

DBMS cPP Version 2.0 Tracked Changes from v1.3

Field	Value
Baseline	DBMS cPP v1.3 official PDF (13 March 2023)
Compared to	DBMS cPP v2.0 Public Review Draft 1 PDF (26 June 2026)
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This comparison is generated from normalized text extracted from the posted official PDF and the review draft PDF.

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--- DBMS cPP v1.3 official PDF (13 March 2023)
+++ DBMS cPP v2.0 Public Review Draft 1 PDF (26 June 2026)
@@ -1,694 +1,577 @@
 collaborative Protection Profile for
 Database Management Systems
-13 March 2023
-Version 1.3
+26 June 2026
+Version 2.0
 Acknowledgements
-This collaborative Protection Profile (cPP) was developed by the Database
-Management System international Technical Community with representatives from
-industry, Government agencies, Common Criteria Test Laboratories. The
-organizations that contributed to the development of this cPP include:
-Industry
+This collaborative Protection Profile (cPP) was developed by the Database Management
System
+international Technical Community with representatives from industry, Government
agencies,
+Common Criteria Test Laboratories. The organizations that contributed to the development
of this
+cPP include:
+INDUSTRY
 IBM
 Microsoft
 Oracle Corp.
-Common Criteria Test Laboratories
+COMMON CRITERIA TEST LABORATORIES
 atsec information security
 Intertek EWA-Canada and Intertek Acumen
 TÜViT
```

Teron Labs

Combitech

-Government Agencies

+GOVERNMENT AGENCIES

FMV/CSEC - Swedish Certification Body for IT Security

BSI - Bundesamt für Sicherheit in der Informationstechnik

JISEC - Japan IT Security Evaluation and Certification Scheme

Details of how to contact the DBMS iTC are found on the Common Criteria Portal at:

<https://www.commoncriteriaportal.org/communities/index.cfm>

-1. Preface

-1.1 Objectives of Document

-This document presents the Common Criteria (CC) collaborative Protection Profile

-(cPP) to express the security functional requirements (SFRs) and security assurance

-requirements (SARs) for a Database Management System. The Evaluation Activities

-that specify the actions the evaluator performs to determine if a product satisfies the

-SFRs captured within this cPP are described in the associated Supporting Document.

-1.2 Scope of Document

-The scope of the cPP within the development and evaluation process is described in

-the Common Criteria for Information Technology Security Evaluation [CC1]. In

-particular, a cPP defines the IT security requirements of a generic type of TOE and

-specifies the functional and assurance security measures to be offered by that TOE

-to meet stated requirements [[CC1], section C.1].

-1.3 Intended Readership

-The target audiences of this cPP are DBMS developers, CC consumers, system

-integrators, CC evaluators and CCRA schemes.

-Although the cPPs and SDs may contain minor editorial errors, cPPs are recognized

-as living documents and the iTCs are dedicated to ongoing updates and revisions.

-Please report any issues to the DBMS iTC. Information on how to contact the DBMS

-iTC can be found on the Technical Communities information page.

-1.4 Related Documents

+Preface

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+Communities information page.

+Related Documents

The following documents are available from the CC Portal at

<https://www.commoncriteriaportal.org/>

Common Criteria

-[CC1] Common Criteria for Information Technology Security Evaluation,

-Part 1: Introduction and General Model,

-CCMB-2017-04-001, Version 3.1 Revision 5, April 2017.

-<https://www.commoncriteriaportal.org/files/ccfiles/CCPART1V3.1R5.pdf>

-[CC2] Common Criteria for Information Technology Security Evaluation,

-Part 2: Security Functional Components,

-CCMB-2017-04-002, Version 3.1 Revision 5, April 2017.

-<https://www.commoncriteriaportal.org/files/ccfiles/CCPART2V3.1R5.pdf>

-[CC3] Common Criteria for Information Technology Security Evaluation,

-Part 3: Security Assurance Components,

-CCMB-2017-04-003, Version 3.1 Revision 5, April 2017

-<https://www.commoncriteriaportal.org/files/ccfiles/CCPART3V3.1R5.pdf>

-[CEM] Common Methodology for Information Technology Security Evaluation,

-Evaluation Methodology,

-CCMB-2017-04-004, Version 3.1 Revision 5, April 2017

-<https://www.commoncriteriaportal.org/files/ccfiles/CEMV3.1R5.pdf>

+ [CC1] Common Criteria for Information Technology

+ Security Evaluation, Part 1: Introduction and

+ general model, CCMB-2022-11-001, CC:2022

+ Revision 1, November 2022.

+ [CC2] Common Criteria for Information Technology

+ Security Evaluation, Part 2: Security functional

+ requirements, CCMB-2022-11-002, CC:2022

+ Revision 1, November 2022.

+ [CC3] Common Criteria for Information Technology

+ Security Evaluation, Part 3: Security assurance

+ requirements, CCMB-2022-11-003, CC:2022

+ Revision 1, November 2022.

+ [CC4] Common Criteria for Information Technology

+ Security Evaluation, Part 4: Framework for the

+ specification of evaluation methods and

+ activities, CCMB-2022-11-004, CC:2022 Revision 1,

+ November 2022.

+ [CC5] Common Criteria for Information Technology
+ Security Evaluation, Part 5: Pre-defined
+ packages of security requirements, CCMB-2022-
+ 11-005, CC:2022 Revision 1, November 2022.
+ [CCE] Common Criteria for Information Technology
+ Security Evaluation, Errata and interpretation
+ for CC:2022 (Release 1) and CEM:2022 (Release
+ 1), CCMB-002, Version 1.1, July 22, 2024.
+ [CEM] Common Methodology for Information
+ Technology Security Evaluation, Evaluation
+ methodology, CCMB-2022-11-006, CEM:2022,
+ Revision 1, November 2022.

Documents related to this cPP

- [SD] Supporting Document Mandatory Technical Document Evaluation Activities for the
- collaborative Protection Profile for Database Management Systems, Version 1.1, 15
- March 2023

+ [SD] Supporting Document Mandatory Technical
+ Document Evaluation Activities for the
+ collaborative Protection Profile for Database
+ Management Systems, Version 2.0, 27 April 2026

Other Documents

[DBMSiTC] DBMS iTC Status

- <https://www.commoncriteriaportal.org/files/communities/Status.DBMS.pdf>

- [CCADD] CC and CEM Addenda: Exact Conformance, Selection-Based SFRs, Optional SFRs
- CCDB, Unique Identifier:013, Version 2.0, 2021-Sep-30
- 1.5 Conventions

- Except for replacing United Kingdom spelling with American spelling, the notation,
- formatting, and conventions used in this cPP are consistent with version 3.1 of the
- CC. Selected presentation choices are discussed here to aid the cPP reader.

- The CC allows several operations to be performed on functional requirements;
- refinement, selection, assignment, and iteration are defined in clause 8 of Part 1 of
- the CC [CC1]. Each of these operations is used in this Protection Profile (PP).

- The refinement operation is used to add detail to a requirement, and thus further
- restricts a requirement. Refinement of security requirements is denoted by bold text
- or in the case of deletions, by crossed out bold text.

- The selection operation is used to select one or more options provided by the CC in
- stating a requirement. Selections that have been made by the PP authors are
- denoted by italicized text, selections to be filled in by the Security Target (ST)
author

- appear in square brackets with an indication that a selection is to be made,
- [selection:], and are not italicized.

- The assignment operation is used to assign a specific value to an unspecified
- parameter, such as the length of a password. Assignments that have been made by
- the cPP authors are denoted by showing the value in square brackets,

- [assignment_value], assignments to be filled in by the ST author appear in square
- brackets with an indication that an assignment is to be made [assignment:].

- Assignments within selections are denoted by showing the value in square brackets
- and italics [assignment_value].

- The iteration operation is used when a component is repeated with varying operations.
- Iteration is denoted by showing the iteration number in parenthesis following the component identifier, (iteration number).
- The CC paradigm also allows protection profile authors to create their own requirements. Such requirements are termed "extended requirements" and are permitted if the CC does not offer suitable requirements to meet the author's needs.
- Extended requirements must be identified and are required to use the CC class/family/component model in articulating the requirements. In this cPP, extended requirements will be indicated with the "_EXT" following the component name.
- Application Notes are provided to help the developer, either to clarify the intent of a requirement, identify implementation choices, or to define "pass-fail" criteria for a requirement. For those components where Application Notes are appropriate, the Application Notes will follow the requirement component. They are numbered and formatted thus:

```
+https://www.commoncriteriaportal.org/files/
+communities/Status.DBMS.pdf
+[TD_DBMS_B_001] Technical Decision TD_DBMS_B_001: Update to
+Role Definitions and Security Attribute
+Management for Consistency, published 29 July
+2025
+[TD_DBMS_B_002] Technical Decision TD_DBMS_B_002: Session
+Locking Mechanism Expansion, published 29
+July 2025
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+of
+deletions, by crossed out bold text.
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+stating a
+requirement. Selections are denoted in square brackets using the CC operation
+designator,
+[selection: selection_value]. Selections to be filled in by the Security Target (ST)
+author retain the
+available choices after the designator.
+The assignment operation is used to assign a specific value to an unspecified parameter,
+such as
```

+the length of a password. Assignments are denoted in square brackets using the CC operation

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+components where Application Notes are appropriate, the Application Notes will follow the

+requirement component. They are numbered and formatted thus:

Application Note 1: This is an application note.

-1.6 Revision History

+Revision History

Version Date Description

0.01 14th February, 2019 Initial Release for iTC review

0.02 8th March, 2019 After iTC workshop review

-0.03 16th June, 2019 Updated with the agreed SPD1 (V1.0) after Public Review

+0.03 16th June, 2019 Updated with the agreed SPD

+(V1.0) after Public Review

0.04 28th October, 2019 Updates by iTC

-0.05 7 February 2020 Acceptance of changes, formatting changes

+Version Date Description

+0.05 7 February 2020 Acceptance of changes,

+formatting changes

0.06 28 February 2020 Acceptance of changes

1.0 16 June 2020 Initial Release

-1.1a 28 November 2022 Updated according to evaluator comments.

-1.1b 1 December 2022 Further comments from the evaluator

+1.1a 28 November 2022 Updated according to evaluator

+comments.

+1.1b 1 December 2022 Further comments from the

+evaluator

- 1.2 13 December 2022 After iTC review
- 1.3 13 March 2023 Updated according to certifier comments.
- 1 Security Problem Definition
- Contents
- ACKNOWLEDGEMENTS
- 1. PREFACE
- 1.1 OBJECTIVES OF DOCUMENT
- 1.2 SCOPE OF DOCUMENT
- 1.3 INTENDED READERSHIP
- 1.4 RELATED DOCUMENTS
- 1.5 CONVENTIONS
- 1.6 REVISION HISTORY
- 2. CPP INTRODUCTION
- 2.1 CPP REFERENCE IDENTIFICATION
- 2.2 CPP OVERVIEW
- 2.3 TOE OVERVIEW
- 2.3.1 Database Management Systems overview
- 2.3.2 Security Functionality Provided by the TOE
- 2.3.3 TOE definition
- 2.3.4 Limitations of Security Claims
- 2.4 TOE OPERATIONAL ENVIRONMENT
- 2.4.1 DBMS Architecture and Environmental Components
- 2.4.2 TOE Administration
- 3. CONFORMANCE CLAIMS
- 3.1 CONFORMANCE WITH CC
- 3.2 CONFORMANCE WITH CC PARTS 2 AND 3
- 3.3 CONFORMANCE WITH PACKAGES
- 3.4 CONFORMANCE WITH OTHER PROTECTION PROFILES
- 3.5 CONFORMANCE STATEMENT
- 3.6 PP-CONFIGURATION
- 4. SECURITY PROBLEM DEFINITION
- 4.1 INFORMAL DISCUSSION
- 4.2 ASSETS AND THREAT AGENTS
- 4.3 THREATS
- 4.4 ORGANIZATIONAL SECURITY POLICIES
- 4.5 ASSUMPTIONS
- 5. SECURITY OBJECTIVES
- 5.1 TOE SECURITY OBJECTIVES
- 5.1.1 O.ADMIN_ROLE
- 5.1.2 O.AUDIT_GENERATION
- 5.1.3 O.DISCRETIONARY_ACCESS
- 5.1.4 O.I&A
- 5.1.5 O.MANAGE
- 5.1.6 O.RESIDUAL_INFORMATION
- 5.1.7 O.TOE_ACCESS
- 5.2 SECURITY OBJECTIVES FOR THE OPERATIONAL ENVIRONMENT
- 5.2.1 OE.ADMIN
- 5.2.2 OE.INFO_PROTECT

- 5.2.3 OE.NO_GENERAL_ PURPOSE
- 5.2.4 OE.PHYSICAL
- 5.3 SECURITY OBJECTIVES FOR THE OPERATIONAL IT ENVIRONMENT
- 5.3.1 OE.IT_I&A
- 5.3.2 OE.IT_TRUSTED_SYSTEM
- 6. SECURITY FUNCTIONAL REQUIREMENTS
- 6.1 CLASS: SECURITY AUDIT (FAU)
 - 6.1.1 Audit Data Generation (FAU_GEN)
 - FAU_GEN.1.1
 - 6.1.2 Security audit event selection (FAU_SEL)
- 6.2 CLASS: USER DATA PROTECTION (FDP)
 - 6.2.1 Access control policy (FDP_ACC)
 - 6.2.2 Residual information protection (FDP_RIP)
- 6.3 CLASS: IDENTIFICATION AND AUTHENTICATION (FIA)
 - 6.3.1 User authentication (FIA_UAU)
 - 6.3.2 User attribute definition (FIA_ATD)
 - 6.3.3 User identification (FIA_UID)
- 6.4 CLASS: SECURITY MANAGEMENT (FMT)
 - 6.4.1 Management of security attributes (FMT_MSA)
 - 6.4.2 Management of TSF data (FMT_MTD)
 - 6.4.3 Revocation (FMT_REV)
 - 6.4.4 Specification of management functions (FMT_SMF)
 - 6.4.5 Security management roles (FMT_SMR)
- 6.5 CLASS: TOE ACCESS (FTA)
 - 6.5.1 Limitation on multiple concurrent sessions (FTA_MCS)
 - 6.5.2 TOE session establishment (FTA_TSE)
- 7. SECURITY ASSURANCE REQUIREMENTS
- 7.1 CLASS ASE: SECURITY TARGET
- 7.2 CLASS ADV: DEVELOPMENT
- 7.3 CLASS AGD: GUIDANCE DOCUMENTATION
- 7.4 CLASS ALC: LIFE-CYCLE SUPPORT
- 7.5 CLASS ATE: TESTS
- 7.6 CLASS AVA: VULNERABILITY ASSESSMENT
- A. OPTIONAL REQUIREMENTS
- A.1 CLASS: IDENTIFICATION AND AUTHENTICATION (FIA)
 - A.1.1 Enhanced user-subject binding (FIA_USB_EXT)
- A.2 CLASS: PROTECTION OF THE TSF (FPT)
 - A.2.1 Internal TOE TSF data replication consistency (FPT_TRC)
- A.3 CLASS: TOE ACCESS (FTA)
 - A.3.1 TOE access information (FTA_TAH_EXT)
- B. EXTENDED COMPONENT DEFINITIONS
- B.1 CLASS: USER IDENTIFICATION AND AUTHENTICATION (FIA)
 - B.1.1 Enhanced user-subject binding (FIA_USB_EXT)
- B.2 CLASS: TOE ACCESS (FTA)
 - B.2.1 TOE access information (FTA_TAH_EXT)
- C. RATIONALES
- C.1 TOE SECURITY OBJECTIVES COVERAGE
- C.2 RATIONALE FOR TOE SECURITY OBJECTIVES

- C.3 RATIONALE FOR THE ENVIRONMENTAL SECURITY OBJECTIVES
- C.4 RATIONALE FOR TOE SECURITY FUNCTIONAL REQUIREMENTS
- C.5 SFR DEPENDENCIES ANALYSIS
- C.6 SAR DEPENDENCIES ANALYSIS
- C.7 RATIONALE FOR SATISFYING ALL SECURITY ASSURANCE REQUIREMENTS
- C.8 RATIONALE FOR EXTENDED SECURITY FUNCTIONAL REQUIREMENTS
- GLOSSARY
- TERMS AND DEFINITIONS
- ACRONYMS USED IN THIS CPP
- Figures / Tables
- Table 1: Threats Applicable to the TOE
- Table 2: Policies Applicable to the TOE
- Table 3: Assumptions Applicable to the TOE Environment
- Table 4: Auditable Events
- Table 5: Security Assurance Requirements
- Table 6: Coverage of Security Objectives for the TOE
- Table 7: Rationale for the TOE Security Objectives
- Table 8: Coverage of SPF Items for the TOE Environment Security Objectives
- Table 9: Rationale for Environmental Security Objectives
- Table 10: Rationale for TOE Security Functional Requirements
- Table 11: Rationale for Extended Security Functional Requirements
- 2. cPP Introduction
- 2.1 cPP Reference Identification
- cPP Reference: collaborative Protection Profile for Database Management Systems
- cPP Version: 1.3
- cPP Date: 13 March 2023
- 2.2 cPP Overview
- This is a collaborative Protection Profile (cPP), a PP that meets the requirements for cPPs described in the Common Criteria Recognition Arrangement.
- Security Targets (STs) that claim conformance to this cPP shall claim exact conformance as defined in Addenda for Exact conformance the CC, [CCADD]
- The product type of the Target of Evaluation (TOE) described in this cPP is a database management system (DBMS). A database is an organized collection of data, generally stored and accessed electronically from a computer system. The database management system (DBMS) is the software that interacts with end users, applications, and the database itself to capture and analyze the data. The DBMS software additionally encompasses the core facilities provided to administer the database. A DBMS may be a single-user system, in which only one user may access the DBMS at a given time, or a multi-user system, in which many users may access the DBMS simultaneously.
- The DBMS will have the capability to limit DBMS access to authorized users, enforce Discretionary Access Controls (DAC) on objects under the control of the database management system based on user and optionally, group authorizations, and provide user accountability via audit of users' actions.
- This cPP specifies security requirements for a commercial-off-the-shelf (COTS) database management system (DBMS). The TOE type is a database management system.

-Security Targets (ST) derived from this cPP describe Targets of Evaluation (TOE)
-that are Database Management Systems.

-2.3 TOE Overview

-A TOE compliant with this cPP includes, but is not limited to, a DBMS server and can
-be evaluated as a software only application layered on an underlying system, i.e., an
-operating system (OS), hardware, network services, and/or custom software, and is
-usually embedded as a component of a larger system within an operational
-environment. This profile establishes the requirements necessary to achieve the
-security objectives of the Target of Evaluation (TOE) and its environment.

-Conformant TOEs provide access control based on user identity and, optionally,
-group membership, e.g., Discretionary Access Control (DAC), and generation of
-audit records for security relevant events. Authorized administrators of the TOE are
-trusted to not misuse the privileges assigned to them.

-2.3.1 Database Management Systems overview

-A DBMS is comprised of the DBMS server application that performs some or all of
-the following functions:

- a) Controlling TOE users' accesses to user data and TSF data;
- b) Indexing data values to their physical locations for quick retrievals based on a
-value or range of values;
- c) Executing pre-written programs (i.e., utilities) to perform common tasks like
-database backup, recovery, loading, and copying;
- d) Supporting mechanisms that enable concurrent database access (e.g., locks);
- e) Assisting recovery of user data and DBMS data (e.g., transaction log); and
- f) Tracking operations that users perform.

+1.3 13 March 2023 Updated according to certifier
+comments.

+1.4 25 April 2025 Updated after comments from
+BSI.

+1.5 27 April 2026 Incorporated TD_DBMS_B_001
+and TD_DBMS_B_002.

+2.0 27 April 2026 Updated conformance target to
+CC:2022.

+Chapter 1. cPP Introduction

+1.1. cPP Reference Identification

+cPP Reference: collaborative Protection Profile for Database Management Systems
+cPP Version: 2.0
+cPP Date: 27 April 2026

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- +□ Indexing data values to their physical locations for quick retrievals based on a value or range of values;
- +□ Executing pre-written programs (i.e., utilities) to perform common tasks like database

backup,

+recovery, loading, and copying;

+ Supporting mechanisms that enable concurrent database access (e.g., locks);

+ Assisting recovery of user data and DBMS data (e.g., transaction log); and

+ Tracking operations that users perform.

Most commercial DBMS server applications also provide the following functions:

- A data model with which the DBMS data structures and organization can be
-conceptualized (e.g., hierarchical, object-oriented, relational data models) and
-DBMS objects defined.

- High-level language(s) or interfaces that allow authorized users to define
-database constructs; access and modify user or DBMS data; present user or
-DBMS data; and perform operations on those data.

+ A data model with which the DBMS data structures and organization can be conceptualized
(e.g., hierarchical, object-oriented, relational data models) and DBMS objects defined.

+ High-level language(s) or interfaces that allow authorized users to define database
constructs;

+access and modify user or DBMS data; present user or DBMS data; and perform operations
on

+those data.

A DBMS supports two user types:

-1. Users who interact with the DBMS to observe and/or modify data objects for
-which they have authorization to access; and

-2. The authorized administrators who implement and manage the various
-information-related policies of an organization (e.g., access, integrity,
-consistency, availability) for the databases that they install, configure, manage,
-and/or own.

+ Users who interact with the DBMS to observe and/or modify data objects for which they
have

+authorization to access; and

+ The authorized administrators who implement and manage the various information-related
+policies of an organization (e.g., access, integrity, consistency, availability) for the
databases that

+they install, configure, manage, and/or own.

A DBMS stores and controls access to two types of data:

-1. The first type is the user data that the DBMS maintains and protects. User
-data may consist of the following:

-a) The user data stored in or as database objects;

-b) The definitions of user databases and database objects, commonly
-known as DBMS metadata; and

-c) The user-developed queries, functions, or procedures that the DBMS
-maintains for users.

-2. The second type is the DBMS data (e.g., configuration parameters, user
-security attributes, transaction log, audit instructions, and records) that the
-DBMS maintains and may use to operate the DBMS.

-DBMS specifications identify the detailed requirements for the DBMS server
-functions given in the above list.

-2.3.2 Security Functionality Provided by the TOE

+ The first type is the user data that the DBMS maintains and protects. User data may

consist of

+the following:

+□ The user data stored in or as database objects;

+□ The definitions of user databases and database objects, commonly known as DBMS metadata; and

+□ The user-developed queries, functions, or procedures that the DBMS maintains for users.

+□ The second type is the DBMS data (e.g., configuration parameters, user security attributes,

+transaction log, audit instructions, and records) that the DBMS maintains and may use to operate the DBMS.

+DBMS specifications identify the detailed requirements for the DBMS server functions given in the

+above list.

+1.3.2. Security Functionality Provided by the TOE

A DBMS evaluated against this PP will provide the following security services.

Security services that must be provided by the TOE:

-□ Discretionary Access Control (DAC) limits access to objects based on the identity of the subjects or groups to which the subjects and objects belong, and which allows authorized users to specify how the objects that they control are protected.

-□ Audit Capture for creation of information on all auditable events.

-□ Authorized administration role to allow authorized administrators to configure the policies for discretionary access control, identification and authentication, and auditing. The TOE must enforce the authorized administration role.

-□ Limitation of the number of concurrent sessions and restrictions on establishing sessions.

-Application Note 1: Some administrative tasks may be delegated to specific users (which by that delegation become administrators although they can only perform some limited administrative actions). Ensuring that those users cannot extend the administrative rights assigned to them is a security functionality the TOE has to provide.

-2.3.3 TOE definition

-The TOE consists of at least one instance of the security functions of the DBMS server application with its associated guidance documentation and the interfaces to the external Information Technology (IT) entities with which the DBMS interacts.

-This cPP does not dictate a specific architecture. The ST writer will need to identify and describe the TOE architecture to be evaluated. Architectures are described in section 1.4.2.

-The external IT entities, with which the DBMS may interact, may include the

+□ Discretionary Access Control (DAC) limits access to objects based on the identity of the subjects

+or groups to which the subjects and objects belong, and which allows authorized users to specify how the objects that they control are protected.

+□ Audit Capture for creation of information on all auditable events.

+□ Authorized administration role to allow authorized administrators to configure the policies for

+discretionary access control, identification and authentication, and auditing. The TOE must

- +enforce the authorized administration role.
- +□ Limitation of the number of concurrent sessions and restrictions on establishing sessions.
- +Some administrative tasks may be delegated to specific users (which by that delegation become administrators although they can only perform some limited administrative actions).
- Ensuring that
 - +those users cannot extend the administrative rights assigned to them is a security functionality the TOE has to provide.
- +1.3.3. TOE definition
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 - +This cPP does not dictate a specific architecture. The ST writer will need to identify and describe the TOE architecture to be evaluated. Architectures are described in section 1.4.2.
 - +The external IT entities, with which the DBMS may interact, may include the following:
 - +□ Client applications that allow users to interface with the DBMS server.
 - +□ The host operating system (host OS) on which the TOE has been installed.
 - +□ The networking, printing, data-storage, and other devices and services with which the host OS may interact on behalf of the DBMS or the DBMS user; and the other IT products such as application servers, web servers, authentication servers, directory services, and transaction processors with which the DBMS may interact to perform a DBMS function or a security function.
 - +The TOE Security Function (TSF) is limited to the elements required to exercise the evaluated security functionality.
 - +The DBMS must specify the host OS on which it must reside to provide the desired degree of security feature integration as well as the configuration of those OS(es) required to support the DBMS functions. In all cases, the TOE must be installed and administered in accordance with the TOE installation and administration instructions.
- +1.3.4. Limitations of Security Claims
 - +Conformance with this cPP will not guarantee the following:
 - +□ Physical protection mechanisms and the administrative procedures for using them are in place.
 - +□ Mechanisms to ensure the complete availability of the data residing on the DBMS are in place.
 - +The DBMS can provide simultaneous access to data to make the data available to more than one person at a given time, and it can enforce DBMS resource allocation limits to prevent

users from

- +monopolizing a DBMS service/resource. However, it cannot detect or prevent the unavailability
- +that may occur because of a physical or environmental disaster, a storage device failure, or
- +external threats on the underlying operating system. For such threats to availability, the
- +environment must provide the required countermeasures.
- +□ Mechanisms to ensure that users properly secure the data that they retrieve from the DBMS are
- +in place. The security procedures of the organization(s) that use and manage the DBMS must
- +define users' data retrieval, storage, export, and disposition responsibilities.
- +□ Mechanisms to ensure that authorized administrators wisely use DAC. Although the DBMS can
- +support an access control policy by which users and optionally users in defined groups, are
- +granted access only to the data that they need to perform their jobs, it cannot completely ensure
- +that authorized administrators who are able to set access controls will do so prudently.

1.4. TOE Operational Environment

1.4.1. DBMS Architecture and Environmental Components

- +This cPP does not dictate a specific architecture. A TOE compliant with this cPP may be evaluated
- +and may operate in several architectures, including, but not limited to, one or more of the
- following:
 - Client applications that allow users to interface with the DBMS server.
 - The host operating system (host OS) on which the TOE has been installed;
 - The networking, printing, data-storage, and other devices and services with
 - which the host OS may interact on behalf of the DBMS or the DBMS user;
 - and the other IT products such as application servers, web servers,
 - authentication servers, directory services, and transaction processors with
 - which the DBMS may interact to perform a DBMS function or a security
 - function.
 - The TOE Security Function (TSF) is limited to the elements required to exercise the
 - evaluated security functionality.
 - The DBMS must specify the host OS on which it must reside to provide the desired
 - degree of security feature integration as well as the configuration of those OS(es)
 - required to support the DBMS functions. In all cases, the TOE must be installed and
 - administered in accordance with the TOE installation and administration instructions.

2.3.4 Limitations of Security Claims

- Conformance with this cPP will not guarantee the following:
 - Physical protection mechanisms and the administrative procedures for using
 - them are in place.
 - Mechanisms to ensure the complete availability of the data residing on the
 - DBMS are in place. The DBMS can provide simultaneous access to data to
 - make the data available to more than one person at a given time, and it can

-enforce DBMS resource allocation limits to prevent users from monopolizing a DBMS service/resource. However, it cannot detect or prevent the unavailability that may occur because of a physical or environmental disaster, a storage device failure, or external threats on the underlying operating system. For such threats to availability, the environment must provide the required countermeasures.

□ Mechanisms to ensure that users properly secure the data that they retrieve from the DBMS are in place. The security procedures of the organization(s) that use and manage the DBMS must define users' data retrieval, storage, export, and disposition responsibilities.

□ Mechanisms to ensure that authorized administrators wisely use DAC.

-Although the DBMS can support an access control policy by which users and optionally users in defined groups, are granted access only to the data that they need to perform their jobs, it cannot completely ensure that authorized administrators who are able to set access controls will do so prudently.

-2.4 TOE Operational Environment

-2.4.1 DBMS Architecture and Environmental Components

-This cPP does not dictate a specific architecture. A TOE compliant with this cPP may be evaluated and may operate in several architectures, including, but not limited to, one or more of the following:

□ A stand-alone system running the DBMS server application; a stand-alone system running the DBMS server and DBMS client(s) and serving one, or more than one, online user at a given time;

□ A network of systems communicating with several distributed DBMS servers simultaneously;

□ A network of workstations or terminals running DBMS clients and communicating with a DBMS server simultaneously; these devices may be hardwired to the host computer or be connected to it by means of local or wide-area networks; and

□ A network of workstations communicating with one or more application servers, which in turn interact with the DBMS on behalf of the workstation users or other subjects (e.g., a DBMS server interacting with a transaction processor that manages user requests).

-2.4.2 TOE Administration

-This cPP defines one necessary administrator role (authorized administrator) which is established by the developer of the DBMS. This cPP allows the DBMS developer or security target writer to define more user or administrator roles.

-If the security target allows it, the administrators of the system may assign privileges to users. When the DBMS is established, the ability to assign privileges and their associated responsibilities must also exist.

-Authorized administrators of the TOE will have capabilities that are commensurate with their assigned administrative privileges. The very ability to establish and assign privileges will itself be a privileged function.

-3. Conformance Claims

-3.1 Conformance with CC

-This cPP conforms to the requirements of Common Criteria v3.1, Revision 5 as defined by the references [CC1], [CC2] and [CC3]. The methodology applied for the PP evaluation is defined in [CEM].

-This cPP also applies the CC and CEM Addenda, Exact Conformance, Selection-Based SFRs, Optional SFRs: V2.0 dated 2021-Sep-30, Final.

-This cPP satisfies the following Assurance Families: APE_CCL.1, APE_ECD.1, APE_INT.1, APE_OBJ.2, APE_REQ.2 and APE_SPD.1.

-3.2 Conformance with CC parts 2 and 3

-DBMS cPP is CC version 3.1 revision 5 Part 2 extended and Part 3 conformant.

-3.3 Conformance with Packages

+ A stand-alone system running the DBMS server application; a stand-alone system running the DBMS server and DBMS client(s) and serving one, or more than one, online user at a given time;

+ A network of systems communicating with several distributed DBMS servers simultaneously;

+ A network of workstations or terminals running DBMS clients and communicating with a DBMS server simultaneously; these devices may be hardwired to the host computer or be connected to it by means of local or wide-area networks; and

+ A network of workstations communicating with one or more application servers, which in turn interact with the DBMS on behalf of the workstation users or other subjects (e.g., a DBMS server interacting with a transaction processor that manages user requests).

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+When the DBMS is established, the ability to assign privileges and their associated responsibilities must also exist.

+Authorized administrators of the TOE will have capabilities that are commensurate with their assigned administrative privileges. The very ability to establish and assign privileges will itself be a privileged function.

+Chapter 2. Conformance Claims

+2.1. Conformance with CC

+This cPP conforms to the requirements of Common Criteria:2022 as defined by the references [CC1], [CC2] and [CC3]. The framework for the specification of evaluation activities is defined in [CC4], the assurance package is defined in [CC5], and the methodology applied for the PP evaluation is defined in [CEM]. This cPP also accounts for errata and interpretations for CC:2022 and CEM:2022

[CCE].

+This cPP applies exact conformance, selection-based SFRs, and optional SFRs as defined for CC:2022.

+This cPP satisfies the following Assurance Families: APE_CCL.1, APE_ECD.1, APE_INT.1, APE_OBJ.2,

+APE_REQ.2 and APE_SPD.1.

+2.2. Conformance with CC parts 2 and 3

+DBMS cPP is CC:2022 Part 2 extended and Part 3 conformant.

+2.3. Conformance with Packages

The DBMS cPP does not claim conformance to any functional packages.

-The DBMS cPP claims conformance to the EAL2 assurance package augmented by

+The DBMS cPP claims conformance to the EAL2 assurance package defined in [CC5], augmented by

ALC_FLR.3 Systematic flaw remediation.

-3.4 Conformance with other Protection Profiles

+2.4. Conformance with other Protection Profiles

The DBMS cPP does not claim conformance to any other Protection Profile.

-3.5 Conformance Statement

+2.5. Conformance Statement

DBMS cPP requires exact conformance by an ST.

-Exact Conformance is a subset of Strict Conformance as defined by [CC1]. Exact

-Conformance is defined as the ST containing all of the SFRs in section 6 (these are

-mandatory SFRs) of this cPP, and potentially SFRs from Appendix A (these are

-optional SFRs). While iteration is allowed, no additional requirements from [CC2],

-[CC3], or definitions of extended components not already included in this cPP) are

-allowed to be included in the ST. Further, no SFRs in section 6 of this cPP are

-allowed to be omitted.

-3.6 PP-Configuration

-The collaborative Protection Profile for Database Management Systems (DBMS cPP)

-is structured as a base Protection Profile, able to accommodate a set of (optional)

-PP-Modules.

-4. Security Problem Definition

-In this section, the security problem definition (SPD) for a DBMS is described. First,

-the informal discussion of the SPD is presented followed by a more formal

-description in terms of the identified threats, policies, and assumptions that will be

-used to identify the specific security requirements addressed by this cPP.

-4.1 Informal Discussion

-Given their common usage as repositories of high value data, attackers routinely

-target DBMS installations for compromise. Vulnerabilities that attackers may take

-advantage of are:

-□ Design flaws and programming bugs in the DBMS and the associated

-programs and systems, creating various security vulnerabilities (e.g. weak or

-ineffective access controls) which can lead to data loss/corruption,

-performance degradation etc;

-□ Unauthorized or unintended activity or misuse by authorized database users,

-or network/systems managers, or by unauthorized users or hackers (e.g.

-inappropriate access to sensitive data, metadata or functions within

-databases, or inappropriate changes to the database programs, structures or

-security configurations);

- Malware infections causing incidents such as unauthorized access, leakage or disclosure of personal or proprietary data, deletion of or damage to the data or programs, interruption or denial of authorized access to the database, attacks on other systems and the unanticipated failure of database services; and

- Data corruption and/or loss caused by the entry of invalid data or commands, mistakes in database or system administration processes, sabotage/criminal damage etc.

-4.2 Assets and Threat Agents

-The threats given in section 4.3 refer to various threat agents and assets. The term "threat agent" is defined in CC Part 1.

-The assets, mentioned in Table 1 below, are either defined in CC Part 1, or in the glossary which will be provided in the Appendix of the cPP document.

-The terms "TSF data", "TSF" and "user data", are defined in CC Part 1. The terms "public objects" and "TOE resources" are given in the glossary which will be provided in the Appendix of the cPP document.

-4.3 Threats

-The following threats are identified and addressed by the TOE and should be read in conjunction with the threat rationale.

-Compliant TOEs will provide security functionality that addresses threats to the TOE and implements policies that are imposed by the organization, law or regulation.

-Table 1: Threats Applicable to the TOE

+Exact Conformance is a subset of Strict Conformance as defined by [CC1]. Exact Conformance is

+defined as the ST containing all of the SFRs in section 6 (these are mandatory SFRs) of this cPP,

+potentially SFRs from Appendix A (these are optional SFRs), and all applicable SFRs from Appendix

+D that are required by selections made in the mandatory SFRs. While iteration is allowed, no

+additional requirements from [CC2], [CC3], or definitions of extended components not already

+included in this cPP) are allowed to be included in the ST. Further, no SFRs in section 6 of this cPP

+are allowed to be omitted.

+2.6. PP-Configuration

+The collaborative Protection Profile for Database Management Systems (DBMS cPP) is structured as

+a base Protection Profile, able to accommodate a set of (optional) PP-Modules.

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+In this section, the security problem definition (SPD) for a DBMS is described. First, the informal

+discussion of the SPD is presented followed by a more formal description in terms of the identified

+threats, policies, and assumptions that will be used to identify the specific security requirements

+addressed by this cPP.

+3.1. Informal Discussion

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- + Design flaws and programming bugs in the DBMS and the associated programs and systems,
- +creating various security vulnerabilities (e.g. weak or ineffective access controls) which can lead
 - +to data loss/corruption, performance degradation etc;
- + Unauthorized or unintended activity or misuse by authorized database users, or network/systems managers, or by unauthorized users or hackers (e.g. inappropriate access to sensitive data, metadata or functions within databases, or inappropriate changes to the database programs, structures or security configurations);
- + Malware infections causing incidents such as unauthorized access, leakage or disclosure of personal or proprietary data, deletion of or damage to the data or programs, interruption or denial of authorized access to the database, attacks on other systems and the unanticipated failure of database services; and
- + Data corruption and/or loss caused by the entry of invalid data or commands, mistakes in database or system administration processes, sabotage/criminal damage etc.

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+Compliant TOEs will provide security functionality that addresses threats to the TOE and implements policies that are imposed by the organization, law or regulation.

+Table 1. Table 1: Threats Applicable to the TOE

Threat Definition

- A user or a process may read or modify TSF data using
- T.ACCESS_TSFDATA functions of the TOE without being identified, authenticated and authorized.
- A user or a process may use, manage or modify the TSF,
- T.ACCESS_TSFFUNC

-bypassing the protection mechanisms of the TSF.

-A user who has not successfully completed identification

-T.IA_USER and authentication may gain unauthorized access to user

-data or TOE resources beyond public objects.

-A user or a process acting on behalf of a user may gain

-unauthorized access to user or TSF data through

-T.RESIDUAL_DATA

-reallocation of TOE resources from one user or process to

-another.

-An authenticated user or a process, in conflict with the

-T.UNAUTHORIZED_ACCESS TOE security policy, may gain unauthorized access to user

+T.ACCESS_TSFDATA A user or a process may read or modify TSF data

+using functions of the TOE without being

+identified, authenticated and authorized.

+T.ACCESS_TSFFUNC A user or a process may use, manage or modify

+the TSF, bypassing the protection mechanisms of

+the TSF.

+T.IA_USER A user who has not successfully completed

+identification and authentication may gain

+unauthorized access to user data or TOE

+resources beyond public objects.

+T.RESIDUAL_DATA A user or a process acting on behalf of a user

+may gain unauthorized access to user or TSF

+data through reallocation of TOE resources from

+one user or process to another.

+T.UNAUTHORIZED_ACCESS An authenticated user or a process, in conflict

+with the TOE security policy, may gain

+unauthorized access to user data.

+3.4. Organizational Security Policies

+The following organizational security policies are addressed by cPP-conformant TOEs:

+Table 2. Table 2: Policies Applicable to the TOE

+Policy Definition

+P.ACCOUNTABILITY The authorized users of the TOE shall be held

+accountable for their actions within the TOE.

+P.ROLES Administrative authority to TSF functionality

+shall be given to trusted personnel and be as

+restricted as possible while supporting only the

+administrative duties the person has. This role

+shall be separate and distinct from other

+authorized users.

+P.USER Authority shall only be given to users who are

+trusted to perform the actions correctly and are

+permitted by the organization to access user

data.

-4.4 Organizational Security Policies

-The following organizational security policies are addressed by cPP-conformant

-TOEs:

-Table 2: Policies Applicable to the TOE

-Policy Definition

-The authorized users of the TOE shall be held accountable for

-P.ACCOUNTABILITY

-their actions within the TOE.

-Administrative authority to TSF functionality shall be given to

-trusted personnel and be as restricted as possible while

-P.ROLES

-supporting only the administrative duties the person has. This

-role shall be separate and distinct from other authorized users.

-Authority shall only be given to users who are trusted to

-P.USER perform the actions correctly and are permitted by the

-organization to access user data.

-4.5 Assumptions

-This section contains assumptions regarding the IT environment in which the TOE

-will reside.

-Table 3: Assumptions Applicable to the TOE Environment

+3.5. Assumptions

+This section contains assumptions regarding the IT environment in which the TOE will reside.

+Table 3. Table 3: Assumptions Applicable to the TOE Environment

Assumption Definition

Physical aspects

-The operational environment is assumed to provide the TOE with

-appropriate physical protection such that the TOE is not subject to

-physical attack that may compromise the security and/or interfere with the

-A.PHYSICAL

-platform's correct operation. This includes protection for the physical

-infrastructure on which the TOE depends for correct operation and

-hardware devices on which the TOE is executing.

+A.PHYSICAL The operational environment is assumed to

+provide the TOE with appropriate physical

+protection such that the TOE is not subject to

+physical attack that may compromise the

+security and/or interfere with the platform's

+correct operation. This includes protection for

+the physical infrastructure on which the TOE

+depends for correct operation and hardware

+devices on which the TOE is executing.

Personnel aspects

-Authorized users possess the necessary authorization to access the

-A.AUTHUSER information managed by the TOE in accordance with organization

-information access policies.

-The TOE security functionality is managed by one or more competent,

-authorized administrators. The system administrative personnel are not

-A.MANAGE

-careless, willfully negligent, or hostile, and will follow and abide by the

-instructions provided by the guidance documentation.

-Authorized users are sufficiently trained to accomplish a task or a group of

-A.TRAINEDUSER tasks within a secure IT environment by exercising control over their user -data.

+A.AUTHUSER Authorized users possess the necessary
+authorization to access the information
+managed by the TOE in accordance with
+organization information access policies.

+A.MANAGE The TOE security functionality is managed by
+one or more competent, authorized
+administrators. The system administrative
+personnel are not careless, willfully negligent, or
+hostile, and will follow and abide by the
+instructions provided by the guidance
+documentation.

+A.TRAINEDUSER Authorized users are sufficiently trained to
+accomplish a task or a group of tasks within a
+secure IT environment by exercising control
+over their user data.

Procedural aspects

-There are no general-purpose computing capabilities (e.g., compilers or
-A.NO_GENERAL_
-user applications) available on DBMS servers, other than those services
-PURPOSE
-necessary for the operation, administration, and support of the DBMS.

-All external IT systems trusted by the TSF to provide TSF data or services
-to the TOE, or to support the TSF in the enforcement of security policy
-A.PEER_FUNC_& decisions are assumed to correctly implement the functionality used by
-_MGT the TSF consistent with the assumptions defined for this functionality and
-to be properly managed and operate under security policy constraints

+A.NO_GENERAL_ + PURPOSE There are no general-purpose computing
+capabilities (e.g., compilers or user applications)
+available on DBMS servers, other than those
+services necessary for the operation,
+administration, and support of the DBMS.

+A.PEER_FUNC_&_MGT All external IT systems trusted by the TSF to
+provide TSF data or services to the TOE, or to
+support the TSF in the enforcement of security
+policy decisions are assumed to correctly
+implement the functionality used by the TSF
+consistent with the assumptions defined for this
+functionality and to be properly managed and
+operate under security policy constraints
compatible with those of the TOE.

-Any information provided by a trusted entity in the IT environment and
-used to support the provision of time and date, information used in audit
-A.SUPPORT
-capture, user authentication, and authorization that is used by the TOE is
-correct and up to date.

+Assumption Definition

+A.SUPPORT Any information provided by a trusted entity in
+the IT environment and used to support the
+provision of time and date, information used in
+audit capture, user authentication, and
+authorization that is used by the TOE is correct
+and up to date.

Connectivity aspects

-All connections to and from remote trusted IT systems and between
-separate parts of the TSF are physically and/or logically protected within
-A.CONNECT the TOE environment to ensure the integrity and confidentiality of the data
-transmitted and to ensure the authenticity of the communication end
-points.

-5. Security Objectives

-This section identifies the security objectives of the TOE and its supporting
-environment.
-These security objectives identify the responsibilities of the TOE and its environment
-in meeting the security problem definition (SPD).

-5.1 TOE security objectives

-5.1.1 O.ADMIN_ROLE

-The TOE shall provide roles that allow only authorized users to have access to
-administrative privileges that are specific to the role.

-5.1.2 O.AUDIT_GENERATION

-The TOE shall provide the capability to detect and create/generate records of
-security relevant events associated with users.

-5.1.3 O.DISCRETIONARY_ACCESS

-The TSF shall control access of subjects and/or users to named resources based on
-identity of the object, subject, or user. The TSF shall allow authorized users to
-specify for each access mode which users/subjects are allowed to access a specific
-named object in that access mode.

-5.1.4 O.I&A

-The TOE shall ensure that users are authenticated before the TOE processes any
-actions that require authentication.

-5.1.5 O.MANAGE

-The TSF shall provide all the functions and facilities necessary to manage TOE
-security mechanisms, and shall restrict such management actions to authorized
-users.

-5.1.6 O.RESIDUAL_INFORMATION

-The TOE shall ensure that any information contained in a protected resource within
-its control is not inappropriately disclosed when the resource is reallocated.

-5.1.7 O.TOE_ACCESS

-The TOE shall provide functionality that controls a user's logical access to user data
-and to the TSF.

-5.2 Security Objectives for the Operational Environment

-5.2.1 OE.ADMIN

-Those responsible for the TOE are competent and trustworthy individuals, capable of
-managing the TOE and the security of the information it contains.

-5.2.2 OE.INFO_PROTECT

-Those responsible for the TOE shall establish and implement procedures to ensure

-that information is protected in an appropriate manner. In particular:

- All network and peripheral cabling shall be approved for the transmittal of the most sensitive data transmitted over the link. Such physical links are assumed to be adequately protected against threats to the confidentiality and integrity of the data transmitted using appropriate physical and logical protection techniques.
- DAC protections on security-relevant files (such as audit trails and authorization databases) shall always be set up correctly.
- Users are authorized to access parts of the data managed by the TOE and are trained to exercise control over their own data.

-5.2.3 OE.NO_GENERAL_PURPOSE

-There shall be no general-purpose computing capabilities (e.g., compilers or user applications) available on DBMS servers, other than those services necessary for the operation, administration, and support of the DBMS.

-5.2.4 OE.PHYSICAL

-Those responsible for the TOE shall ensure that those parts of the TOE critical to enforcement of the security policy are protected from physical attack that might compromise IT security objectives. The protection shall be commensurate with the value of the IT assets protected by the TOE.

-5.3 Security Objectives for the Operational IT Environment

-5.3.1 OE.IT_I&A

-Any information provided by a trusted entity in the environment and used to support user authentication and authorization used by the TOE is correct and up to date.

-5.3.2 OE.IT_TRUSTED_SYSTEM

-External IT systems may be required by the TOE for the enforcement of the security policy. These external trusted IT systems shall be managed according to known, accepted, and trusted policies based on the same rules and policies applicable to the TOE, and are physically and shall be sufficiently protected from any attack that may cause those functions to provide false results.

-6. Security Functional Requirements

+A.CONNECT All connections to and from remote trusted IT systems and between separate parts of the TSF are physically and/or logically protected within the TOE environment to ensure the integrity and confidentiality of the data transmitted and to ensure the authenticity of the communication end points.

+Chapter 4. Security Objectives

+This section identifies the security objectives of the TOE and its supporting environment.

+These security objectives identify the responsibilities of the TOE and its environment in meeting the security problem definition (SPD).

+4.1. TOE security objectives

+4.1.1. O.ADMIN_ROLE

+The TOE shall provide roles that allow only authorized users to have access to administrative privileges that are specific to the role.

+4.1.2. O.AUDIT_GENERATION

+The TOE shall provide the capability to detect and create/generate records of security relevant

+events associated with users.

+4.1.3. O.DISCRETIONARY_ACCESS

+The TSF shall control access of subjects and/or users to named resources based on identity of the

+object, subject, or user. The TSF shall allow authorized users to specify for each access mode which

+users/subjects are allowed to access a specific named object in that access mode.

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+The TOE shall ensure that users are authenticated before the TOE processes any actions that

+require authentication.

+4.1.5. O.MANAGE

+The TSF shall provide all the functions and facilities necessary to manage TOE security mechanisms, and shall restrict such management actions to authorized users.

+4.1.6. O.RESIDUAL_INFORMATION

+The TOE shall ensure that any information contained in a protected resource within its control is

+not inappropriately disclosed when the resource is reallocated.

+4.1.7. O.TOE_ACCESS

+The TOE shall provide functionality that controls a user's logical access to user data and to the TSF.

+4.2. Security Objectives for the Operational

+Environment

+4.2.1. OE.ADMIN

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+against threats to the confidentiality and integrity of the data transmitted using appropriate

+physical and logical protection techniques.

+□ DAC protections on security-relevant files (such as audit trails and authorization databases)

+shall always be set up correctly.

+□ Users are authorized to access parts of the data managed by the TOE and are trained to exercise

+control over their own data.

+4.2.3. OE.NO_GENERAL_PURPOSE

+There shall be no general-purpose computing capabilities (e.g., compilers or user applications)

+available on DBMS servers, other than those services necessary for the operation, administration,

+and support of the DBMS.

+4.2.4. OE.PHYSICAL

+Those responsible for the TOE shall ensure that those parts of the TOE critical to enforcement of the

+security policy are protected from physical attack that might compromise IT security objectives.

+The protection shall be commensurate with the value of the IT assets protected by the TOE.

+4.3. Security Objectives for the Operational IT

+Environment

+4.3.1. OE.IT_I&A

+Any information provided by a trusted entity in the environment and used to support user authentication and authorization used by the TOE is correct and up to date.

+4.3.2. OE.IT_TRUSTED_SYSTEM

+External IT systems may be required by the TOE for the enforcement of the security policy. These

+external trusted IT systems shall be managed according to known, accepted, and trusted policies

+based on the same rules and policies applicable to the TOE, and are physically and shall be

+sufficiently protected from any attack that may cause those functions to provide false results.

+Chapter 5. Security Functional

+Requirements

The individual security functional requirements are specified in the sections below.

-6.1 Class: Security Audit (FAU)

-6.1.1 Audit Data Generation (FAU_GEN)

+5.1. Class: Security Audit (FAU)

+5.1.1. Audit Data Generation (FAU_GEN)

FAU_GEN.1 Audit data generation

FAU_GEN.1.1

-The TSF shall be able to generate an audit record of the following auditable events:

-a) Start-up and shutdown of the audit functions;

-b) All auditable events for the minimum level of audit listed in Table 4:

-Auditable Events; and

-c) [Start-up and shutdown of the DBMS; and

-d) Use of special permissions (e.g., those often used by authorized administrators to circumvent access control policies).]

+The TSF shall be able to generate audit data of the following auditable events:

+ Start-up and shutdown of the audit functions;

+ All auditable events for the [selection: minimum] level of audit listed in Table 4:
Auditable

+Events; and

+ [assignment: Start-up and shutdown of the DBMS; and use of special permissions (e.g.,

those

+often used by authorized administrators to circumvent access control policies).]

FAU_GEN.1.2

-The TSF shall record within each audit record at least the following information:

-a) Date and time of the event, type of event, subject identity (if applicable), and
-the outcome (success or failure) of the event; and

-b) For each audit event type, based on the auditable event definitions of the
-functional components included in the cPP/ST, [information specified in
-column three of Table 4: Auditable Events].

-Application Note 2: In column 3 of the table below, "Additional Audit Record Contents"
is

-used to designate data that should be included in the audit record if it

- "makes sense" in the context of the event which generates the record.

-If no other information is required (other than that listed in item a)

-above) for a particular auditable event type, then an assignment of

- "none" is acceptable.

-Table 4: Auditable Events

-Column 1: Column 2: Column 3:

-Security Functional Auditable Event(s) Additional Audit Record

-Requirement Contents

+The TSF shall record within the audit data at least the following information:

+□ Date and time of the auditable event, type of event, subject identity (if applicable),
and the

+outcome (success or failure) of the event; and

+□ For each auditable event type, based on the auditable event definitions of the
functional

+components included in the PP, PP-Module, functional package or ST, [assignment:
information

+specified in column three of Table 4: Auditable Events].

+Application Note 1: In column 3 of the table below, "Additional Audit Data Contents" is
used to

+designate data that should be included in the audit data if it "makes sense" in the
context of the event

+which generates the data. If no other information is required (other than that listed in
item a) above)

+for a particular auditable event type, then an assignment of "none" is acceptable.

+Table 4. Table 4: Auditable Events

+Column 1: Security Functional Column 2: Auditable Event(s) Column 3: Additional Audit

+Requirement Data Contents

FAU_GEN.1 None None

FAU_GEN.2 None None

-FAU_SEL.1 All modifications to the audit The identity of the

-configuration that occur authorized administrator

-Column 1: Column 2: Column 3:

-Security Functional Auditable Event(s) Additional Audit Record

-Requirement Contents

-while the audit collection that made the change to the

-functions are operating audit configuration

+Column 1: Security Functional Column 2: Auditable Event(s) Column 3: Additional Audit Requirement Data Contents

+FAU_SEL.1 All modifications to the audit The identity of the authorized configuration that occur while administrator that made the the audit collection functions change to the audit are operating configuration

FDP_ACC.1 None None

-FDP_ACF.1 Successful requests to None perform an operation on an object covered by the SFP

+FDP_ACF.1 Successful requests to perform None an operation on an object covered by the SFP

FDP_RIP.1 None None

FIA_ATD.1 None None

-FIA_UAU.2 Access denied by None authentication mechanism

-FIA_UID.2 Access denied by The user identity provided authentication mechanism

-FMT_MSA.1 None None

+FIA_UAU.2 Access denied by authentication None mechanism

+FIA_UID.2 Access denied by authentication The user identity provided mechanism

+FMT_MSA.1(1) None None

+FMT_MSA.1(2) None None

FMT_MSA.3 None None

FMT_MTD.1 None None

FMT_REV.1(1) Unsuccessful revocation of Identity of individual security attributes attempting to revoke security attributes

+security attributes attempting to revoke security attributes

FMT_REV.1(2) Unsuccessful revocation of Identity of individual security attributes attempting to revoke security attributes

+security attributes attempting to revoke security attributes

FMT_SMF.1 Use of the management Identity of the administrator functions performing these functions

FMT_SMR.1 Modifications to the group of Identity of authorized users that are part of a role administrator modifying the role definition

FPT_TRC.1 Restoring consistency None

-FTA_MCS.1 Rejection of a new session None

+FTA_MCS_EXT.1 Rejection of a new session None based on the limitation of multiple concurrent sessions

FTA_TSE.1 Denial of a session Identity of the individual

@@ -697,1340 +580,1240 @@

mechanism

FAU_GEN.2 User identity association

FAU_GEN.2.1

-For audit events resulting from actions of identified users and any identified groups,
-the TSF shall be able to associate each auditable event with the identity of the
-[selection: "user", "user and group"] that caused the event.

-6.1.2 Security audit event selection (FAU_SEL)

+For audit events resulting from actions of identified users and any identified groups,
the TSF shall

+be able to associate each auditable event with the identity of the [selection: user,
user and group]

+that caused the event.

+5.1.2. Security audit event selection (FAU_SEL)

FAU_SEL.1 Selective audit

FAU_SEL.1.1

-The TSF shall be able to select the set of events to be audited from the set of all
-auditable events based on the following attributes:

-a) user identity;

-b) [selection: object identity, user identity, subject identity, host identity, group
-identity, event type, success of auditable security events, failure of
-auditable security events];

-c) [assignment: list of additional attributes that audit selectivity is based upon].

-Application Note 3: "event type" is to be defined by the ST author; the intent is to be
able

-to include or exclude classes of audit events.

-Application Note 4: The intent of this requirement is to capture sufficient audit data
to

-allow the administrators to perform their tasks; additional audit data

-may be captured.

-6.2 Class: User Data Protection (FDP)

-6.2.1 Access control policy (FDP_ACC)

+The TSF shall be able to select the set of events to be audited from the set of all
auditable events

+based on the following attributes:

+[] user identity;

+[] [selection: object identity, user identity, subject identity, host identity, group
identity, event

+type, success of auditable security events, failure of auditable security events];

+[] [assignment: list of additional attributes that audit selectivity is based upon].

+Application Note 2: "event type" is to be defined by the ST author; the intent is to be
able to include or

+exclude classes of audit events.

+Application Note 3: The intent of this requirement is to capture sufficient audit data
to allow the

+administrators to perform their tasks; additional audit data may be captured.

+5.2. Class: User Data Protection (FDP)

+5.2.1. Access control policy (FDP_ACC)

FDP_ACC.1 Subset access control

FDP_ACC.1.1

-The TSF shall enforce the [Discretionary Access Control policy] to objects on [all
+The TSF shall enforce the [assignment: Discretionary Access Control policy] on
[assignment: all
subjects, all DBMS-controlled objects, and all operations among them].

+5.2.2. Access control functions (FDP_ACF)

FDP_ACF.1 Security attribute based access control

FDP_ACF.1.1

-The TSF shall enforce the [Discretionary Access Control policy] to objects based on
-the following: [assignment: list of subjects and objects controlled under the indicated
-SFP, and for each, the SFP-relevant security attributes, or named groups of SFP-
-relevant security attributes].

-Application Note 5: DBMS-controlled objects may be implementation-specific objects that
-are presented to authorized users at the user interface to the DBMS.

-They may include, but are not limited to tables, records, files, indexes,

-views, constraints, stored queries, and metadata. Data structures that

-are not presented to authorized users at the DBMS user interface, but

-are used internally, are internal TSF data structures. Internal TSF data

-structures are not controlled according to the rules specified in

+The TSF shall enforce the [assignment: Discretionary Access Control policy] to objects
based on the

+following: [assignment: list of subjects and objects controlled under the indicated SFP,
and for each,

+the SFP-relevant security attributes, or named groups of SFP-relevant security
attributes].

+Application Note 4: DBMS-controlled objects may be implementation-specific objects that
are

+presented to authorized users at the user interface to the DBMS. They may include, but
are not limited

+to tables, records, files, indexes, views, constraints, stored queries, and metadata.
Data structures that

+are not presented to authorized users at the DBMS user interface, but are used
internally, are internal

+TSF data structures. Internal TSF data structures are not controlled according to the
rules specified in

FDP_ACF.1.

-Application Note 6: Named groups of security attributes can be specified to provide a
-convenient means to refer to multiple security attributes. In this PP,

-'Named group of SFP-relevant security attributes' refers to a group of

-attributes that can be associated with an object or a subject. For

+Application Note 5: Named groups of security attributes can be specified to provide a
convenient

+means to refer to multiple security attributes. In this PP, 'Named group of SFP-relevant
security

+attributes' refers to a group of attributes that can be associated with an object or a
subject. For

example, this could be a named Access Control List (ACL).

FDP_ACF.1.2

-The TSF shall enforce the following rules to determine if an operation among controlled subjects and controlled objects is allowed: [assignment: rules governing access among controlled subjects and controlled objects using controlled operations on controlled objects].

+The TSF shall enforce the following rules to determine if an operation among controlled subjects and controlled objects is allowed: [assignment: rules governing access among controlled subjects and controlled objects using controlled operations on controlled objects].

FDP_ACF.1.3

-The TSF shall explicitly authorize access of subjects to objects based on the following additional rules: [assignment: rules, based on security attributes, that explicitly authorize access of subjects to objects].

+The TSF shall explicitly authorize access of subjects to objects based on the following additional rules: [assignment: rules, based on security attributes, that explicitly authorize access of subjects to objects].

FDP_ACF.1.4

-The TSF shall explicitly deny access of subjects to objects based on the following additional rules: [assignment: rules, based on security attributes, that explicitly deny access of subjects to objects].

-6.2.2 Residual information protection (FDP_RIP)

+The TSF shall explicitly deny access of subjects to objects based on the following additional rules: [assignment: rules, based on security attributes, that explicitly deny access of subjects to objects].

+5.2.3. Residual information protection (FDP_RIP)

FDP_RIP.1 Subset residual information protection

FDP_RIP.1.1

-The TSF shall ensure that any previous information content of a resource is made unavailable upon the allocation of the resource to the following objects: [assignment: list of objects].

-6.3 Class: Identification and authentication (FIA)

-Application Note 7: It is drawn to the attention of the ST writer that the identification and authentication family was written in such a way that the SFRs might

-be used in either the case that Identification and Authentication (I&A) services are performed by the TOE itself or that they are performed within the TOE environment.

-6.3.1 User authentication (FIA_UAU)

+The TSF shall ensure that any previous information content of a resource is made unavailable upon the [selection: allocation of the resource to] the following objects: [assignment: list of objects].

+5.3. Class: Identification and authentication (FIA)

+Application Note 6: It is drawn to the attention of the ST writer that the identification and authentication family was written in such a way that the SFRs might be used in either the case that

- +Identification and Authentication (I&A) services are performed by the TOE itself or that they are
- +performed within the TOE environment.

+5.3.1. User authentication (FIA_UAU)

- FIA_UAU.2 User authentication before any action
- FIA_UAU.2.1
- The TSF shall require each user to be successfully authenticated before allowing
- any other TSF-mediated actions on behalf of that user.

-6.3.2 User attribute definition (FIA_ATD)

- +The TSF shall require each user to be successfully authenticated before allowing any other TSF-
- +mediated actions on behalf of that user.

+5.3.2. User attribute definition (FIA_ATD)

- FIA_ATD.1 User attribute definition
- FIA_ATD.1.1
- The TSF shall maintain the following list of security attributes belonging to individual users:
- a) Database user identifier and any associated group memberships;
- b) Security-relevant database roles; and
- c) [assignment: list of security attributes].
- Application Note 8: The intent of this requirement is to specify the TOE security attributes
- that the TOE utilizes to determine access. These attributes may be
- controlled by the environment or by the TOE itself.

-6.3.3 User identification (FIA_UID)

- +The TSF shall maintain the following list of security attributes belonging to individual users:
- + Database user identifier and any associated group memberships;
- + Security-relevant database roles; and
- + [assignment: list of security attributes].
- +Application Note 7: The intent of this requirement is to specify the TOE security attributes that the
- +TOE utilizes to determine access. These attributes may be controlled by the environment or by the TOE
- +itself.

+5.3.3. User identification (FIA_UID)

- FIA_UID.2 User identification before any action
- FIA_UID.2.1
- The TSF shall require each user to be successfully identified before allowing any
- other TSF-mediated actions on behalf of that user.

-6.4 Class: Security management (FMT)

- 6.4.1 Management of security attributes (FMT_MSA)
- FMT_MSA.1 Management of security attributes
- FMT_MSA.1.1

-The TSF shall enforce the [Discretionary Access Control policy] to restrict the ability
 -to [manage] all the security attributes [assignment: list of security attributes] to
 -[authorized administrators].

+The TSF shall require each user to be successfully identified before allowing any other
 TSF-

+mediated actions on behalf of that user.

+5.4. Class: Security management (FMT)

+5.4.1. Management of security attributes (FMT_MSA)

+FMT_MSA.1(1) Management of security attributes (Users)

+FMT_MSA.1.1(1)

+The TSF shall enforce the [assignment: Discretionary Access Control policy] to restrict
 the ability to

+ [selection: [assignment: manage]] the security attributes [assignment: associated with
 users] to

+ [assignment: authorized administrators].

+FMT_MSA.1(2) Management of security attributes (Objects)

+FMT_MSA.1.1(2)

+The TSF shall enforce the [assignment: Discretionary Access Control policy] to restrict
 the ability to

+ [selection: [assignment: manage]] the security attributes [assignment: associated with
 objects] to

+ [assignment: authorized administrators, authorized users].

FMT_MSA.3 Static attribute initialization

FMT_MSA.3.1

-The TSF shall enforce the [Discretionary Access Control policy] to provide restrictive
 -default values for security attributes that are used to enforce the SFP.

-Application Note 9: This requirement applies to new objects at the top-level (e.g.,
 tables).

-When lower-level objects are created (e.g., rows, cells), these may

-inherit the permissions of the top-level objects by default. In other

-words, the permissions of the 'child' objects can take the permissions

-of the 'parent' objects by default.

+The TSF shall enforce the [assignment: Discretionary Access Control policy] to provide
 [selection:

+restrictive] default values for security attributes that are used to enforce the SFP.

+Application Note 8: This requirement applies to new objects at the top-level (e.g.,
 tables). When lower-

+level objects are created (e.g., rows, cells), these may inherit the permissions of the
 top-level objects by

+default. In other words, the permissions of the 'child' objects can take the permissions
 of the 'parent'

+objects by default.

FMT_MSA.3.2

-The TSF shall allow the [no user] to specify alternative initial values to override the

+The TSF shall allow the [assignment: no user] to specify alternative initial values to
 override the

default values when an object or information is created.

-6.4.2 Management of TSF data (FMT_MTD)

+5.4.2. Management of TSF data (FMT_MTD)

FMT_MTD.1 Management of TSF data

FMT_MTD.1.1

-The TSF shall restrict the ability to [include or exclude] the [auditable events] to
-[authorized administrators].

-6.4.3 Revocation (FMT_REV)

-FMT_REV.1(1) Revocation

+The TSF shall restrict the ability to [selection: [assignment: include or exclude]] the
[assignment:
+auditable events] to [assignment: authorized administrators].

+5.4.3. Revocation (FMT_REV)

+FMT_REV.1(1) Revocation (Users)

FMT_REV.1.1(1)

-The TSF shall restrict the ability to revoke [assignment: list of security attributes]
-associated with the users under the control of the TSF to [the authorized
-administrator].

+The TSF shall restrict the ability to revoke [assignment: list of security attributes]
associated with

+the [selection: users] under the control of the TSF to [assignment: authorized
administrator].

FMT_REV.1.2(1)

The TSF shall enforce the rules [assignment: specification of revocation rules].

-FMT_REV.1(2) Revocation (DAC)

+FMT_REV.1(2) Revocation (Objects)

FMT_REV.1.1(2)

-The TSF shall restrict the ability to revoke [assignment: list of security attributes]
-associated with the objects under the control of the TSF to [the authorized
-administrator] and database users with sufficient privileges as allowed by the
-Discretionary Access Control policy.

+The TSF shall restrict the ability to revoke [assignment: list of security attributes]
associated with

+the [selection: objects] under the control of the TSF to [assignment: authorized
administrator,
+authorized users].

FMT_REV.1.2(2)

The TSF shall enforce the rules [assignment: specification of revocation rules].

-6.4.4 Specification of management functions (FMT_SMF)

+5.4.4. Specification of management functions (FMT_SMF)

FMT_SMF.1 Specification of Management Functions

FMT_SMF.1.1

-The TSF shall be capable of performing the following security management
-functions:

-[

-□ Database configuration

-□ User and role management

-[selection:

-□ Management of groups

-□ Adding or removing a database

- Revocation of security attributes
- Configuration of the maximum number of concurrent sessions
- Configuration of session establishment rules
- Configuration of TSF replication and consistency
- Configuration of TOE access information rules
- No other security management functions]
- [assignment: any additional security management functions required to configure the claimed security]
-].
- Application Note 10: The ST author should ensure that all security attributes identified in FIA_ATD.1 are adequately managed and protected.
- 6.4.5 Security management roles (FMT_SMR)
- +The TSF shall be capable of performing the following security management functions: [assignment: Database configuration; User and role management; Configure the session limiting mechanism; [selection: Management of groups, Adding or removing a database, Revocation of security attributes, Configuration of session establishment rules, Configuration of TSF replication and consistency, Configuration of TOE access information rules, No other security management functions]; [assignment: any additional security management functions required to configure the claimed security]].
- +Application Note 9: The ST author should ensure that all security attributes identified in FIA_ATD.1 are adequately managed and protected.
- +5.4.5. Security management roles (FMT_SMR)
- FMT_SMR.1 Security roles
- FMT_SMR.1.1
- The TSF shall maintain the roles [authorized administrator and [assignment: additional authorized identified roles]].
- +The TSF shall maintain the roles [assignment: authorized administrator, authorized users, and [assignment: additional authorized identified roles]].
- FMT_SMR.1.2
- The TSF shall be able to associate users with roles.
- Application Note 11: This requirement identifies a minimum set of management roles. An ST may describe, or an operational environment may contain a finer-grain decomposition of roles that correspond to the roles identified here (e.g., database non-administrative user or database operator).
- The ST author may change the names of the roles identified above but the "new" roles must still perform the functions that the security management requirements in this cPP have defined. It is not necessary to list roles that are not exercised in the evaluated configuration.
- 6.5 Class: TOE access (FTA)
- 6.5.1 Limitation on multiple concurrent sessions (FTA_MCS)

- FTA_MCS.1 Basic limitation on multiple concurrent sessions
- FTA_MCS.1.1
- The TSF shall restrict the maximum number of concurrent sessions that belong to the same user.
- FTA_MCS.1.2
- The TSF shall enforce, by default, a limit of [assignment: default number] sessions per user.
- Application Note 12: The ST author is reminded that the CC part 2, [CC2] para 473 allows that the default number may be defined as a management function in FMT.
- 6.5.2 TOE session establishment (FTA_TSE)
- +Application Note 10: The authorized users role defined in FMT_SMR.1.1 is referenced in FMT_REV.1.1(2) and FMT_MSA.1.1(2) for objects.
- +Application Note 11: This requirement identifies a minimum set of management roles. An ST may describe, or an operational environment may contain a finer-grain decomposition of roles that correspond to the roles identified here (e.g., database non-administrative user or database operator).
- +The ST author may change the names of the roles identified above but the "new" roles must still perform the functions that the security management requirements in this cPP have defined. It is not necessary to list roles that are not exercised in the evaluated configuration.
- +5.5. Class: TOE access (FTA)
- +5.5.1. Configurable Session Limiting Mechanisms (FTA_MCS_EXT)
- +FTA_MCS_EXT.1 Configurable Session Limiting Mechanisms
- +FTA_MCS_EXT.1.1
- +The TSF shall restrict the maximum number of concurrent sessions based on [selection: User session locking as defined by FTA_MCS.1, [assignment: mechanism(s) for session limitation enforced by the TSF]].
- +FTA_MCS_EXT.1.2
- +The TSF shall provide the capability for an authorized administrator to configure the selected enforcement mechanism(s).
- +Application Note 12: If "User session locking as defined by FTA_MCS.1" is selected in FTA_MCS_EXT.1.1, then FTA_MCS.1 must also be included from Appendix D.
- +5.5.2. TOE session establishment (FTA_TSE)
- FTA_TSE.1 TOE session establishment
- FTA_TSE.1.1
- The TSF shall be able to deny session establishment based on [assignment: attributes that can be set explicitly by authorized administrator(s), including user identity, and [selection: group identity, time of day, day of the week, [assignment: list of additional attributes]]].
- 7. Security Assurance Requirements
- The Security Objectives for the TOE in section 5 were constructed to address threats

-identified in section 4. The Security Functional Requirements (SFRs) in section 6 are

-a formal instantiation of the Security Objectives. This cPP identifies the Security

-Assurance Requirements (SARs) to frame the extent to which the evaluator

-assesses the documentation applicable for the evaluation and performs independent

-testing.

-This section lists the set of SARs from CC part 3 [CC3] that are required in

-evaluations against this cPP. Individual Evaluation Activities to be performed are

-specified in [SD].

-The general model for evaluation of TOEs against STs written to conform to this cPP

-is as follows:

-After the ST has been approved for evaluation, the IT Security Evaluation Facility

-(ITSEF) will obtain the TOE, supporting environmental IT (if required), and the

-administrative/user guides for the TOE. The ITSEF is expected to perform actions

-mandated by the Common Evaluation Methodology [CEM] for the ASE and ALC

-SARs. The ITSEF also performs the Evaluation Activities contained within the [SD],

-which are derived from the [CEM] assurance requirements as they apply to the

-specific technology instantiated in the TOE. The Evaluation Activities that are

-captured in the [SD] also provide clarification as to what the developer needs to

-provide to demonstrate the TOE is compliant with the cPP.

+The TSF shall be able to deny session establishment based on [assignment: attributes

that can be set

+explicitly by authorized administrator(s), including user identity, and [selection:

group identity,

+time of day, day of the week, [assignment: list of additional attributes]]].

+Chapter 6. Security Assurance Requirements

+The Security Objectives for the TOE in section 5 were constructed to address threats

identified in

+section 4. The Security Functional Requirements (SFRs) in section 6 are a formal

instantiation of the

+Security Objectives. This cPP identifies the Security Assurance Requirements (SARs) to

frame the

+extent to which the evaluator assesses the documentation applicable for the evaluation

and

+performs independent testing.

+This section lists the set of SARs from CC part 3 [CC3] that are required in evaluations

against this

+cPP. Individual Evaluation Activities to be performed are specified in [SD].

+The general model for evaluation of TOEs against STs written to conform to this cPP is

as follows:

+After the ST has been approved for evaluation, the IT Security Evaluation Facility

(ITSEF) will

+obtain the TOE, supporting environmental IT (if required), and the administrative/user

guides for

+the TOE. The ITSEF is expected to perform actions mandated by the Common Evaluation

+Methodology [CEM] for the ASE and ALC SARs. The ITSEF also performs the Evaluation

Activities

+contained within the [SD], which are derived from the [CEM] assurance requirements as

they apply

+to the specific technology instantiated in the TOE. The Evaluation Activities that are captured in the

+ [SD] also provide clarification as to what the developer needs to provide to demonstrate the TOE is

+compliant with the cPP.

The TOE security assurance requirements are identified in Table 5.

-Table 5: Security Assurance Requirements

+Table 5. Table 5: Security Assurance Requirements

Assurance Class Assurance Components

Security Target (ASE) Conformance claims (ASE_CCL.1)

Extended components definition (ASE_ECD.1)

ST introduction (ASE_INT.1)

-Security objectives for the operational environment (ASE_OBJ.2)

+Security objectives for the operational

+environment (ASE_OBJ.2)

Stated security requirements (ASE_REQ.2)

Security Problem Definition (ASE_SPD.1)

TOE summary specification (ASE_TSS.1)

Development (ADV) Security architecture description (ADV_ARC.1)

Basic functional specification (ADV_FSP.2)

Basic design (ADV_TDS.1)

-Guidance documents Operational user guidance (AGD_OPE.1)

-(AGD)

+Guidance documents (AGD) Operational user guidance (AGD_OPE.1)

Preparative procedures (AGD_PRE.1)

Life cycle support (ALC) Labeling of the TOE (ALC_CMC.2)

TOE CM coverage (ALC_CMS.2)

Delivery procedures (ALC_DEL.1)

+Assurance Class Assurance Components

Flaw reporting procedures (ALC_FLR.3)

Tests (ATE) Evidence of coverage (ATE_COV.1)

Functional testing (ATE_FUN.1)

Independent testing - sample (ATE_IND.2)

-Vulnerability assessment Vulnerability survey (AVA_VAN.2)

-(AVA)

-7.1 Class ASE: Security Target

-NOTE: The Supporting Document [SD] contains evaluation activities that refine the -evaluation activities given in [CEM].

-7.2 Class ADV: Development

-NOTE: The Supporting Document [SD] contains evaluation activities that refine the -evaluation activities given in [CEM].

-7.3 Class AGD: Guidance Documentation

-NOTE: The Supporting Document [SD] contains evaluation activities that refine the -evaluation activities given in [CEM].

-7.4 Class ALC: Life-cycle Support

-NOTE: The Supporting Document [SD] contains evaluation activities that refine the -evaluation activities given in [CEM].

-7.5 Class ATE: Tests

-NOTE: The Supporting Document [SD] contains evaluation activities that refine the -evaluation activities given in [CEM].

-7.6 Class AVA: Vulnerability Assessment

-NOTE: The Supporting Document [SD] contains evaluation activities that refine the -evaluation activities given in [CEM].

-A.Optional Requirements

-As indicated in the introduction to this cPP, the baseline requirements (those that -must be performed by the TOE) are contained in the body of this cPP. Additionally, -there is another type of requirements specified in Appendix A

-These requirements can be included in the ST, but do not have to be in order for a -TOE to claim conformance to this cPP.

-ST authors are free to choose none, some or all SFRs defined in this chapter. It is -not a requirement to add the SFRs defined in this chapter, even if the functionality is -supported by the product.

-A.1 Class: Identification and authentication (FIA)

-A.1.1 Enhanced user-subject binding (FIA_USB_EXT)

+Vulnerability assessment (AVA) Vulnerability survey (AVA_VAN.2)

+6.1. Class ASE: Security Target

+6.2. Class ADV: Development

+6.3. Class AGD: Guidance Documentation

+6.4. Class ALC: Life-cycle Support

+6.5. Class ATE: Tests

+6.6. Class AVA: Vulnerability Assessment

+Appendix A: Optional Requirements

+As indicated in the introduction to this cPP, the baseline requirements (those that must be +performed by the TOE) are contained in the body of this cPP. Additionally, there is another type of +requirements specified in Appendix A

+These requirements can be included in the ST, but do not have to be in order for a TOE to claim +conformance to this cPP.

+ST authors are free to choose none, some or all SFRs defined in this chapter. It is not a requirement +to add the SFRs defined in this chapter, even if the functionality is supported by the product.

+A.1. Class: Identification and authentication (FIA)

+A.1.1. Enhanced user-subject binding (FIA_USB_EXT)

 FIA_USB_EXT.2 Enhanced user-subject binding

-FIA_USB_EXT.2 .1

-The TSF shall associate the following user security attributes with subjects acting on -the behalf of that user: [assignment: list of user security attributes].

-FIA_USB_EXT.2 .2

-The TSF shall enforce the following rules on the initial association of user security -attributes with subjects acting on the behalf of users: [assignment: rules for the initial -association of attributes].

-FIA_USB_EXT.2 .3

-The TSF shall enforce the following rules governing changes to the user security attributes associated with subjects acting on the behalf of users: [assignment: rules for the changing of attributes].

-FIA_USB_EXT.2 .4

-The TSF shall enforce the following rules for the assignment of subject security attributes not derived from user security attributes when a subject is created: [assignment: rules for the initial association of the subject security attributes not derived from user security attributes].

-Application Note 13: Some administrative tasks may be delegated to specific users (which by that delegation become administrators although they can only perform some limited administrative actions). Ensuring that those users cannot extend the administrative rights assigned to them is a security functionality the TOE has to provide.

+FIA_USB_EXT.2.1

+The TSF shall associate the following user security attributes with subjects acting on the behalf of that user: [assignment: list of user security attributes].

+FIA_USB_EXT.2.2

+The TSF shall enforce the following rules on the initial association of user security attributes with subjects acting on the behalf of users: [assignment: rules for the initial association of attributes].

+FIA_USB_EXT.2.3

+The TSF shall enforce the following rules governing changes to the user security attributes associated with subjects acting on the behalf of users: [assignment: rules for the changing of attributes].

+FIA_USB_EXT.2.4

+The TSF shall enforce the following rules for the assignment of subject security attributes not derived from user security attributes when a subject is created: [assignment: rules for the initial association of the subject security attributes not derived from user security attributes].

+Application Note 13: Some administrative tasks may be delegated to specific users (which by that delegation become administrators although they can only perform some limited administrative actions). Ensuring that those users cannot extend the administrative rights assigned to them is a security functionality the TOE has to provide.

-Application Note 14: If FIA_USB_EXT.2 is included in an ST then Table 4: Auditable Events is refined to add the following entry:

Column 1:	Column 2:	Column 3:
-Security Functional Auditable Event(s)	Additional Audit Record	Requirement Contents

+Application Note 14: If FIA_USB_EXT.2 is included in an ST then Table 4: Auditable

Events is refined to

- +add the following entry:
- +Column 1: Security Functional Column 2: Auditable Event(s) Column 3: Additional Audit Requirement Data Contents
- FIA_USB_EXT.2 Unsuccessful binding of user None
- security attributes to a
- subject (e.g. creation of a
- subject)
- A.2 Class: Protection of the TSF (FPT)
- A.2.1 Internal TOE TSF data replication consistency (FPT_TRC)
- +security attributes to a subject
- +(e.g. creation of a subject)
- +A.2. Class: Protection of the TSF (FPT)
- +A.2.1. Internal TOE TSF data replication consistency (FPT_TRC)
- FPT_TRC.1 Internal TSF consistency
- FPT_TRC.1.1
- The TSF shall ensure that TSF data is consistent when replicated between parts of
- the TOE.
- +The TSF shall ensure that TSF data is consistent when replicated between parts of the
- TOE.
- FPT_TRC.1.2
- When parts of the TOE containing replicated TSF data are disconnected, the TSF
- shall ensure the consistency of the replicated TSF data upon reconnection before
- processing any requests for [assignment: list of functions dependent on TSF data
- replication consistency].
- Application Note 15: In general, it is impossible to achieve complete, constant
- consistency of
- TSF data that is distributed to remote portions of a TOE because
- distributed portions of the TSF may be active at different times or
- disconnected from one another. This requirement attempts to address this
- situation in a practical manner by acknowledging that there will be TSF
- data inconsistencies but that they will be corrected without undue delay.
- For example, a TSF could provide timely consistency through periodic
- broadcast of TSF data to all TSF nodes maintaining replicated TSF data.
- Another example approach is for the TSF to provide a mechanism to
- explicitly probe remote TSF nodes for inconsistencies and respond with
- action to correct the identified inconsistencies.
- A.3 Class: TOE access (FTA)
- A.3.1 TOE access information (FTA_TAH_EXT)
- +When parts of the TOE containing replicated TSF data are disconnected, the TSF shall
- ensure the
- +consistency of the replicated TSF data upon reconnection before processing any requests
- for
- +[assignment: list of functions dependent on TSF data replication consistency].
- +Application Note 15: In general, it is impossible to achieve complete, constant
- consistency of TSF data
- +that is distributed to remote portions of a TOE because distributed portions of the TSF
- may be active

+at different times or disconnected from one another. This requirement attempts to address this

+situation in a practical manner by acknowledging that there will be TSF data inconsistencies but that

+they will be corrected without undue delay. For example, a TSF could provide timely consistency

+through periodic broadcast of TSF data to all TSF nodes maintaining replicated TSF data.

Another

+example approach is for the TSF to provide a mechanism to explicitly probe remote TSF nodes for

+inconsistencies and respond with action to correct the identified inconsistencies.

+A.3. Class: TOE access (FTA)

+A.3.1. TOE access information (FTA_TAH_EXT)

FTA_TAH_EXT.1 TOE access information

FTA_TAH_EXT.1.1

Upon a session establishment attempt, the TSF shall store

-a) the date and time of the session establishment attempt of the user.

-b) the incremental count of successive unsuccessful session establishment

+ the date and time of the session establishment attempt of the user.

+ the incremental count of successive unsuccessful session establishment attempt(s).

FTA_TAH_EXT.1.2

Upon successful session establishment, the TSF shall allow the date and time of

-a) the previous last successful session establishment, and

-b) the last unsuccessful attempt to session establishment and the number of

-unsuccessful attempts since the previous last successful session

-establishment to be retrieved by the user.

-Application Note 16: If FTA_TAH_EXT.1 is included in an ST then Table 4: Auditable

-Events is refined to add the following entry:

-Column 1: Column 2: Column 3:

-Security Functional Auditable Event(s) Additional Audit Record

-Requirement Contents

+ the previous last successful session establishment, and

+ the last unsuccessful attempt to session establishment and the number of unsuccessful attempts

+since the previous last successful session establishment to be retrieved by the user.

+Application Note 16: If FTA_TAH_EXT.1 is included in an ST then Table 4: Auditable

Events is refined to

+add the following entry:

+Column 1: Security Functional Column 2: Auditable Event(s) Column 3: Additional Audit

+Requirement Data Contents

FTA_TAH_EXT.1 None None

-B.Extended Component Definitions

-This appendix contains the definitions for the extended requirements that are used in

-the cPP, including those used in Appendix A.

-B.1 Class: User Identification and Authentication (FIA)

-B.1.1 Enhanced user-subject binding (FIA_USB_EXT)

-Family Behaviour

- FIA_USB_EXT.2 is analogous to FIA_USB.1 except that it adds the possibility to
- specify rules whereby subject security attributes are also derived from TSF data
- other than user security attributes.
- Component levelling
- +Chapter 7. Extended Component Definitions
- +This appendix contains the definitions for the extended requirements that are used in the cPP,
- +including those used in Appendix A.
- +7.1. Class: User Identification and Authentication (FIA)
- +7.1.1. Enhanced user-subject binding (FIA_USB_EXT)
- +7.1.1.1. Family Behaviour
- +FIA_USB_EXT.2 is analogous to FIA_USB.1 except that it adds the possibility to specify rules whereby
- +subject security attributes are also derived from TSF data other than user security attributes.
- +7.1.1.2. Component levelling
- FIA_USB_EXT.2 is hierarchical to FIA_USB.1.
- Management
- +Figure 1. Component levelling
- +7.1.1.3. Management
- See management description specified for FIA_USB.1 in [CC2].
- Audit
- +7.1.1.4. Audit
- See audit requirement specified for FIA_USB.1 in [CC2].
- FIA_USB_EXT.2 Enhanced user-subject binding
- Hierarchical to: FIA_USB.1 User-subject binding
- Dependencies: FIA_ATD.1 User attribute definition
- FIA_USB_EXT.2.1
- The TSF shall associate the following user security attributes with subjects acting on
- the behalf of that user: [assignment: list of user security attributes].
- +The TSF shall associate the following user security attributes with subjects acting on the behalf of
- +that user: [assignment: list of user security attributes].
- FIA_USB_EXT.2.2
- The TSF shall enforce the following rules on the initial association of user security
- attributes with subjects acting on the behalf of users: [assignment: rules for the initial
- association of attributes].
- +The TSF shall enforce the following rules on the initial association of user security attributes with
- +subjects acting on the behalf of users: [assignment: rules for the initial association of attributes].
- FIA_USB_EXT.2.3
- The TSF shall enforce the following rules governing changes to the user security
- attributes associated with subjects acting on the behalf of users: [assignment: rules
- for the changing of attributes].
- +The TSF shall enforce the following rules governing changes to the user security attributes

+associated with subjects acting on the behalf of users: [assignment: rules for the changing of

+attributes].

FIA_USB_EXT.2.4

-The TSF shall enforce the following rules for the assignment of subject security

-attributes not derived from user security attributes when a subject is created:

-[assignment: rules for the initial association of the subject security attributes not

-derived from user security attributes].

-B.2 Class: TOE access (FTA)

-B.2.1 TOE access information (FTA_TAH_EXT)

-Family Behaviour

-FTA_TAH_EXT.1 TOE access information provides the requirement for a TOE to

-make available information related to attempts to establish a session.

-Component levelling

+The TSF shall enforce the following rules for the assignment of subject security

attributes not

+derived from user security attributes when a subject is created: [assignment: rules for the

+initial association of the subject security attributes not derived from user security

+attributes].

+7.2. Class: TOE access (FTA)

+7.2.1. Limitation on multiple concurrent sessions (FTA_MCS_EXT)

+7.2.1.1. Family Behaviour

+This family defines requirements to place limits on the number of concurrent sessions.

+7.2.1.2. Component levelling

+FTA_MCS_EXT.1 is not hierarchical to any other components.

+Figure 2. Component levelling

+7.2.1.3. Management

+The following actions could be considered for the management functions in FMT:

+□ management of the maximum allowed number of concurrent user sessions

+□ management of the enforcement mechanism(s)

+7.2.1.4. Audit

+The following actions should be auditable if FAU_GEN Security audit data generation is

included in

+the PP/ST:

+□ rejection of a new session based on the limitation of multiple concurrent sessions

+7.2.1.5. Dependencies

+FIA_UID.2 User identification before any action

+FTA_MCS_EXT.1 Configurable Session Limiting Mechanisms

+Hierarchical to: No other components.

+Dependencies: FIA_UID.2 User identification before any action

+FTA_MCS_EXT.1.1

+The TSF shall restrict the maximum number of concurrent sessions based on [selection:

User

+session locking as defined by FTA_MCS.1, [assignment: mechanism(s) for session

limitation

+enforced by the TSF]].

+FTA_MCS_EXT.1.2

+The TSF shall provide the capability for an authorized administrator to configure the selected enforcement mechanism(s).

+7.2.2. TOE access information (FTA_TAH_EXT)

+7.2.2.1. Family Behaviour

+FTA_TAH_EXT.1 TOE access information provides the requirement for a TOE to make available information related to attempts to establish a session.

+7.2.2.2. Component levelling

FTA_TAH_EXT.1 is not hierarchical to any other components.

-Management:

+Figure 3. Component levelling

+7.2.2.3. Management

There are no management activities foreseen.

-Audit:

+7.2.2.4. Audit

There are no auditable events foreseen.

FTA_TAH_EXT.1 TOE access information

Hierarchical to: No other components.

Dependencies: No dependencies.

FTA_TAH_EXT.1.1

Upon a session establishment attempt, the TSF shall store

-a) the date and time of the session establishment attempt of the user.

-b) the incremental count of successive unsuccessful session establishment attempt(s).

+□ the date and time of the session establishment attempt of the user.

+□ the incremental count of successive unsuccessful session establishment attempt(s).

FTA_TAH_EXT.1.2

Upon successful session establishment, the TSF shall allow the date and time of

-a) the previous last successful session establishment, and

-b) the last unsuccessful attempt to session establishment and the number of unsuccessful attempts since the previous last successful session establishment

+□ the previous last successful session establishment, and

+□ the last unsuccessful attempt to session establishment and the number of unsuccessful attempts since the previous last successful session establishment to be retrieved by the user.

-C. Rationales

-C.1 TOE Security Objectives Coverage

-The table below gives a summary of the policies, and threats relating to the TOE security objectives.

-Table 6: Coverage of Security Objectives for the TOE

+Chapter 8. Rationales

+8.1. TOE Security Objectives Coverage

+The table below gives a summary of the policies, and threats relating to the TOE security objectives.

+Table 6. Table 6: Coverage of Security Objectives for the TOE

Objective Name SPD coverage

- O.ADMIN_ROLE P.ACCOUNTABILITY
- P.ROLES
- T.ACCESS_TSFFUNC
- +O.ADMIN_ROLE P.ACCOUNTABILITY P.ROLES T.ACCESS_TSFFUNC
- O.AUDIT_GENERATION P.ACCOUNTABILITY
- O.DISCRETIONARY_ACCESS T.IA_USER
- T.UNAUTHORIZED_ACCESS
- O.I&A P.ACCOUNTABILITY
- T.ACCESS_TSFFUNC
- T.ACCESS_TSFDATA
- T.IA_USER
- O.MANAGE P.USER
- T.ACCESS_TSFDATA
- T.ACCESS_TSFFUNC
- +O.DISCRETIONARY_ACCESS T.IA_USER T.UNAUTHORIZED_ACCESS
- +O.I&A P.ACCOUNTABILITY T.ACCESS_TSFFUNC
- +T.ACCESS_TSFDATA T.IA_USER
- +O.MANAGE P.USER T.ACCESS_TSFDATA T.ACCESS_TSFFUNC
- T.UNAUTHORIZED_ACCESS
- O.RESIDUAL_INFORMATION T.RESIDUAL_DATA
- O.TOE_ACCESS P.ACCOUNTABILITY
- P.ROLES
- P.USER
- T.ACCESS_TSFDATA
- T.ACCESS_TSFFUNC
- T.IA_USER
- T.UNAUTHORIZED_ACCESS
- C.2 Rationale for TOE Security Objectives
- +O.TOE_ACCESS P.ACCOUNTABILITY P.ROLES P.USER
- +T.ACCESS_TSFDATA T.ACCESS_TSFFUNC
- +T.IA_USER T.UNAUTHORIZED_ACCESS
- +8.2. Rationale for TOE Security Objectives
- The table below gives the rationale for the TOE security objectives.
- Table 7: Rationale for the TOE Security Objectives
- +Table 7. Table 7: Rationale for the TOE Security Objectives
- Threat/Policy TOE Security Objectives Rationale
- Addressing the Threat/Policy
- P.ACCOUNTABILITY O.ADMIN_ROLE O.ADMIN_ROLE
- The authorized users The TOE shall provide roles that supports this policy by ensuring that
- of the TOE shall be allow only authorized users to the TOE provides a means of
- held accountable for have access to administrative granting authorized administrators
- their actions within privileges that are specific to the the privileges needed for secure
- the TOE. role. administration.
- O.AUDIT_GENERATION O.AUDIT_GENERATION
- The TOE shall provide the supports this policy by ensuring that

- capability to generate records of audit records are generated to
- security relevant events enable accountability.
- associated with users.
- O.I&A O.I&A
- The TOE shall ensure that users supports this policy by requiring that
- are authenticated before the TOE each entity interacting with the TOE
- processes any actions that require is properly identified and
- authentication. authenticated before allowing any
- action.
- O.TOE_ACCESS O.TOE_ACCESS
- The TOE shall provide supports this policy by providing a
- mechanisms that control a user's mechanism for controlling user
- logical access to user data and to access.
- the TSF.
- +P.ACCOUNTABILITY The O.ADMIN_ROLE The TOE shall O.ADMIN_ROLE supports this
- +authorized users of the TOE provide roles that allow only policy by ensuring that the
- TOE
- +shall be held accountable for authorized users to have access provides a means of
- granting
- +their actions within the TOE. to administrative privileges that authorized
- administrators the
- +are specific to the role. privileges needed for secure
- +administration.
- +O.AUDIT_GENERATION The TOE O.AUDIT_GENERATION
- +shall provide the capability to supports this policy by ensuring
- +generate records of security that audit data is generated to
- +relevant events associated with enable accountability.
- +users.
- Threat/Policy TOE Security Objectives Rationale
- Addressing the Threat/Policy
- P.USER O.MANAGE O.MANAGE
- Authority shall only be The TSF shall provide all the supports this policy by ensuring
- given to users who functions and facilities necessary to that the functions and
- facilities
- are trusted to perform manage TOE security mechanisms, supporting secure management
- the actions correctly and shall restrict such management are in place.
- and are permitted by actions to authorized users.
- the organization to
- O.TOE_ACCESS O.TOE_ACCESS
- access user data.
- The TOE shall provide mechanisms supports this policy by providing a
- that control a user's logical access to mechanism for controlling user
- +O.I&A The TOE shall ensure that O.I&A supports this policy by
- +users are authenticated before requiring that each entity
- +the TOE processes any actions interacting with the TOE is
- +that require authentication. properly identified and
- +authenticated before allowing
- +any action.

+O.TOE_ACCESS The TOE shall O.TOE_ACCESS supports this
+provide mechanisms that policy by providing a
+control a user's logical access to mechanism for controlling user
user data and to the TSF. access.
Threat/Policy TOE Security Objectives Rationale
Addressing the Threat/Policy
-OE.ADMIN OE.ADMIN
-Those responsible for the TOE are supports this policy by ensuring
-competent and trustworthy that only competent administrators
-individuals, capable of managing the are allowed to manage the TOE.
-TOE and ensuring the security of
+P.USER Authority shall only be O.MANAGE The TSF shall O.MANAGE supports this policy
+given to users who are trusted provide all the functions and by ensuring that the
functions
+to perform the actions correctly facilities necessary to manage and facilities
supporting secure
+and are permitted by the TOE security mechanisms, and management are in place.
+organization to access user shall restrict such management
+data. actions to authorized users.
+O.TOE_ACCESS The TOE shall O.TOE_ACCESS supports this
+provide mechanisms that policy by providing a
+control a user's logical access to mechanism for controlling user
+user data and to the TSF. access.
+OE.ADMIN Those responsible OE.ADMIN supports this policy
+for the TOE are competent and by ensuring that only
+trustworthy individuals, competent administrators are
+capable of managing the TOE allowed to manage the TOE.
+and ensuring the security of
information it contains.
Threat/Policy TOE Security Objectives Rationale
Addressing the Threat/Policy
-P.ROLES O.ADMIN_ROLE O.ADMIN_ROLE
-Administrative The TOE shall provide roles that supports this objective by
-authority to TSF allow only authorized users to have providing roles that allow only
-functionality shall be access to administrative privileges authorized users access to
-given to trusted that are specific to the role. administrative privileges.
-personnel and be as
-restricted as
-possible while O.TOE_ACCESS O.TOE_ACCESS
-supporting only the The TOE shall provide mechanisms supports this policy by controlling
-administrative duties that control a user's logical access access to TSF functionality
based
-the person has. This to user data and to the TSF. on role.
-role shall be
-separate and distinct
-from other
-authorized users.
+P.ROLES Administrative O.ADMIN_ROLE The TOE shall O.ADMIN_ROLE supports this

+authority to TSF functionality provide roles that allow only objective by providing roles
+shall be given to trusted authorized users to have access that allow only authorized
+personnel and be as restricted to administrative privileges that users access to administrative
+as possible while supporting are specific to the role. privileges.
+only the administrative duties
+the person has. This role shall
+be separate and distinct from
+other authorized users.

Threat/Policy TOE Security Objectives Rationale

Addressing the Threat/Policy

-T.ACCESS O.I&A O.I&A

-_TSFDATA

-The TOE shall ensure that users are supports this policy by requiring

-A user or a process authenticated before the TOE that each entity interacting with the

-may read or modify processes any actions that require TOE is properly identified and

-TSF data using authentication. authenticated before allowing any

-functions of the action the TOE is defined to provide

-TOE without being to authenticated users only.

-identified,

-O.MANAGE O.MANAGE

-authenticated and

-authorized. The TSF shall provide all the diminishes this threat since it

-functions and facilities necessary to ensures that functions and facilities

-manage TOE security mechanisms, used to modify TSF data are not

-and shall restrict such management available to unauthorized users.

-actions to authorized users.

-O.TOE_ACCESS O.TOE_ACCESS

-The TOE shall provide mechanisms mitigates this threat by restricting

-that control a user's logical access to TOE access.

+O.TOE_ACCESS The TOE shall O.TOE_ACCESS supports this

+provide mechanisms that policy by controlling access to

+control a user's logical access to TSF functionality based on role.

user data and to the TSF.

Threat/Policy TOE Security Objectives Rationale

Addressing the Threat/Policy

-T.ACCESS O.ADMIN_ROLE O.ADMIN_ROLE

-_TSFFUNC

-The TOE will provide roles that allow mitigates this threat by restricting

-A user or a process only authorized users to have access access to privileged actions.

-may use, manage or to administrative privileges that are

-modify the TSF, specific to the role.

-bypassing the

-O.I&A O.I&A

-protection

-mechanisms of the The TOE shall ensure that users are mitigates this threat since the

-TSF. authenticated before the TOE TOE requires successful

-processes any actions that require authentication to the TOE prior to authentication. gaining access to any controlled-access content.

-O.MANAGE O.MANAGE

-The TSF shall provide all the functions mitigates this threat by ensuring and facilities necessary to manage that management functions are TOE security mechanisms, and shall restricted to authorized users.

-restrict such management actions to authorized users.

-O.TOE_ACCESS O.TOE_ACCESS

-The TOE shall provide mechanisms mitigates this threat by restricting that control a user's logical access to TOE access.

+T.ACCESS + _TSFDATA A user or O.I&A The TOE shall ensure that O.I&A supports this policy by

+a process may read or modify users are authenticated before requiring that each entity +TSF data using functions of the the TOE processes any actions interacting with the TOE is

+TOE without being identified, that require authentication. properly identified and authenticated and authorized. authenticated before allowing

+any action the TOE is defined to provide to authenticated users

+only.

+O.MANAGE The TSF shall O.MANAGE diminishes this

+provide all the functions and threat since it ensures that facilities necessary to manage functions and facilities used to TOE security mechanisms, and modify TSF data are not

+shall restrict such management available to unauthorized users. actions to authorized users.

+O.TOE_ACCESS The TOE shall O.TOE_ACCESS mitigates this

+provide mechanisms that threat by restricting TOE access. control a user's logical access to

user data and to the TSF.

-Threat/Policy TOE Security Objectives Addressing Rationale

-the Threat/Policy

-T.IA_USER O.DISCRETIONARY_ACCESS O.DISCRETIONARY_ACCESS

-A user who has not The TSF shall control access of mitigates this threat by requiring

-successfully subjects and/or users to named that data, including user data

-completed resources based on identity of the stored with the TOE, is protected

-identification and object, subject, or user. The TSF shall by discretionary access controls.

-authentication may allow authorized users to specify for

-gain unauthorized each access mode which

-access to user data users/subjects are allowed to access a

-or TOE resources specific named object in that access

-beyond public mode.

-objects.

-O.I&A O.I&A

-The TOE shall ensure that users are mitigates this threat by requiring

-authenticated before the TOE that each entity interacting with
 -processes any actions that require the TOE is properly identified
 -authentication. and authenticated before
 -allowing access beyond public
 -objects.
 -O.TOE_ACCESS O.TOE_ACCESS
 -The TOE shall provide mechanisms mitigates this threat by
 -that control a user's logical access to controlling logical access to user
 -Threat/Policy TOE Security Objectives Addressing Rationale
 -the Threat/Policy
 -user data and to the TSF. data and TSF data.
 Threat/Policy TOE Security Objectives Rationale
 Addressing the Threat/Policy
 -T.RESIDUAL O.RESIDUAL_INFORMATION O.RESIDUAL_INFORMATION
 -_DATA The TOE shall ensure that any mitigates this threat by ensuring
 -A user or a process information contained in a protected that data is not improperly
 -acting on behalf of a resource is not inappropriately disclosed.
 -user may gain disclosed when the resource is
 -unauthorized access reallocated.
 -to user or TSF data
 -through reallocation
 -of TOE resources
 -from one user or
 +T.ACCESS + _TSFFUNC A user or O.ADMIN_ROLE The TOE will O.ADMIN_ROLE mitigates this
 +a process may use, manage or provide roles that allow only threat by restricting access
 to
 +modify the TSF, bypassing the authorized users to have access privileged actions.
 +protection mechanisms of the to administrative privileges that
 +TSF. are specific to the role.
 +O.I&A The TOE shall ensure that O.I&A mitigates this threat since
 +users are authenticated before the TOE requires successful
 +the TOE processes any actions authentication to the TOE prior
 +that require authentication. to gaining access to any
 +controlled-access content.
 +Threat/Policy TOE Security Objectives Rationale
 +Addressing the Threat/Policy
 +O.MANAGE The TSF shall O.MANAGE mitigates this threat
 +provide all the functions and by ensuring that management
 +facilities necessary to manage functions are restricted to
 +TOE security mechanisms, and authorized users.
 +shall restrict such management
 +actions to authorized users.
 +O.TOE_ACCESS The TOE shall O.TOE_ACCESS mitigates this
 +provide mechanisms that threat by restricting TOE access.
 +control a user's logical access to
 +user data and to the TSF.
 +Threat/Policy TOE Security Objectives Rationale
 +Addressing the Threat/Policy

+T.IA_USER A user who has not O.DISCRETIONARY_ACCESS The O.DISCRETIONARY_ACCESS
+successfully completed TSF shall control access of mitigates this threat by
+identification and subjects and/or users to named requiring that data, including
+authentication may gain resources based on identity of user data stored with the TOE,
+unauthorized access to user the object, subject, or user. The is protected by
discretionary
+data or TOE resources beyond TSF shall allow authorized access controls.
+public objects. users to specify for each access
+mode which users/subjects are
+allowed to access a specific
+named object in that access
+mode.

+O.I&A The TOE shall ensure that O.I&A mitigates this threat by
+users are authenticated before requiring that each entity
+the TOE processes any actions interacting with the TOE is
+that require authentication. properly identified and
+authenticated before allowing
+access beyond public objects.

+O.TOE_ACCESS The TOE shall O.TOE_ACCESS mitigates this
+provide mechanisms that threat by controlling logical
+control a user's logical access to access to user data and TSF
+user data and to the TSF. data.

+Threat/Policy TOE Security Objectives Rationale
+Addressing the Threat/Policy

+T.RESIDUAL + _DATA A user or a O.RESIDUAL_INFORMATION O.RESIDUAL_INFORMATION
+process acting on behalf of a The TOE shall ensure that any mitigates this threat by
+user may gain unauthorized information contained in a ensuring that data is not
+access to user or TSF data protected resource is not improperly disclosed.
+through reallocation of TOE inappropriately disclosed when
+resources from one user or the resource is reallocated.
process to another.
Threat/Policy TOE Security Objectives Rationale
Addressing the Threat/Policy

-T.UNAUTHORIZED O.DISCRETIONARY_ACCESS O.DISCRETIONARY_ACCESS
- _ACCESS
-The TSF shall control access of mitigates this threat by requiring
-An authenticated subjects and/or users to named that data, including TSF data, is
-user or a process, in resources based on identity of the protected by discretionary
access
-conflict with the TOE object, subject or user. The TSF controls.
-security policy, may shall allow authorized users to
-gain unauthorized specify for each access mode
-access to user data. which users/subjects are allowed
-to access a specific named object
-in that access mode.

-O.MANAGE O.MANAGE
-The TSF shall provide all the mitigates this threat by ensuring that
-functions and facilities necessary access to user data is restricted to

-to manage TOE security authorized users.
-mechanisms, and shall restrict
-such management actions to
-authorized users.
-0.TOE_ACCESS 0.TOE_ACCESS
-The TOE shall provide mitigates this threat by controlling
-mechanisms that control a user's logical access to user data and TSF
-logical access to user data and to data.
-the TSF.
-C.3 Rationale for the Environmental Security Objectives
-The table below gives a summary of the assumptions, policies, and threats relating
-to the environmental security objectives.
-Table 8: Coverage of SPF Items for the TOE Environment Security Objectives
+T.UNAUTHORIZED + _ACCESS 0.DISCRETIONARY_ACCESS The 0.DISCRETIONARY_ACCESS
+An authenticated user or a TSF shall control access of mitigates this threat by
+process, in conflict with the TOE subjects and/or users to named requiring that data,
including
+security policy, may gain resources based on identity of TSF data, is protected by
+unauthorized access to user the object, subject or user. The discretionary access
controls.
+data. TSF shall allow authorized
+users to specify for each access
+mode which users/subjects are
+allowed to access a specific
+named object in that access
+mode.
+0.MANAGE The TSF shall 0.MANAGE mitigates this threat
+provide all the functions and by ensuring that access to user
+facilities necessary to manage data is restricted to authorized
+TOE security mechanisms, and users.
+shall restrict such management
+actions to authorized users.
+0.TOE_ACCESS The TOE shall 0.TOE_ACCESS mitigates this
+provide mechanisms that threat by controlling logical
+control a user's logical access to access to user data and TSF
+user data and to the TSF. data.
+8.3. Rationale for the Environmental Security
+Objectives
+The table below gives a summary of the assumptions, policies, and threats relating to
the
+environmental security objectives.
+Table 8. Table 8: Coverage of SPF Items for the TOE Environment Security Objectives
Objective Name SPD coverage
-OE.ADMIN A.MANAGE
-P.USER
-OE.INFO_PROTECT A.AUTHUSER
-A.CONNECT
-A.MANAGE

-A.PHYSICAL
 -A.TRAINEDUSER
 -P.USER
 +OE.ADMIN A.MANAGE + P.USER
 +Objective Name SPD coverage
 +OE.INFO_PROTECT A.AUTHUSER + A.CONNECT + A.MANAGE +
 +A.PHYSICAL + A.TRAINEDUSER + P.USER +
 T.UNAUTHORIZED_ACCESS
 OE.IT_I&A A.SUPPORT
 -OE.IT_TRUSTED_SYSTEM A.CONNECT
 -A.PEER_FUNC_&MGT
 +OE.IT_TRUSTED_SYSTEM A.CONNECT + A.PEER_FUNC_&MGT
 OE.NO_GENERAL_PURPOSE A.NO_GENERAL_PURPOSE
 -OE.PHYSICAL A.CONNECT
 -A.PHYSICAL
 +OE.PHYSICAL A.CONNECT + A.PHYSICAL

The table below provides a rationale for the environmental security objectives.

-Table 9: Rationale for Environmental Security Objectives

-Assumption Environmental Objective Addressing Rationale for Specifying the
 -the Assumption Environmental Security

+Table 9. Table 9: Rationale for Environmental Security Objectives

+Assumption Environmental Objective Rationale for Specifying the
 +Addressing the Assumption Environmental Security

Objective

-A.AUTHUSER OE.INFO_PROTECT OE.INFO_PROTECT

-Authorized users Those responsible for the TOE shall supports the assumption by

-possess the establish and implement procedures to ensuring that users are

-necessary ensure that information is protected in authorized to access data

-authorization to an appropriate manner. In particular: managed by the TOE.

-access the

-□ All network and peripheral cabling

-information

-shall be approved for the transmittal

-managed by the

-of the most sensitive data

-TOE in

+A.AUTHUSER Authorized users OE.INFO_PROTECT Those OE.INFO_PROTECT supports the

+possess the necessary responsible for the TOE shall assumption by ensuring that

+authorization to access the establish and implement users are authorized to access
 +information managed by the procedures to ensure that data managed by the TOE.

+TOE in accordance with information is protected in an

+organization information appropriate manner. In

+access policies. particular: All network and

+peripheral cabling shall be

+approved for the transmittal of

+the most sensitive data

transmitted over the link. Such

-accordance with

-physical links are assumed to be
-organization
-adequately protected against threats
-information
-to the confidentiality and integrity of
-access policies.
-the data transmitted using
-appropriate physical and logical
-protection techniques.
-□ DAC protections on security-relevant
-files (such as audit trails and
-authorization databases) shall
-always be set up correctly.
-□ Users are authorized to access parts
-of the data managed by the TOE
-and are trained to exercise control
+physical links are assumed to
+be adequately protected against
+threats to the confidentiality
+and integrity of the data
+transmitted using appropriate
+physical and logical protection
+techniques. DAC protections on
+security-relevant files (such as
+audit trails and authorization
+databases) shall always be set
+up correctly. Users are
+authorized to access parts of the
+data managed by the TOE and
+are trained to exercise control
over their own data.

-Assumption Environmental Objective Addressing Rationale for Specifying the
-the Assumption Environmental Security
+Assumption Environmental Objective Rationale for Specifying the
+Addressing the Assumption Environmental Security
Objective

-A.CONNECT OE.INFO_PROTECT OE.INFO_PROTECT
-All connections to Those responsible for the TOE shall supports the assumption by
-and from remote establish and implement procedures to requiring that all network and
-trusted IT ensure that information is protected in peripheral cabling must be
-systems and an appropriate manner. In particular: approved for the transmittal of the
-between separate most sensitive data transmitted
-□ All network and peripheral cabling
-parts of the TSF over the link. Such physical links
-shall be approved for the transmittal
-are physically are assumed to be adequately
-of the most sensitive data
-and/or logically protected against threats to the

-transmitted over the link. Such
 -protected within confidentiality and integrity of the
 -physical links are assumed to be
 -the TOE data transmitted using
 -adequately protected against threats
 -environment to appropriate physical and logical
 -to the confidentiality and integrity of
 -ensure the protection techniques.
 -the data transmitted using
 -integrity and
 -appropriate physical and logical
 -confidentiality of
 -protection techniques.
 -the data
 - DAC protections on security-relevant
 -transmitted and
 -files (such as audit trails and
 -to ensure the
 -authorization databases) shall
 -authenticity of the
 -always be set up correctly.
 -communication
 -end points. Users are authorized to access parts
 -of the data managed by the TOE
 -and are trained to exercise control

+A.CONNECT All connections to OE.INFO_PROTECT Those OE.INFO_PROTECT supports the
 +and from remote trusted IT responsible for the TOE shall assumption by requiring that
 +systems and between separate establish and implement all network and peripheral
 +parts of the TSF are physically procedures to ensure that cabling must be approved for
 +and/or logically protected information is protected in an the transmittal of the most
 +within the TOE environment to appropriate manner. In sensitive data transmitted over
 +ensure the integrity and particular: All network and the link. Such physical links are
 +confidentiality of the data peripheral cabling shall be assumed to be adequately
 +transmitted and to ensure the approved for the transmittal of protected against threats
 to the
 +authenticity of the the most sensitive data confidentiality and integrity of
 +communication end points. transmitted over the link. Such the data transmitted using
 +physical links are assumed to appropriate physical and logical
 +be adequately protected against protection techniques.
 +threats to the confidentiality
 +and integrity of the data
 +transmitted using appropriate
 +physical and logical protection
 +techniques. DAC protections on
 +security-relevant files (such as
 +audit trails and authorization
 +databases) shall always be set
 +up correctly. Users are

+authorized to access parts of the
+data managed by the TOE and
+are trained to exercise control
over their own data.

OE.IT_TRUSTED_SYSTEM OE.IT_TRUSTED_SYSTEM

-External IT systems may be required by supports the assumption by
-the TOE for the enforcement of the ensuring that external trusted IT
-security policy. These external trusted systems implement the protocols
-IT systems shall be managed according and mechanisms required by the
-to known, accepted and trusted policies TSF to support the enforcement
-based on the same rules and policies of the security policy.
-applicable to the TOE, and shall be
-sufficiently protected from any attack
-that may cause those functions to
-provide false results.

-OE.PHYSICAL OE.PHYSICAL

-Those responsible for the TOE shall supports the assumption by
-ensure that those parts of the TOE ensuring that appropriate physical
-critical to enforcement of the security security is provided within the
-policy are protected from physical attack domain.
-that might compromise IT security
-objectives. The protection shall be
-commensurate with the value of the IT
-assets protected by the TOE.

-Assumption Environmental Objective Addressing Rationale for Specifying the
-the Assumption Environmental Security

+External IT systems may be supports the assumption by
+required by the TOE for the ensuring that external trusted
+enforcement of the security IT systems implement the
+policy. These external trusted IT protocols and mechanisms
+systems shall be managed required by the TSF to support
+according to known, accepted the enforcement of the security
+and trusted policies based on policy.
+the same rules and policies
+applicable to the TOE, and shall
+be sufficiently protected from
+any attack that may cause those
+functions to provide false
+results.

+Assumption Environmental Objective Rationale for Specifying the
+Addressing the Assumption Environmental Security
Objective

-A.SUPPORT OE.IT_I&A OE.IT_I&A

-Any information Any information provided by a trusted supports the assumption
-provided by a entity in the environment and used to implicitly.
-trusted entity in support user authentication and
-the IT authorization used by the TOE is correct
-environment and and up to date.

-used to support
 -the provision of
 -time and date,
 -information used
 -in audit capture,
 -user
 -authentication,
 -and authorization
 -that is used by
 -the TOE is
 -correct and up to
 +OE.PHYSICAL Those responsible OE.PHYSICAL supports the
 +for the TOE shall ensure that assumption by ensuring that
 +those parts of the TOE critical to appropriate physical security is
 +enforcement of the security provided within the domain.
 +policy are protected from
 +physical attack that might
 +compromise IT security
 +objectives. The protection shall
 +be commensurate with the
 +value of the IT assets protected
 +by the TOE.
 +A.SUPPORT Any information OE.IT_I&A Any information OE.IT_I&A supports the
 +provided by a trusted entity in provided by a trusted entity in assumption implicitly.
 +the IT environment and used to the environment and used to
 +support the provision of time support user authentication
 +and date, information used in and authorization used by the
 +audit capture, user TOE is correct and up to date.
 +authentication, and
 +authorization that is used by
 +the TOE is correct and up to
 date.
 -A.MANAGE OE.ADMIN OE.ADMIN
 -The TOE security Those responsible for the TOE are supports the assumption by
 -functionality is competent and trustworthy individuals, requiring that authorized
 -managed by one capable of managing the TOE and the administrators are competent,
 -or more security of information it contains. thereby ensuring that all the tasks
 -competent, are performed correctly and
 -authorized effectively.
 -administrators.
 -OE.INFO_PROTECT OE.INFO_PROTECT
 -The system
 -administrative Those responsible for the TOE shall supports the assumption by
 -personnel are not establish and implement procedures to ensuring that users are
 -careless, willfully ensure that information is protected in authorized to access the
 -negligent, or an appropriate manner. In particular: appropriate data, and are trained
 -hostile, and will □ All network and peripheral cabling to exercise control.
 -follow and abide shall be approved for the transmittal

-by the of the most sensitive data
 -instructions transmitted over the link. Such
 -provided by the physical links are assumed to be
 -guidance adequately protected against threats
 -documentation. to the confidentiality and integrity of
 -the data transmitted using
 -appropriate physical and logical
 -protection techniques.
 -□ DAC protections on security-relevant
 -files (such as audit trails and
 -authentication databases) shall
 -always be set up correctly.
 -□ Users are authorized to access parts
 -of the data managed by the TOE
 -and are trained to exercise control
 +A.MANAGE The TOE security OE.ADMIN Those responsible OE.ADMIN supports the
 +functionality is managed by one for the TOE are competent and assumption by requiring
 that
 +or more competent, authorized trustworthy individuals, authorized administrators are
 +administrators. The system capable of managing the TOE competent, thereby ensuring
 +administrative personnel are and the security of information that all the tasks are
 performed
 +not careless, willfully negligent, it contains. correctly and effectively.
 +or hostile, and will follow and
 +abide by the instructions
 +provided by the guidance
 +documentation.
 +Assumption Environmental Objective Rationale for Specifying the
 +Addressing the Assumption Environmental Security
 +Objective
 +OE.INFO_PROTECT Those OE.INFO_PROTECT supports the
 +responsible for the TOE shall assumption by ensuring that
 +establish and implement users are authorized to access
 +procedures to ensure that the appropriate data, and are
 +information is protected in an trained to exercise control.
 +appropriate manner. In
 +particular: All network and
 +peripheral cabling shall be
 +approved for the transmittal of
 +the most sensitive data
 +transmitted over the link. Such
 +physical links are assumed to
 +be adequately protected against
 +threats to the confidentiality
 +and integrity of the data
 +transmitted using appropriate
 +physical and logical protection
 +techniques. DAC protections on

+security-relevant files (such as
+audit trails and authorization
+databases) shall always be set
+up correctly. Users are
+authorized to access parts of the
+data managed by the TOE and
+are trained to exercise control
over their own data.

-Assumption Environmental Objective Addressing Rationale for Specifying the
-the Assumption Environmental Security

+A.NO_GENERAL + _PURPOSE OE.NO_GENERAL_PURPOSE OE.NO_GENERAL_PURPOSE The
+There are no general-purpose There shall be no general- DBMS server must not include
+computing capabilities (e.g., purpose computing capabilities any general-purpose
computing
+compilers or user applications) (e.g., compilers or user capabilities. This will protect
+available on DBMS servers, applications) available on the TSF data from malicious
+other than those services DMBS servers, other than those processes.
+necessary for the operation, services necessary for the
+administration, and support of operation, administration, and
+the DBMS. support of the DBMS.

+Assumption Environmental Objective Rationale for Specifying the
+Addressing the Assumption Environmental Security
Objective

-A.NO_GENERAL OE.NO_GENERAL_PURPOSE OE.NO_GENERAL_PURPOSE
-_PURPOSE There shall be no general-purpose The DBMS server must not
-There are no computing capabilities (e.g., compilers include any general-purpose
-general-purpose or user applications) available on DMBS computing capabilities. This
will
-computing servers, other than those services protect the TSF data from
-capabilities (e.g., necessary for the operation, malicious processes.
-compilers or user administration, and support of the
-applications) DBMS.
-available on
-DBMS servers,
-other than those
-services
-necessary for the
-operation,
-administration,
-and support of
-the DBMS.

-A.PEER_FUNC_ OE.IT_TRUSTED_SYSTEM OE.IT_TRUSTED_SYSTEM
-&_MGT External IT systems may be required by supports this assumption by
-All external the TOE for the enforcement of the ensuring that remote systems
-trusted IT security policy. These external trusted supporting the TOE are managed
-systems trusted IT systems shall be managed according in a manner consistent with the
-by the TSF to to known, accepted, and trusted policies security policies applicable to
the

- provide TSF data based on the same rules and policies TOE.
- or services to the applicable to the TOE, and shall be
- TOE, or to sufficiently protected from any attack
- support the TSF that may cause those functions to
- in the provide false results.
- enforcement of
- security policy
- decisions are
- assumed to
- correctly
- implement the
- functionality used
- by the TSF
- consistent with
- the assumptions
- defined for this
- functionality and
- to be properly
- managed and
- operate under
- security policy
- constraints
- compatible with
- those of the TOE.
- Assumption Environmental Objective Addressing Rationale for Specifying the
- the Assumption Environmental Security
- +A.PEER_FUNC_&_MGT ALL OE.IT_TRUSTED_SYSTEM OE.IT_TRUSTED_SYSTEM
- +external trusted IT systems External IT systems may be supports this assumption by
- +trusted by the TSF to provide required by the TOE for the ensuring that remote systems
- +TSF data or services to the TOE, enforcement of the security supporting the TOE are
- +or to support the TSF in the policy. These external trusted IT managed in a manner
- +enforcement of security policy systems shall be managed consistent with the security
- +decisions are assumed to according to known, accepted, policies applicable to the TOE.
- +correctly implement the and trusted policies based on
- +functionality used by the TSF the same rules and policies
- +consistent with the assumptions applicable to the TOE, and shall
- +defined for this functionality be sufficiently protected from
- +and to be properly managed any attack that may cause those
- +and operate under security functions to provide false
- +policy constraints compatible results.
- +with those of the TOE.
- +A.PHYSICAL The operational OE.PHYSICAL Those responsible OE.PHYSICAL supports this
- +environment is assumed to for the TOE shall ensure that assumption by ensuring that
- +provide the TOE with those parts of the TOE critical to the parts of the TOE critical to
- +appropriate physical protection enforcement of the security the enforcement of the
- security
- +such that the TOE is not subject policy are protected from policy are protected from
- +to physical attack that may physical attack that might physical attack.

+compromise the security and/or compromise IT security
+interfere with the platform's objectives. The protection shall
+correct operation. This includes be commensurate with the
+protection for the physical value of the IT assets protected
+infrastructure on which the by the TOE.
+TOE depends for correct
+operation and hardware
+devices on which the TOE is
+executing.
+Assumption Environmental Objective Rationale for Specifying the
+Addressing the Assumption Environmental Security
Objective
-A.PHYSICAL OE.PHYSICAL OE.PHYSICAL
-The operational Those responsible for the TOE shall supports this assumption by
-environment is ensure that those parts of the TOE ensuring that the parts of the TOE
-assumed to critical to enforcement of the security critical to the enforcement of the
-provide the TOE policy are protected from physical attack security policy are protected
from
-with appropriate that might compromise IT security physical attack.
-physical objectives. The protection shall be
-protection such commensurate with the value of the IT
-that the TOE is assets protected by the TOE.
-not subject to
-physical attack
-that may
-compromise the
-security and/or
-interfere with the
-platform's correct
-operation. This
-includes
-protection for the
-physical
-infrastructure on
-which the TOE
-depends for
-correct operation OE.INFO_PROTECT OE.INFO_PROTECT
-and hardware
-Those responsible for the TOE shall supports the assumption by
-devices on which
-establish and implement procedures to requiring that all network and
-the TOE is
-ensure that information is protected in peripheral cabling must be
-executing.
-an appropriate manner. In particular: approved for the transmittal of the
-most sensitive data transmitted
-□ All network and peripheral cabling
-over the link. Such physical links

-shall be approved for the transmittal
 -are assumed to be adequately
 -of the most sensitive data
 -protected against threats to the

+OE.INFO_PROTECT Those OE.INFO_PROTECT supports the
 +responsible for the TOE shall assumption by requiring that
 +establish and implement all network and peripheral
 +procedures to ensure that cabling must be approved for
 +information is protected in an the transmittal of the most
 +appropriate manner. In sensitive data transmitted over
 +particular: All network and the link. Such physical links are
 +peripheral cabling shall be assumed to be adequately
 +approved for the transmittal of protected against threats to the
 +the most sensitive data confidentiality and integrity of
 +transmitted over the link. Such the data transmitted using
 +physical links are assumed to appropriate physical and logical
 +be adequately protected against protection techniques.
 +threats to the confidentiality
 +and integrity of the data
 +transmitted using appropriate
 +physical and logical protection
 +techniques. DAC protections on
 +security-relevant files (such as
 +audit trails and authorization
 +databases) shall always be set
 +up correctly. Users are
 +authorized to access parts of the
 +data managed by the TOE and
 +are trained to exercise control
 +over their own data.

+Assumption Environmental Objective Rationale for Specifying the
 +Addressing the Assumption Environmental Security
 +Objective

+A.TRAINEDUSER Authorized OE.INFO_PROTECT Those OE.INFO_PROTECT supports the
 +users are sufficiently trained to responsible for the TOE shall assumption by ensuring
 that
 +accomplish a task or group of establish and implement users are authorized to access
 +tasks within a secure IT procedures to ensure that parts of the data managed by
 +environment by exercising information is protected in an the TOE and are trained to
 +control over their user data. appropriate manner. In exercise control over their own
 +particular: All network and data.
 +peripheral cabling shall be
 +approved for the transmittal of
 +the most sensitive data
 transmitted over the link. Such
 -confidentiality and integrity of the
 -physical links are assumed to be
 -data transmitted using

-adequately protected against threats
 -appropriate physical and logical
 -to the confidentiality and integrity of
 -protection techniques.
 -the data transmitted using
 -appropriate physical and logical
 -protection techniques.
 - DAC protections on security-relevant
 -files (such as audit trails and
 -authentication databases) shall
 -always be set up correctly.
 - Users are authorized to access parts
 -of the data managed by the TOE
 -and are trained to exercise control
 +physical links are assumed to
 +be adequately protected against
 +threats to the confidentiality
 +and integrity of the data
 +transmitted using appropriate
 +physical and logical protection
 +techniques. DAC protections on
 +security-relevant files (such as
 +audit trails and authorization
 +databases) shall always be set
 +up correctly. Users are
 +authorized to access parts of the
 +data managed by the TOE and
 +are trained to exercise control
 over their own data.

-Assumption Environmental Objective Addressing Rationale for Specifying the
 -the Assumption Environmental Security
 +P.USER Authority shall only be OE.ADMIN Those responsible OE.ADMIN supports the policy
 +given to users who are trusted for the TOE are competent and by ensuring that the
 authorized
 +to perform the actions correctly. trustworthy individuals, administrators, responsible
 for
 +capable of managing the TOE granting authority to users, are
 +and the security of information trustworthy.
 +it contains.

+Assumption Environmental Objective Rationale for Specifying the
 +Addressing the Assumption Environmental Security
 Objective

-A.TRAINEDUSE OE.INFO_PROTECT OE.INFO_PROTECT
 -R Those responsible for the TOE shall supports the assumption by
 -Authorized users establish and implement procedures to ensuring that users are
 -are sufficiently ensure that information is protected in authorized to access parts of
 the
 -trained to an appropriate manner. In particular: data managed by the TOE and

-accomplish a task are trained to exercise control

- All network and peripheral cabling
- or group of tasks over their own data.
- shall be approved for the transmittal
- within a secure IT
- of the most sensitive data
- environment by

+OE.INFO_PROTECT Those OE.INFO_PROTECT supports the

- +responsible for the TOE shall policy by ensuring that users
- +establish and implement are authorized to access parts
- +procedures to ensure that of the data managed by the
- +information is protected in an TOE.
- +appropriate manner. In
- +particular: All network and
- +peripheral cabling shall be
- +approved for the transmittal of
- +the most sensitive data
- transmitted over the link. Such
- exercising control
- physical links are assumed to be
- over their user
- adequately protected against threats
- data.
- to the confidentiality and integrity of
- the data transmitted using
- appropriate physical and logical
- protection techniques.
- DAC protections on security-relevant
- files (such as audit trails and
- authentication databases) shall
- always be set up correctly.
- Users are authorized to access parts
- of the data managed by the TOE
- and are trained to exercise control
- +physical links are assumed to
- +be adequately protected against
- +threats to the confidentiality
- +and integrity of the data
- +transmitted using appropriate
- +physical and logical protection
- +techniques. DAC protections on
- +security-relevant files (such as
- +audit trails and authorization
- +databases) shall always be set
- +up correctly. Users are
- +authorized to access parts of the
- +data managed by the TOE and
- +are trained to exercise control

over their own data.

-Assumption Environmental Objective Addressing Rationale for Specifying the

-the Assumption Environmental Security

+Assumption Environmental Objective Rationale for Specifying the

+Addressing the Assumption Environmental Security
Objective

-P.USER OE.ADMIN OE.ADMIN

-Authority shall Those responsible for the TOE are supports the policy by ensuring

-only be given to competent and trustworthy individuals, that the authorized
administrators,

-users who are capable of managing the TOE and the responsible for granting authority

-trusted to perform security of information it contains. to users, are trustworthy.

-the actions

-correctly. OE.INFO_PROTECT OE.INFO_PROTECT

-Those responsible for the TOE shall supports the policy by ensuring

-establish and implement procedures to that users are authorized to

-ensure that information is protected in access parts of the data managed

-an appropriate manner. In particular: by the TOE.

-□ All network and peripheral cabling

-shall be approved for the transmittal

-of the most sensitive data

+T.UNAUTHORIZED + _ACCESS A OE.INFO_PROTECT Those OE.INFO_PROTECT diminishes

+user may gain unauthorized responsible for the TOE shall the logical and physical
threats

+access to user data for which establish and implement by ensuring that the network

+they are not authorized procedures to ensure that and peripheral cabling are

+according to the TOE security information is protected in an appropriately protected.

DAC

+policy. appropriate manner. In protections, when implemented

+particular: All network and correctly, support the

+peripheral cabling shall be identification of unauthorized

+approved for the transmittal of access.

+the most sensitive data

transmitted over the link. Such

-physical links are assumed to be

-adequately protected against threats

-to the confidentiality and integrity of

-the data transmitted using

-appropriate physical and logical

-protection techniques.

-□ DAC protections on security-relevant

-files (such as audit trails and

-authorization databases) shall

-always be set up correctly.

-□ Users are authorized to access parts

-of the data managed by the TOE

-and are trained to exercise control

+physical links are assumed to

+be adequately protected against
+threats to the confidentiality
+and integrity of the data
+transmitted using appropriate
+physical and logical protection
+techniques. DAC protections on
+security-relevant files (such as
+audit trails and authorization
+databases) shall always be set
+up correctly. Users are
+authorized to access parts of the
+data managed by the TOE and
+are trained to exercise control
over their own data.

-T.UNAUTHORIZ OE.INFO_PROTECT OE.INFO_PROTECT
-ED

-Those responsible for the TOE shall diminishes the logical and
-_ACCESS establish and implement procedures to physical threats by ensuring that
-A user may gain ensure that information is protected in the network and peripheral
-unauthorized an appropriate manner. In particular: cabling are appropriately
-access to user protected.

-□ All network and peripheral cabling
-data for which
-shall be approved for the transmittal DAC protections, when
-they are not of the most sensitive data implemented correctly, support
-authorized
-transmitted over the link. Such the identification of unauthorized
-according to the physical links are assumed to be access.

-TOE security
-adequately protected against threats
-policy.
-to the confidentiality and integrity of
-the data transmitted using
-appropriate physical and logical
-protection techniques.

-□ DAC protections on security-relevant
-files (such as audit trails and
-authorization databases) shall
-always be set up correctly.

-□ Users are authorized to access parts
-Assumption Environmental Objective Addressing Rationale for Specifying the
-the Assumption Environmental Security

+8.4. Rationale for TOE Security Functional
+Requirements
+The following table provides the rationale for the selection of the security functional
requirements.
+It traces each TOE security objective to the identified security functional
requirements.

+Table 10. Table 10: Rationale for TOE Security Functional Requirements

+Objective Requirements Addressing the Rationale

Objective

-of the data managed by the TOE

-and are trained to exercise control

-over their own data.

-C.4 Rationale for TOE Security Functional Requirements

-The following table provides the rationale for the selection of the security functional

-requirements. It traces each TOE security objective to the identified security

-functional requirements.

-Table 10: Rationale for TOE Security Functional Requirements

-Objective Requirements Rationale

-Addressing the

+O.ADMIN_ROLE The TOE shall FMT_SMR.1 The TOE will establish, at least,

+provide roles that allow only an authorized administrator

+authorized users to have access role and authorized user roles.

+to administrative privileges that Additional roles may also be

+are specific to the role. specified.

+Objective Requirements Addressing the Rationale

Objective

-O.ADMIN_ROLE FMT_SMR.1 The TOE will establish, at

-The TOE shall provide roles that least, an authorized

-administrator role. Additional

-allow only authorized users to have

-access to administrative privileges roles may also be specified.

-that are specific to the role.

-Objective Requirements Rationale

-Addressing the

+O.AUDIT_GENERATION The TOE FAU_GEN.1 FAU_GEN.2 FAU_GEN.1 defines the set of

+shall provide the capability to FAU_SEL.1 events for which the TOE must

+detect and create records of be capable of generating audit

+security relevant events data. This requirement ensures

+associated with users. that the administrator has the

+ability to audit any security

+relevant events that takes place

+in the TOE. This requirement

+also defines the information

+that must be contained in the

+audit data for each auditable

+event. FAU_GEN.2 ensures that

+the audit data associates a user

+identity and, when applicable, a

+group identity with the

+auditable event. FAU_SEL.1

+allows the administrator to

+configure which auditable

+events will be recorded in the

+audit trail.

+0.DISCRETIONARY_ACCESS FDP_ACC.1 FDP_ACF.1 The TSF controls access to
+TSF shall control access of resources based on the subject
+subjects and/or users to named and/or object security
+resources based on identity of attributes.
+the object, subject or user. The
+TSF shall allow authorized
+users to specify for each access
+mode which users/subjects are
+allowed to access a specific
+named object in that access
+mode.

+Objective Requirements Addressing the Rationale
Objective

-0.AUDIT_GENERATION FAU_GEN.1 FAU_GEN.1 defines the set
-The TOE shall provide the capability FAU_GEN.2 of events that the TOE must
-to detect and create records of be capable of recording.
-FAU_SEL.1
-security relevant events associated This requirement ensures
-with users. that the administrator has
-the ability to audit any
-security relevant events that
-takes place in the TOE. This
-requirement also defines the
-information that must be
-contained in the audit record
-for each auditable event.
-FAU_GEN.2 ensures that
-the audit records associate
-a user and any associated
-group identity with the
-auditable event.
-FAU_SEL.1 allows the
-administrator to configure
-which auditable events will
-be recorded in the audit trail.

-0.DISCRETIONARY_ACCESS FDP_ACC.1 The TSF controls access to
-resources based on the
-The TSF shall control access of FDP_ACF.1
-subject and/or object
-subjects and/or users to named
-security attributes.
-resources based on identity of the
-object, subject or user. The TSF shall
-allow authorized users to specify for
-each access mode which
-users/subjects are allowed to access
-a specific named object in that access
-mode.

-0.I&A FIA_ATD.1 FIA_UID.2 and
 -FIA_UAU.2 ensure that only
 -The TOE shall ensure that users are FIA_UAU.2
 -authenticated before the TOE authorized users gain
 -FIA_UID.2
 -processes any actions that require access to the TOE and its
 -FIA_USB_EXT.2
 -resources following
 -authentication.
 -(Optional)

+0.I&A The TOE shall ensure that FIA_ATD.1 FIA_UAU.2 FIA_UID.2 FIA_UID.2 and FIA_UAU.2
 +users are authenticated before FIA_USB_EXT.2 (Optional) ensure that only authorized
 +the TOE processes any actions users gain access to the TOE
 +that require authentication. and its resources following
 identification and
 -authentication.
 -FIA_ATD.1 ensures that the
 -security attributes used to
 -determine access are
 -defined and available to the
 -support access control
 -decisions.
 +authentication. FIA_ATD.1
 +ensures that the security
 +attributes used to determine
 +access are defined and
 +available to support access
 +control decisions.
 FIA_USB_EXT.2 ensures
 enforcement of the rules
 -governing subjects acting
 -on behalf of authorized
 -users.

-Objective Requirements Rationale
 -Addressing the
 +governing subjects acting on
 +behalf of authorized users.

+0.MANAGE The TSF shall FMT_MSA.1(1) FMT_MSA.1(2) FMT_MSA.1(1) and
 +provide all the functions and FMT_MSA.3 FMT_MTD.1 FMT_MSA.1(2) ensure that the
 +facilities necessary to manage FMT_REV.1(1) FMT_REV.1(2) ability to perform operations
 on
 +TOE security mechanisms, and FMT_SMF.1 FMT_SMR.1 security attributes is restricted
 +shall restrict such management to authorized administrators
 +actions to authorized users. and authorized users.
 +FMT_MSA.3 ensures that default
 +values used for security
 +attributes are restrictive.
 +FMT_MTD.1 ensures that the

+ability to include or exclude
+auditable events is restricted to
+authorized administrators.
+FMT_REV.1(1) and FMT_REV.1(2)
+restrict the ability to revoke
+attributes to the authorized
+administrator and authorized
+users. FMT_SMF.1 identifies the
+management functions that are
+available to the authorized
+administrator. FMT_SMR.1
+defines the specific security
+roles to be supported.

+Objective Requirements Addressing the Rationale
Objective

-O.MANAGE FMT_MSA.1 FMT_MSA.1 ensures that
-The TSF shall provide all the FMT_MSA.3 the ability to perform
-functions and facilities necessary to operations on security
-FMT_MTD.1
-manage TOE security mechanisms, attributes is restricted to
-FMT_REV.1(1)
-and shall restrict such management authorized administrators.
-FMT_REV.1(2)
-actions to authorized users. FMT_MSA.3 ensures that
-FMT_SMF.1
-default values used for
-FMT_SMR.1 security attributes are
-restrictive.
-FMT_MTD.1 ensures that
-the ability to include or
-exclude auditable events is
-restricted to authorized
-administrators.
-FMT_REV.1 restricts the
-ability to revoke attributes to
-the authorized administrator.
-FMT_SMF.1 identifies the
-management functions that
-are available to the
-authorized administrator.
-FMT_SMR.1 defines the
-specific security roles to be
-supported.

0.RESIDUAL_INFORMATION FDP_RIP.1 FDP_RIP.1 ensures that the
-contents of resources are
-The TOE shall ensure that any
-not available upon
-information contained in a protected

- reallocation of the resource.
- resource within its control is not
- inappropriately disclosed when the
- resource is reallocated.
- O.TOE_ACCESS FDP_ACC.1 FDP_ACC.1 and
- FDP_ACF.1 ensure that
- The TOE shall provide mechanisms FDP_ACF.1
- that control a user's logical access to access between subjects
- FIA_ATD.1
- and objects is controlled
- user data and to the TSF.
- FTA_MCS.1
- using security attributes.
- FTA_TSE.1
- FIA_ATD.1 defines the
- FTA_TAH_EXT.1 security attributes for
- (Optional) individual users.
- FPT_TRC.1 (Optional) FTA_MCS.1 ensures that
- users are restricted to no
- more than a specified
- number of concurrent
- sessions.
- FTA_TSE.1 allows the TOE
- to restrict access to the TOE
- +The TOE shall ensure that any contents of resources are not
- +information contained in a available upon reallocation of
- +protected resource within its the resource.
- +control is not inappropriately
- +disclosed when the resource is
- +reallocated.
- +Objective Requirements Addressing the Rationale
- +Objective
- +O.TOE_ACCESS The TOE shall FDP_ACC.1 FDP_ACF.1 FDP_ACC.1 and FDP_ACF.1
- +provide mechanisms that FIA_ATD.1 FTA_MCS_EXT.1 ensure that access between
- +control a user's logical access to FTA_MCS.1 (Selection-Based) subjects and objects is
- +user data and to the TSF. FTA_TSE.1 FTA_TAH_EXT.1 controlled using security
- +(Optional) FPT_TRC.1 (Optional) attributes. FIA_ATD.1 defines
- +the security attributes for
- +individual users.
- +FTA_MCS_EXT.1 ensures that
- +the TOE restricts the maximum
- +number of concurrent sessions
- +using the mechanism selected
- +by the ST author and allows the
- +authorized administrator to
- +configure the selected
- +enforcement mechanism.
- +FTA_MCS.1, when selected

+through FTA_MCS_EXT.1,
+ensures that users are
+restricted to no more than a
+specified number of concurrent
+sessions. FTA_TSE.1 allows the
+TOE to restrict access to the TOE
based on specified criteria.

-Objective Requirements Rationale
-Addressing the
-Objective
-FTA_TAH_EXT.1
-The TOE must be able to
-store and retrieve
+FTA_TAH_EXT.1 The TOE must
+be able to store and retrieve
information about previous
unauthorized login attempts
and the number of times the
-login was attempted every
-time the user logs into their
-account. The TOE must also
-store the last successful
-authorized login. This
-information will include the
-date, time, method, and
-location of the attempts.
-Access to this data is
-controlled and restricted
-such that a user may only
-access his or her own data.

-FPT_TRC.1
-If included in an ST,
-FPT_TRC.1 ensures
-replicated TSF data that
-specifies attributes for
-access control must be
-consistent across distributed
-components of the TOE.
-The requirement is to
+login was attempted every time
+the user logs into their account.
+The TOE must also store the last
+successful authorized login.
+This information will include
+the date, time, method, and
+location of the attempts. Access
+to this data is controlled and
+restricted such that a user may

+only access his or her own data.

+FPT_TRC.1 If included in an ST,

+FPT_TRC.1 ensures replicated

+TSF data that specifies

+attributes for access control

+must be consistent across

+distributed components of the

+TOE. The requirement is to

maintain consistency of

replicated TSF data and

-associated access controls.

-C.5 SFR Dependencies Analysis

+associated access controls. 53

+8.5. SFR Dependencies Analysis

Requirement Dependency Satisfied

-FAU_GEN.1 FPT_STM.1 This requirement is satisfied by the

-assumption on the IT environment, given in

+FAU_GEN.1 FPT_STM.1 This requirement is satisfied by

+the assumption on the IT

+environment, given in

A.SUPPORT.

-FAU_GEN.2 FAU_GEN.1 This requirement is satisfied by

-FAU_GEN.1.

-FIA_UID.1

-This requirement is satisfied by FIA_UID.2

-which is hierarchical to FIA_UID.1.

-FAU_SEL.1 FAU_GEN.1 This requirement is satisfied by

-FMT_MTD.1 FAU_GEN.1.

-This requirement is satisfied by

-FMT_MTD.1.

+FAU_GEN.2 FAU_GEN.1 FIA_UID.1 This requirement is satisfied by

+FAU_GEN.1. This requirement is

+satisfied by FIA_UID.2 which is

+hierarchical to FIA_UID.1.

+FAU_SEL.1 FAU_GEN.1 FMT_MTD.1 This requirement is satisfied by

+FAU_GEN.1. This requirement is

+satisfied by FMT_MTD.1.

FDP_ACC.1 FDP_ACF.1 This requirement is satisfied by

FDP_ACF.1.

-FDP_ACF.1 FDP_ACC.1 This requirement is satisfied by

-FDP_ACC.1.

-FMT_MSA.3

-This requirement is satisfied by

-FMT_MSA.3.

+FDP_ACF.1 FDP_ACC.1 FMT_MSA.3 This requirement is satisfied by

+FDP_ACC.1. This requirement is

+satisfied by FMT_MSA.3.

FDP_RIP.1 None N/A

FIA_ATD.1 None N/A

-FIA_UAU.2 FIA_UID.1 This requirement is satisfied by FIA_UID.2
-which is hierarchical to FIA_UID.1.

+FIA_UAU.2 FIA_UID.1 This requirement is satisfied by
+FIA_UID.2 which is hierarchical
+to FIA_UID.1.

FIA_UID.2 None N/A

-FIA_USB_EXT.2 FIA_ATD.1 This requirement is satisfied by FIA_ATD.1.

-FMT_MSA.1 [FDP_ACC.1 or This requirement is satisfied by
-FDP_IFC.1] FDP_ACC.1.

-FMT_SMF.1 This requirement is satisfied by
-FMT_SMF.1.

-FMT_SMR.1
-This requirement is satisfied by

+FIA_USB_EXT.2 FIA_ATD.1 This requirement is satisfied by
+FIA_ATD.1.

+FMT_MSA.1(1) [FDP_ACC.1 or FDP_IFC.1] This requirement is satisfied by
+FMT_SMF.1 FMT_SMR.1 FDP_ACC.1. This requirement is
+satisfied by FMT_SMF.1. This
+requirement is satisfied by
FMT_SMR.1.

-FMT_MSA.3 FMT_MSA.1 This requirement is satisfied by
-FMT_SMR.1 FMT_MSA.1.

-This requirement is satisfied by

+FMT_MSA.1(2) [FDP_ACC.1 or FDP_IFC.1] This requirement is satisfied by
+FMT_SMF.1 FMT_SMR.1 FDP_ACC.1. This requirement is
+satisfied by FMT_SMF.1. This
+requirement is satisfied by
FMT_SMR.1.

-FMT_MTD.1 FMT_SMF.1 This requirement is satisfied by
-FMT_SMR.1 FMT_SMF.1.

-This requirement is satisfied by

+FMT_MSA.3 FMT_MSA.1 FMT_SMR.1 This requirement is satisfied by
+FMT_MSA.1(1) and
+FMT_MSA.1(2). This
+requirement is satisfied by
FMT_SMR.1.

+Requirement Dependency Satisfied

+FMT_MTD.1 FMT_SMF.1 FMT_SMR.1 This requirement is satisfied by
+FMT_SMF.1. This requirement is
+satisfied by FMT_SMR.1.

FMT_REV.1(1) FMT_SMR.1 This requirement is satisfied by
FMT_SMR.1.

FMT_REV.1(2) FMT_SMR.1 This requirement is satisfied by

-Requirement Dependency Satisfied
FMT_SMR.1.

FMT_SMF.1 None N/A

-FMT_SMR.1 FIA_UID.1 This requirement is satisfied by FIA_UID.2

- which is hierarchical to FIA_UID.1.
- FPT_TRC.1 FPT_ITT.1 For a distributed TOE, the dependency is
- satisfied through the environmental
- assumption, A.CONNECT, that assures the
- confidentiality and integrity of the
- transmitted data.
- FTA_MCS.1 FIA_UID.1 This requirement is satisfied by FIA_UID.2
- which is hierarchical to FIA_UID.1.
- +FMT_SMR.1 FIA_UID.1 This requirement is satisfied by
- +FIA_UID.2 which is hierarchical
- +to FIA_UID.1.
- +FPT_TRC.1 FPT_ITT.1 For a distributed TOE, the
- +dependency is satisfied through
- +the environmental assumption,
- +A.CONNECT, that assures the
- +confidentiality and integrity of
- +the transmitted data.
- +FTA_MCS_EXT.1 FIA_UID.2 This requirement is satisfied by
- +FIA_UID.2.
- +FTA_MCS.1 FIA_UID.1 When FTA_MCS.1 is selected
- +through FTA_MCS_EXT.1, this
- +requirement is satisfied by
- +FIA_UID.2 which is hierarchical
- +to FIA_UID.1.
- FTA_TSE.1 None N/A
- C.6 SAR Dependencies Analysis
- The dependencies for security assurance requirements are all fulfilled based on the
- following facts:
- EAL2 is completely self-sufficient with all dependencies being fulfilled with the
- package of EAL2.
- The security assurance requirement of ALC_FLR.3, which is in addition to
- EAL2, does not have any dependencies.
- C.7 Rationale for Satisfying all Security Assurance Requirements
- This collaborative Protection Profile (cPP) is developed for use by commercial DBMS
- security software developers. Since the cPP will be applied to commercial DBMS
- products that are used internationally the EAL2 assurance package was selected by
- the cPP writers to meet the maximum level of assurance that is recognized
- internationally through the Common Criteria Recognition Arrangement (CCRA).
- Flaw Remediation is the only requirement not included in any EAL level because it
- does not add any assurance to the current system, but to subsequent releases. A
- systematic flaw remediation procedure is however considered necessary for every
- DBMS vendor who supports enterprise security needs in both, private and public
- sectors. Therefore, ALC_FLR.3 was selected to augment EAL2.
- C.8 Rationale for Extended Security Functional Requirements
- The table below presents a rationale for the inclusion of the extended functional
- security requirements found in this PP. Note that there are no extended security
- assurance requirements (SAR).
- Table 11: Rationale for Extended Security Functional Requirements

-Extended Identifier Rationale

-Requirement

-FIA_USB_EXT.2 Enhanced user- Security attributes may be associated with a user subject binding to further restrict access or provide additional privileges.

-FTA_TAH_EXT.1 TOE access The TOE may make information related to information attempts to establish a session available to users.

-Glossary

-The terms, definitions and abbreviations given [CC1] apply to this document.

-Additional terms, definitions and abbreviations applicable only within the DBMS cPP context are given below:

-Terms and Definitions

+8.6. SAR Dependencies Analysis

+The dependencies for security assurance requirements are all fulfilled based on the following facts:

+EAL2 is completely self-sufficient with all dependencies being fulfilled with the package of EAL2 as defined in [CC5].

+The security assurance requirement of ALC_FLR.3, which is in addition to EAL2, does not have any dependencies.

+8.7. Rationale for Satisfying all Security Assurance

+Requirements

+This collaborative Protection Profile (cPP) is developed for use by commercial DBMS security

+software developers. Since the cPP will be applied to commercial DBMS products that are used

+internationally the EAL2 assurance package defined in [CC5] was selected by the cPP writers to

+meet the maximum level of assurance that is recognized internationally through the Common

+Criteria Recognition Arrangement (CCRA).

+Flaw Remediation is the only requirement not included in any EAL level because it does not add

+any assurance to the current system, but to subsequent releases. A systematic flaw remediation

+procedure is however considered necessary for every DBMS vendor who supports enterprise security needs in both, private and public sectors. Therefore, ALC_FLR.3 was selected to augment

+EAL2.

+8.8. Rationale for Extended Security Functional

+Requirements

+The table below presents a rationale for the inclusion of the extended functional security

+requirements found in this PP. Note that there are no extended security assurance requirements

+(SAR).

+Table 11. Table 11: Rationale for Extended Security Functional Requirements

+Extended Requirement Identifier Rationale

+FIA_USB_EXT.2 Enhanced user-subject binding Security attributes may be associated with a user to further restrict access or provide additional privileges.

+FTA_TAH_EXT.1 TOE access information The TOE may make information related to attempts to establish a session available to users.

+FTA_MCS_EXT.1 Configurable Session Limiting The TOE can enforce Mechanisms concurrent session limits using per-user session locking or another TSF-enforced mechanism selected by the ST author.

+Chapter 9. Selection-Based Requirements

+As indicated in the introduction to this cPP, the baseline requirements are contained in the body of this cPP. Additional requirements appear here if certain selections are made in the baseline requirements.

+9.1. Class: TOE access (FTA)

+9.1.1. Limitation on multiple concurrent sessions (FTA_MCS)

+FTA_MCS.1 Basic limitation on multiple concurrent sessions

+FTA_MCS.1.1

+The TSF shall restrict the maximum number of concurrent sessions that belong to the same user.

+FTA_MCS.1.2

+The TSF shall enforce, by default, a limit of [assignment: default number] sessions per user.

+Application Note 17: The ST author is reminded that CC Part 2 [CC2] allows that the default number may be defined as a management function in FMT.

+Chapter 10. Glossary

+The terms, definitions and abbreviations given [CC1] apply to this document. Additional terms, definitions and abbreviations applicable only within the DBMS cPP context are given below:

+10.1. Terms and Definitions

Term	Meaning
-Access	Interaction between an entity and an object that results in the flow or modification of data.
-Access Control	Security service that controls the use of resources ² and the disclosure and modification of data. ³
-Accountability	Property that allows activities in an IT system to be traced to the entity responsible for the activity.
-Administrator	A user who has been specifically granted the authority to manage some portion or the entire TOE and whose actions

- may affect the DAC. Administrators may possess special
- privileges that provide capabilities to override portions of the
- access control policy.
- +Access Interaction between an entity and an object that
- +results in the flow or modification of data.
- +Access Control Security service that controls the use of
- +resources and the disclosure and modification of
- +data.
- +Accountability Property that allows activities in an IT system to
- +be traced to the entity responsible for the
- +activity.
- +Administrator A user who has been specifically granted the
- +authority to manage some portion or the entire
- +TOE and whose actions may affect the DAC.
- +Administrators may possess special privileges
- +that provide capabilities to override portions of
- +the access control policy.
- Application An executable program.
- Assurance A measure of confidence that the security features of an IT
- system are sufficient to enforce its security policy.
- Attack An intentional act attempting to violate the security policy of an
- IT system.
- +Assurance A measure of confidence that the security
- +features of an IT system are sufficient to enforce
- +its security policy.
- +Attack An intentional act attempting to violate the
- +security policy of an IT system.
- Authentication Security measure that verifies a claimed identity.
- Authorization Permission, granted by an entity authorized to do so, to
- perform functions and access data.
- Authorized Administrator The authorized person in contact with the Target of Evaluation
- who is responsible for maintaining its operational capability.
- Authorized User An authenticated user who may, in accordance with the
- access control policy, perform an operation.
- Availability Timely, reliable access to IT resources.
- +Authorization Permission, granted by an entity authorized to
- +do so, to perform functions and access data.
- +Authorized Administrator The authorized person in contact with the Target
- +of Evaluation who is responsible for
- +maintaining its operational capability.
- +Authorized User An authenticated user who may, in accordance
- +with the access control policy, perform an
- +operation.
- +Availability Timely, reliable access to IT resources.
- Compromise Violation of a security policy.
- Confidentiality A security policy pertaining to the disclosure of data.
- Database Management System A suite of programs that typically manage large structured
- sets

- (DBMS) of persistent data, offering ad hoc query facilities to many users. They are widely used in business applications.
- Discretionary Access Control A means of restricting access to objects based on the identity
- 2 Hardware and software
- 3 Stored or communicated
- 4 According to a defined metric
- + Confidentiality A security policy pertaining to the disclosure of data.

Term Meaning

- (DAC) of subjects and/or groups to which they belong. Those controls are discretionary in the sense that a subject with certain access permission is capable of passing that permission (perhaps indirectly) on to any other subject.
- Entity A subject, object, user or another IT device, which interacts with TOE objects, data, or resources.
- External IT entity Any trusted Information Technology (IT) product or system, outside of the TOE, which may, in accordance with the access control policy, perform an operation.
- Group A group is a defined set. It is often used to describe a defined set of users.
- Identity A representation (e.g., a string) uniquely identifying an authorized user, which can either be the full or abbreviated name of that user or a pseudonym.
- Integrity A security policy pertaining to the corruption of data and TSF mechanisms.
- Named Object An object that exhibits all of the following characteristics:
 - □ The object may be used to transfer information between subjects of differing user and/or group identities within the TSF.
 - □ Subjects in the TOE must be able to require a specific instance of the object.
 - □ The name used to refer to a specific instance of the object must exist in a context that potentially allows subjects with different user and/or group identities to
- + Database Management System (DBMS) A suite of programs that typically manage large structured sets of persistent data, offering ad hoc query facilities to many users. They are widely used in business applications.
- + Discretionary Access Control (DAC) A means of restricting access to objects based on the identity of subjects and/or groups to which they belong. Those controls are discretionary in the sense that a subject with certain access permission is capable of passing that permission (perhaps indirectly) on to any other subject.
- + Entity A subject, object, user or another IT device, which interacts with TOE objects, data, or resources.

+External IT entity Any trusted Information Technology (IT) product or system, outside of the TOE, which may, in accordance with the access control policy, perform an operation.

+Group A group is a defined set. It is often used to describe a defined set of users.

+Identity A representation (e.g., a string) uniquely identifying an authorized user, which can either be the full or abbreviated name of that user or a pseudonym.

+Integrity A security policy pertaining to the corruption of data and TSF mechanisms.

+Named Object An object that exhibits all of the following characteristics: The object may be used to transfer information between subjects of differing user and/or group identities within the TSF. Subjects in the TOE must be able to require a specific instance of the object. The name used to refer to a specific instance of the object must exist in a context that potentially allows subjects with different user and/or group identities to require the same instance of the object.

-Object An entity that contains or receives information and upon which subjects perform operations.

-Platform The environment in which application software runs. The platform can be an operating system, an execution environment which runs atop an operating system, or some combination of these.

-Public Object An object for which the TSF unconditionally permits all entities "read" access. Only the TSF or authorized administrators may create, delete, or modify the public objects.

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Subject An entity that causes operation to be performed.

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- +Unauthorized user A user who may obtain access only to system
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- +User Any entity (human user or external IT entity)
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- Acronyms used in this cPP
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- Acronym Meaning
- ACL Access Control List
- CC Common Criteria
- COTS Commercial Off The Shelf
- DAC Discretionary Access Control
- DBMS Database Management System
- DBMS Database Management System collaborative Protection Profile
- cPP
- +DBMS cPP Database Management System collaborative
- +Protection Profile
- I&A Identification and Authentication
- IT Information Technology
- ITSEF IT Security Evaluation Facility
- @@ -2039,6 +1822,7 @@
- SAR Security Assurance Requirement
- SFP Security Functional Policy
- SFR Security Functional Requirement
- +Acronym Meaning
- SPD Security Problem Definition
- ST Security Target
- TOE Target of Evaluation