
Audit data collection

Collecte des données d'audit

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Published in Switzerland

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html.

This document was prepared by Project Committee ISO/PC 295, *Audit data collection*.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

Accounting and Enterprise Resource Planning (ERP) software packages are widely used in businesses and by various government organizations to manage and track business processes, post transactions and produce financial reports. Because of the nature of the information contained within the ERP systems, the data are also leveraged by internal and external auditors to assess the business controls, processes and financial reporting. There are numerous ERP packages that are used by businesses and government organizations, which can vary greatly in design (e.g. interfaces, data content, data formats, operational reports, management reports, financial reports). These and other design differences present challenges in the collection of data for auditing supervision management purposes.

This document aims to resolve the common problems that auditors face when requesting data to perform their audit procedures. The information contained within this document will help to improve the accessibility and transparency of audit data, standardize the process of collecting audit data, avoid duplicate efforts and save resources. The worldwide standardization of audit data content and formats will enhance the effectiveness and efficiency of government, internal and external audits, and provide benefits to related stakeholders.

This document focuses on major business modules of accounting and ERP systems that are typically used in various organizations. These modules relate to major business processes, including the areas of purchase, sales, inventory, fixed assets and financial reporting, with the aim to identify and specify the data elements and file formats needed for auditing.

This document facilitates the use of analytics and enables regulatory bodies to better fulfil their supervision responsibilities, external auditors to better perform their tasks of assurance, and internal auditors to assist management in making more informed decisions.

The clauses in this document, including the Base (see 4.4), General Ledger (see 4.5), Accounts Receivable (see 4.6), Sales (see 4.7), Accounts Payable (see 4.8), Purchase (see 4.9), Inventory (see 4.10) and Property, Plant and Equipment (see 4.11) modules:

- provide guidelines and specifications for obtaining accounting data;
- define the content requirements of accounting data elements (e.g. fields and tables grouped into modules);
- define the format requirements of data elements;
- specify data interface output files;
- provide thoughts for customizing the standard to meet the needs of the business structure and process variances that can occur in some organizations.

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Audit data collection

1 Scope

This document establishes common definitions of accounting data elements and provides the information necessary to extract relevant audit data.

NOTE For the purpose of this document, "audit" refers to an examination of an entity's financial and financial related records in order to check that they are fairly presented.

This document is applicable to the bridging of understanding among auditors, auditees, software developers and IT professionals, and creating a mechanism for expressing the information, common to accounting, in a manner independent of accounting and ERP systems. This document serves as a foundation for local data extraction efforts in the areas of general ledger, accounts receivable, sales, accounts payable, purchase, inventory, and property, plant and equipment.

2 Normative references

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

ISO 3166-1, *Codes for the representation of names of countries and their subdivisions — Part 1: Country codes*

ISO 3166-2, *Codes for the representation of names of countries and their subdivisions — Part 2: Country subdivision code*

ISO 4217, *Codes for the representation of currencies*

ISO 8601-1, *Date and time — Representations for information interchange — Part 1: Basic rules*

ISO 9362, *Banking — Banking telecommunication messages — Business identifier code (BIC)*

ISO/IEC 14957:2010, *Information technology — Representation of data element values — Notation of the format*

ISO 17442, *Financial services — Legal entity identifier (LEI)*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at <https://www.iso.org/obp>

— IEC Electropedia: available at <http://www.electropedia.org/>

3.1

data

set of values of qualitative or quantitative variables

3.2

accounting data

transactions from ledgers and journals that support the financial statements

**3.3
data element**

basic unit of identifiable and definable *data* (3.1)

[SOURCE: ISO 2146:2010, 3.4, modified — The admitted term "element" has been deleted.]

**3.4
data file**

collection of *data* (3.1) records having a homogeneous structure

[SOURCE: ISO 14825:2011, 3.1.2, modified — The word "related" and the note to entry have been deleted.]

**3.5
data interface**

set of rules that related two independent systems in a way that allows cross-system interactions

**3.6
data profiling**

activities that are performed to understand the *data structures* (3.8) and system rules that affect the extraction of audit *data* (3.1)

**3.7
data questionnaire**

supplemental information related to the system or auditee

**3.8
data structure**

framework comprising a number of *data elements* (3.3) in a prescribed form

[SOURCE: ISO 21007-1:2005, 2.16, modified — "element" has been deleted from the term.]

**3.9
primary key**

minimum set of attributes that uniquely specify a record in a table

**3.10
reference identifier
foreign key**

<in a relation> one or a group of attributes that corresponds to a *primary key* (3.9) in another relation

[SOURCE: ISO/IEC 20944-1:2013, 3.14.4.15, modified — The preferred term "reference identifier" has been added.]

**3.11
functional currency**

medium of exchange of value, defined by reference to the geographical location of the monetary authorities responsible for it, of the primary economic environment in which the entity operates

[SOURCE: ISO 4217:2015, 3.2, modified — "functional" has been added in the term and "of the primary economic environment in which the entity operates" has been added at the end of the definition.]

**3.12
local currency**

medium of exchange of value, defined by reference to the geographical location of the monetary authorities responsible for it, of the local economic environment in which a distinct and separable business unit is physically located, but not necessarily the economic environment where it operates

[SOURCE: ISO 4217:2015, 3.2, modified — "local" has been added to the term and the text after the second comma has been added to the end of the definition.]

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3.13**reporting currency**

medium of exchange of value, defined by reference to the geographical location of the monetary authorities responsible for it, in which financial statements are presented

[SOURCE: ISO 4217:2015, 3.2, modified — "reporting" has been added to the term and the text after the second comma has been added to the end of the definition.]

3.14**transaction currency**

medium of exchange of value, defined by reference to the geographical location of the monetary authorities responsible for it, for exchange or transfer of goods, services or funds

[SOURCE: ISO 4217:2015, 3.2, modified — "transaction" has been added to the term and the text after the second comma has been added to the end of the definition.]

3.15**process flow**

depiction of the steps in an accounting workflow, including the related *data* (3.1) and activities

3.16**syntax**

set of rules, principles and processes that govern the *data structure* (3.8)

4 Modules, tables and fields**4.1 General**

The Audit Data Collection Standard (ADCS) covers the main business modules of accounting and ERP systems and the main business processes in the enterprise production supply chain. The ADCS has eight modules: Base (BAS), General Ledger (GL), Accounts Receivable (AR), Sales (SAL), Purchase (PUR), Accounts Payable (AP), Inventory (INV) and Property, Plant and Equipment (PPE). According to the information system condition, the ADCS supports collecting information from either partial modules or all of them.

The modules within this document and select business events that demonstrate interaction points between the modules are shown in [Figure 1](#). Note that the connectors for the interactions are high level representations and are not meant to depict all related attributes. Data transmission is defined as a process in which the data of business modules could be transformed into general ledger.

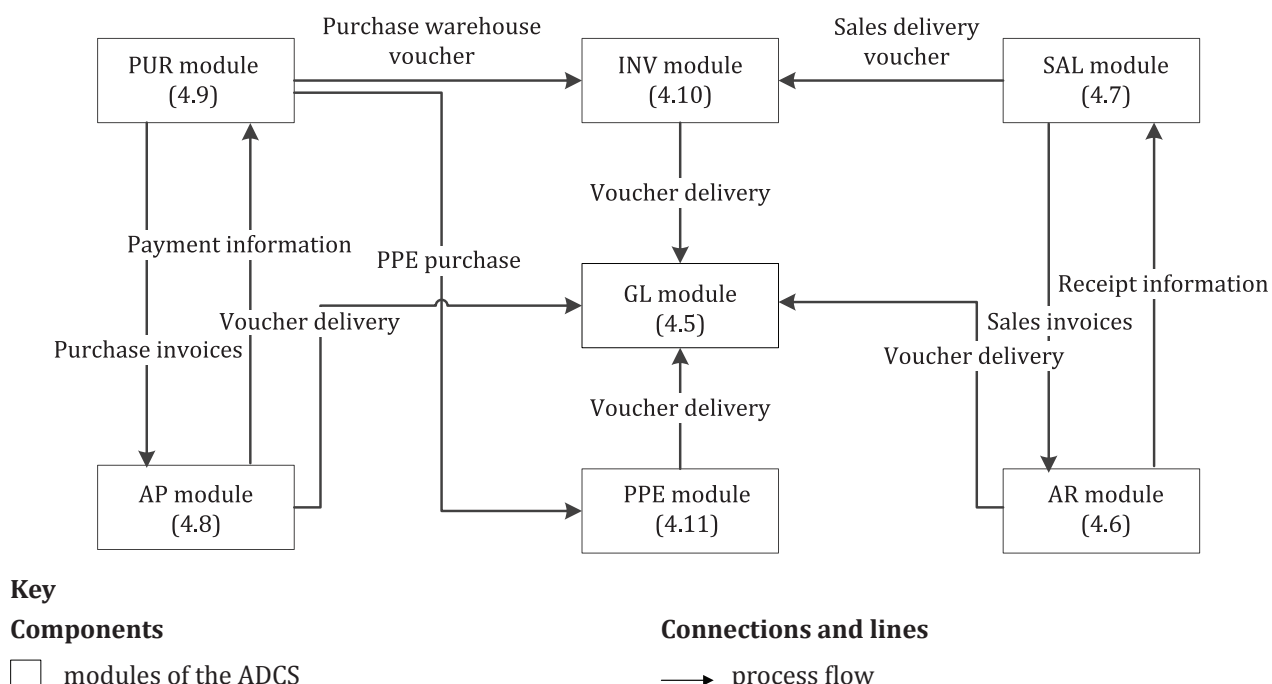


Figure 1 — Business modules in the ADCS

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There is a total of 71 tables specifying data elements with structures in the ADCS: 52 tables are level 1 and 19 tables are level 2. The designation difference is based on the use of the information by auditors. Level 1 tables are defined as tables containing information the auditor should leverage when auditing. However, depending on the system, this information may not be available. The level 2 table designation indicates that these tables contain information that the auditor can leverage if the scope of the audit requires this type of data.

Within each table, fields are also labelled as level 1 or level 2. Similarly to the table designations, level 1 fields are defined as fields containing information the auditor should leverage when auditing and where the data are available within the system. The level 2 field designation indicates that these fields contain information that the auditor can leverage if the scope of the audit requires this type of data.

There are situations where level 2 tables contain level 1 fields. This scenario indicates that this type of information may not be needed in some audit situations. However, if the data in the table are deemed to be required by the auditor, the level 1 fields within the level 2 table should be included as they are key fields for the use of the information. Additional information for dealing with fields not available is presented in 5.5.

A questionnaire, located at the end of each module, includes supplemental questions about the data that are essential for an understanding of the use of the data. The answers to the questionnaire are commonly provided by accounting or finance personnel, with input from IT personnel.

4.2 Naming conventions

The naming conventions aim to help readers to have a clear understanding of each table and data element. They also conform to the requirements of major accounting and ERP systems and databases. The following generic conventions are applied to all names for tables and data elements.

- a) The length of the table and data element name shall be no more than 30 characters.
- b) The abbreviation will be used if the length of a table name or element name is longer than 30 characters. International commonly used abbreviations are allowed, such as ERP.

- c) Underline is used to separate words in a table name and data element name. Each table name and data element name shall contain only alpha-numeric characters and the underline characters.
- d) The first letter of each word in the table name and data element name shall be in upper case. Any abbreviated term shall be in upper case.

The abbreviated terms used in the ADCS are listed in [Table 1](#).

Table 1 — Abbreviated terms

Abbreviation	Full name
ACC	Account
ADCS	Audit Data Collection Standard
ADJ	Adjustment
AP	Accounts Payable
AR	Accounts Receivable
ASCII	American Standard Code for Information Interchange
BAS	Base
BEG	Beginning
BIC	Business Identifier Code
CFO	Chief Financial Officer
CNY	Chinese Yuan
CRLF	Carriage-Return Line-Feed
CSV	Comma Separated Values
CUR	Currency
CUS	Customer
ERM	Enterprise Resource Management
ERP	Enterprise Resource Planning
EUR	Euro
FIFO	First In, First Out
FOB	Free On Board
FS	Financial Statement
GB	Gigabyte
GL	General Ledger
IBAN	International Bank Account Number
ICBC	Industrial and Commercial Bank of China
ID	Identification
INV	Inventory
IT	Information Technology
JE	Journal Entry
LEI	Legal Entity Identifier
LIFO	Last In, First Out
MS-DOS	Microsoft Disk Operating System
NTFS	New Technology File System
NUM	Number
NY	New York State
ORG	Organization
OS	Operating System
PK	Primary Key

Table 1 (continued)

Abbreviation	Full name
PO	Purchase Order
PPE	Property, Plant and Equipment
PRV	Province
PUR	Purchase
REF	Reference Identifier
RFC	Request For Comments
SAL	Sales
SAP	Systems Applications and Products in data processing
SQL	Structured Query Language
TB	Terabytes
TIN	Tax Identification Number
TRX	Transactional
UOM	Unit of Measurement
US	United States of America
USD	U.S. Dollars
UTC	Coordinated Universal Time
UTF-8	8-bit Unicode Transformation Format
WIP	Work In Progress

Special naming conventions for table names include:

- each table name contains no more than three underlines;
- each table name is presented as “module (each table belongs) abbreviation + underline + table description”.

Special naming conventions for data elements include:

- each element name contains no more than four underlines;
- words in element name shall appear in normal word order (e.g. modifiers before nouns);
- the last word of element name is the keyword;
- if there is a number in the element name, the number shall be combined with the previous word without underlining. The number shall be expressed as an integer, such as the data element Tax1_Type_Code.

4.3 Representation and datatype of data elements

The representation of a data element defines its length and precision. The representation shall be designed in accordance with ISO/IEC 14957, ISO 4217 and ISO 8601-1. Datatype constrains the value that a data element might take. The ADCS supports the common datatypes of Date, String, Decimal, etc., to facilitate outputting data from a database and importing data into a database.

Each representation is introduced by the character %. The details are listed in [Table 2](#).

Table 2 — Representation specifications and samples

Representation	Description
%ns	%ns describes a sequence of characters, of which the maximum length is n . Left justified; no leading or trailing blank spaces. EXAMPLE %6s describes "123", "123abc", but not "abcdefg".
%nc	%nc describes a sequence of characters, of which the length is exactly n . Left justified; no leading or trailing blank spaces; the string length shall be n . a) %1c represents an indicator type. b) %3c represents currency. EXAMPLE USD = US dollars, CNY = Chinese yuan. c) %6c represents time zone as " \pm hh:mm". EXAMPLE Newfoundland's time zone = -03:30, Beijing's time zone = +08:00. d) %8c represents time in 24-hour time (hh:mm:ss). EXAMPLE 1:00 PM = 13:00:00. e) %10c represents calendar date as YYYY-MM-DD. EXAMPLE March 8, 2017 = 2017-03-08.
%m.nf	%m.nf describes an optionally signed floating-point number, of which the maximum length of decimal is n , and the maximum length of integer is $(m-n-1)$. Left justified; no leading or trailing blank spaces. Decimal symbols shall be included and displayed with a dot ("."). Decimals shall be used for non-integers. Negative numbers shall be indicated with a minus sign (-) immediately preceding the number. Percentages shall be represented as decimals, where 100 % = 1.00 and 10 % = 0.10.
%nd	%nd describes an optionally signed decimal integer, of which the maximum length is n . Left justified; no leading or trailing blank spaces. Negative numbers shall be indicated with a minus sign (-) immediately preceding the number.

Datatypes included in this document are listed in and shall conform to [Table 3](#). The specific requirements for these elements are not listed in the subsequent tables.

Table 3 — The datatypes and corresponding representations

Datatype	Representation	ISO standard adoption
Date	%10c	Represent date in YYYY-MM-DD format (in accordance with ISO 8601-1). EXAMPLE %10c describes "2010-05-01", but not "2010-5-01".
Time	%8c	Represent time in 24-hour time in hh:mm:ss format (in accordance with ISO 8601-1). EXAMPLE 1:00 PM = 13:00:00.
String	%ns	Represent a sequence of characters, of which the maximum length is n (in accordance with ISO/IEC 14957:2010). EXAMPLE %6s describes "123", "123abc", but not "123abcd".
Decimal	%m.nf	Represent an optionally signed floating-point number, of which the maximum length of decimal is n , and the maximum length of integer is $(m-n-1)$ (in accordance with ISO/IEC 14957:2010). EXAMPLE %11.6f describes "4.527125", "8692.52", but not "4.5271258" or "86926.52".
Integer	%nd	Represent an optionally signed decimal integer, of which the maximum length is n (in accordance with ISO/IEC 14957:2010). EXAMPLE %4d describes "32", "3482", but not "34875".