



Advantages

- Passively captures network traffic without impacting site performance
 - Provides breakthrough visibility into customer interactions on your website including in-page and RIA interactions that occur solely in the browser
 - Affords the discovery of unexpected customer experiences and the scoring of customer struggle in real time
 - Reliable and time-tested architecture—scales to fit large and sophisticated websites
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IBM Tealeaf CX

*A leading data capture for online
Customer Behavior Analytics*

IBM® Tealeaf® CX is an industry-leading robust datastore of online customer information and the engine behind all IBM Tealeaf products. Using groundbreaking patented technology, Tealeaf CX captures and manages each visitor interaction on your website. Across the organization, from e-business and production support to customer service and compliance, Tealeaf CX is a distinct product that delivers breakthrough visibility into your customers' online experiences.

The following IBM Tealeaf solutions are powered by Tealeaf CX:

- **IBM Tealeaf cxImpact** provides rapid visibility into the hidden problems impacting your business to help you detect, quantify and resolve issues and sources of customer struggle.
- **IBM Tealeaf cxView** affords proactive management by providing an early warning system into significant changes in critical customer experience metrics, struggle scores and KPIs.
- **IBM Tealeaf cxOverstat** is designed to improve campaign performance and content placement while optimizing a site's page flows with intuitive visual analytics such as heat maps, attention maps, link and form analytics.
- **IBM Tealeaf cxLifecycle** manages customers' lifecycles and improves visibility into how specific marketing programs, channels content, and products influence customer behavior.



- **IBM Tealeaf cxReveal** empowers customer service teams to proactively and quickly serve customers' queries with replayable access to both live and historical customer activities on your website from existing customer service tools and portals.
- **IBM Tealeaf cxVerify** preserves a complete and permanent record of all customer interactions on your site for effective customer dispute resolution, fraud investigations, as well as for audit and compliance requirements.
- **IBM Tealeaf CX Mobile** enables businesses to capture customer journeys for mobile websites, including HTML-5 based sites, native applications, and hybrid applications, including both network and client interactions and touch-screen gestures such as pinching, zooming, scrolling and device rotation.
 - **IBM Tealeaf cxConnect for Web Analytics:**
Validate trends and drive site improvements with Tealeaf's online customer experience dataset and Web Analytics solution integration.
 - **IBM Tealeaf cxConnect for Data Analysis:**
Make more informed cross-channel business decisions by integrating Tealeaf's online customer experience dataset with Data Analysis solutions.
 - **IBM Tealeaf cxConnect for Voice of Customer:**
Gain deeper insight from customer feedback from Tealeaf's online experience dataset with any VOC solution integration.

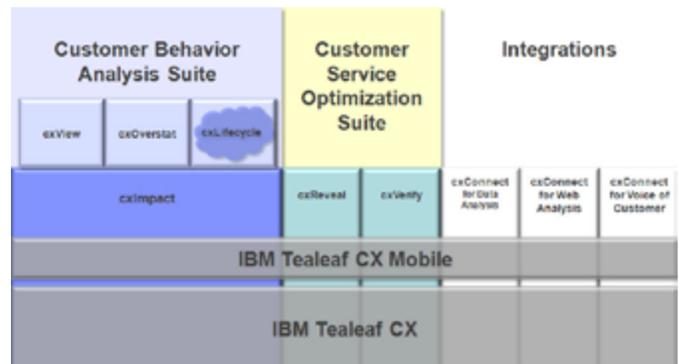


Figure 1: IBM Tealeaf customer experience solutions

Feature highlights

- Real-time event engine utilizes complex pattern analysis to track and score customer behavior in real-time
- Segmentation analysis made simple via the automatic population of session dimensions
- Intelligent data management and flexible archiving of customer experience data
- Data security and privacy through global data destruction, authenticated client access and roles-based filtering

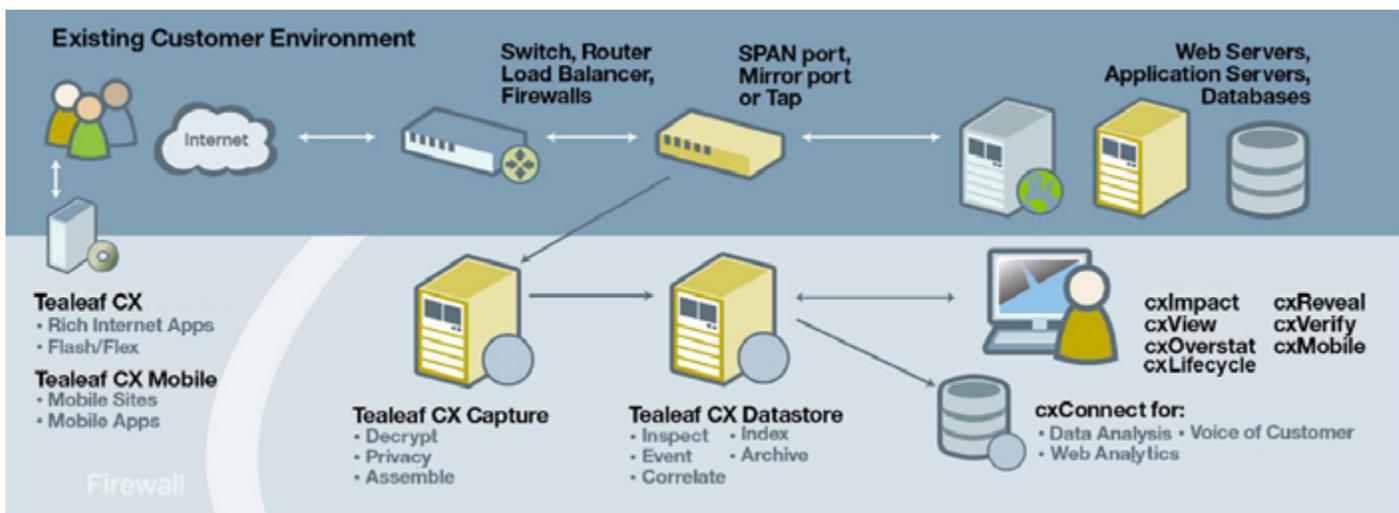


Figure 2: IBM Tealeaf CX Architecture

How it works

Tealeaf CX provides a non-intrusive, real-time method to capture what each customer is doing and seeing on each page, across a visitor session — available on-premise and in the cloud. To do this, Tealeaf CX passively records the HTTP(S) request and response data by “sniffing” TCP/IP packets from the network via an existing span port or network tap. Tealeaf CX captures HTTP headers, URLs, URL form fields (both get and post), user login names, cookies, server host names, application, client IPs, page sizes, the HTML source code of the page returned to the customer and other diagnostics included in the HTTP(S) interaction between the customer’s browser, the web application and more. In addition, the capture process records the total round trip page generation times for each page requested in the session, page cancellations, and the connection-type experienced by the customer (e.g., T1, DSL) as measured by the page delivery rate.

Tealeaf CX broadens online visibility by capturing in-page interactions and client-side functions executed by Rich Internet Application (RIA) technologies such as AJAX. Tealeaf CX allows you to optimize form pages and in-page layouts, as well as client-side functionality, to deliver the optimal customer experience. Example types of captured data include form field abandonment, form-field validation messages, client-side java script errors, end-to-end response time, scrolling and mouse movements. With Tealeaf CX, you not only have breakthrough visibility into the online experience across a visitor session, you also have industry-leading insight into the customer behaviors that occur solely within the web browser and mobile applications.

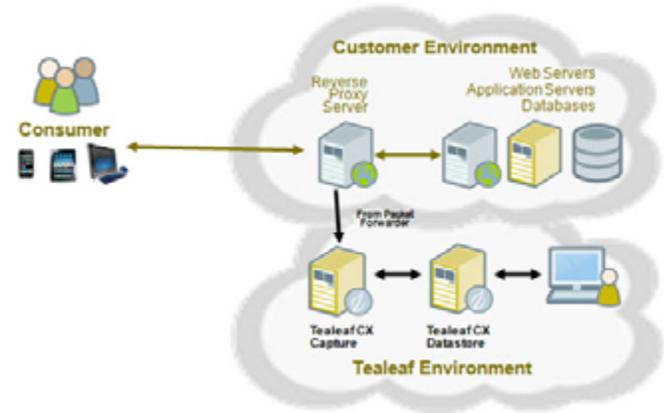


Figure 3: IBM Tealeaf solutions Cloud Architecture

Tealeaf in the Cloud

Tealeaf can run in public cloud including passive capture without impacting a website’s performance and a customer’s online experience. Businesses can send Tealeaf data back to their on-premise data centers.

Real-time data processing

As data is received by Tealeaf CX it is streamed through a process that performs specific filtering and manipulation functions to normalize and protect the data. After data is normalized, it is indexed, archived and made available for further access and analysis by other IBM Tealeaf solutions.

Real-time event engine

Advanced pattern recognition

The event engine analyzes captured data in real-time against user-defined rules to provide insight into customer struggle, business process health, customer activity, application errors and performance problems. Using the drag-and-drop editor, event rules can be defined against the occurrence or absence of simple page-level conditions or complex stateful conditions based on multiple actions in the session including sequence, time, and thresholds.

Examples of business events include:

- **Business process:** each step in a business process, or a customer completing or not completing a multi-step business process
- **Customer struggle:** a customer going through the checkout process multiple times, repeatedly trying to complete the billing information page, or going to help multiple times
- **Product, feature and service tracking:** a product, feature, or service selected by a customer

Examples of technical events include:

- **Application error:** an error exception message (e.g., java exception) or global error page.
- **Page error:** HTTP 500, HTTP 40x, blank page, or page weight too great (size > 40KB).
- **Application response:** pages taking longer than 10 seconds to load.

Note: events do not require application code changes or programming skills to create and maintain. To help you get started quickly, Tealeaf CX includes a set of out-of-the-box events.

Struggle scoring

In real time, as behavioral patterns that signify struggle are identified, the event engine grades the magnitude of the struggle using defined business rules to create a struggle score. Struggle scores are then used to monitor the health of the website.

Multi-dimensional data recording

When struggle patterns or other events are identified, the event engine automatically records customizable attributes about the customer experience, such as transaction success status, business data (shipping country) or environmental information (browser type), and makes them available for real-time, multi-dimensional segmentation.

Reliable and security-rich architecture

Flexible, scalable platform

The Tealeaf CX platform can be scaled based on traffic volumes, data archiving and end-user volume requirements. Its distributed architecture enables optimal utilization of available system resources to be responsive even when processing large data volumes. It can be scaled horizontally to meet future site traffic growth requirements while still providing a single, unified view of the captured data. It is also designed to exploit existing capabilities—data back-up and storage—so companies can integrate the Tealeaf CX platform into their current practices without having to adopt new procedures.

Security and privacy

The Tealeaf CX platform is designed to satisfy even the most rigorous requirements for security and privacy and is used with confidence by many Fortune 500 companies, major banks, and government agencies. Captured information that appears in the HTTP(S) request or response—passwords, Social Security numbers (SSN), or account numbers—can be kept, destroyed or encrypted as soon as it enters the system. Encrypted information appears as if it were destroyed unless the user viewing the session is authenticated on the basis of role, and thereby authorized to view that specific information. In addition, captured data is stored in an encrypted format to help eliminate unauthorized data access. To meet security compliance requirements, the Tealeaf CX platform maintains a detailed audit trail of data access and system changes.

Intelligent data management and flexible archiving

The Tealeaf CX platform provides flexible data management and archiving so you can archive data for extended periods of time for problem resolution, customer behavior analysis, dispute resolution and other web archiving needs. Tealeaf CX intelligently determines which sessions are of interest and should be archived based on user-defined data management rules. Before the selected sessions are archived, the data is compressed to reduce data storage requirements.

About IBM ExperienceOne

IBM ExperienceOne helps you attract, delight and grow the loyalty of customers by enriching the ways you engage each of them. IBM ExperienceOne provides a set of integrated customer engagement solutions that empower marketing, merchandising, commerce and customer service teams to identify the customers and moments that matter most, and to rapidly apply those insights to develop and deliver personally rewarding brand experiences.

IBM ExperienceOne ignites innovation by leveraging patterns of success from more than 8,000 client engagements, original industry research, and products consistently recognized as industry leaders in major analyst reports.

IBM ExperienceOne solutions are delivered in cloud, on premises, and in hybrid options.

For more information

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