

Redox Prospectus

Scalable Infrastructure for Healthcare

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Redox exists to make healthcare data useful. We’ve built the simplest, most scalable way for provider organizations and technology vendors to exchange data. Together we are re-inventing the way healthcare technology is adopted and enabling dramatic improvements to care delivery, clinical outcomes, patient experience, and provider happiness.

With Redox, a single connection to our platform enables interoperability between EHRs, other legacy systems, and cloud-based applications in a matter of days, not months. We accomplish this through a centralized architecture that accommodates a wide range of data standards and communication preferences. When two organizations agree to exchange data, we facilitate the exchange by handling connectivity, data translation, and data delivery ensuring data is exchanged the same way every time.

► **HOW WE DO THIS**

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► **WHY WE DO THIS**

Technology adoption in healthcare has been slowed by interoperability issues. Too many systems can’t efficiently interact with one another. This is stifling the development and distribution of technology that has the power to improve outcomes and provider happiness, increase patient engagement, and lower costs. Redox delivers the data sharing infrastructure needed for healthcare to realize the full potential of digital health.



Who We Power: Provider Organizations

Redox is a full-service integration solution designed for the technology-enabled provider organization. With Redox, a single connection from your EHR to our Platform enables turn-key interoperability with hundreds of software applications.

WHY PROVIDER ORGANIZATIONS PARTNER WITH REDOX

1

Power Digital Transformation Initiatives

With a reusable application layer and APIs out-of-the-box, Redox enables provider organizations to rapidly adopt and deploy new technology. From patient engagement to telemedicine, care coordination to inventory management, our vendor partners are bringing cutting edge technology to market. Once your organization is connected to Redox, all of these application integrations become turn-key.

2

A Full-Service Solution

Redox takes on the work of building, configuring, and maintaining interfaces to vendors so IT teams can focus on higher-value activities. We handle the mapping of interfaces from the EHR and other legacy systems to our centralized API, so the IT team doesn't have to worry about meeting new specs. Redox also monitors all message traffic 24/7, acting as a first line of support for any errors and issue resolution with third-party vendors (yes, we have pagers).

3

Built to Scale

Connect once, connect all. Redox partners with IT teams to maintain a single connection to our platform—that means just one VPN to maintain, no matter how many cloud-based applications you connect. Interfaces and web services from the EHR power a suite of APIs that are reused for subsequent integrations. This design dramatically reduces effort required by IT and accelerates project velocity.

"Redox will allow us to efficiently and securely share information that is essential to supporting the development of novel technologies that have the potential to ultimately improve the care of our patients."

Adam Landman, CIO, Brigham & Women's Hospital



Who We Power: Technology Vendors

Redox helps bring healthcare's best-in-breed technologies to market faster with an integration solution that scales across any customer site. Because our platform is vendor agnostic, integration with a client using Cerner is no different from one using Epic, athenahealth, or any other EHR.

WHY VENDORS LOVE REDOX

1

We're Subject Matter Experts

Redox doesn't just give our partners software that they have to figure out and maintain themselves. From workflow design to connection monitoring and issue resolution, the Redox team is with you every step of the way. We believe in the power of specialization, and that's why our team of integration experts handles all necessary configurations and maintenance for the life of your connections.

2

Expand Your Customer Base

Integrate with any EHR, Practice Management System, or Lab System through a single API. Through Redox, you can read, write, and query health data with all of your customers the same way every time. The Redox API is universally compatible, and our partners are exchanging data with over 40 EHRs.

3

Quick to Implement

Redox is an interoperable network, meaning any organization already using Redox has gone through the connectivity, security, and configuration process required to exchange data. Our standardized model eliminates the need for time-consuming back-and-forth conversations and site-specific configuration, allowing for net new sites to require less than twelve hours of health system IT support. Our average install timeline is 4-6 weeks, and in places where Redox is already in use, we can go live in a matter of hours.

"Redox has been a great partner for us. Their solution has proven to be robust and reliable, allowing our development teams to focus on delivering a great user experience knowing that Redox was supporting the data flows."

Dan Gaines, VP of Product Management, CareVive

The Redox Network

The power of our platform lies in its ability to make an organization totally interoperable with thousands of others. When you connect to Redox, you become part of an ecosystem that enables each member to seamlessly share data with all other nodes in the network. Connectivity requires minimal development, as members are able to use the technical mapping already established with provider organizations, HIEs, data warehouses, and the industry's leading healthcare technology solutions.

"With Redox, we can ensure access to information across myriad IT systems used to deliver and document care to get a comprehensive view of a patient and to ensure their high-quality healthcare journey."

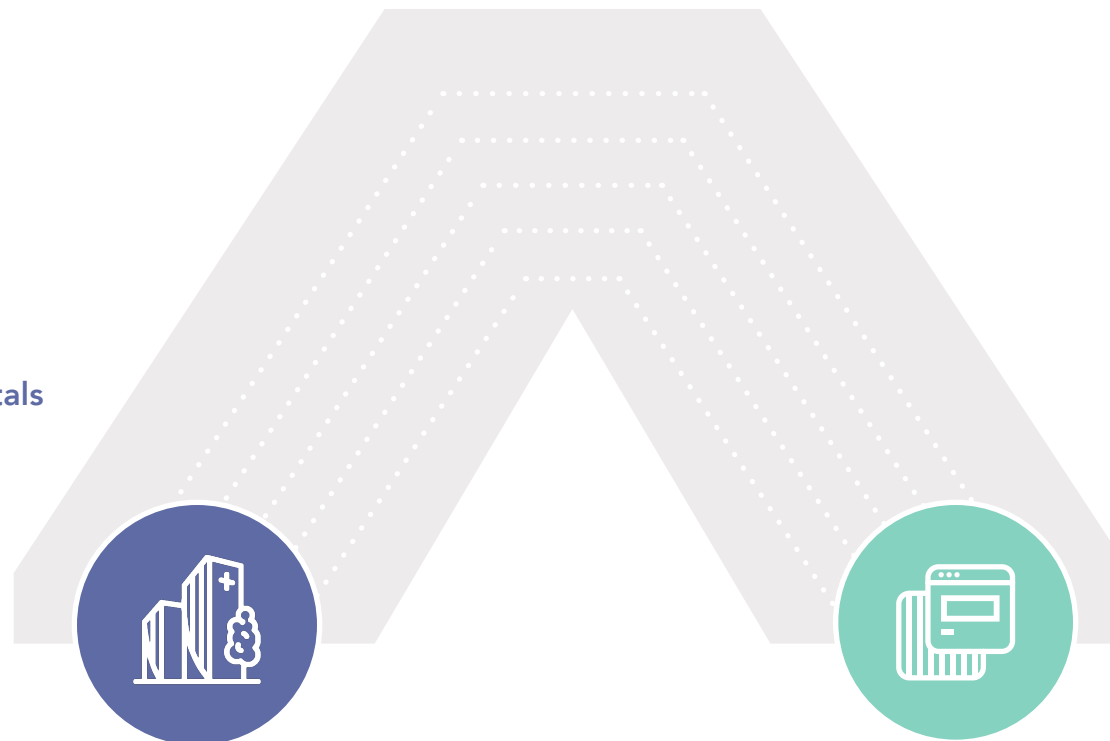
Mark Switaj, CEO, Roundtrip

PROVIDER ORGANIZATION ECOSYSTEM

- ▶ Hospital
- ▶ Academic Medical Centers
- ▶ Specialty Clinics & Hospitals
- ▶ Community-based Clinics & Hospitals
- ▶ Long-term Care Facilities
- ▶ Home Health Agencies
- ▶ and more...

TECHNOLOGY VENDOR ECOSYSTEM

- ▶ Telemedicine
- ▶ Population Health
- ▶ Care Coordination
- ▶ Patient Engagement
- ▶ Precision Medicine
- ▶ and more...



ACCELERATE
Time to Value


Without Redox
100
DAYS TO INTEGRATE


→

With Redox
30
DAYS TO INTEGRATE

=

With Redox
2+
MONTHS OF INCREMENTAL
REVENUE / COST SAVINGS

 **55+**
Connected EHR vendors &
HIEs in the Redox Network

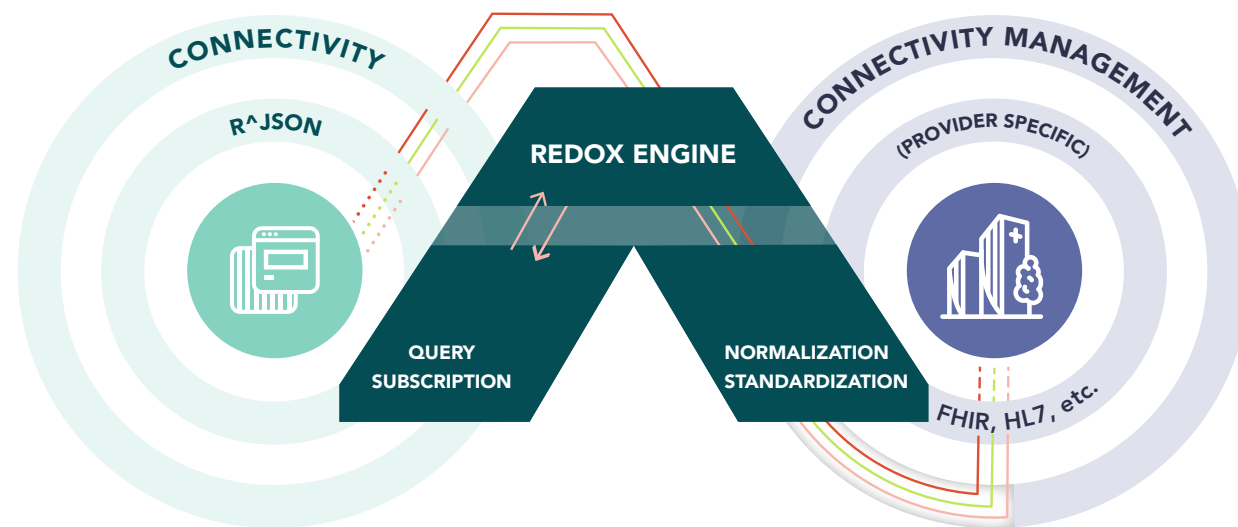
 **46 percent**
Top health systems use
Redox-powered apps

 **11 million+**
Messages per day pass
through the Redox Network

How We Work

The Redox Platform allows organizations to access and interact with a wide variety of health-care-related data via a consistent, normalized, REST-inspired API. Our platform is based on our truly-standardized data model format and uses HTTPS communication with JSON to allow users to securely and conveniently build the next generation of innovative healthcare applications.

How Data Moves Through Redox



- █ Health Delivery Organization to Application Event
- █ Application to Health Delivery Organization Event
- █ Data on Demand via Query
- █ Data in Real-Time via Subscription

The Redox Engine

A modern integration engine optimized for the cloud. The Redox Engine is completely vendor (EHR/PMS/LIS) and standards agnostic, allowing you to read, write, and query healthcare data with any partner. All data exchanged is translated into the preferred format of the receiving system before delivery.

Standards Supported:

HL7v2, CDA, X12, FHIR, Vendor APIs

Communication Methods Supported:

Web Services, MLLP, SFTP, XDR, XDS.b

Connectivity Management

Enjoy a simpler way to exchange health data with any partner and never worry about VPN management or multiple authentication credentials again. For technology vendors, we establish and maintain connectivity to on-premise systems allowing you to operate firmly in the cloud. For provider organizations, Redox partners with IT teams to maintain a single connection to our platform. That means just one VPN to maintain, no matter how many applications you connect.

Standardization/Normalization/Translation Layer

All data exchanged across the Redox Network goes through a transformation process to ensure it is compatible with the receiving system. Most commonly, this occurs when translating from the Redox data model to a provider organization's unique data specifications. When a node with unique data requirements first enters the Redox Network, a specific configuration is built to facilitate this translation.

Modern API

The Redox API includes 22 (and growing) data models that power a wide range of data exchange workflows. Our strict canonical data models ensure total interoperability and scalability across all integrations.

Data on Demand

For advanced workflow normalization across disparate systems, the Redox Platform adds an additional layer of abstraction on top of legacy EHRs to power previously impossible query driven workflows and use cases.

Data via Subscription

Enables subscribe-and-receive workflows with interfaces and web services. Receive important information as it occurs with any health data source system and keep workflows consistent across a diverse customer base.

The Health Data You Need, When You Need It

APPLICATION'S REQUIRED COMMUNICATION
based on engineering and workflow considerations

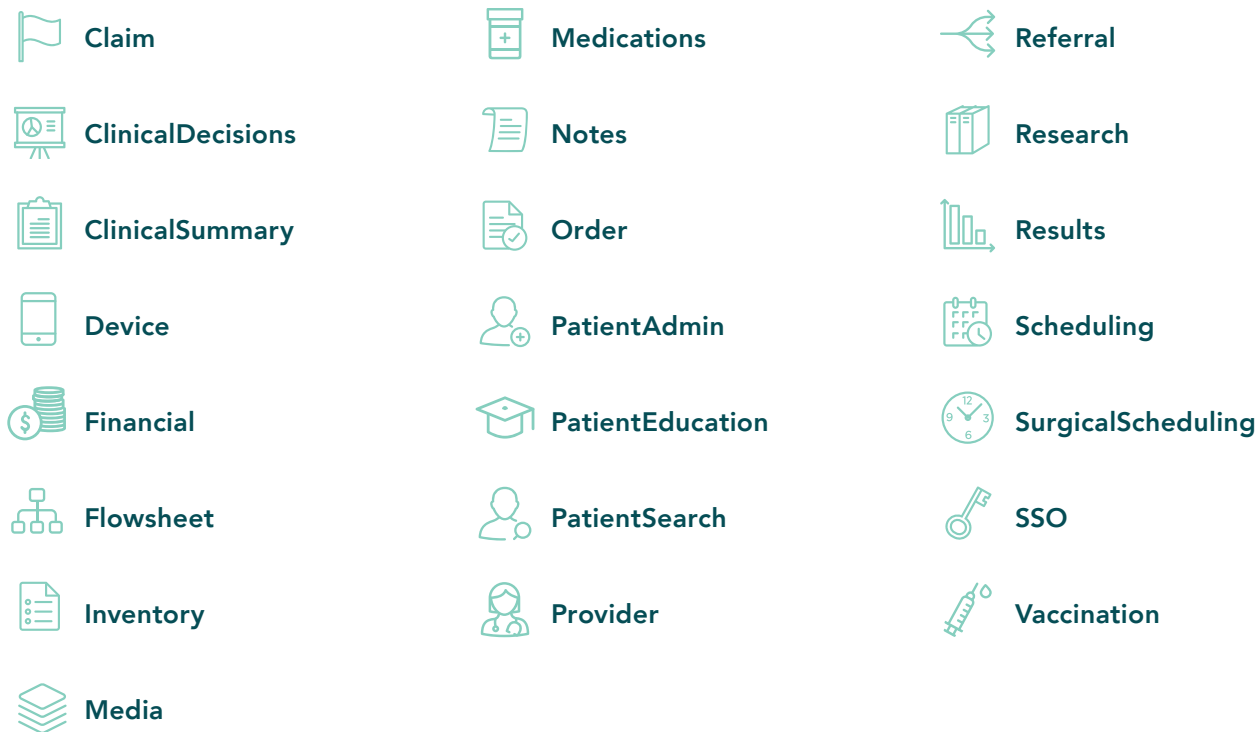
QUERY	<p>DATA ON DEMAND</p> <p>Redox receives and standardizes messages to be made available to query.</p>	<p>API PASS-THROUGH</p> <p>Applications query Redox. Redox forms queries compliant with the source system requirements and translates synchronous responses.</p>
EVENT	<p>INTERFACE SUBSCRIPTION</p> <p>Redox translates HL7 into our JSON specification and posts to an application's callback URL.</p>	<p>API POLLING</p> <p>Redox queries the source system at a given interval to identify new data. Responses are then posted to the application's callback URL.</p>
	EVENT	QUERY

HEALTHCARE ORGANIZATION'S CAPABILITIES based on legacy systems (EHR, Interface engine, etc.)

Redox Data Models

Our standardized JSON data models are the framework our API uses to enable third-party applications to read, write, and query healthcare data. There are two kinds of data models: the first is event based, where messages are triggered by user action within the EHR (a new appointment is scheduled, a new patient is registered, etc.) and automatically pushed to an established webhook; the second is query based, where clinical data is pulled by request and is sent to an application on demand.

Redox currently offers 22 data models that can exchange a wide array of clinical data. If your solution requires complex clinical data, let us know—often we can combine models to fit your requirements, or create an entirely new one to support your workflow needs.



Workflows We Power

The healthcare technology solutions powered by Redox cover the entire continuum of care. The Redox Platform offers truly unparalleled possibilities for health data exchange. Below are a few of the many workflows we power today.

Direct Scheduling	Real-time scheduling information and direct scheduling workflows
Orders & Results	Know about labs and imaging as they are ordered and as results are posted. Submit results and offer POC tests.
Document Exchange	Import PDFs and JPEGs into any patient's medical record. Provide contextual reports or summaries.
Remote Monitoring	Automatically file back clinical values from medical devices. Trigger alerts as needed.
Medical History Exchange	Retrieve medical summaries to support workflows and submit updates for care received outside of the traditional care setting.
Referral Management	Receive referrals and close the loop by seamlessly reporting back the results of the visit.
Inventory Optimization	Use clinical data to optimize inventory turnover ratio.
Trigger Alerts	Incorporate a rules engine and trigger best practice advisories at the point of care.
Patient Education	Retrieve notes and after visit summaries for review and use by patients. Share timely, targeted information at the patient level based on diagnoses and care received.
Patient Reported Outcomes	Collect valuable data from patients that can be transmitted to the EHR and made available to clinicians and for reporting purposes.



Review full data model documentation:
developer.redoxengine.com

The Secure Platform for Data Exchange

The healthcare technology solutions powered by Redox cover the entire continuum of care. The Redox Platform offers truly unparalleled possibilities for health data exchange. Below are a few of the many workflows we power today.

Application Security Framework

For provider organizations, one secure connection to Redox allows you to communicate with all of your cloud-based applications, thus reducing the exposure to your data center.

We enforce modern security standards in communication with applications, eliminating the need for redundant complexity and inconsistency across vendors. Our engine's advanced filtering limits vendors' PHI access to only what they truly need to know.

For our enterprise clients, we evaluate each application's security posture based on your organization's requirements. Redox is a single, strong, secure connection enabling communications across your vendors.

Redox Security Program

Redox takes exemplary measures to safeguard against security threats. We are HITRUST certified and have a SOC2 Type II report. Additionally, we work with multiple third-party testing vendors to conduct penetration testing, as well as intrusion detection, intrusion prevention, and endpoint protection.

Certifications & Reports

HITRUST

Beyond being HIPAA compliant, Redox has passed an extensive compliance verification from HITRUST, the leading and most widely recognized third-party auditing framework within healthcare. HITRUST evaluates enacted security measures against multiple industry standards and regulations to prove platform compliance.

A rigorous and challenging test, our HITRUST certification demonstrates to our partners that data security is a top priority at Redox.

SOC 2 Type II Report

Our SOC2 Type II report provides evidence that Redox adheres to the highest standards of security and stability for service providers in the cloud. Our SOC2 Type II audit evaluated our entire operating environment—from firewall configuration, encryption, and password protocols to background checks, intrusion prevention, and third party penetration testing—to assert that Redox has built a secure infrastructure to manage health data.

Revolutionize Healthcare

Redox makes possible the secure, efficient exchange of data between provider organizations and technology vendors. Our network is comprised of healthcare delivery organizations, technology vendors, HIEs, lab systems, and other healthcare delivery organizations who trust Redox to exchange and store their patient data.



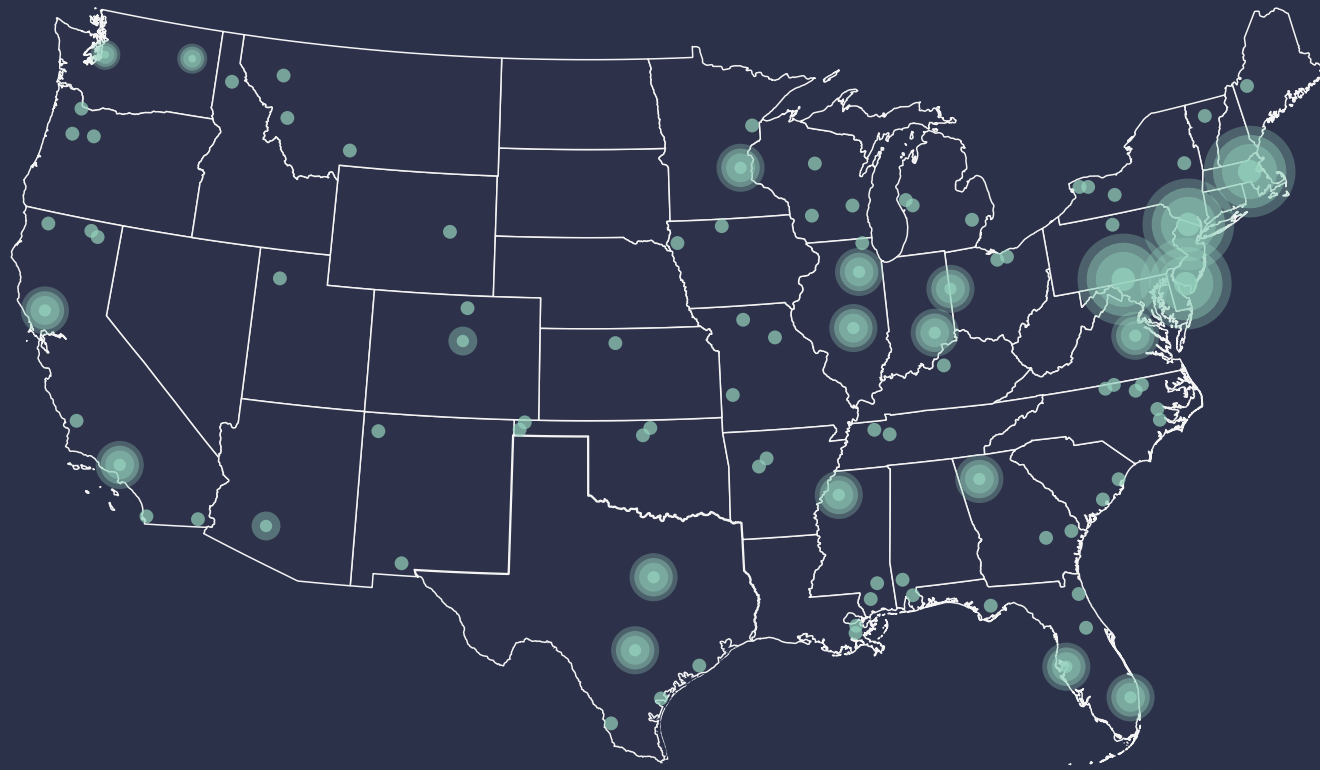
+ hundreds more...

"Redox's developer-centric platform has clearly attracted the most innovative solutions on the market. And their unique networked approach brings tremendous efficiency gains in the adoption of these tools at healthcare organizations. Redox is quickly becoming the de facto solution for application interoperability."

Rasu Shrestha, MD MBA, Chief Strategy Officer, Atrium Health

Get Started with Redox

If you're not connected to Redox, you're not sharing health data efficiently. Speak with us today and become part of the only interoperable healthcare network that's connected to over 700 health systems.



Talk to Us Today



Send Us a Message
redoxengine.com/contact-us



Review Data Model Docs
developer.redoxengine.com



Join us on Slack!
community.redoxengine.com

See What Others Have to Say

"It's a dog fight [for patients] these days in any given geography...Redox brings Mean Time to Integration (MTTI) down from 100 days to 30. It's alarmingly (in a good way) faster. And that's a massive competitive advantage."

Innovation Leader at Major Mid-Atlantic Health System

"The biggest reasons we switched to Redox from Mirth was the ongoing costs of customizing messages for each client. We had to invest in a lot of specialized knowledge and dedicated developers just to handle Mirth. We already do REST APIs so switching to Redox was a win-win."

Glen Colby, Developer Lead, Healthwise

"Redox has provided us with the ability to integrate the Glooko platform into our Health System customer's EHR in an efficient and timely manner allowing for improved provider workflow and more effective treatment decisions at the point of care for patients with diabetes."

Jack Dainton, Enterprise Business Development Executive, Glooko

"Thank you for being in the 1% of VPN's that I've set up that was easy and worked the first time! There have been countless VPN turn-ups that take forever because of misconfiguration or miscommunication. I had none of that with you configuring it on your end and it is very much appreciated! I wish they all went like this!"

Shawn Babynecz, Network Security Engineer, Cleveland Clinic



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