Introduction and Ecosystem

XINA is an integrated data management platform, developed at NASA GSFC. XINA is provided as a managed service hosted on Amazon Web Services.

Overview

The XINA platform provides five primary functions:

- Structured Database Storage (MySQL on AWS RDS)
- File Storage (AWS S3)
- Task Management (XINA Run on AWS EC2, XINA Lambda on AWS Lambda)
- Web Client (XINA Web, Angular)
- Direct API Access (XINA Tunnel)

XINA supports Launchpad and NAMS integration for user management and authentication.

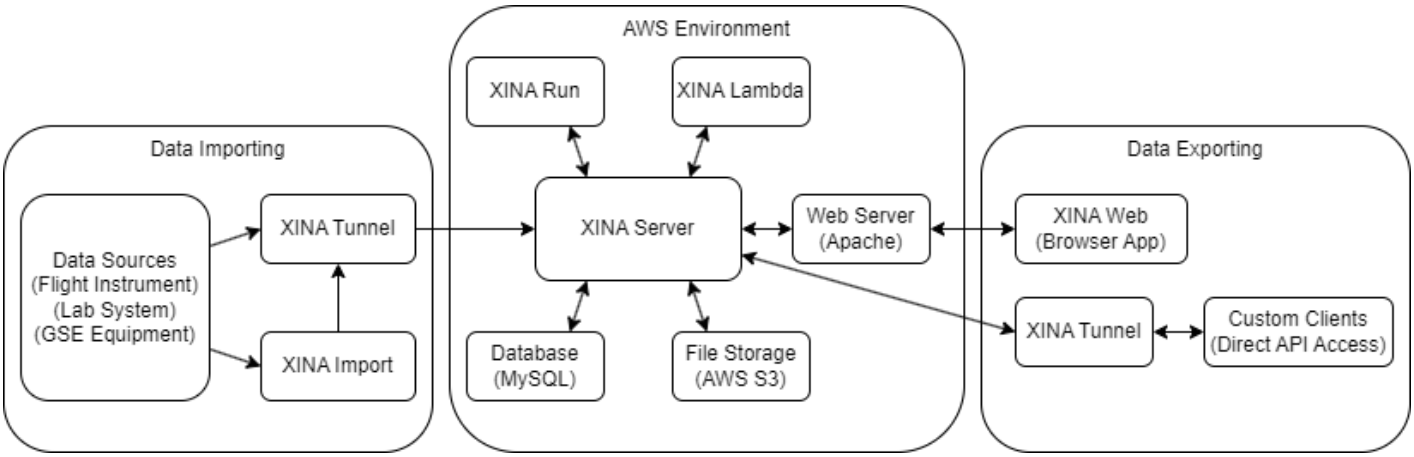
Limitations

XINA is not a single standalone application, and cannot currently be installed locally. We provide the software as a service through a NASA AWS account integration. Specific AWS requirements and costs will vary depending on project parameters.

XINA is not recommended as a gold copy for data storage. Although AWS cloud services are highly reliable and XINA is often used as a valuable backup tool, a full gold copy should always be kept onsite.

XINA System Components

The XINA platform is composed of several interconnected components and applications:



XINA Server

The XINA server is the core application of the XINA platform. It manages all incoming and outgoing XINA data and provides API access. The server is built on a MySQL database backend and uses the AWS S3 service for large file storage.

XINA Web

XINA Web (formerly XINA Online) is the primary XINA front-end application, written in TypeScript with Google's Angular web application platform. Authentication is integrated with NASA Launchpad and managed through NAMS.

XINA Tunnel

The XINA Tunnel utility is a Java application intended to facilitate communication with the XINA API. The tunnel connects directly to the XINA server and manages connection security and authentication. It then opens a local webserver to which client applications can connect and communicate with the core XINA server. Full reference is available here.

XINA Import

The XINA Import utility is a Java application to simplify importing data to the XINA server by importing XINA API actions from JSON files. Full reference is available here.

XINA Run

XINA Run is a Java application for managing and executing asynchronous tasks though the XINA platform. Full reference is available here.

XINA Lambda

XINA Lambda is an integrated service for executing asynchronous tasks from the AWS Lambda platform. Full reference is available here.

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