Andrei Tryfuntau
(Fr. Skorina GSU, Gomel)
Scientific advisor **Viktar Liauchuk**, Ph.D. in technics, associate professor

DATA MODEL OF MONITORING SYSTEM FOR ENTERPRISE LAN WORKSTATIONS

Real-time monitoring shows how the infrastructure is performing. In case of deviation or emergency situations, the staff may be able to prevent the critical situation or to reduce its consequences to a minimum.

The main advantage is the ability to store original unmodified values of indicators for significant periods of time with high recording speed and access to data, which allows you to quickly and efficiently analyze the situation in the present and past, to build mathematically based forecasts of the development of the situation in the future. The monitoring system can also collect data on parameters and equipment status, monitor service life, operating hours, and so on.

Therefore, it is necessary to develop the right architecture for data collection and storage, for example, to make sure that we do not collect and store low-value data or that the log files contain enough information to quickly identify errors. For the agent, the input data are: metrics from workstations and a configuration file. For the server, the input data are: a request with metrics in json format and a configuration file. Output data is graphs of data from workstations, log files, and data stored in the database.

The organization of log files is a set of text strings with the date and time of the error, the type of error, the host, the stream and the class where the error occurred and the content of the error itself, in ASCII encoding. When a certain file size is reached or at the beginning of a new month, a date is added to the end of the file and the file is moved to the «archived» folder in the same directory, and then logging continues to a new file. Eventually data are stored in the database. Its structure is presented in the figure 1.

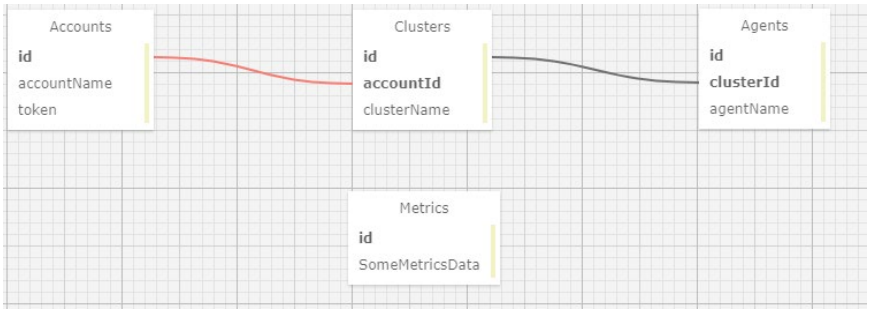

Figure 1 – Database scheme