



National Standard of Canada Standards Proposal

Proposed Standard Title:

Data Governance – Part 7: Zero Copy Integration

Proposed Scope:

This proposed standard aims to specify implementation methods for zero copy integration, sharing and exchange of data.

This Standard applies to all sectors, including public and private companies, government entities, and not-for-profit organizations.

Strategic Need:

Identify the strategic need of key stakeholders and confirmation expressing the need.

This includes consideration for:

- a. The strategic need of key stakeholder (e.g. legislator, industry, government, consumers);*
- b. The type of standard (international, regional, domestic standards and harmonization need);*
- c. Addressing up-to-date vs outdated standard to ensure latest innovative/technology/safety features available for businesses;*
- d. If the standard is intended to support national/regional/international certification programs;*
- e. If there is stakeholder intention to transition to different standard;*
- f. The type of maintenance (periodic, continuous, stabilized, best before date); and*
- g. The use of “CAN” descriptor.*

Applications are now interwoven into the modern business fabric. It is not uncommon for larger organizations to manage thousands of applications within their enterprise, and even smaller firms can rely on up to hundreds to manage their day-to-day operations.

These applications require data, and often require the exchange of this data to effectively operate and communicate with a myriad of other technologies. That integration requires the duplication of data, and this means that hundreds, even thousands of copies of datasets (including customer profile details and transaction data) now circulate within organizations.

The proliferation of applications and the increased fragmentation of data makes it difficult for organizations to have a clear picture of where their data is and how it is being used. This is of increasingly important concern as both domestic and global initiatives are seeking to develop new legal and regulatory frameworks for establishing data ownership rights for private citizens and businesses.

The sheer scale of the data fragmentation problem has inspired the development of a new generation of “Zero Copy” technologies (including Data Fabric platforms) that enable data to be managed and operationalized without creating additional data silos or further fragmenting data access controls.



By adopting “Zero Copy” methodologies, the datasets managed within the network can be meaningfully owned and protected by individuals (or their custodians) with highly-granular access and quality settings that replace the need to host such controls within applications .

Other data-centric technologies such as blockchain, which seeks to guarantee the integrity and traceability of transactions, are ground-breaking but not designed to separate the control of data from fragmented applications.

However, the combination of blockchain’s high-integrity transaction logs combined with the efficiency of Zero Copy Integration holds significant potential for the modern intelligent enterprise.

Already established within leading organizations, the “Zero Copy” Integration approach offers a workable alternative to the paradigm that holds “an app for everything, and a database for every app” which has been standard practice for over 40 years.

This proposed National Standard of Canada will:

- support future certification programs developed at national level;
- be maintained on a periodic basis as determined by the technical committee responsible for developing the standard; and
- use the CAN descriptor.

Need for Availability in Both of Canada’s Official Languages:

*Do stakeholders need the standard published in both official languages?
 Do users of the standard need the standard published in both official languages?
 Do authorities having jurisdiction need the standard published in both official languages?
 Are there health and safety related needs for the standard to be published in both official languages?
 For adoptions, is there availability of the regional/international standard or other deliverable from the source?
 For adoptions, is there an agreement with the source committee to facilitate official translation?*

Yes

Geographical Representation Considerations:

Identify the Canadian geographical representation appropriate to the subject area covered by the standard.

Geographic representation may consider factors such as:

- a. Industry (e.g. petroleum in petroleum producing provinces);*
- b. Reference in regulation (if a regulation exists in a province); or*
- c. Commodity characteristics and social impact (e.g. heating oil for northern climates).*

All sectors of the economy.

Trade:

Identify how the standard meets the needs of the marketplace and contributes to advancing trade in the broadest possible geographical and economic contexts.



For example:

- a. Facilitate Canadian innovation to lead internationally;*
- b. Support the objectives of “One standard, one test, accepted everywhere”;*
- c. Support the objectives of “First to Market”; or*
- d. Foster international/ regional/ national alignment of requirements.*

The proposed standard would represent a first to market for Canada and would be focused on empowering data owners with universal control and eliminating the overhead of integration (copies) with universal access.

By eliminating copies organizations will see the benefit of operational efficiencies and processes, while unifying their data environment and reducing their overall risk.

Relevant existing documents at the international, regional and national level:

- [Privacy Act \(R.S.C., 1985, c. P-21\)](#)
- [Personal Information Protection and Electronic Documents Act \(S.C. 2000, c.5\) - \(PIPEDA\)](#)
- California Consumer Privacy Act
- Regulation (EU) 2016/679 - (European Union General Data Protection Regulation)
- [UN Secretary-General’s Data Strategy](#)
- ISO 37156:2020, Smart community infrastructures — Guidelines on data exchange and sharing for smart community infrastructures