

LAW to Third Party API Configuration

XML Implementation

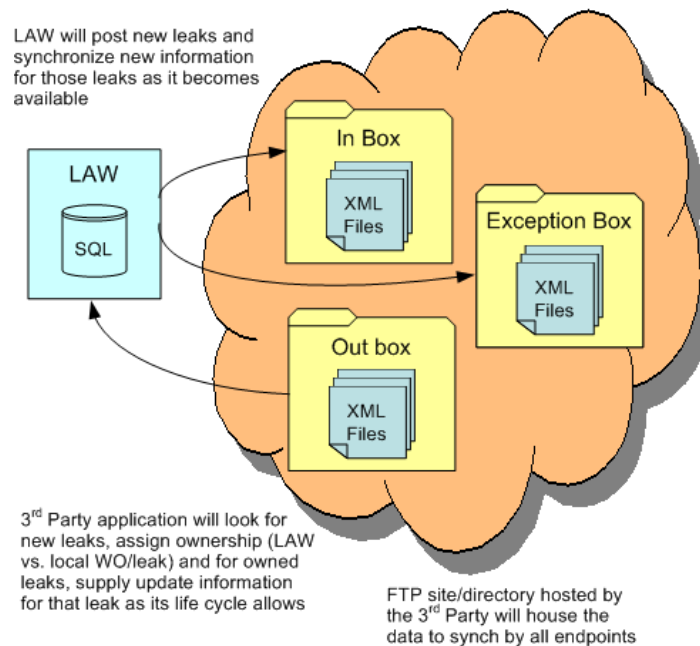
Summary

With LAW's application programming interface (API) enabled, the Trilithic LAW server will create an XML file with a record of each leak, which will then be posted to an FTP site or hosted directory. The third party application would supply feedback required for leak life cycle management in a similar XML file, in a different folder on the same FTP site or directory. During LAW's normal batch processing, not only will LAW post newly discovered or modified leaks, it will synchronize the data supplied by the third party application. In the case where the leak has been closed, the closure will be synchronized as well and the leak will be retained within LAW for historical purposes and reporting.

Timing for either endpoint is non-critical in regard to synchronization; if one end misses an update from the other during a synchronization pass, the data will remain available for future processing. Either party can check for updates and new files more frequently. With this methodology, neither the time-critical processes nor data capacity of the LAW server, the application server, or the third party databases will be disrupted.

In the case where errors occur related to API usage by either party, an XML error message can be posted to a designated subfolder.

XML Architecture



For Additional Help, Contact
 Trilithic Applications Engineering
 1-800-344-2412 or 317-895-3600
support@trilithic.com or www.trilithic.com

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Details

When a new leak is discovered or modified, LAW will supply the following information to the FTP site/directory, in XML format:

1. Leak record ID
2. LAW work order ID
3. Detection date and time
4. Latitude/longitude of the actual leak location
5. The predicted level of the leak
6. The nearest street address to the actual leak location (fully-parsed)
7. Status of the leak (open, closed/fix, deleted)
8. Status of the work order (open, closed/fix, deleted)
9. Assigned repair technician

The API can be configured so that feedback will not be used or required, as described below. Rather than requiring feedback from the third party application, the API would function as a mirror, to be used for export of LAW data to the third party. As LAW manages the lifecycle of the leak, the data in the XML file would be updated and removed as appropriate for normal operation of LAW. In this mode, the XML file will be republished every time a batch process is executed, and would only contain open leaks.

Otherwise, once the third party application becomes aware of these leaks/work orders, it will create a similar XML file that would contain the following additional information as well as updating the status, assigned technician, and street address fields as appropriate, based upon feedback from field technicians, dispatchers, etc.:

1. Repair/fix date and time
2. Problem code/cause of leak
3. Observed pre-fix leak level
4. Observed post-fix leak level
5. Comments
6. LAW-only leak? (true, false)
7. System work order ID

LAW will synchronize all of the updated data from the available XML files during its normal batch processing. New leaks will be posted to the third party application for technician dispatch and repair. Data collected from the field will then be transferred by the third party application back to LAW, which will allow for proper and efficient operation of both systems.

The normal capabilities of LAW to remove a leak from a work order and to delete erroneous leaks will be disabled (only for leaks recorded in the third party application) and handled exclusively by the third party application. Automatic closure of leaks and work order assignment (only for leaks recorded in the third party application) will be disabled in LAW.

Within the administrative section of LAW, a new user permission (titled API admin) is available. This user permission will allow a user with "API admin" rights to perform the otherwise-blocked functions described above.

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When the third party application changes the status of a leak/work order to a “closed/fixed” or “deleted” status, the third party will signal LAW to close or delete the leak and the associated work order on the next synchronized exchange.

Note: In an instance where the API Admin user does not have a means to provide a list of authorized technicians, LAW will add a default account for the technician specified by the 3rd party feedback.

All API-related errors are recorded in the LAW system error log, and a subfolder on the FTP site/directory. Third party errors posted to this file location are not reported in the LAW error log.

Additional Information

For users with “API admin” account privileges, a link will be available on the main administration page that allows them to set up necessary modes, switches, file paths, and miscellaneous aspects of API implementation. Included in the administrative privileges are database management; FTP connection parameters; port designation; and external connection strings. User accounts which are designated as “API admin” only do not have general administrative privileges, they only include API administrative privileges as necessary for IT personnel who will not oversee LAW functionality.

In all functions within LAW, the interface will display the third party work order number, rather than a LAW work order number. The third party application can send leak information to LAW of a new leak that was not entered in the LAW database. The LAW database will retain records on all leaks reported by the third party application so it can be available for historical purposes.

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