Association Of Public Health Laboratories (APHL)

APHL Informatics Messaging Services (AIMS) Platform

AIMS is a secure, cloud based environment that accelerates the implementation of health messaging by providing shared services to aid in the transport, validation, translation and routing of electronic data.

Serving Public Health

The ability to share data efficiently and securely with diverse messaging partners is a critical capability for public health, however it is often difficult for the public health community to maintain multiple point-to-point electronic interfaces and accommodate ever-changing transport mechanisms. APHL developed AIMS in direct response to these challenges.

The AIMS cloud environment offers both software as a service (SaaS) and a platform as a service (PaaS). In other words, trading partners can leverage custom services and applications for message translation and transformation and set up alerts for notifiable conditions in electronic laboratory reporting (ELR) feeds, while also using AIMS as a platform for transport protocols and integration engine software.

Connecting Partners

Our trading partners include federal agencies, the United States Uniformed Services, regional commercial laboratories and hospitals, State Health Information Exchanges (HIEs), and 50 state public health jurisdictions. Our list of trading partners is a testament to the strong relationships that we have built with the public health community, including the Centers for Disease Control and Prevention (CDC), the U.S. Navy, the Association of Territorial Health Officials (ASTHO), and the Office of the National Coordinator (ONC).

Enabling Data Exchange

AIMS Platform has transported over 9,451,467 messages, growing at more than 3,294,626 messages per month. Examples of data currently exchanged through AIMS include:

- Aggregated Influenza test result data from public health laboratories to CDC
- Vaccine-preventable disease reports from testing centers of excellence to CDC
- Biological threat data from laboratories within the Laboratory Response Network to CDC
- Immunization data exchange among several public health jurisdictions
- Electronic laboratory reporting (ELR) between eligible hospitals and their respective jurisdictions
- Whole Genome Sequencing (WGS) through the Advanced Molecular Detection(AMD) program
- Electronic Case Reporting (eCR) between providers and jurisdictions across the US
Routing messages through the AIMS Route-Not-Read (RnR) service reduces certificate management and message routing tasks for individual trading partners. Each messaging partner updates credentials for a single recipient or poller, rather than maintaining connections to multiple senders and pollers. Once a trading partner is on AIMS, they can send and receive with any trading partner already on the Platform with minimal effort.

In addition, the translation and transformation services that AIMS offers make it easier for agencies and laboratories to exchange data with a variety of senders and receivers. AIMS provides interoperability between a variety of transport protocols, which allows a sender using one protocol to send data securely to a receiver that uses another. Transport protocols that the Platform can process include PHINMS, Direct, Web Services, AWS S3, SFTP and VPN.

For More Information
Contact the APHL Informatics Program:
informatics.support@aphl.org

Creating Efficiencies
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Additional benefits to using AIMS include:

• Common architecture and services
• Shareable Open Source architecture
• Centralized processing and message routing
• Real-Time monitoring and audit systems
• Reduced data translation and transformation complexity
• Reduced development and support costs
• Flexible capacity technical infrastructure
• 5 Year authentication certificates
• Vocabulary and HL7 message support
• Experienced and dedicated technical support

Strengthening Security and Compliance
AIMS is located in the East and West Regions of the cloud computing market leader, Amazon Web Services (AWS). AIMS is hosted on AWS, a cloud service provider that meets FedRAMP, HIPAA and Department of Defense compliance. In addition to these, AIMS has undergone two successful FISMA Moderate 3rd party audits and four successful 3rd party penetration tests. AIMS is monitored and maintained by health technology professionals with expertise in cybersecurity, cloud computing and data integration.