

# Sunshine technical guide



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# Bringing customer experience teams out of the dark



Use this guide to dive into the architecture of solutions built on Sunshine—and learn how to connect your data across your organization to create seamless, more personalized customer experiences.

Customer expectations are higher than ever. Customers expect you to deliver easy, fast, and personalized experiences—and even provide them with what they’re looking for before they ask for it.

But with enterprises managing [3 times](#) as much data as they did 5 years ago, delivering the tailored experiences your customers have come to expect can be complicated. The technology footprint of modern companies is constantly growing while customer data is increasingly siloed across outdated systems. The end result is that customer experience teams can’t access the customer information they need, when they need it—they’re essentially left in the dark.

That’s why high performing customer experience teams are harnessing the power of connected customer data to create a single view of the customer that spans channels. The value of connecting and making your customer data actionable is clear—companies that do so resolve tickets faster, are more operationally efficient, and deliver better customer experiences, [according to Zendesk’s Customer Experience Trends Report, 2020](#).

This is where Zendesk Sunshine brings customer experience teams out of the dark. Sunshine is our open and flexible CRM platform that lets you seamlessly connect and understand all your customer data. With Sunshine, you can put your customers—not legacy CRM—at the center of your business.

Today on Sunshine, Zendesk customers are building a wide range of applications to do everything from enabling agents to access all the relevant context they need to build better customer relationships to enable proactive support.

## Sunshine is

### **OPEN AND FLEXIBLE**

Based on open APIs, Sunshine doesn't lock you into using proprietary tech. It lets you leverage the technology investments you've already made and surface data wherever you want—whether that's in Zendesk or your homegrown applications.

### **DEVELOPER-FRIENDLY**

Sunshine allows your developers to use the tools they already know and love, empowering them to build faster than they can with legacy CRM systems.

### **BORN IN THE PUBLIC CLOUD**

Sunshine is native to Amazon Web Services (AWS), enabling you to harness all the power and scalability of AWS services.



# The elements of Sunshine

Sunshine consists of powerful features for storing data and managing workflows. These features include:



## Unified Profiles

Profiles enable you to consolidate customer information from different sources—such as mobile apps, billing systems, e-commerce providers, or marketing software—into one complete picture for all your teams and applications.



## Custom Events

Events allow you to capture every interaction to create a complete map of your customer journey. A Sunshine Custom Event includes any programmatic activity that your application or system can associate with a customer, such as purchase transactions, website visits, or customer service interactions. Sunshine also includes event activity from Zendesk apps, like ticket creation or help center views.



## Custom Objects

Custom Objects enable you to store and surface new data within Zendesk, such as product catalogs and order histories from any source. Custom Objects support a wide variety of structured [data types](#), following the JSON Schema standard. This includes hierarchical data entities, such as objects and arrays.

With relationships, your developers can create powerful connections between objects to model connections between data, including one-to-one, one-to-many, or many-to-many [relationships](#). Relationships can link Custom Objects to other Custom Objects, or to [Zendesk Objects](#) (such as tickets, articles, or organizations). For example, you can use Relationships to associate order details along with product information to a particular ticket.

Sunshine provides [REST APIs](#) for leveraging these data stores, and APIs to monitor Sunshine usage as well as execute batch operations on records.



## Sunshine Workflows (EAP)

Sunshine Workflows are a powerful way to automate processes that span Zendesk apps. Workflows are initiated via API calls. (This feature is currently in [EAP](#)). You can use conditional and branching logic to define your Workflow. In addition, you can leverage Sunshine Custom Objects to create Workflows to deflect tickets, automate refunds, and more.

In the future, Workflows will be able to be extended into third party systems and initiated in the Zendesk UI or via Zendesk events.



## Zendesk Events Connector for Amazon Eventbridge

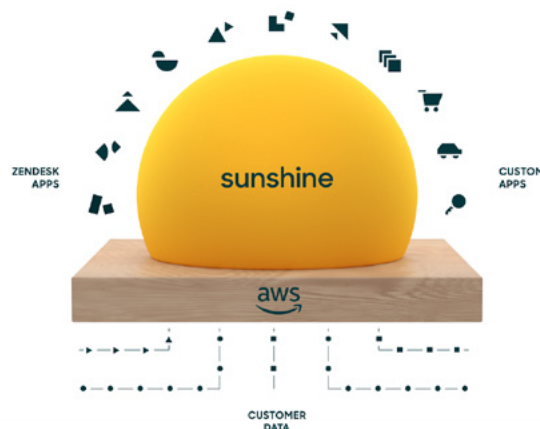
The Events Connector enables you to stream real-time events from Zendesk into AWS. Once these events are in your organization's own AWS environment, you can use AWS and Marketplace services to power advanced analysis and workflows.



## Sunshine Conversations

[Sunshine Conversations](#) is a flexible and developer-friendly messaging platform. It enables you to unify messages from every channel into a single conversation that you can share across every department. Sunshine Conversations empowers businesses to build interactive messaging experiences—and deliver conversational business at scale.

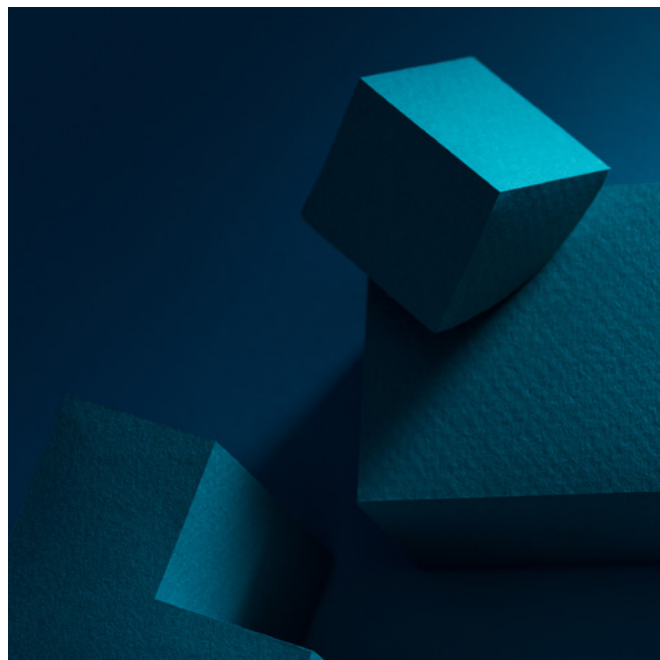
You can use Sunshine Conversations to add messaging and conversational capabilities to your website or software. It enables your developers to connect your software to popular social messaging channels like WhatsApp and Facebook Messenger. Sunshine Conversations' rich APIs allow for conversation management, rich messaging, user metadata collection, account management, and more.



# Sunshine

## use cases

We created Sunshine with flexibility in mind so you can use it in different ways based on your particular needs. Below, we outline some of the key patterns that customers are using with Sunshine today. These patterns fall into two main categories: supercharging the support experience and powering external apps.



## Supercharging the support experience

**You can leverage Sunshine to extend and enhance the Zendesk Support experience, providing relevant and actionable data to agents.**

### Creating a complete view of the customer

Creating a complete view of the customer is one of the primary use cases for Sunshine, enabling you to give agents a complete, contextual picture of your customer—who they are, what they own, and all their interactions with you.

In this pattern, you can leverage Sunshine to aggregate and consolidate data about your customers from across different business applications. The original sources of data remain the source of truth for your customer information. A cloud integration platform drives the data synchronization process and helps ensure the most current consolidated version of your data resides in Sunshine.

You can create a complete view of the customer through Sunshine's three central components: Unified Profiles, Custom Events, and Custom Objects.

## Sunshine use cases

Unified Profiles enable you to surface profiles from different sources within one single customer identity, making this information easily accessible to your agents. For example, you can pull in and associate a customer's profile from your marketing automation system with their profile from your order management system, and link both profiles to that customer's Zendesk user profile.

Arm your support agents with the customer context they need by natively surfacing in Support key customer interactions, such as when a customer adds an item to their cart or when their order ships. Every event can be brought into Sunshine to empower your agents with real-time context across any system.

Use Custom Objects with Relationships to model the other data elements that are critical to understanding your customers, such as data about your products or customer warranty information, and relate that information to a user, ticket, or organization.

Sunshine provides a flexible set of options for surfacing customer data, including:

### Native experiences

**The Agent Workspace:** Sunshine Profiles and Events are visible natively in the [Agent Workspace](#), which enables your agents to provide support across channels including phone, email, chat, and social messaging—all in one place.

**Sunshine Custom Object App (EAP):** The Sunshine Custom Object App (currently in [EAP](#)) allows your agents in Support to easily see data associated with a ticket requester. When your agents view a ticket, relevant Custom Object data is automatically surfaced.

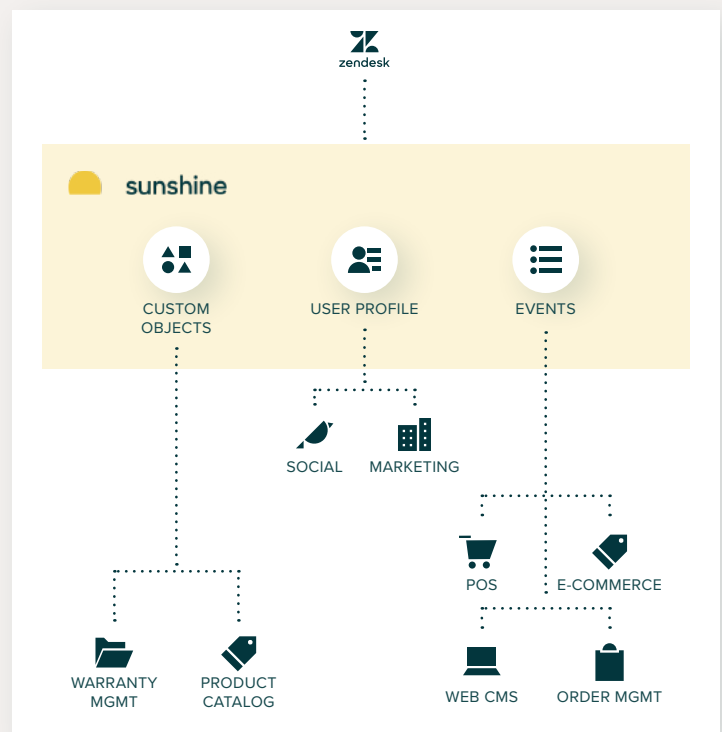
### Custom experiences

[Zendesk Apps Framework](#) (ZAF) provides you with the ability to create a custom app to surface relevant Sunshine data within the Support agent experience. With ZAF, you can create a custom UI or apply custom logic to Sunshine data.

### CUSTOMER EXAMPLE

A telecommunications provider based in Latin America uses Sunshine to provide its agents with a contextualized and unified view of customer data from disparate systems. Using Custom Objects, the firm built a custom Zendesk app that lets its agents easily visualize critical customer information within the agent interface. The app integrates data from multiple systems into Sunshine, including Salesforce and a legacy MySQL database.

The firm also created a custom ZAF app that auto-populates required information depending on the specific request type, reducing the time to solve cases and enabling agents to work more efficiently.





## Extending the Zendesk data model

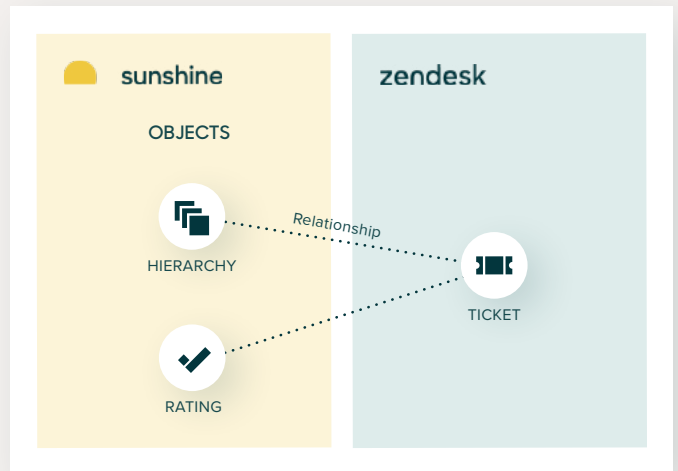
Sunshine allows you to augment the data model of Zendesk applications to support the unique requirements of your organization. For these use cases, Custom Objects and Relationships enable you to create a unified data model. Depending on your particular use case, you can use Objects to store additional information about tickets, products, or other relevant information about your business. You can use the object's fields to store further information like ticket IDs and easily associate tickets with other tickets.



### CUSTOMER EXAMPLE

A large video sharing website needed to scale its customer service operations to support new ticket categories, teams, and routing rules. These complex hierarchies required a level of layering that was not possible to model in Support. Using Custom Objects and Relationships, the company created a hierarchy of hundreds of ticket categories that enabled them to organize and properly route specific requests from users.

In addition, they created an app powered by Custom Objects to enable agents to rate the quality of the routing experience, driving continuous improvement of their support processes.



## Building custom functionality

Sunshine can power custom applications to augment Zendesk functionality. In this architectural pattern, Custom Objects serve as the data store for your applications.

ZAF allows you to create logic to power your custom application and enables it to surface itself in the agent user interface via an iframe. ZAF is largely technology-agnostic, letting you use any client-side or server-side web technology to create logic for your ZAF applications. You have two options when it comes to hosting ZAF apps:

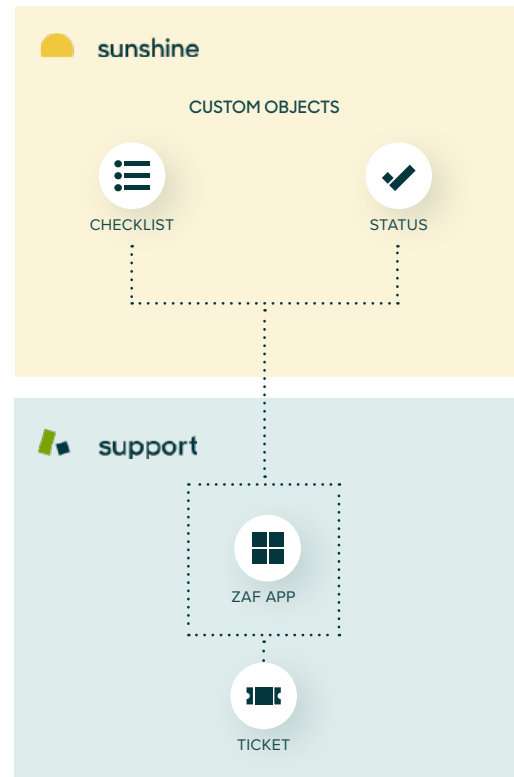
**Zendesk hosted:** Many Sunshine applications are built leveraging client-side technologies like HTML, JavaScript, and CSS. In these cases, Zendesk can host the ZAF application.

**Externally hosted:** Hosting an app externally lets you use server-side technologies in conjunction with client-side technologies to build your application. You can use any combination of technologies that you'd use for standard web application development, such as, Java running on AWS EC2. Hosting externally allows your application to be always-on—executing activities outside of the context of the Zendesk interface. This is particularly useful for certain scenarios, such as real-time synchronization of data.

### CUSTOMER EXAMPLE

An internet travel agency uses Custom Objects to track project checklists for its agents. With Custom Objects, it can define checklists and track the status of individual items. The app uses client-side code in ZAF to generate the checklist interface for agents.

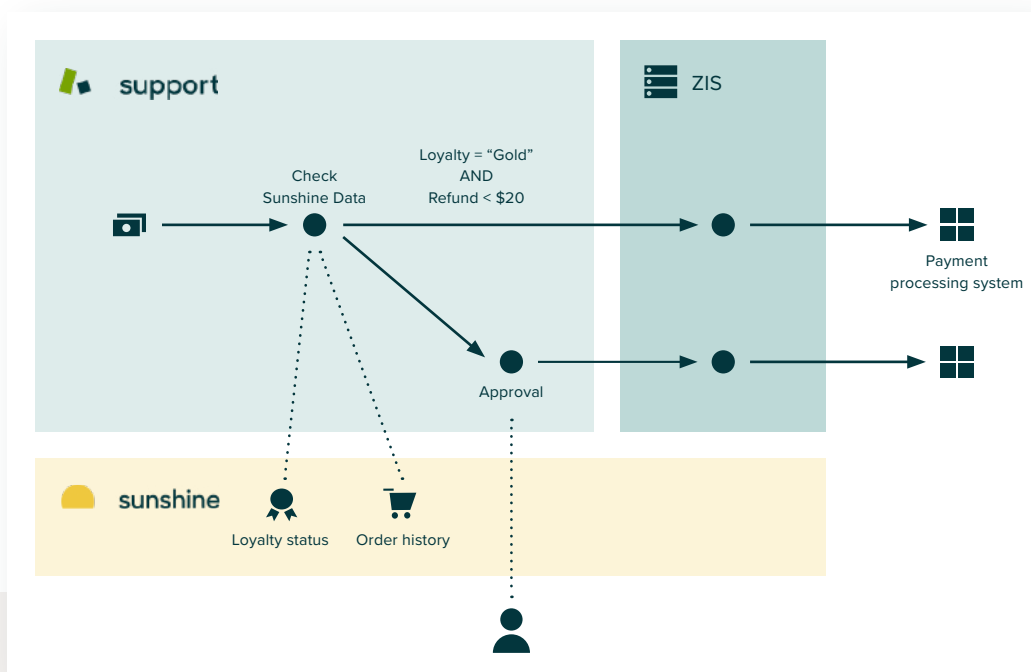
ZAF applications interact with their host Zendesk applications via the [ZAF Client API](#), which allows applications to perform a wide variety of activities, such as listening for events, setting properties, or invoking actions. For example, using the ZAF Client API, one of your developers could enable an app to insert macros with intelligent product recommendations powered by Sunshine.



## Automating workflows

You can leverage [Sunshine Workflows \(EAP\)](#) to automate customer-facing interactions, saving support resources and decreasing time-to-resolution. Workflows harness all the power of Sunshine, executing logic based on Custom Object data and triggering workflows based on Sunshine Events—that go beyond ticket-based routing. Today, Workflows can execute logic based on Custom Object or Unified Profile data and create Events.

In the future, Workflows will be able to execute activities within external systems in response to events within Zendesk applications.



### CUSTOMER EXAMPLE

An e-commerce company could connect a third-party payment processor to Sunshine, such as Stripe, to enable agents to initiate a refund workflow across multiple systems. A ticket could automatically determine if a customer meets predefined criteria—for example, if they’re a “gold” level loyalty member and their refund amount is less than \$20—and a workflow could automatically initiate the refund in

Stripe. In addition, the workflow could require a managerial approval step for all other returns that do not meet the predefined criteria. The status of the refund would be recorded and visible to agents via Sunshine events.

# Powering external apps

Sunshine can also power external apps—whether you build them yourself or with the help of a partner.

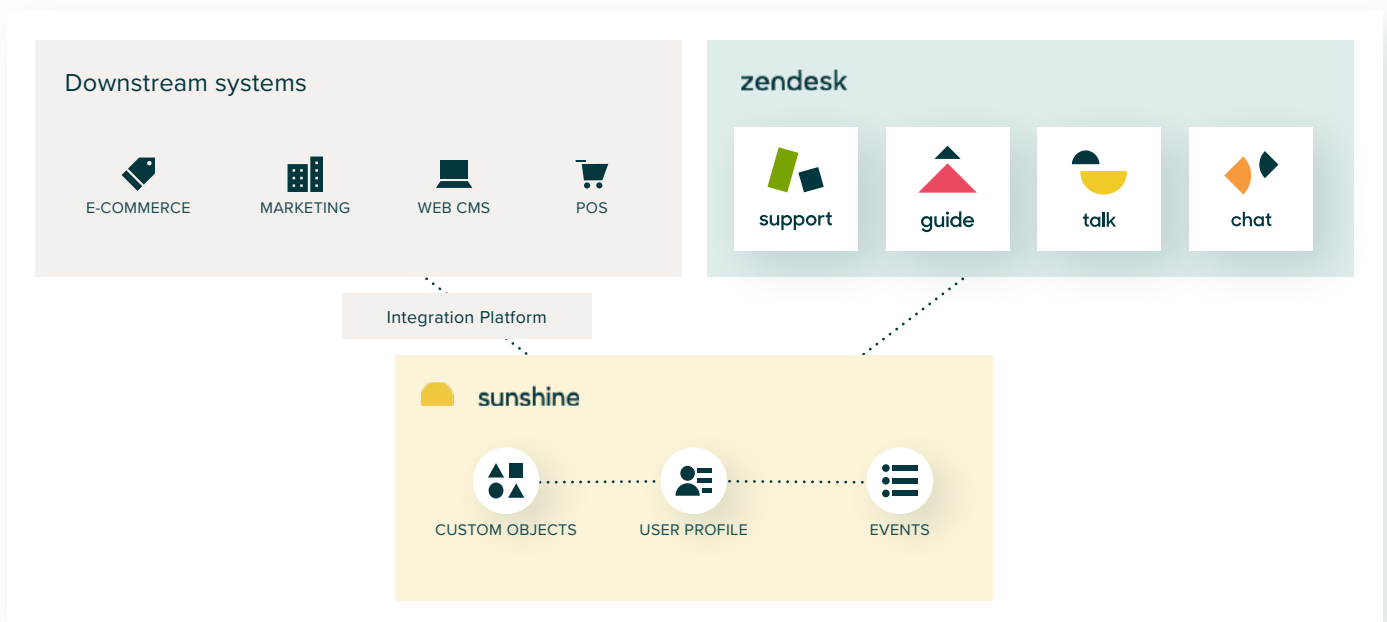
## Creating an agile source of customer data

In this pattern, Sunshine becomes a single, flexible customer data source, streamlining development and enabling developers to [build apps](#) with rich, relevant customer context.

You can link and aggregate customer data from disparate external sources and Zendesk applications within Sunshine, such as Support and Guide activity. You can also leverage Sunshine APIs to surface this data in other applications.

An integration platform ensures that downstream systems populate with the most current version of user data. It enables customer-facing systems like e-commerce and web content management platforms to operate from the same understanding of the customer as your support team.

This opens up possibilities such as sending personalized offers to dissatisfied customers with recently closed tickets or giving your agents a view into the promotions that have recently been sent to a customer.



## Applying machine learning and advanced analytics

With the [Events Connector](#), you can stream events from Zendesk in near real-time and leverage AWS for a variety of use cases. Zendesk generates events with the execution of various types of transactions. [Events](#) range from the creation of a ticket to the update of a custom field value.

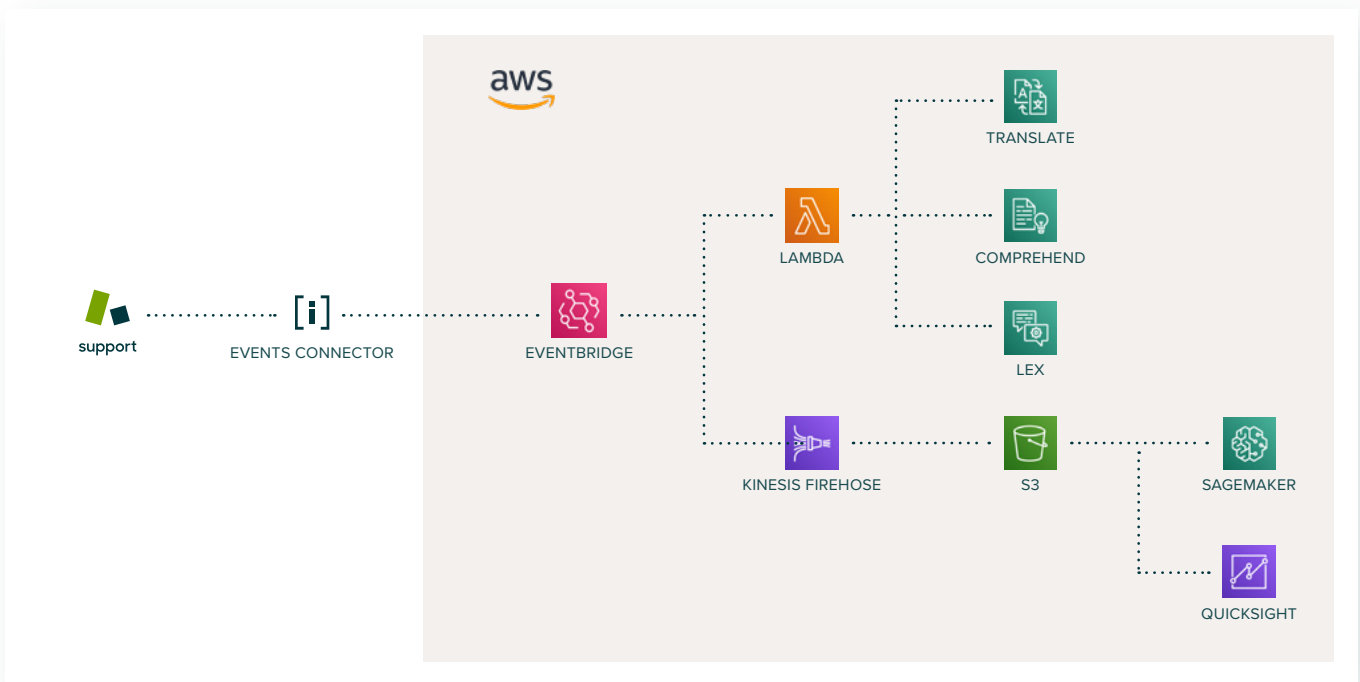
### Use cases include:

**Automated translation:** Leverage AWS Translate to automatically translate tickets and scale your operations at a lower cost.

**Bot automation:** Use a bot powered by AWS Lex to deflect simple queries and automate ticket routing and ticket collection across support channels

**Advanced analysis:** Perform sentiment analysis with AWS Comprehend to improve customer satisfaction and identify “at-risk” customers. And use AWS Quicksight to identify trends and anomalies—or use a business intelligence tool of your choice.

**Machine Learning:** Leverage Zendesk Events along with other customer data to build powerful machine learning models based on customer activity with services like Sagemaker.



# Developing for Sunshine

Sunshine is based on open standards and supports the use of tooling and programming languages of your choice.



## Technical requirements

- Using the Events Connector requires an AWS account.
- Many use cases also require an integration platform (iPaaS), such as a Workato or a Tray.io. In the future, you'll also be able to use a new Zendesk Integration Service to implement these use cases.
- [Zendesk Application Framework \(ZAF\)](#) is key for many use cases. Experience developing with standard client-side web technologies (HTML/CSS/Javascript) provides developers with a foundation for working with ZAF. Experience building and deploying server-side web applications can be helpful too, depending on the technical requirements of your use case.
- Developers may also find it beneficial to have experience working with REST APIs and event-based architectures.

## Resourcing

Sunshine was designed to be flexible and developer-friendly so you can get to value quickly. The amount of required resources largely depends on the specifics of your project. Many Sunshine customers have gone live leveraging only a single developer resource. Zendesk also has a professional services team and trusted development partners that can help you scope and execute your project.



# Sunshine foundations

## Architecture overview

Zendesk is built on enterprise-level operations and technology architecture that exceeds industry standards and future-proofs your business. As our customers grow and their needs change, the technology can scale to meet demands for performance and reliability.

Zendesk uses a fully redundant, distributed, and automated environment consisting of geographically separate data centers running multiple self-sustaining instances of its applications. To ensure high performance for customers globally, Zendesk runs on multiple data centers around the world. Each data center increases capacity and reduces latency for customers.

## AWS

A range of AWS services power Zendesk on the backend, including DynamoDB and Aurora. A global event bus based on Apache Kafka connects all applications and provides a basis for interactions between them.

Zendesk applications can publish and subscribe to events from the bus. Zendesk-delivered integrations can leverage events and use them for integrations. [The Zendesk Events Connector](#) for Amazon EventBridge enables you to use Zendesk events directly for building applications and performing analysis in AWS.

# Conclusion

Sunshine is open and flexible, allowing you to use it in a broad spectrum of ways based on the needs of your business—from supercharging Support to powering external apps with a single view of your customers. With Sunshine, you can deliver the fast, personalized, and seamless experiences your customers have come to expect.

Here are some resources to help get you started:

[Sunshine API Documentation](#)

[Sunshine App Examples on Github](#)

[Getting Started with Zendesk Apps Framework](#)

[Learn more](#) about Sunshine or [contact us](#) to start your free trial today.

