CCOW User Authentication Protection Package (CCOWAUTH)

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Editor:

David Staggs
Veterans Health Administration (SAIC)

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Record of Changes

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02/27/2007	0.4	Incorporated revisions by CCOW TC	David Staggs
02/27/2007	0.5	Quality Assurance Review/Revision	Craig Winter
04/24/2007	0.6	Incorporated revisions by Ed Coyne	David Staggs
09/18/2007	0.7	Incorporated comments from CCOW TC review	David Staggs
11/13/2007	1.0	Edits in preparation for balloting	David Staggs
1/16/2008	1.1	Edits to reconcile comments from CCOW Ballot	David Staggs

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Preface

This document is intended for use with a Protection Profile conforming to the Common Criteria for Information Technology Security Evaluation (CCMB-2005-07-001), aligned with ISO/IEC 15408:2005 (October, 2005) at Evaluation Assurance Level 3. It was produced to address a need to improve the clinical sign-on process to provide both efficiency and security. It contains functionality specific to programs that are used for authenticating computer system users and which also implement the CCOW standard for context sharing, as promulgated by the Health Level 7 international standards development organization. More specifically, this protection package describes CCOW-specific functional security requirements required for user authentication by a CCOW-compliant application. A related protection package entitled "CCOW Application Protection Package" (CCOWAPP) describes CCOW-specific functional security requirements required of a CCOW-compliant application without reference to user authentication. The two protection package can be combined in a Protection Profile to describe the comprehensive CCOW-specific functional security requirements required of an application designated as a user authenticating CCOW-compliant application.

Foreword

This document, *CCOW User Authentication Protection Package*, is issued by the Health Level Seven (HL7) standards development organization. This Protection Package is based on the *HL7 Context Management ("CCOW") Standard: Technology- and Subject-Independent Component Architecture* Version 1.5, dated May 2004 (further referred to as *CCOWSpec*) and *HL7 Context Management "CCOW" Standard: Subject Data Definitions*, Version 1.4, January 2002 (further referred to as *CCOWData*).

This Protection Package is in conformance with the requirements of the Common Criteria for Information Technology Security Evaluation (CC v3.0). A Protection Package is defined as:

> A package is a named set of security requirements. A package can be a functional package and contain only Security Functional Requirements (SFRs). A package can be an assurance package and contain only Security Assurance Requirements (SARs). Mixed packages containing both SFRs and SARs are not allowed. A package can be defined by any party and is intended to be reusable. To this goal it should contain requirements that are useful and effective in combination. [...] Packages are used in the construction of larger packages, [Protection Profiles] PPs and [Security Targets] STs (*CC v3.0 §8.2*).

The functionality presented in this Protection Package may also be referenced from a Protection Profile as assignable criteria. The concept of assignable criteria and test steps was introduced by the CCHIT in 2006:

> Assignable Criteria and corresponding Assignable Test Steps represent functions that may, at the vendor's option, be fulfilled by components external to the vendor's EHR product, such as third-party software, operating systems, hardware, or a network. For items externally Assigned by the vendor, compliance can be demonstrated by supplying suitable documentation and self-attestation. (*Certification Handbook; Ambulatory EHR Products 2006, Ver.1.2, May 1, 2006*)

Alternatively, authors may use this document as a guide for adding CCOW-specific security functional requirements directly to their Protection Profile. Further information, including the status and updates of the Common Criteria, can be found on the Internet at http://www.niap-ccevs.org/cc-scheme/.

Acknowledgements

This Protection Package is based on the joint efforts of the HL7 CCOW Technical Committee and the HL7 Security Technical Committee. Special appreciation is owed to Dr. Ed Coyne for his contributions to the initial draft of this document.

1 Introduction

This document collects functionality that can be referenced or delegated from a parent Protection Profile that describes a target of evaluation (TOE) implementing the CCOW standard. This section contains document management and overview information similar to that necessary to allow a Protection Profile to be registered through a Protection Profile Registry. The identification below provides the labeling and descriptive information necessary to identify, catalogue, register, and cross-reference this document. The overview summarizes this document in narrative form and provides sufficient information for a potential user to determine whether this document is of interest. The overview can also be used as a stand-alone abstract for catalogues and registers.

1.1 Identification

Title:	CCOW User Authentication Protection Package (CCOWAUTH)
Registration:	Health Level 7
Keywords:	Clinical Context Object Workgroup, CCOW, health information protection, context management

1.2 Overview

This Common Criteria (CC) CCOW User Authentication Protection Package, hereafter called CCOWAUTH, specifies a set of security functional requirements for access to health information in a clinical environment from a clinical application. This effort was provided to allow an application Protection Profile to more easily include CCOW functionality by referencing portions of this Protection Package. In the envisioned system, the CCOWAPP conformant Application Target of Evaluation (TOE) will interact with a CCOW context manager that supports the maintenance of patient context and user context across applications.

The Target of Evaluation (TOE) consists of an application, as illustrated in the shaded region in Figure 1. The TOE is capable of interacting with a CCOW context manager and an optional authentication repository. The context manager permits application users to automatically select data for a particular patient on multiple applications. The authentication repository enables applications to securely store and retrieve application-specific user authentication data (CCOWSpec § 14.6.2). As envisioned, this protection package only addresses security issues specific to user authentication within a CCOW application (i.e. User Link; cf. CCOWSpec §14). This protection package must be combined with the CCOW Application Protection Package (CCOWAPP) for complete coverage of CCOW-specific application security requirements.

The security functional requirements in this document provides for a level of protection that is appropriate for an assumed non-hostile and well managed user community requiring protection against threats of inadvertent or casual attempts to breach the system security. Reference to this