

Light Service Bus

It's 100%
worth it!

The Central Institute for Supervising and Testing in Agriculture (known also under its earlier designation The State Phytosanitary Administration) uses a variety of internal information systems. They communicate with services provided by the electronic registry at the Czech Ministry of Agriculture. The communication has been scattered in individual systems without any central administration or audit. The aim of the project was to design and to implement an integration platform which would unify the communication array between the ministry and other external subjects. It would enable a unified administration, enhance the security and a more efficient audit. In order to achieve this, the Light Service Bus (LSB) component in the High Availability configuration was implemented.



REFERENCES



ÚKZÚZ

The institute realizes administration inquiries, professional, testing and control activities. It specializes in protection of plants and plant products, mechanization tools and other plant-medical activities.

LSB benefits

- Low price
- Quick implementation
- Simple administration of services
- Flexible and efficient solution with a quick response
- Available validation of requests and responses via the XSD which lowers the communication workload
- Available reaction changes for provided services via XSL transformation requests and responses. This can be done without any major interference into the services on the other communication end.

Benefits

- Unified administration of the SSL communication certificate
- Simple and efficient configuration of the used services
- Validation and transformation of requests and responses
- Unified communication with external systems via one single component
- Precise communication audit

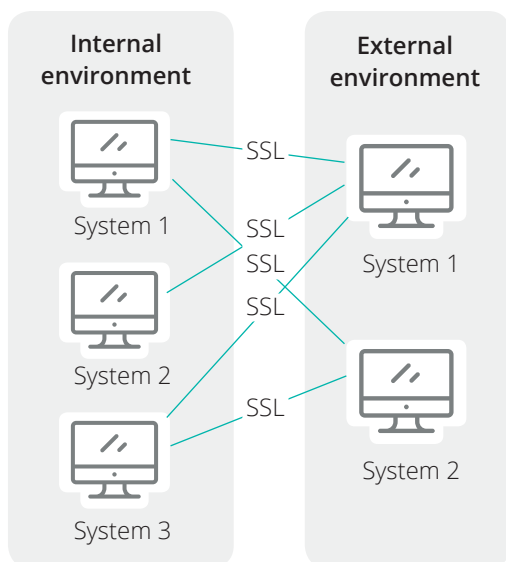
Applied technologies

- LSB components
- Apache HTTP Server
- Python
- MySQL relation database in a master-slave replication regime

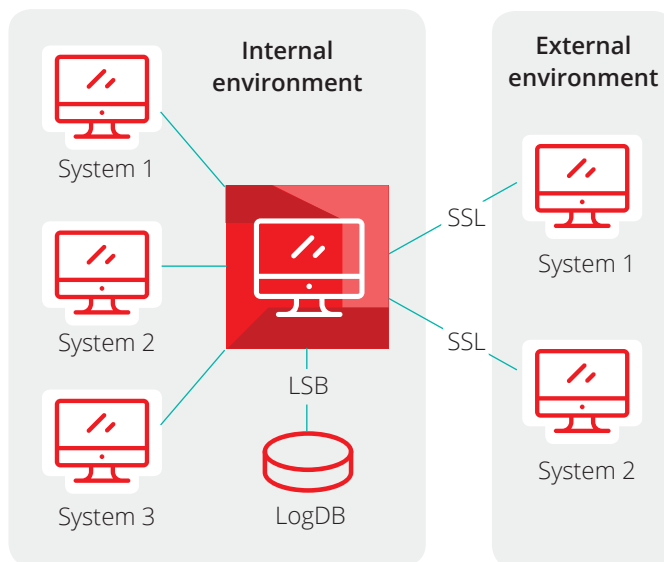
PROVIDED SERVICES



Initial situation



Target situation



References

„The connection of our agenda information systems with the basic registers via new communication and integration platforms required a professional approach and a maximal focus due to the limited available time. Our collaboration with GEM System brought a successful result with the required quality and in order with existing standards.“

Ing. Aleš Prošek

Director of the IT Department
Central Institute for Supervising
and Testing in Agriculture



Project implementation

Analysis

GEM System did a detailed analysis of the client's services. A specific LSB component was used based on analysis results. It enables an efficient and unified administration of a secured SSL communication with external services which has no requirements on the hardware. The component further provides validation and transformation of requests and responses, as well an asynchronous logging communication for audits - all that for a very low price. In order to achieve a high accessibility of the client's Integration platform, it was suggested to implement the LSB component on two parallel servers. The logging information database was also put into the High Availability regime. This was done via the classic master-slave replication and failover utility for the monitoring of a possible database server failure.

Testing

Based on the analysis results, a solution for the client's Integration platform was approved. A testing service configuration was created in order to verify the correct functionality for communication with testing EPO services of the Czech Ministry of Agriculture. After that, SoapUI description tests were run. Their creation was part of the project realization. Moreover, it included an integration testing with a selected agenda system of the client.

Product implementation and support

Following the tests in a testing environment, the solution was implemented in the product environment. A product configuration with provided services was created. Besides that, a replication for the High Availability solution was set in order to control the database storage for logging communication information.

The support regime is part of the client's Integration platform product implementation. The support offers solutions of the Integration platform operational issues in a 24/7 regime.