Introduction

Although XINA is very flexible and can be configured to meet almost any data organization requirements, we have defined standard organization principles for common use cases with pre-built front end tooling. By adhering to these standards projects can quickly leverage built-in XINA front end tools and data processing pipelines, as well as first class API actions for interacting with data in complex ways. We call this collection of standards **structured data standards**, or **structs**.

These are not hard limitations of the overall XINA system, but serve as our recommended entry point into using XINA based on past experience, performance benchmarks, and cost/benefit analysis.

Data Models

The primary organizational concept of the struct system is the **data model**. Abstractly, a data model (or simply **model**) is defined as having a set of **synchronously relevant data**. For example, a project might have a flight model, ETU model, etc. Models store data in independent databases, and multiple models may be importing data in parallel.

Broadly we use **time** as the primary method to organize and synchronize data within a model. In XINA this is represented as an 8-byte unsigned integer Unix time with microsecond precision. We use Unix time because it is:

- Widely and consistently supported
- Time zone independent
- Efficiently convertible to other formats and time systems

Other time formats may be available for data export depending on project requirements.

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