Contribution ID: **1854** Type: **Oral**

Status of the BM@N software infrastructure and future plans

Thursday 30 October 2025 12:45 (15 minutes)

Modern experiments on high-energy physics, such as BM@N within the NICA project (JINR), place high demands not only on data collection and processing systems but also on the supporting software infrastructure including, among others, a set of Information Systems (IS). The report presents the latest improvements in the software architecture and deployment of the IS for the BM@N experiment, focused on three key areas: security, standardization, and automation. The technology stack has been consolidated through a migration to modern solutions based on Ansible, Podman, and GitLab Container Registry. The approach provides improved security through the use of rootless containers, as well as improved scalability and fault tolerance of BM@N services.

The work is aimed at creating a standardized and easily scalable software ecosystem that simplifies data analysis and organizes collaborative work for the BM@N experiment.

Author: CHEBOTOV, Alexander (JINR)

Co-authors: ROMANOV, Ilya (JINR); GERTSENBERGER, Konstantin (JINR)

Presenter: CHEBOTOV, Alexander (JINR)

Session Classification: Information Technology

Track Classification: Information Technology