



**PERT  
CARRIER'S  
GUIDE TO THE TECHNICAL TOOLKIT**

## Version History

<b>Date</b>	<b>Document Version</b>	<b>Document Revision Description</b>
4/18/09	1.0	Initial Draft

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## 1. INTRODUCTION

The Carrier Technical Toolkit is intended to provide technical specifications to Carriers and Associations who are developing a solution to receive the Deduction Register in eXtensible Markup Language (XML) using File Transfer Protocol (FTP).

### 1.1. Objectives

The objectives of this Technical Toolkit are:

- Identify the elements included in the toolkit
- Explain the purpose of the elements included in the toolkit
- Define the relationships between the elements of the toolkit
- Provide developers with the specifications for the data elements and file formats
- Offer references to Uniform Resource Locators (URLs) for Microsoft and other sites where XML, XSD and related information can be found

### 1.2. Document Scope

The Technical Toolkit covers the following scope:

- Instructions on how to download and extract the contents of the Technical Toolkit
- Documentation on the data elements included in the Deduction Register file (from CalPERS)
- Schema definitions (XSD) for the Deduction Register, SOAP envelope and Common Utilities
- Sample XML files for the Deduction Register file
- Information on Technical Support

### 1.3. Glossary

**Data Element Descriptions**– A table identifying the list of data elements included in the Deduction Register. The Data Element Description provides the name of the data element and whether it is required, conditional or optional to be included in the file. It also contains the level of the hierarchy within the file where the data element fits, the type of data and any valid values or particular format that needs to be used when reporting the data. **IMPORTANT:** The Data Element Definition documents DO NOT describe the file structure. Please refer to the appropriate XSDs (XML Schema Definition), contained in the Technical Toolkit, for file structure specifications.

**Encryption**- Cryptographic transformation of data (called "plaintext") into a form (called "ciphertext") that conceals the data's original meaning to prevent it from being known or used. If the transformation is reversible, the corresponding reversal process is called "decryption", which is a transformation that restores encrypted data to its original state.

**Extensible Markup Language (XML)**- XML is a simple, very flexible, text format derived from SGML (ISO 8879). Originally designed to meet the challenges of large-scale electronic publishing, XML is also playing an increasingly important role in the exchange of a wide variety of data on the Web and elsewhere.

**File Transfer Protocol (FTP)** - A TCP/IP protocol specifying the transfer of text or binary files across the network.

**Public Key** – The publicly-disclosed component of a pair of cryptographic keys used for asymmetric cryptography

**Sample XML** – An example of XML for a particular file demonstrating the XML content and format of the file.

**Secure File Transfer Protocol (SFTP)** – A communications protocol used to transfer files without compromise of data. Secure FTP provides extra security by encrypting the files before transmission. It encrypts both the commands and the data, preventing passwords and sensitive information from being transmitted in clear text over the network.

**Simple Object Access Protocol (SOAP)**- The formal set of conventions governing the format and processing rules of a SOAP message. These conventions include the interactions among SOAP nodes generating and accepting SOAP messages for the purpose of exchanging information along a SOAP message path.

**Web Service**- A software system designed to support interoperable machine-to-machine interaction over a network.

**XML Schema** - A schema is a way to describe and validate data in an XML environment. A schema is a model for describing the structure of information. XML Schema (XSD) is a recommendation of the W3C.

## 2. INSTRUCTIONS FOR DOWNLOAD

The [Technical Toolkit for Health and Dental Business Partners](#) is available in the Business Partner area of CalPERS On-Line.

The Technical Toolkit consists of several documents necessary for consuming the Deduction Register file in XML format. For ease of downloading and to preserve the format of the schema files during download, the contents of the Technical Toolkit are contained in a Zip file.

Instructions for downloading the Zip file are on the page where the Zip file resides. The WinZip program is required to extract the contents from the file. WinZip is a file compression utility that allows several files to be compressed and contained within a single file. WinZip can be obtained online at [WinZip's Web Page](#).

Once the documents have been downloaded and extracted, the technical team responsible for developing the solution to read the Deduction Register in XML, will use them to define, build, and validate the solution.

### 3. TOOLKIT CONTENTS

The following table outlines the content of the Technical Toolkit.

<b>Technical Toolkit Contents for Carrier's</b>	
<b>File Name</b>	<b>Notes</b>
<b>Data Element Definitions and Schema Docs</b>	
DeductionRegister.pdf	
<b>Sample XML</b>	
Sample Deduction Register Report	
<b>XML Schemas</b>	
DeductionRegisterForVendorsV1.xsd	
CommonUtilitiesV1.xsd	
SoapEnvelope.xsd	
<b>Utilities</b>	
XML Validator Tool	
<b>Documentation</b>	
XML Validator Tool Setup and Usage	
Encryption Decryption File Naming.pdf	
Carrier README - Technical Toolkit.txt	

**Table 3.0**

### 3.1. Deduction Register File Data Element Descriptions

The Data Element Description artifacts are documents that define the data element field names, descriptions, type, R/O/C (Required/Optional/Conditional) and length. Each element in the file is numbered for reference and elements that are logically related are grouped together, under a group heading. These documents do not represent the order or relationship of data elements within the XML file.

The Deduction Register is available via FTP in XML format. It may also be accessed online and saved on your desktop as a comma separated values (.csv) file.

Each Data Element Description artifact begins with an introduction. The introduction describes the purpose of the document, provides definitions of the data contained within, and also includes websites where further information can be found on XML, SOAP and related technologies.

The Data Element column provides the formal name of the element. The Description column defines the element, provides an explanation of its use and notes under what conditions the data element is required where appropriate.

The column R/C/O indicates if the element is Required, Conditional or Optional. The data type, field values and max length provide the format rules for the element.

The Data Type column indicates the type of data that is permitted in the data element.

The Field Values column lists the valid field values or format allowed in the data element.

The Length column lists the maximum number of characters that the data element can contain.

### 3.2. Deduction Register File Schemas (XSD)

The Deduction Register has a schema that defines the structure of the file. The data elements in the file will be in the order they are presented in the schema. You will use this schema in conjunction with the Data Element Definition document to understand the structure and business purpose for the elements in the file.

Note: This document and toolkit is specific to the Carrier perspective on the Deduction Register. Carriers and Associations that have Direct Authorization Agreements with CalPERS, will receive Deduction Registers containing both PEMHCA and Direct Authorization deduction information.

The same schema file is used for both the Direct Authorization Deduction Register and the PEMHCA Deduction Register. There are differences in how the data elements are used. For example, the PEMHCA deductions will use the Social Security number to identify the participant that the deduction is for. The Direct Authorization deductions will use the CalPERS ID to identify the participant for the deduction. There may be different valid code values depending on the nature of the transaction.

Please refer to the [DAV Technical Toolkit](#) for a complete set of technical documentation on the Direct Authorization processes in my|CalPERS.

### **3.3. Common Utilities Schema**

The Common Utilities Schema is common across all files transmitted inbound and outbound using FTP. This schema file defines all the common types that are found across all the XML files and their respective schemas. This schema defines the rules that indicate what kind of data can be contained in a common data element, the data model relationship of the common data elements, and the format in which the data needs to comply.

### **3.4. SOAP Envelope Schema**

The SOAP Envelope schema is common across all files transmitted inbound and outbound using FTP or File Upload. This Schema file describes the attributes of the XML files.

### **3.5. XML Validator Tool Setup and Usage**

This guide is to be used as an aid to installing and using the XML Validator Tool. Please be sure to read this document carefully before attempting to install or run this tool.

### **3.6. Encryption/Decryption File Naming**

This document describes the file encryption strategy and file naming conventions for transmitting files via FTP.

#### **3.6.1 FTP**

The files transmitted from my|CalPERS contain sensitive information and when using FTP, these files must be encrypted. The encrypted file is retrieved using sFTP. An overview of the FTP process is shown in [Appendix A](#).

You will need to log in to CalPERS external facing server using your username and password in order to access specific folders for retrieving files transmitted to you from my|CalPERS.

CalPERS will encrypt the Deduction Register file with the business partner's public key. Once testing of the file transmission process begins, CalPERS will assign technical resources to validate the test files submitted and provide guidance to Carriers and Associations for troubleshooting.

### **3.7. ReadMe**

This is a simple overview of how to use the toolkit and the most pertinent documents contained in the toolkit.

## **4. TECHNICAL SUPPORT**

CalPERS will provide test environments so that Carriers and Associations can validate their ability to read the Deduction Register file structure and update their internal systems.

During the testing process, CalPERS will have technical support available to assist with testing issues and facilitating the test process. More information on the testing schedule and how to get support during testing will become available before the test phase begins.

There are many resources available online to help developers with understanding XML and XML development tools, schemas, and related topics. A list of Web pages developers may find useful is available in the document Additional Resources on the Deduction Register Toolkit for Health and Dental Business Partners page in the Business Partner area of CalPERS On-Line.

## APPENDIX A: FTP DEDUCTION REGISTER OVERVIEW

