ග Synadia

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.

Try Synadia's free trial or contact our team for a personalized demonstration.





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Synadia Platform enables software architects, developers and operators to design, build and run high-performance, low-latency, globally distributed applications.

Based on open-source technologies - NATS (connectivity: distributed communication patterns) and NATS JetStream (data: streaming, key-value, object storage; events: real-time event sourcing and feeds) - the platform elevates NATS to an enterpriseready solution with enhanced security, compliance and management features.

Founded by the creator of NATS and home to its most active maintainers, the platform offers two deployment options: self-managed on-premises, in any cloud and embedded in edge devices/applications or managed and supported by Synadia experts in your cloud (BYOC). Synadia also provides expert consulting and customer support for distributed systems spanning multiple clouds and the customer-defined edge.

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: Provides low-latency and high-throughput communications, making it ideal for demanding real-time processing and data streaming applications.
- Scalability: Scales effortlessly from a single node to a large footprint of globally dispersed nodes without compromising performance.
- Security: Offers built-in security features including TLS, Auth Callout, multiple forms of authentication, multi-tenancy and finegrained access controls.
- · Simplicity: Easy to deploy with a straightforward API for quick integration with existing systems. Manage your NATS infrastructure with an all-in-one control plane.
- High Availability: Provides protection against node and network failures with a cluster architecture, ensuring that clients can always connect and communicate.
- Multi-Cloud, Edge and IoT: Seamlessly integrates with multiple cloud providers, supports IoT devices and operates efficiently at the edge and on-premises.
- **Customer Support:** Take your NATS journey with confidence knowing a team of experts is delivering proactive and reactive services to ensure your business success.

Core Features

- **Messaging**: High-performance messaging with support for various patterns including distributed communication patterns, real-time event sourcing and feeds.
- Data Persistence with NATS JetStream: High-performance, real-time and replayable; built-in key-value system and object store, replicated across the system for resiliency. Extend NATS and JetStream to your premises or the edge with leaf node mode.
- **Multi-Tenant Support:** Secure and isolated environments for multiple tenants with the same infrastructure.
- Management: Centralized management of one or multiple NATS systems in an all-in-one control plane, including purpose-built monitoring of servers and clients, CLI and views of real-time connections, users, streams/consumers, exports, alerts and settings.
- Security: Managed decentralized auth with optional auth callout and PKI-based authentication system, with account-based signing keys for access revocation and programmatic user control.



Summary Technical Specifications

- **Protocol:** Support for 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.
- **Security:** Multi-tenancy, decentralized authentication with fine-grained authorization controls, signing key rotation and revocations. TLS encryption.
- Multi-Deployment Options: Run on VMs, clouds, baremetal, Docker and containers like Kubernetes.
- Management: Offers a unified dashboard, multi-cluster management/support, fine grain and policy-driven access control, real-time updating, real-time monitoring via Prometheus and centralized management of security.
- **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.
- NATS JetStream: Provides message persistence across nodes; flow control with streams; key-value store for KV workloads and object store for unstructured data; at-leastonce and exactly-once message delivery; scalable and fault-tolerant.

Technical Use Cases

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- **AI/ML:** Provides high-speed inference at the edge and largescale 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.

Success Stories

Financial



"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, Fineco-Bank

Manufacturing

"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

Energy

"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

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 <u>open source NATS</u>, a connective technology, to enable real-time, secure communication across cloud, on-premises, edge and IoT environments. Founded in 2017 by the creator of NATS, Synadia is backed by Forgepoint Capital, True Ventures, Bold Capital Partners, LDVP, Singtel, Accenture and Samsung Next. Synadia's customer base ranges from innovative startups in AI, Green Energy and Gaming to Global 500 enterprises in Finance, Retail, Automotive and Industrial Manufacturing.