

PRODUCT BRIEF

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# Continuous Intelligence at Scale



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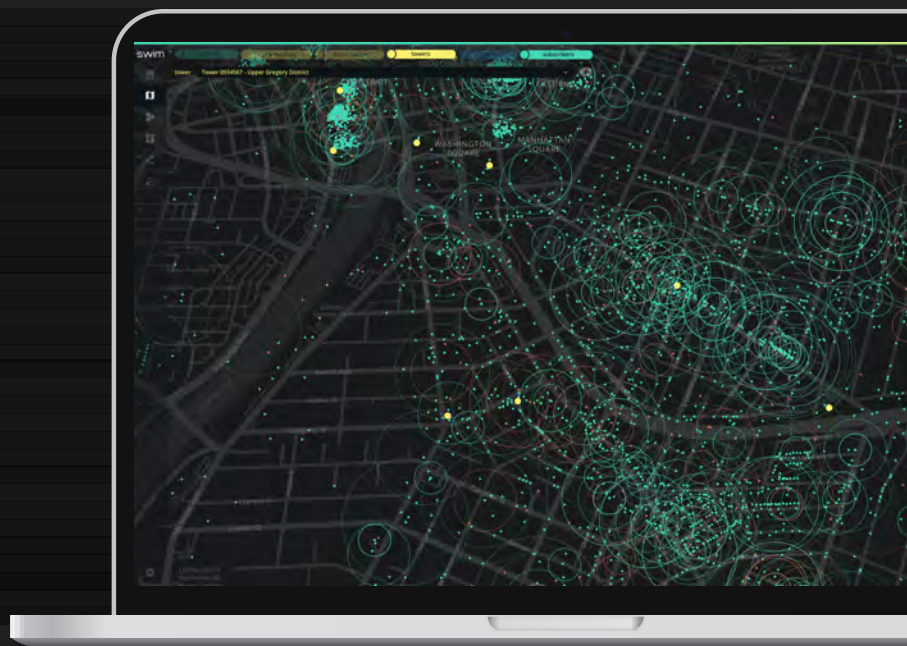
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# Context is Key

*Monitor, Anticipate and Act with Continuous Intelligence from Swim*

Digital transformation has been a top priority in most enterprises, allowing them to better compete, create new revenue opportunities, or improve operational efficiencies. Centralized, big data cloud solutions are well suited to batch-processing and analyzing historical data, supporting these goals. However, today's enterprises also need to be prepared for and resilient to business disruptions happening anywhere at any moment, which requires their applications and insights to be increasingly distributed and real-time.

There is no shortage of point solutions in the market that stream data, transform it, and analyze short windows of real-time data with the goal of accelerating insights. But streaming data by itself is meaningless for understanding what happens "now" if it is not supported by relevant business context as well as context from historical data.

What is needed is an integrated approach for continuously processing streaming data in concert with historical data and business context stored in enterprise IT systems, databases or data lakes. Today's enterprises need continuous intelligence about the state of their business, which provides them with better situational awareness and active decision support at every moment; it helps them better assess how to respond to the "now" in the context of their current business operations.

Swim offers the first open core, enterprise-grade platform for building, managing and operating continuous intelligence at scale.

CONTEXTUAL INSIGHTS



MASSIVE SCALE



SINGLE PLATFORM



# Swim is Software in Motion

Swim is software in motion; just as motion is by definition continuous, Swim enables continuous intelligence at scale. So when your business needs to know, it already does. No need to query databases first to generate relevant and timely insights.

Continuous Intelligence means always-on, continuous data integration, analytics, visualization and automated real-time responses, integrated into business operations and providing ongoing decision support based on processing real-time and contextual, historical data in concert. Continuous Intelligence from Swim enables you to:



Immediately integrate, structure and aggregate static and dynamic data from on-prem, cloud or edge sources



Create and link digital models - Swim Web Agents - from real-world, physical and logical, entities, and update models with changes in state as they occur



Perform contextual analytics by combining, mapping and processing streaming data in concert with contextual and historical data, while avoiding latency-prone database queries



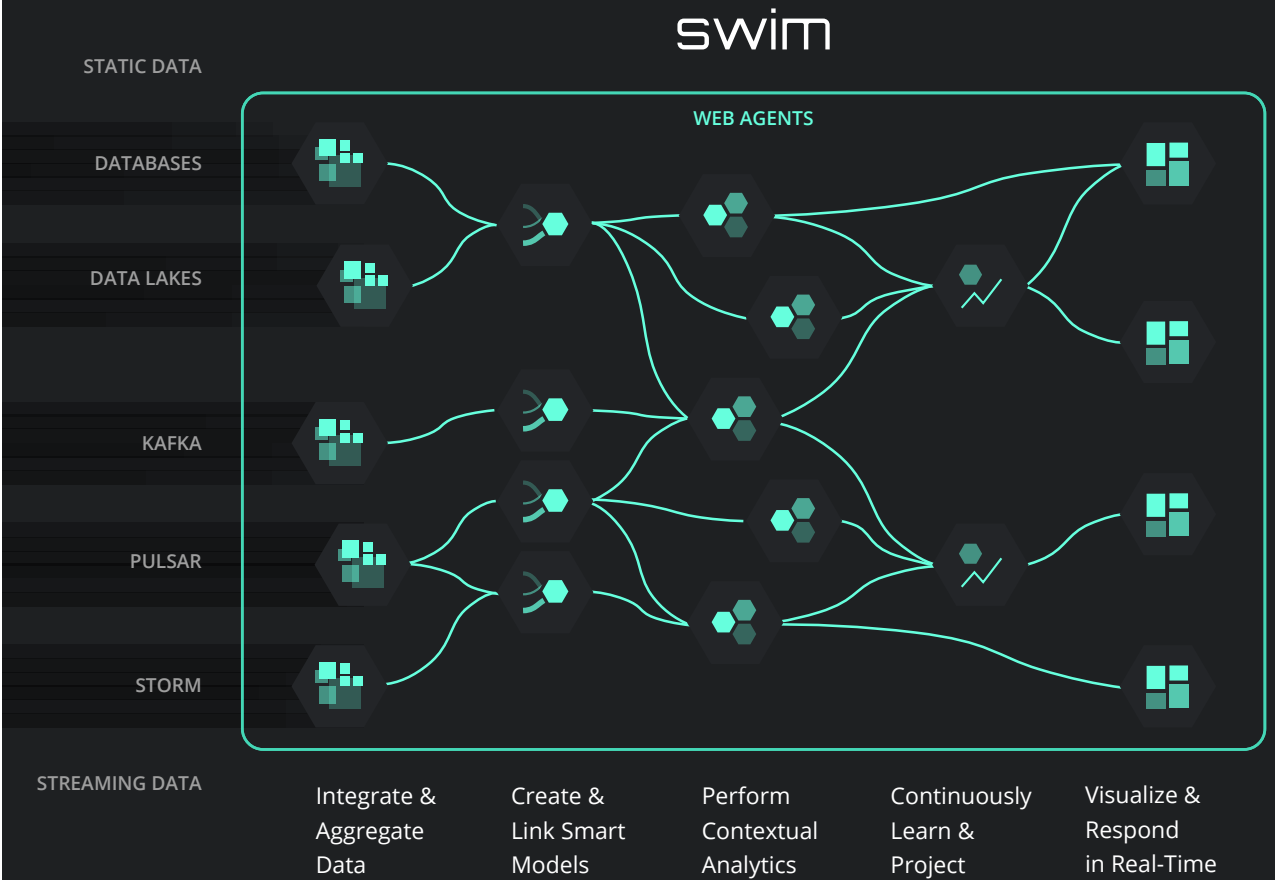
Continuously infer and learn from shared data models, discover trends and project outcomes



Visualize and seamlessly route insights to dashboards, applications, or data stores, and automate responses to specific alert conditions in real-time to augment human decision making

From the data, Swim automatically creates a set of live, stateful Web Agents to represent real-world, physical or logical, data sources, such as sensors, devices, and systems. It then dynamically interlinks these Web Agents to build a shared data model through a secure mesh of connections. As real-time data is generated, Web Agents automatically process, analyze, learn and project to make insights continuously available to the business.





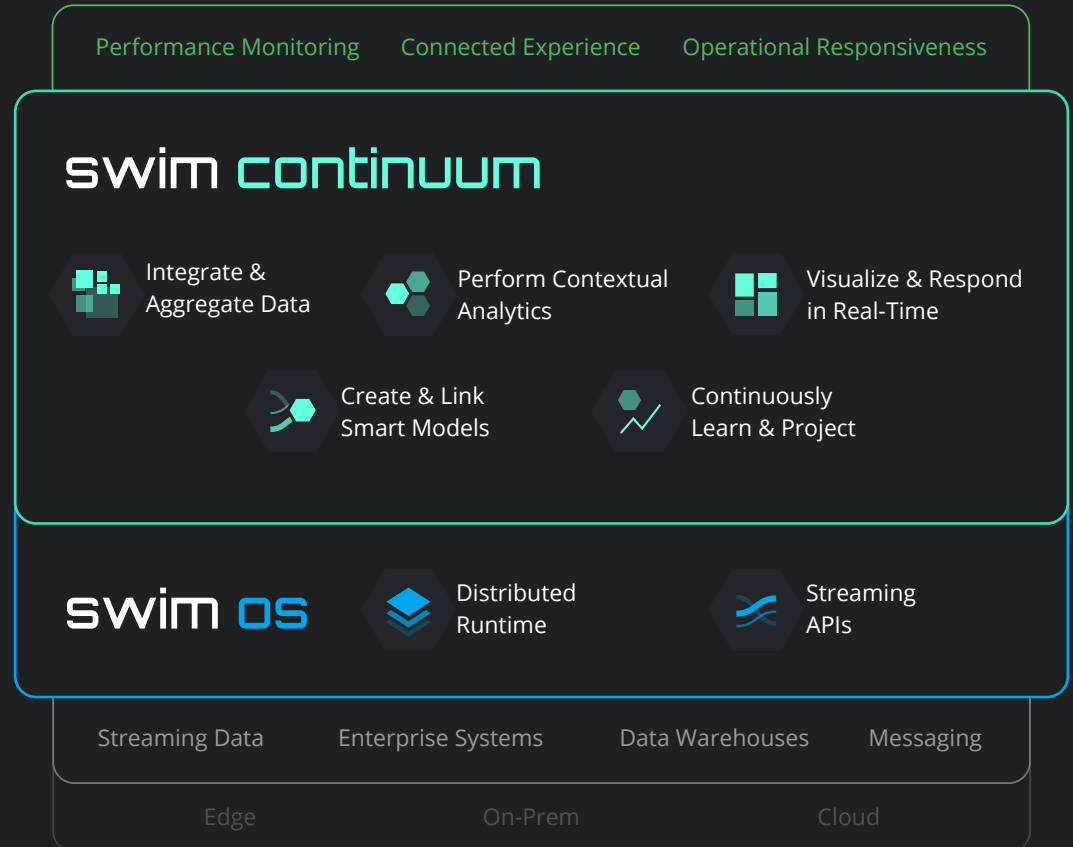
Swim Web Agents are web-scale, autonomous computer programs that aggregate, transform, analyze and act upon streaming and static data at the speed of change; they are the foundation of Swim continuous intelligence applications. Swim Web Agents are self-contained objects that possess individual logic and manage their own granular data streams and persistence.

Unlike digital twins, which only mirror the state of the real-world entities they represent and don't relate to each other, Swim Web Agents take action on behalf of their entities and continuously communicate changes to related Web Agents, and other interested subscribers, in network real-time. These bidirectional streaming links keep Web Agents and subscribers continuously in sync when connected, while permitting sustained, fully autonomous operation when Web Agents become disconnected from non-essential external services. When subscribers and Web Agents reconnect, they quickly resynchronize their state.

Swim Web Agents support general purpose compute, enabling any kind of business logic to run at the speed of change to real-time contextual data.

# Swim Products

Swim offers the first open core platform for building and running distributed, continuous intelligence applications at scale:



## swim OS

Without requiring a database, message broker, or application server, SwimOS is the first Apache 2.0 licensed software platform built from the ground up to power continuous intelligence applications. It provides messaging, processing and persistence out of the box, and also integrates naturally with existing message brokers, streaming frameworks and data stores while building intelligence into your solutions.

Optimized for data locality, SwimOS can be distributed from the cloud to the edge and leverages the available compute independent of infrastructure constraints. Its stateful architecture enables a new class of streaming API's that deliver unprecedented performance, scale and efficiency.

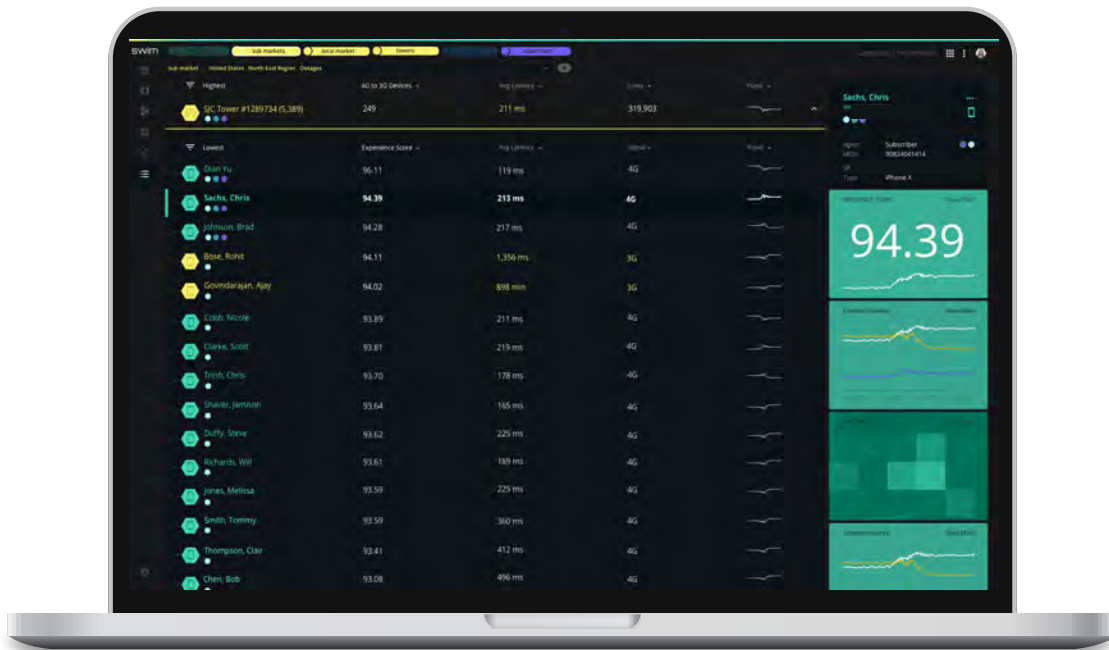
## swim continuum

Designed with enterprise needs in mind, Swim Continuum provides real-time visibility, manageability, and automation to operate continuous intelligence applications efficiently and at scale. It builds upon the SwimOS core and meets stringent enterprise requirements by managing persistence, scheduling, clustering, replication, monitoring, and security.

Providing performance and agility under high loads, Swim Continuum excels during massive scale-out by distributing, provisioning, and load-balancing applications across the available compute. It monitors itself as well as SwimOS applications with deep introspection for process availability, reliability, and performance.

Through a single pane of glass experience, Swim Continuum provides a comprehensive view of all aspects of Swim operations. In addition, business operators can use custom views to inspect data and insights specific to their role, spot relevant trends, and take action faster. Swim Continuum enables teams to collaborate more easily across business functions and organizations.





Examples of successful deployments of Swim Continuum include the ability to constantly monitor and address network service quality issues, to create connected experiences, such as real-time infrastructure-to-vehicle communications, and to improve equipment efficiency by visualizing the location and status of thousands of assets for immediate situational awareness of safety and law enforcement teams.



# Getting Started With Swim

The highly integrated architecture of Swim provides a self-contained environment for building and running stateful, continuous intelligence applications and user experiences that mesh streaming and historical data sources across distributed compute environments.

Swim continuous intelligence applications are built using patterns that will be familiar to developers experienced with object-oriented programming frameworks. The basic steps to architecting enterprise-grade Swim applications are:

-  **1 Design** your application simply for a single instance, and automatically receive a distributed workload
-  **2 Develop** only what is unique to your business logic and stop using development cycles for boilerplate code
-  **3 Deploy** Swim as a single, self-contained process in a cloud container or virtual machine
-  **4 Operate** and scale out your Swim applications in an enterprise-ready environment

No additional prerequisites, dependencies and installations are required except for a standard Java Runtime environment. Swim provides several methods of deploying the applications including jar deployments, container-based deployments and service-based deployments.

By publishing your real-time and batch data sources to Swim compute clusters, you can make real-time KPIs, analytics, and insights available for use not only by multiple Swim applications, but also other enterprise applications.

Learn more at [www.swimos.org](http://www.swimos.org)



# Next Steps



Continuous intelligence built and operated with Swim continuously provides situational awareness, operational responsiveness and “frictionless” decision support for real-time events, analyzed and interpreted within the context of the enterprise systems and data stores that support your business.

For more information or to request a demo, please visit [www.swim.ai](http://www.swim.ai) or contact us at [info@swim.ai](mailto:info@swim.ai)

