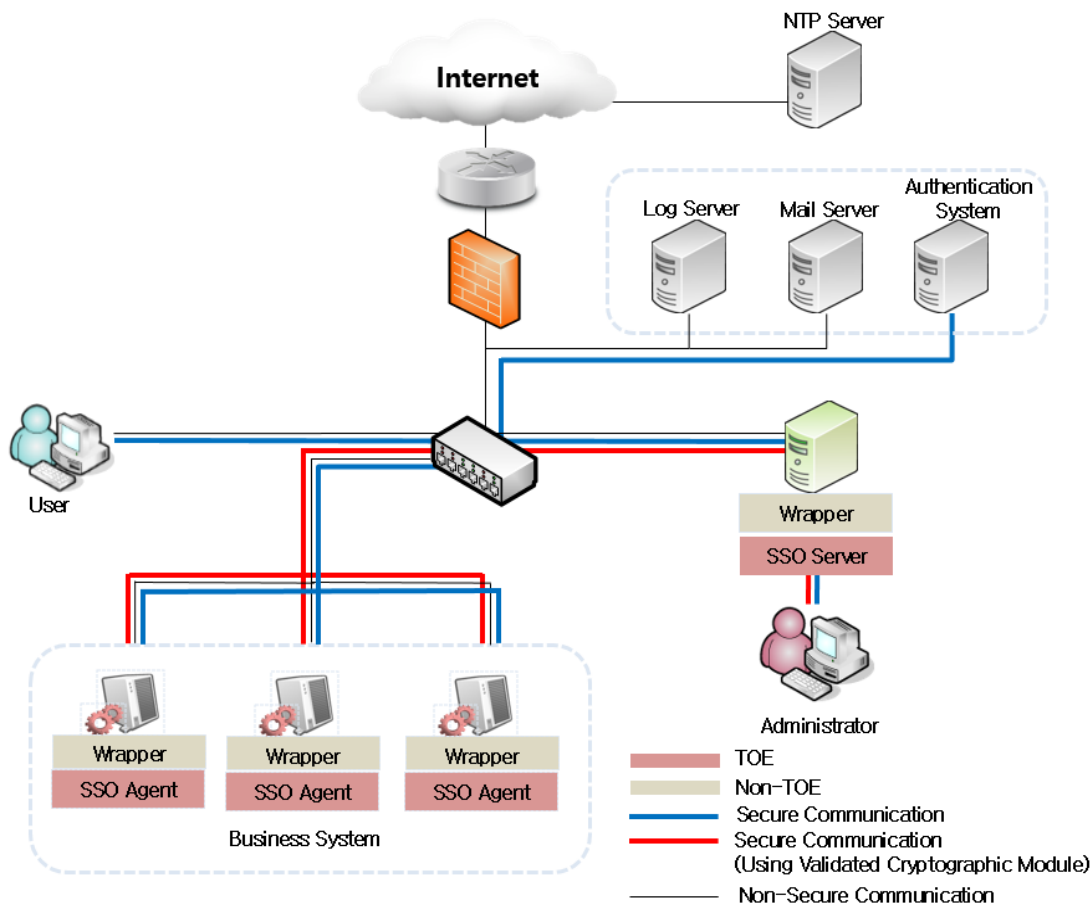
[Figure 1] Operational environment of SSO

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# 2. Identification

[Table 1] summarizes identification information for scheme, developer, sponsor, evaluation facility, certification body, etc..

| Scheme | Korea Evaluation and Certification Guidelines for IT Security (27 June 2016) |
| --- | --- |
| | Korea Evaluation and Certification Scheme for IT Security (26 June 2017) |

| Name and Version of the Certified Protection Profile | Korean National Protection Profile for Single Sign On V1.0 |
|---|---|
| Common Criteria | Common Criteria for Information Technology Security Evaluation, Version 3.1 Revision 5, CCMB-2017-04-001 ~ CCMB-2017-04-003, April 2017 |
| Common Methodology | Common Methodology for Information Technology Security Evaluation, Version 3.1 Revision 5, CCMB-2017-04-004, April 2017 |
| EAL | EAL1+ (augmented by ATE_FUN.1) |
| Developer | National Security Research Institute (NSR) Telecommunications Technology Association (TTA) |
| Sponsor | National Security Research Institute (NSR) |
| Evaluation Facility | Telecommunications Technology Association (TTA) |
| Completion Date of Evaluation | 13 June 2017 |
| Certification No. | KECS-PP-0822-2017 |
| Certification Body | IT Security Certification Center (ITSCC) |

[Table 1] Identification information

## 3. Security Policy

The PP [1] has reduced content of a low assurance PP, thus the PP [1] does not have any explicit security problem definition (i.e., threats, organisational security policies, and/or assumptions) and security objectives for the TOE. The TOE defined in the PP [1] provides security features in accordance with the SFRs. Refer to the PP [1] chapter 5 for details.

## 4. Assumptions and Clarification of Scope

The PP [1] has reduced content of a low assurance PP, thus the PP [1] does not have any explicit assumptions. The TOE defined in the PP [1] is the Single Sign On.

# 5. Results of the Evaluation

The PP [1] claims EAL1+ (ATE_FUN.1), thus has reduced content of a low assurance PP.

The evaluation facility provided the evaluation result in the ETR [6] which references a Single Evaluation Report for APE requirements and Observation Reports. The evaluation result was based on the CC [2] and CEM [3].

As a result of the evaluation, the verdict PASS is assigned to all assurance components of APE.

## 5.1 Protection Profile Evaluation (APE)

The PP Introduction correctly identifies the PP, and the PP reference and the TOE overview are consistent with each other. Therefore the verdict PASS is assigned to APE_INT.1.

The Conformance Claim properly describes how the PP conforms to the CC and packages. Therefore the verdict PASS is assigned to APE_CCL.1.

The Security Objectives for the operational environment from the PP is clearly defined. Therefore the verdict PASS is assigned to APE_OBJ.1.

The Extended Components Definition has been clearly and unambiguously defined, and it is necessary. Therefore the verdict PASS is assigned to APE_ECD.1.

The Security Requirements is defined clearly and unambiguously, and it is internally consistent. Therefore the verdict PASS is assigned to APE_REQ.1.

Thus, the PP is sound and internally consistent, and suitable to be used as the basis for writing a low-assurance ST or another low-assurance PP.

The verdict PASS is assigned to the assurance class APE.

## 5.2 Evaluation Result Summary

| Assurance Class | Assurance Component | Evaluator Action Elements | Verdict | | |
| | | | Evaluator Action Elements | Assurance Component | Assurance Class |
|---|---|---|---|---|---|
| APE | APE_INT.1 | APE_INT.1.1E | PASS | PASS | PASS |
| | APE_CCL.1 | APE_CCL.1.1E | PASS | PASS | |

| Assurance Class | Assurance Component | Evaluator Action Elements | Verdict | | |
|---|---|---|---|---|---|
| | | | Evaluator Action Elements | Assurance Component | Assurance Class |
| | APE_OBJ.1 | APE_OBJ.1.1E | PASS | PASS | |
| | APE_ECD.1 | APE_ECD.1.1E | PASS | PASS | |
| | | APE_ECD.1.2E | PASS | | |
| | APE_REQ.1 | APE_REQ.1.1E | PASS | PASS | |

[Table 2] Evaluation Result Summary

# 6.  Recommendations

The PP [1] defines the minimum security requirements for Single Sign On, and requires an ST or another PP claiming this PP [1] to fulfill the CC requirements for strict conformance, but only a low-assurance ST is allowed to make a conformance to the PP [1]. If the TOE defined in the ST which claims conformance to the PP [1] implements additional security features, then it is strongly recommended the ST author to define additional security functional requirements in accordance with the TOE implementation.

# 7.  Acronyms and Glossary

| | |
|---|---|
| CC | Common Criteria |
| EAL | Evaluation Assurance Level |
| ETR | Evaluation Technical Report |
| PP | Protection Profile |
| SAR | Security Assurance Requirement |
| SFR | Security Functional Requirement |
| ST | Security Target |
| TOE | Target of Evaluation |
| TSF | TOE Security Functionality |

# 8. Bibliography

The certification body has used following documents to produce this report.

[1]  Korean National Protection Profile for Single Sign On V1.0

[2]  Common Criteria for Information Technology Security Evaluation, Version 3.1 Revision 5, CCMB-2017-04-001 ~ CCMB-2017-04-003, April 2017

  – Part 1: Introduction and general model
  – Part 2: Security functional components
  – Part 3: Security assurance components

[3]  Common Methodology for Information Technology Security Evaluation, Version 3.1 Revision 5, CCMB-2017-04-004, April 2017

[4]  Korea Evaluation and Certification Guidelines for IT Security (27 June 2016)

[5]  Korea Evaluation and Certification Scheme for IT Security (26 June 2017)

[6]  TTA-CCE-16-035 Korean National Protection Profile for Single Sign On V1.0 Evaluation Technical Report V1.5, 13 June 2017