

CASE STUDY:

EXPERIMENT AS A SERVICE (EaaS)



Overview: A multinational oil and gas company was utilizing BIOVIA Experiment software to support the day-to-day operations of scientists running experiments in the companies' chemical operations division. These experiments were being conducted in three different laboratory locations worldwide, one of which had four servers on-premise that were being used to house the BIOVIA application and data center. The customer approached BIOVIA with a request for a cloud-based offering for BIOVIA Experiment, where it would be managed for the customer on a subscription basis. BIOVIA agreed to deploy a cloud-based offering of their Experiment application, and partnered with Astrix to provide the Managed Services.

Business Challenge: In order to be able to focus more on their core business, the customer was interested in getting out of the data center and application management business. A cloud-based application was also appealing for the customer because it offered cost reduction, improved operational agility and ability to scale to multiple locations globally in a single instance, and established a long-term shared knowledge base of experimentation for scientists that would accelerate the achievement of project goals.

Once the transfer was complete and the cloud-based platform was operational, the customer expected Astrix Managed Services to provide:

- ◆ A support team with deep application knowledge.
- ◆ Good connection and communication to the larger BIOVIA organization for escalation of problems.
- ◆ In-depth knowledge of the application architecture, both on the core components and company-specific components.
- ◆ Rapid response time for high-severity issues.
- ◆ Good understanding of the company application development policies.
- ◆ Access to the source code for quicker diagnosis of issues and rapid development of workarounds.

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Service Provided:

BIOVIA and Astrix created a partnership to provide the necessary services for the customer. This partnership has the following arrangements and agreements:

- Astrix provides BIOVIA with an Amazon Web Services (AWS) platform for their application.
- BIOVIA transfers the Experiment application to the AWS platform.
- Once the cloud platform is operational, BIOVIA provides continuous delivery of “Experiment as a Service” (EaaS). EaaS is essentially a collection of services that are designed to provide user support, software updates, content enhancement and project management for the BIOVIA Experiment application.
- Over time, responsibility for all aspects of the EaaS service will be transferred to Astrix. This will have the advantage of providing a single point of contact for the customer for issues incurred with either the software (BIOVIA) or the cloud provider (AWS).
- Once the service is up and running, Astrix will perform further due diligence and learn the customer’s business model to optimize the service and save the customer money.

The first services that will be transferred to Astrix once the cloud platform is operational are remote operations management and support, which includes the following:

- Cloud Platform provisioning/deprovisioning as directed by the BIOVIA team
- Monitoring of the Cloud Platform
- Application patch management & validation
- Regular reporting of conformance to established KPI/SLAs associated with the cloud platform
- Direct Level 1 support for customer interaction and triage of issues, with escalation to Level 2 and Level 3 support, as needed
- Coordination with software company (Biovia) and cloud provider (AWS) for level 2 and 3 issues, as needed
- Coordination with the Cloud Platform Provider (AWS) for resolution of Level 3 issues concerning the platform, OS, databases, storage, and FTP

Any issues reported to the Astrix “Service Desk” by the customer will be logged and assigned a support level as defined below. If the customer is unhappy with the assigned support level, they can change the it for any reason.

- **Level 1 Support (L1):** L1 is the initial support level in which remote operators are responsible for gathering the customer’s information and determining the issue. The operator then attempts to resolve the underlying problem by following an established script. The goal for L1 is to handle 70%-80% of the user problems before finding it necessary to escalate the issue to a higher level.
- **Level 2 Support (L2):** L2 is a more in-depth technical support level than L1. L2 technicians are responsible for assisting L1 personnel in solving basic technical problems, and also for investigating and seeking known solutions to these more complex issues. L2 issues will be addressed by Astrix for the Cloud Platform, with BIOVIA handling all other L2 issues initially.
- **Level 3 Support (L3):** L3 support is responsible for handling the most difficult or advanced problems. Specific application or device support will be handled by appropriate software or hardware companies and will be managed and monitored by Astrix.
- **Escalation:** In cases of delayed response or severe customer issues, escalation to a manager will be initiated. The manager will be responsible for enlisting the required resources to remedy the situation. Escalation will be handled by Astrix and BIOVIA management teams.

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All Astrix Managed Services, including management of AWS cloud operations, will be coordinated on behalf of the customer by technical personnel located in the Astrix Costa Rica Office. This nearshoring office location offers a number of important benefits, including:

- **Cost Savings:** Significant cost savings over our domestic teams, with the same technical capabilities
 - **Strategic Location:** Similar time zone as mainland U.S. (central time zone) allows phone communication during normal business hours
 - **On-Site Availability:** Same day flights and ease of travel in and out of the US for on-site client work
 - **Good Cultural Fit:** Bilingual education system assures that our team speaks fluent English
 - **Solid Technical Resources & Leadership:** Costa Rica team members have extensive training and experience with laboratory informatics projects, along with access to all the necessary technical resources.
 - **Stable Connection:** Economic stability, along with solid internet redundancy, utilities and infrastructure
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Value addition/Future expansion:

The Managed Services provided by Astrix which are described above will gradually be expanded going forward until they encompass the full breadth of EaaS. Astrix Managed Services for the customer under EaaS will eventually include:

- I. CONTENT** – A team of skilled people providing extensions, improvements and additions to the Experiment application.
 - a. **Business Analysis:** Talking to end-user scientists about their needs and interpreting their requirements into actionable tasks
 - b. **Content Development:** Working with the BIOVIA team to represent new laboratory procedures, experiments and output of data in the Experiment software as needed by the customer.
 - c. **Training and on-boarding:** Spending time with scientist end-users to ensure that new functionality is adopted quickly and effectively

- II. SUPPORT** – A team of skilled people providing issue logging, tracking and resolution services on the Experiment system.
 - a. **Bug and Enhancement Issues:** Logging, triage & routing, fixing content bugs
 - b. **Development Operations:** Working with the BIOVIA team to test new, updated or fixed content as it moves from development through test and production servers
 - c. **Fixing Environment Issues:** Performance issues with servers, problems with connectivity of the system with other integrated systems (e.g. Laboratory Servers), problems with users being able to access the system
 - d. **Software Updates and Patches:** To BIOVIA applications software and Microsoft Environment (Windows and SQL Server)
 - e. **Day-to-day administration:** Adding new users, deactivating users, creating new “Projects” in the system and assigning teams
 - f. **Collection of Key Performance Indicator (KPI) metrics:** To be used by Project Manager to create reports for Governance meetings.

- III. PROJECT MANAGEMENT** – A project manager providing oversight of the Content and Support activities, as well as project reporting and interacting with various levels of governance.
 - a. **Manage** work item queue for Content Team
 - b. **Review** KPI data and generate reports
 - c. **Facilitate** Governance