

Tier2 Submit Web Application – Our Vision



The purpose of this document is to outline one possible conception of a future multi-user web-accessible version of Tier2 Submit so that states can assess whether or not it would meet their requirements and whether they have the resources to implement it. No final decision has been made for the path forward, but your input is critical.

The application

The application would be hosted and administered by states or other entities, and accessed by users via a web browser. Initially, users would either upload their last submission file from the desktop version of Tier2 Submit or enter new data in data-entry screens. Most functionality from the desktop version would continue to be supported, but the interface may be quite different. The application would adhere to current web standards.

EPA/NOAA would develop the application in the Python and JavaScript programming languages, using an open-source database management system (e.g. Postgres or MySQL). To facilitate deployment to servers, we would package the application inside a virtual machine (e.g. VirtualBox) or application container (e.g. Docker). We would document configuration for all application components.

The application would include an automated user-account management system. Permissions would be controlled on both user-specific and data-specific levels.

The application would use industry-standard security protocols (e.g., encrypt passwords in the database) and would follow federal government security standards. We would provide security updates as necessary.

When the system identifies problems, it would automatically generate emails to the system administrator and other specified recipients.

We would provide technical support to states and other entities that host the application, but this would be limited by staff and resources.

Requirements for hosting the application

States would have a number of hardware, software, and personnel needs.

Database server and web server hardware are required. (Alternatively, a cloud server can be used.) The servers may run either Windows or Linux. Host software for the virtual machine or application container would be required (free options are available).

States must register a domain name and SSL certificate through third-party providers.

An experienced system administrator would install and configure the application, manage user accounts, monitor server resources (CPU, memory, and disks), and apply the updates we provide.

States would provide technical support to users. Some training material would probably be available from the CAMEO team.

If you have any questions or concerns, please let us know.