# Leveraging Data Virtualization to Protect Data Privacy

**SOLUTION**
PIPEDA & Law 25 Compliance

**INDUSTRY**
Applicable to all companies with customers in Canada and Quebec respectively

**WEBSITE**
www.denodo.com

**PRODUCT OVERVIEW**
The Denodo Platform offers the broadest access to structured and unstructured data residing in enterprise, big data, and cloud sources, in both batch and real-time, exceeding the performance needs of data-intensive organizations for both analytical and operational use cases, delivered in a much shorter timeframe than traditional data integration tools

## Ensuring Seamless Compliance with the Canadian Personal Information Protection and Electronic Document Act (PIPEDA) and the Québec's Law 25

Data privacy is a global concern, and like the European Union's General Data Protection Regulation (GDPR), the Personal Information Protection Act of 2000 (PIPEDA) is a Canadian law relating to data privacy.

PIPEDA governs how private sector organizations collect, use, and disclose personal information in the course of commercial business. The act was also intended to reassure the European Union that the Canadian privacy law was adequate to protect the personal information of European citizens and support the GDPR. Another similar regulation, Québec's law 25, an act to modernize legislative provisions regarding the protection of personal information, was adopted unanimously, on September 2021. Law 25 raises the bar by introducing new standards for individual privacy rights, establishing standards that are already gaining traction beyond the province's borders. While PIPEDA and law 25 have much in common with the GDPR, it is not simply the same set of laws applied to a different geographical region.

Law 25 grants specific rights to consumers, which companies will be required to honor:

- **Enhanced consent and transparency obligations**

  Law 25 refines existing transparency requirements and introduces new ones to support valid consent from individuals. Consent must be specific to each use of personal information and implied consent is only accepted where some conditions are met.

- **Mandatory Privacy Impact Assessments (PIA)**

  Québec law will now require PIAs with respect to: 1) any project of acquisition, development, and redesign of an information system project or electronic service delivery project involving personal information, 2) the transfer of personal information outside of Québec and 3) the communication of personal information without consent for study, research, or statistics.

- **Regulation for de-identified and anonymized information**

  Law 25 regulates the use of de-identified and anonymized information. In the bill, "de-identified information" means information that "no longer allows the person concerned to be directly identified," the operative term being "directly."

- **A new right to data portability**

  The United States has already legislated on the right to portability in certain areas, bringing to light the significant technological challenges and complexities of developing the interoperable infrastructure required to support it. Law 25 affords organizations a transition period of three years after the date of assent to develop and install the mechanisms necessary to transfer personal information "in a structured, commonly used technological format."

- **Introducing the "right to be forgotten"**

  Law 25 also borrows from the GDPR the notion of the "right to be forgotten." Using the model of the GDPR, individuals may require organizations to cease disseminating personal information or to "de-index" a hyperlink attached to their name, that provides access to information by technological means, provided that certain conditions are met.

- **Regulated automated decision-making**

  Taking its cue from the GDPR, law 25 introduces requirements related to the use of automated decision-making involving personal information. The terms refer particularly to decisions based exclusively on automated processes, which are understood to refer to decisions made without the intervention of a human being.

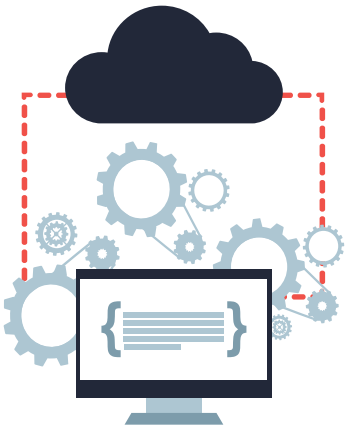
Many companies will find it challenging to comply with law 25 and PIPED, since data is often stored across myriad heterogeneous data sources, both on-premises and in the cloud. To satisfy consumer requests protected by law 25 and PIPEDA, companies will need to report on where specific records are stored, where they may have been transferred to, and who has the authority to view this data. In addition, they will need to track all transactions that involve the selling of personal information.

To prepare for law 25, companies will need a comprehensive view into all of the data related to individual consumers, and a way to establish security controls over the entire infrastructure from a single point. Of all the available data management technologies, data virtualization offers the capabilities best suited to enable companies to quickly and easily comply with law 25 without investing in new hardware or re-building existing systems from the ground up.

# Data Virtualization for Seamless Law 25 Compliance

## Fine-grained Security and Complete Auditability

Data virtualization provides companies with fine-grained control over sensitive customer information stored across multiple systems, by establishing a single, unified access layer across on-premises and off-premises systems. When data consumers need to access a source, they do so through the data virtualization layer, which contains the metadata for accessing each source, and returns a secure, virtualized view of the data to the consumer, in real time. These views are traceable and auditable and will only be delivered to authorized consumers. With the Denodo Platform under the hood, companies will be able to rapidly reply with consumer requests for tracing, reporting on, or deleting personal data.




## Eliminates Unnecessary Data Movement

With a data virtualization layer in place, no data needs to be replicated for reporting purposes, and no extract, transform, and load (ETL) scripts need to be rewritten. A data virtualization layer operates with a company's existing infrastructure, configured exactly as it is. It merely abstracts the access functions, so that users perceive the data as existing in a single virtual repository. For law 25 compliance, this means that companies can reduce the inherent risks involved with maintaining multiple copies of the same personal information.

## Complete Data Lineage and Agile Business Rules

At any point in time, companies can understand, and report on, the full lineage of any sensitive data set, including its original source, any views, and any modifications. In addition, through the data virtualization layer, companies can mask data on the fly, so it cannot be viewed by users who lack the requisite credentials. Again, such rules can be applied quickly and effectively across diverse systems, since they are being applied in the data virtualization layer.

## Secures Data-at-rest and Data-in-motion

The data virtualization layer can perform role-based authentication at any level, such as guest, employee, or corporate; apply data-specific permissions including row- and column-level masking; and define schema-wide permissions and policy-based security. The virtualization layer secures data in transit via SSL/TLS protocols and authenticates users via industry proven protocols such as LDAP, pass-through with Kerberos, Windows SSO, OAuth, SPNEGO authentication, and JDBC/ODBC Security.

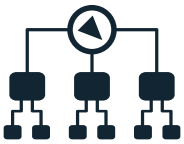
## Benefits

Access to the most up-to-date data through real time access to data sources.

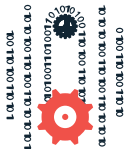
Results in fewer copies of personal data.

Data on-premises and off, combined through the same governed virtual layer.

Full auditing and monitoring capabilities, including logs of which users view which data.



Captures full data lineage, helping security stakeholders to understandthe original sources for all data, which is critical for law 25 compliance.



On-the-fly data masking capabilities, across the enterprise.

Consistent management of security controls, applied via a single access point.

## With a data virtualization layer powered by the Denodo Platform, companies can:

Apply a cost-benefit-based approach to data privacy and security.

Leverage data privacy and security to drive superior customer experiences.

Consistently manage privacy and security, applied via a single access point.

Easily instill data privacy and security into new initiatives that require information access.

## Case Study: How Data Virtualization Protects Data Privacy at Asurion

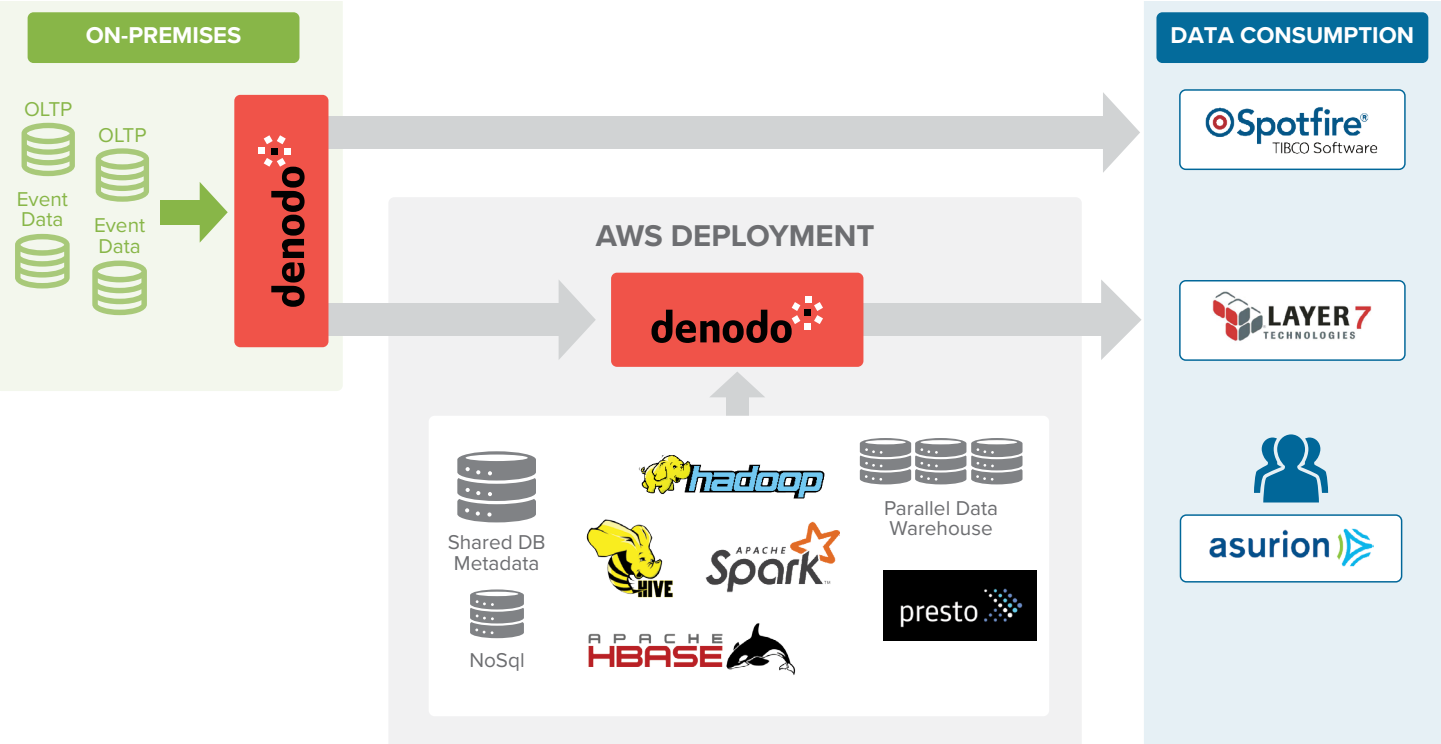
Asurion is the leading provider of global technology support and protection products.

### Challenge

Asurion wanted to modernize its infrastructure to include cloud-based analytics, but it faced strict restrictions on migrating personally identifiable information (PII) and needed to maintain compliance with a set of increasingly stringent governmental regulations. In addition, the company needed to centralize security management companywide, around a single point of control.

### Solution

Leveraging the Denodo Platform, Asurion set up a data virtualization layer that runs on an Amazon Web Services (AWS) instance in the cloud. By standardizing access to all data sources (including on-premises and cloud) through the data virtualization layer, Asurion is able to use the virtualization layer to implement security controls across all enterprise data holdings, greatly simplifying security management.




> *"The Denodo Platform was one of the easiest and most successful rollouts of critical enterprise software I have seen, and it was immediately successful in handling our initial security use case."*
>
> - Enterprise Architect, Asurion.

## Results

After implementing the data virtualization layer, Asurion was able to:

- Control security across the entire infrastructure from a single access point
- Easily meet regional data security requirements
- Perform complete audits of data access, as needed
- Quickly and easily add new, compliant data sources

denodo

Denodo Technologies is the leader in data virtualization providing agile, high performance data integration, data abstraction, and real-time data services across the broadest range of enterprise, cloud, big data, and unstructured data sources at half the cost of traditional approaches. Denodo's customers across every major industry have gained significant business agility and ROI.