Synadia Platform

Synadia, the company behind NATS.io, empowers developers and enterprises to accelerate the delivery of distributed applications across edge, IoT, cloud and on-premises environments.

SYNADIA.COM

The Synadia Platform enables system architects and software developers to build and operate high-performance, low-latency, globally distributed applications.

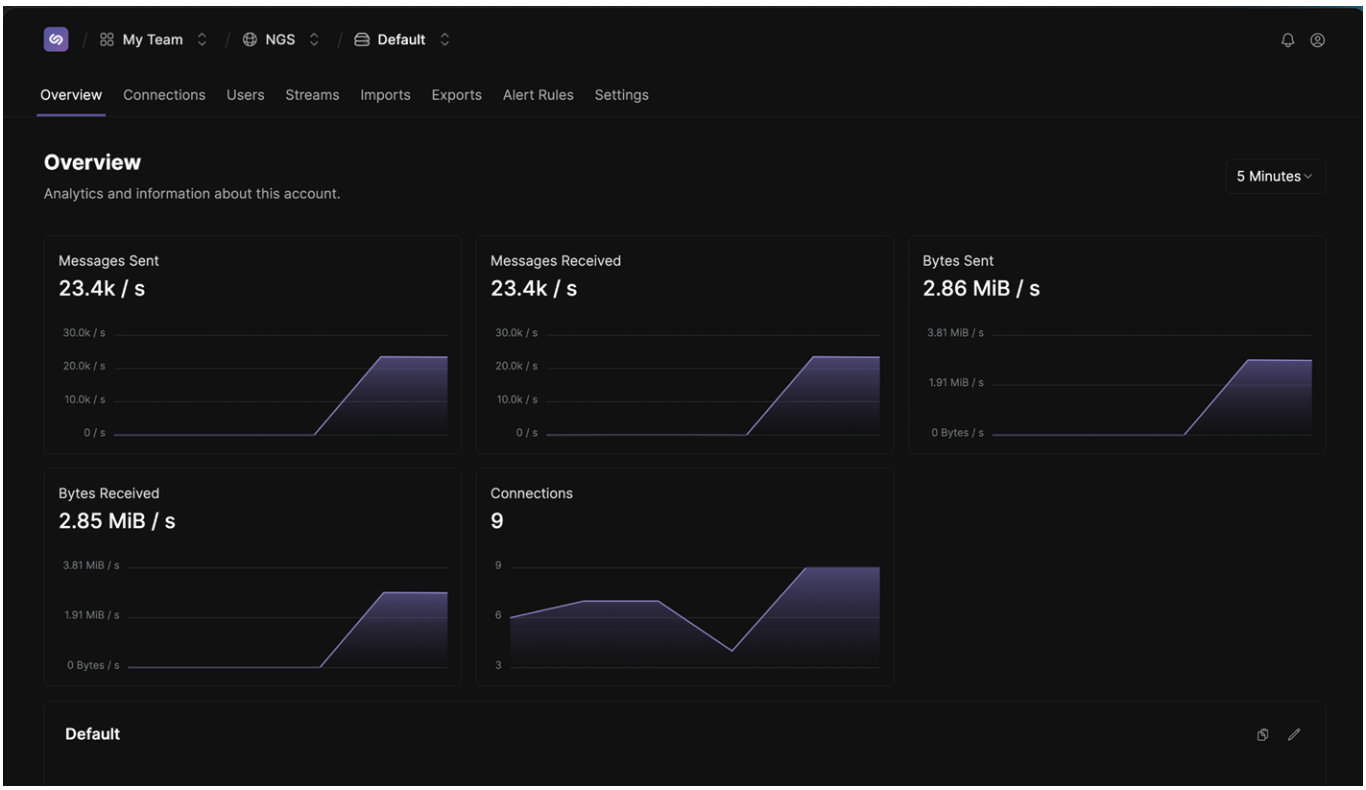
Based on open-source technologies – NATS (connectivity: microservices at scale, real-time event sourcing and feeds) and JetStream (data: streaming, key-value, object storage) – the platform elevates NATS to an enterprise-ready solution with enhanced security, compliance, and management features.

Founded by the creator of NATS and home to its most active maintainers, Synadia also provides expert consulting and customer support for distributed systems across any cloud and any region.

For enterprises and developers, Synadia Platform reduces costs and complexity, streamlining application development and operations for AI/ML, IoT, and edge environments.

KEY BENEFITS

- **High Performance:** The platform provides low-latency and high-throughput communications, making it ideal for demanding real-time processing and data streaming applications.
- **Scalability:** The platform can scale effortlessly from a single node to a large footprint of globally dispersed nodes without compromising performance.
- **Security:** Built-in security features including TLS, multiple forms of authentication, multi-tenancy and fine-grained access controls.
- **Simplicity:** Easy to deploy and manage with a straightforward API for quick integration with existing systems.
- **High Availability:** A cluster provides protection against node and network failures, ensuring that clients can always connect and communicate.
- **Multi-Cloud Support:** Seamlessly integrates across various cloud providers and on-premises environments.
- **Customer Support:** Take your NATS journey with confidence knowing a team of experts is delivering proactive and reactive services to ensure your business success.



Synadia Control Plane Overview

Core Features

- **Messaging**: High-performance messaging with support for various patterns including microservices, real-time event sourcing and feeds.
- **Data Persistence:** High-performance, real-time and replayable; key-value system and object store, replicated across the system for resiliency.
- **Multi-Tenant Support:** Secure and isolated environments for multiple tenants with the same infrastructure.
- **Security:** PKI based authentication system, with account based signing keys for access revocation and programmatic user control.

Summary Technical Specifications

- **Protocol:** Supports the NATS protocol over TCP or WebSockets and supports MQTT 3.1 and HTTP.
- **Latency:** Sub-millisecond latency for real-time applications.
- **Throughput:** Capable of handling millions of messages per second.
- **Deployment:** Supports Kubernetes, Docker, and bare-metal deployments.
- **Programming Languages:** Tier one, Synadia supported and maintained client libraries are available for popular programming languages: Go, Rust, JavaScript, .NET, Ruby, Java, Python, and C. Community libraries cover other programming languages.

Technical Use Cases

- **AI/ML:** Provides high-speed inference at the edge and large-scale model training across multiple regions and clouds
- **Edge Computing:** Enables real-time data processing at the edge, reducing latency and bandwidth usage.
- **IoT:** Efficient communication, fleet management, and data streaming for IoT devices.

Vertical Solutions

- **Financial Services:** Supports immutable systems of record, real-time analytics, secure messaging, and sharing of data services such as stock tickers and exchange rates.
- **Healthcare:** Facilitates real-time data exchange between medical devices and healthcare applications, enabling distributed tele-health offerings.
- **Telecommunications:** Low-latency messaging for network management and service delivery, resource pool sharing and control, usage logging, and microservices.
- **Manufacturing:** Real-time control and monitoring of manufacturing processes.
- **Energy and Utilities:** Monitoring and management of renewable energy sources.
- **Logistics and Transportation:** Real-time tracking and management of shipments.
- **Retail:** Enhanced customer transaction processing and inventory management.
- **Media and Entertainment:** Low-latency content delivery and use engagement.
- **Government:** Real-time data collection and processing from IoT sensors for delivering public services.
- **Automotive:** Enables in-vehicle infotainment systems, over-the-air (OTA) software updates, vehicle-to-everything (V2X) communication, autonomous driving data processing.

Success Stories

FINECO BANK

Financial Institution:
Achieved faster trade execution and real-time risk management, leading to more profitable financial outcomes.

"We first spotted NATS because it covers all our needs such as request/reply, queue subscriptions, and guaranteed message delivery. The wide range of languages supported was also a plus – but it is the low effort required for administration that really nailed NATS as our connectivity platform of choice to build on for the future."
– Franco Sabini,
Head of IT, Trading Online,
FinecoBank

SCHAEFFLER

Manufacturing Company:
Real-time control and monitoring of its automated production lines allowed for immediate adjustment to manufacturing processes, which improved production efficiency and reduced downtime.

"NATS infrastructure is very important to us because it allows us to increase the efficiency of our production environment to faster develop new technologies and to gain lots of insights in all the data we generate day in day out."
– Max Arndt,
Senior Platform Engineer,
Schaeffler

powerflex EDF Renewables

Energy Firm:
Monitoring and managing renewable energy sources of solar and wind ensured more efficient power distribution, performance monitoring and quick response to operational issues.

"I'm excited that NATS provides a secure connection between our cloud and edge services where messages are just there. The leaf node topology is amazing because it allows our sites to operate independently even when networks go offline."
– Robbie Hughes,
Full Stack Software Developer,
PowerFlex

CONCLUSION

Synadia Platform elevates the open-source NATS to a comprehensive, enterprise-ready platform, with the latest security and compliance, optimized cloud integrations, monitoring and observability, and expert consulting and support. It delivers low-latency and high-performance messaging with built-in data management such as key-value and object stores and streaming. Its lightweight footprint spans edge, IoT, cloud, and on-premises deployments across any geo making Synadia Platform the ideal choice for organizations looking to modernize distributed applications for the AI-driven world and edge environments.

To learn more about how Synadia can transform your approach to distributed applications, visit us for a free trial or contact our team for a personalized demonstration.

FREE TRIAL CONTACT US

Commercial Offering compared to Open Source

While open-source NATS provides a powerful foundation, the Synadia Platform elevates it further, offering enhanced features and enterprise-grade capabilities. This comprehensive solution streamlines operations, and bolsters security, delivering a superior experience tailored for demanding business environments.

CAPABILITY	FEATURE	SYNADIA PLATFORM	OPEN-SOURCE NATS
Performance	Low-latency	■	■
	High-throughput	■	■
	Advanced scalability	■	■
Compliance and Security	Leverage true multi-tenancy between accounts	■	■
	Share data and services securely across accounts	■	■
	Easily tailor precise RBAC policies for your team without learning another CLI tool	■	■*
	FIPS build available	■	□
	SOC2 Type II (pending 2024)	■	□
	Integrate with any OIDC-compliant identity provider	■	□
	Integrate with key management system for encrypting secrets	■	□
	Seamlessly manage and rotate application credentials	■	□
	View a full audit log of all resource changes	■	□
Management	Create streams, key-value stores, and object stores	■	■
	Mirror data across regions and connected edge	■	■
	Integrated observability and management tools with a GUI and API	■	□
	OIDC authentication	■	□
	Visually manage your streams and consumers and set limits	■	□
	Easily share streams across team accounts	■	□
	Visualize your entire topology, from cloud to edge	■	□
	Analyze metrics across servers, clients, and streams	■	□
	Monitor account usage across teams and domains	■	□
Customer Support	NATS.io community Slack channel	■	■
	Access to distributed system experts	■	□
	24/7 enterprise support	■	□
	Three levels of support services available to meet your business needs	■	□
	NATS experts to help troubleshoot technical issues and offer proactive guidance	■	□
	Additional services including an annual health check for premium and enterprise level subscriptions	■	□
	Access to a suite of content including troubleshooting guides and best practices	■	□
	Onboarding services including architectural guidance	■	□

* Offered out of the box, but requires time investment

About Synadia

Synadia provides a secure, scalable, and high-performance data and communications platform designed for distributed systems. It empowers developers and enterprises to accelerate the delivery of distributed applications. Synadia leverages NATS, a connective technology, to enable real-time, secure communication across cloud, on-premises, edge, and IoT environments. NATS is an open-source platform powering thousands of applications globally. Founded in 2017 by the creator of NATS, Synadia is backed by leading VCs and strategic investors, including Forgepoint Capital, True Ventures, Bold Capital Partners, LDVP, Singtel, Accenture, and Samsung Next. Synadia's diverse customer base ranges from innovative startups to Global 500 enterprises in Finance, Retail, Automotive, and Industrial Manufacturing to innovative startups across FinTech, AI, Green Energy, and Gaming. Learn more at https://www.synadia.com/.

About NATS

NATS is a connective technology built for the ever increasingly hyper-connected world. It is a lightweight, low-latency technology that enables applications to securely communicate across any combination of cloud vendors, on-premises, edge, web and mobile, and devices. NATS consists of a family of open source products that are tightly integrated but can be deployed easily and independently. NATS is unique in its simplicity and performance, and as a result powers some of the largest production environments. NATS is being used globally by thousands of companies, spanning use-cases including microservices, edge computing, mobile, IoT and can be used to augment or replace traditional messaging.

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