

**M. Bouzdalkin**  
(*F. Skaryna GSU, Gomel*)

## **DEVELOPMENT OF A DATA EXPORT SUBSYSTEM FOR CORPORATE CMS**

В работе рассматривается развитие подсистемы экспорта данных для корпоративной CMS.

In modern projects using Content Management Systems, situations arise in which it is necessary to replicate metadata to external storages for backup, more convenient conversion aggregation and presentation of metadata. So, the development of replication for data export is an actual goal. Since in our case we have a specific scope of application of the project, it is necessary to create a replicator, instances of which work in parallel and show high fault tolerance.

Communication between the CMS and the replicator is implemented by message queues. They provide asynchronous communication, which means that the endpoints that send and receive messages communicate with the queue rather than with each other. Queues provide data storage and reduce errors that occur when various parts of the system are down. Message queues allow you to scale exactly where it is necessary. Message queues help remove dependencies between components and greatly simplify writing code for disconnected applications.

CMS sends messages to the queue and the replicator reads out using Java Messaging Service. JMS provides high performance by posting messages to a queue asynchronously, which allows multiple messages to be sent to a queue using multithreading. JMS also provides high reliability, messages once sent will surely be delivered to the consumer without any loss of data.

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JMS also defines APIs that different vendors implement in their products, which allows you to switch to other solutions with minimal cost.

Metadata is imported in RDF format. RDF allows data to be stored in a subject-predicate-object format, which takes precedence over more complex models that require typing. Also RDF has a query language SPARQL allowing to retrieve and manipulate data.

Allegrograph was chosen as the metadata storage. It can store data and metadata as triples and quads, query them through various query APIs like SPARQL. Details of the metadata synchronization scheme are considered in the presentation.