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## Design of the BM@N experiment data management system

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The Data Management System (DMS) design for BM@N, a fixed target experiment of the NICA (Nuclotron-based Ion Collider fAcility) is presented in this article. The BM@N DMS is based on the DIRAC Grid Community. This system provides all the necessary tools for secure access to the experiment data. The key service of the system is the File catalog, presenting all the distributed storage elements as a single entity for the users with transparent access. The file catalog also includes a metadata catalog, it can be used for an efficient search of the data necessary for a particular analysis. Access is provided via a REST API and a C++ interface, with authentication via BM@N SSO. The REST API helps to integrate the DMS with other software systems of the experiment, while the C++ interface allow BmnRoot to conveniently select events for a particular physics analysis.

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