Software Versioning

The Ed-Fi community produces a lot of software utilizing the Ed-Fi Data Standard. But there are multiple standards; they are versioned. And the various software components and tools are versioned. How do we make sense of all of this? Through use of semantic versioning (semver) and, in some cases, a *Suite Number*.

Also see:

- Ed-Fi Technical Suite Version Matrix
- Ed-Fi Technology Version Index
- Ed-Fi Data Standard Versioning and Releases
- Open Source and New Versioning (blog)

Semantic Version

All tools released through the Ed-Fi Alliance should at minimum have a semantic version with three part number: x.y.z, where:

- x: major version, which increments when there is a change that breaks compatibility.
- y: minor version, which changes when a new feature is added in a backward-compatible way.
- z: patch version, which changes when a bug is fixed or usability is improved without adding new features or breaking compatibility.

Anyone wishing to integrate another software product with an Ed-Fi tool will know that an upgrade to that tool should be safe if the patch or minor version number changes, while recognizing that an upgrade with a major version number bump will require careful evaluation to determine and mitigate the impact of breaking changes.

Patch: the least-significant number

While every release has a patch version, it might not be mentioned prominently in documentation. Furthermore, the number may change frequently during the development process, so that the formal "release" of a minor update might have a patch version greater than 0.

For example, the release of a "version 2.3" of some application might technically be "2.3.7". The 7 would be seen at a technical level, in the downloaded artifacts, but is not always worth documenting.

When semantically versioned software has multiple releases that differ only by patch number, it is generally best to install the latest patch version.

Suite Number

In 2018, the Alliance introduced the concept of Technical Suites, that represent a generation of technology products that share a data model and are designed to work together. See Ed-Fi Technical Suite Version Matrix.

Integrating the Suite Number into the versioning scheme was introduced in mid-2020; prior to this, an Ed-Fi ODS/API release was given only a plain version number, where the first digit corresponded to the Data Standard version. This was confusing and did not fit well with Semantic Versioning. For example, when Ed-Fi ODS/API 3.4 was released (full semver: 3.4.0), the Alliance knew that the next software release would have breaking changes in it, although the supported *data standard* would not.

In the previous convention, bumping the next release number from 3.4 to 4.0 would be confusing, as people would think that there was a corresponding release of a Data Standard 4.0 (there is no such thing!). So we introduced the *suite number* to indicate the major version of the Data Standard. Effectively, we went from 3.4 to 3.5 and moved the "3" over to the suite version: Ed-Fi ODS/API for Suite 3, version 5.0.