The California Consumer Privacy Act (CCPA) was signed into law in June 2018, ushering in a new set data privacy requirements that apply to businesses both inside and outside the state. The new regulation comes as a response to a multitude of businesses making headlines for mishandling or exploiting private data. The CCPA focuses on ensuring that organizations responsibly protect and govern sensitive personal information, while giving consumers greater control over how their data is collected, processed, and shared.

Achieving compliance with CCPA is a multifaceted undertaking that requires organization-wide collaboration to address policies, technologies, and human practices associated with the management of personal data. While no single technology will satisfy the entirely of the requirements that CCPA drives, the Delphix Dynamic Data Platform can play a pivotal role in helping businesses:

- **Identify and assess** the data environments impacted by CCPA and easily determine degree of risk.
- **Define and implement policy** to secure personal data subject to CCPA, and control who has access to what data, when, and where.
- **Report and audit** the actions taken to achieve compliance with key provisions of the regulation.

**WHO MUST COMPLY**

Organizations that conduct business with California residents and meet any one of the following three thresholds must be CCPA-compliant:

- Annual gross revenue in excess of $25 million
- Buys, receives, sells, or shares personal information of 50,000 or more consumers
- Derives 50 percent or more of its annual revenue from selling personal information

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An Introduction To The Delphix Dynamic Data Platform

The Delphix Dynamic Data Platform is a software-based data management solution that combines virtualization (for efficient data storage and delivery) with data masking (for risk mitigation and compliance) to support API-driven automation across heterogeneous clouds and data sources.

Delphix synchronizes with production data sources, compresses and virtualizes the data it collects, then provisions virtual data copies to developers, testers, analysts, or data scientists. Data copies from Delphix are highly space-efficient, readable/writable, and can be controlled (e.g. refreshed, bookmarked, branched) via self-service. In addition, Delphix can mask data copies—replacing sensitive data values with fictitious yet realistic values—to completely eliminate personal information in non-production environments.

With the ability to provision, de-provision, mask, and otherwise control data across all non-production environments, the Delphix Dynamic Data Platform can become the single point of control for defining, enforcing, and auditing data privacy policies for CCPA.

How Delphix Addresses Key CCPA Provisions

Data Profiling: Identify And Assess CCPA Risks

Identifying where personal information resides is a necessary precursor to meeting several CCPA requirements. Delphix profiles data sources and automatically pinpoints personal information such as names, email addresses, and social security numbers to help businesses:

- Locate environments in scope for CCPA, then determine how much and where personal data resides within those environments
- Execute a targeted approach for protective measures through data masking
- Monitor data environments on an ongoing basis for continuous compliance
Delphix comes pre-configured to locate the data values and fields designated as “personal” under CCPA. This provides businesses an enterprise-wide view of CCPA risk. It also helps compliance teams map out which environments contain what types of data, positioning them to more easily respond to consumer requests to expunge data or report on how data is being processed or shared.

**Data Masking And Governance: Define And Implement Policy**

The CCPA imposes fines and penalties for privacy violations and holds businesses responsible for implementing “reasonable security procedures” to protect personal information from unauthorized disclosure. Delphix enables teams to apply data security policies in two ways:

**DATA MASKING**

Once Delphix identifies personal information in data sources, it determines recommended de-identification algorithms, then masks the personal data. Delphix masking algorithms produce realistic but irreversible values with referential integrity across disparate sources that preserve application behavior. Delphix is simple enough to allow business users to create enterprise-level masking policies for CCPA that define what data should be masked, where, and how. Users can then consistently deploy those policies across different data sources and locations (e.g. on premises and in the cloud).

### DELPHIX AUTOMATICALLY IDENTIFIES PERSONAL DATA PROTECTED BY CCPA INCLUDING:

<table>
<thead>
<tr>
<th>Account Numbers</th>
<th>Driver License Number</th>
<th>Plate Number</th>
<th>Tax ID</th>
</tr>
</thead>
<tbody>
<tr>
<td>Physical Addresses</td>
<td>Email</td>
<td>PO Box Numbers</td>
<td>Telephone Number</td>
</tr>
<tr>
<td>Biometrics</td>
<td>First Name</td>
<td>Record Number</td>
<td>VIN Number</td>
</tr>
<tr>
<td>Credit Card</td>
<td>IP Address</td>
<td>School Name</td>
<td>Web Address</td>
</tr>
<tr>
<td>Date of Birth</td>
<td>Last Name</td>
<td>Social Security Number</td>
<td>Zip Code</td>
</tr>
</tbody>
</table>

**Data Masking**

**UNMASKED**

<table>
<thead>
<tr>
<th>Last Name</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Lee</td>
<td>415-230-1283</td>
</tr>
<tr>
<td>Rogers</td>
<td>510-512-5123</td>
</tr>
<tr>
<td>Lee</td>
<td>317-512-4489</td>
</tr>
<tr>
<td>Jacobson</td>
<td>650-965-1117</td>
</tr>
<tr>
<td>Sanchez</td>
<td>310-634-8145</td>
</tr>
</tbody>
</table>

**MASKED**

<table>
<thead>
<tr>
<th>Last Name</th>
<th>Phone</th>
</tr>
</thead>
<tbody>
<tr>
<td>Jones</td>
<td>905-263-7354</td>
</tr>
<tr>
<td>Frank</td>
<td>847-512-5472</td>
</tr>
<tr>
<td>Jones</td>
<td>415-612-8452</td>
</tr>
<tr>
<td>Williamson</td>
<td>312-623-3833</td>
</tr>
<tr>
<td>Jones</td>
<td>708-512-5647</td>
</tr>
</tbody>
</table>
Since development, testing, reporting, and analytics data stores contain up to 90% of an enterprise’s personal data, non-production environments can represent the single largest source of CCPA risk. Masking this data not only neutralizes the risk of breach for these environments, but also eases the burden of complying with CCPA provisions that empower consumers to request data deletion: masked non-production data has already been irreversibly de-identified and is therefore no longer subject to deletion.

**Delphix Masking Key Capabilities**

Delphix protects personal information by generating a functional substitute for sensitive data values when the real values are not required. Delphix masking features:

- **Automatic identification** of personal data values
- **Irreversible masking** that ensures data cannot be restored to its original, sensitive state
- **Realistic data** that doesn’t compromise development, testing, or reporting
- **Referential integrity** for masked data across multiple, heterogeneous sources
- **Easy to implement** masking that requires no specialized programming expertise
- **Out-of-the-box** masking algorithms plus the ability to define custom routines

**DATA GOVERNANCE**

Beyond the application of masking as a security measure, Delphix serves as the control plane for managing non-production data across the complete data lifecycle. Delphix automatically provisions masked and unmasked data copies with the ability to associate permissions with copies to determine how they are accessed and manipulated. Administrators can also use Delphix to de-provision or inactivate data copies at the click of a button. It can do this for multiple, heterogeneous data sources across on-premises, cloud, and hybrid environments. Collectively, these capabilities allow businesses to understand and control:

- Where data environments containing CCPA-relevant personal information reside
- Which datasets are moved across and within different locations or clouds
- Who is allowed to see unmasked data versus who can access only masked data
- How long data environments are deployed and active

A robust API set also allows teams to embed these capabilities into compliance workflows or integrate Delphix with other security solutions to provide comprehensive protection against data loss.
Report And Audit Data Privacy Actions

Delphix logs all security and administrative actions to give businesses robust reporting and auditing capabilities. In particular, Delphix maintains an inventory of data masking policies that document how specific types of personal data were discovered and secured, then tracks exactly where and when those policies were deployed. Distribution of all masked and unmasked data is also captured, creating a continuous record of data governance measures across time and space.

In the event of a CCPA audit, businesses can easily report against the state of their non-production environments, including the security policies in place as of a specific point in time. Delphix even allows businesses to report against the state of their production environments. Since Delphix stays synchronized with production data sources as they change over time, it can provision historical point-in-time copies that recreate a data environment reflective of a specific moment—down to the second or even transaction—to enable detailed forensics or auditing with respect to CCPA.

Delphix addresses the first crucial step in securing sensitive data for Boeing Employees’ Credit Union: discovering where the risk lies by using a built-in data profiling tool. Next, Delphix masks hundreds of millions of rows of data across thousands of database columns.

“Not only does Delphix allow us to reduce our risk footprint by masking sensitive data, but we can also give developers realistic, production-like environments, which ensures we’re not introducing defects because of bad data.”

KYLE WELSH
Chief Information Security Officer

eHarmony leverages Delphix to implement a secure, self-service data management solution, enabling development and QA teams to create and refresh masked environments as needed, without the involvement of DBAs.

“Delphix delivers the environments we need for Dev, Test, and QA to enable our Agile and DevOps methods. We improved our data masking capabilities, minimizing risk. Delphix is a no-brainer.”

NAVDEEP KUMAR
Senior Director

To protect cloud data from breach and to enable regulatory compliance, Dentegra needed to secure sensitive data before moving it to AWS. The Delphix platform collects data from Dentegra’s production applications, then applies masking to that data before replicating it to AWS.

“The combination of Delphix and AWS gives us the agility we need to succeed in today’s application-driven economy. By easily and securely moving data to the cloud, we’re able to release new features to the market faster, while also lowering cost and risk.”

SHAN SWAMINATHAN
VP of Application Delivery and DevOps

ABOUT DELPHIX

Delphix’s mission is to free companies from data friction and accelerate innovation. Fortune 100 companies use the Delphix Dynamic Data Platform to connect, virtualize, secure and manage data in the cloud and on-premise environments. The Delphix Dynamic Data platform serves as the foundation for DataOps across hundreds of the world’s leading enterprises.