FAULT SEARCH DC

DPC monitoring and control system

PURPOSE OF THE MONITORING AND CONTROL SYSTEM

AUTOMATION OF TASKS OF CENTRALIZED MONITORING, OPERATION, SUPPORT AND MAINTENANCE OF DPC COMPUTING, TELECOMMUNICATIONS AND ENGINEERING INFRASTRUCTURE

FUNCTIONS OF THE MONITORING AND CONTROL SYSTEM

- Automatic search, identification of controlled equipment and network topology construction
- Monitoring of workability of controlled equipment and other controlled objects with troubleshooting, including identification of failures, root cause analysis (event correlation).
- Performance control, including collection and display of equipment operating parameters statistics as well as assignment and control of threshold values of operating parameters.
- Equipment configuration control (system integrity).
- Mailing of accident notifications.
- Communication of the information on infrastructure condition and statistical data to related systems.

CONTROLLED PARAMETERS OF DPC FUNCTIONING

More than 1000 types of controlled parameters enabling to assess current condition of the DPC equipment:

Network equipment parameters

- QoS
- Current loading of network interfaces (netflow)
- Network collisions

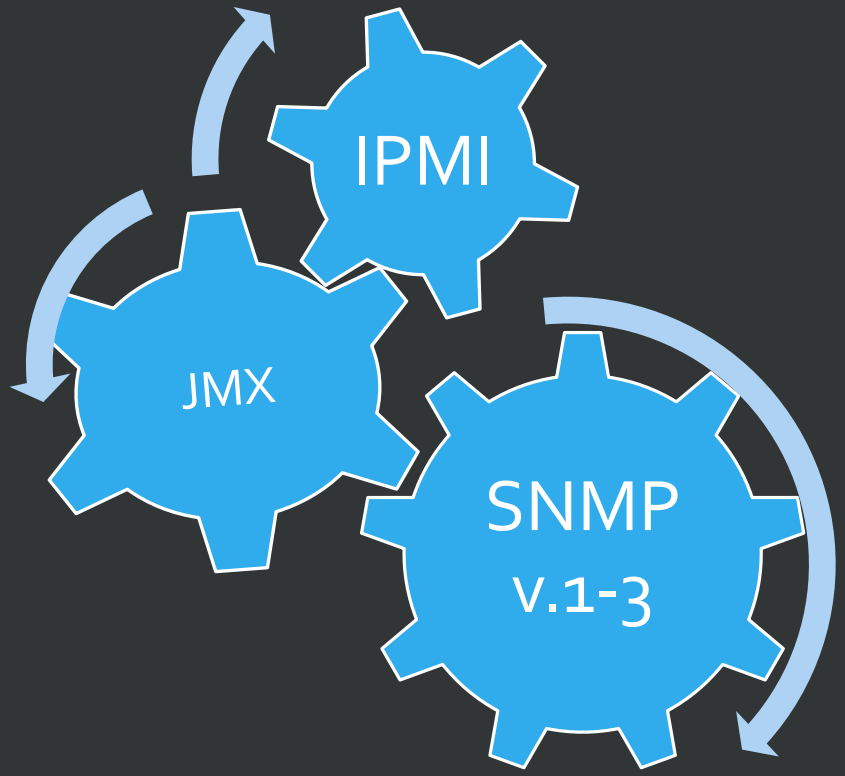
Engineering systems parameters

- Monitoring of cooling systems parameters
- Monitoring of power supply systems
- ACS control
- CCTV control

Computing equipment parameters

- Recycling of storage, processor
- Network services availability
- Disk subsystem queue status

MONITORING AND CONTROL PROTOCOLS



Native control protocols support:

- SNMP v.1-3
- Modbus
- Canbus
- SSH
- telnet
- ICMP
- IPMI
- JMX

Possibility to install an agent to control the equipment not supporting standard protocols

FUNCTION OF EQUPIMENT INVENTORY RECORD KEEPING

- Record keeping of materials, including indication of accountable persons and persons responsible for equpment fucntioning
- Registration of current state and service bulletin (at a warehouse, in use, undergoing scheduled maintenance, under repair, written off, etc.)
- Record keeping of hard disks in DSS with notification of their attributes changing (for example, series number)

DATA BASE MONITORING

AVAILABILITY CONTROL

- Tasks performance
- Backupping

PERFORMANCE CONTROL

- Response time
- Status of indeces

TREND ANALYSIS

- Recommendations on performance improvement

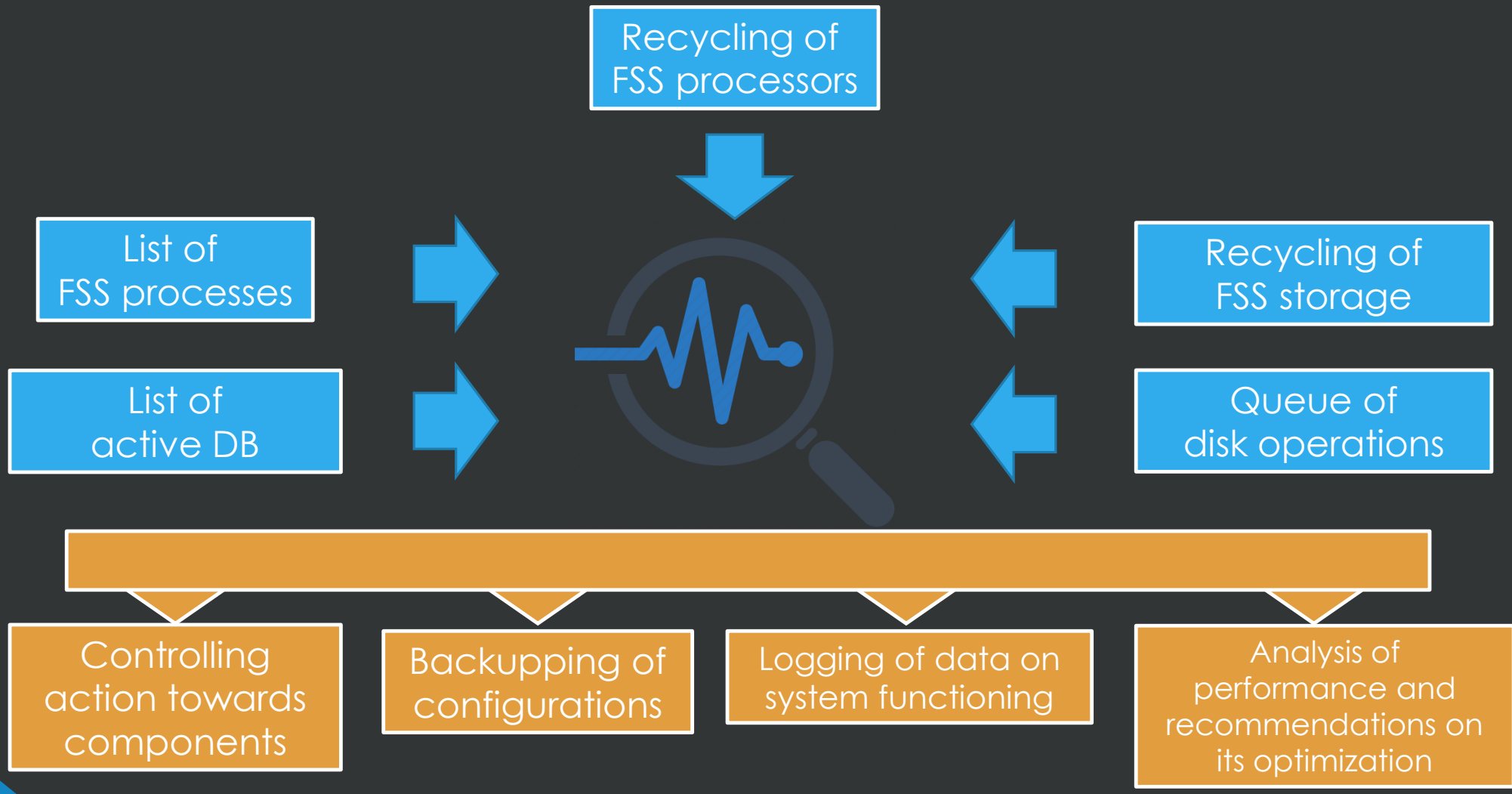
JMX MONITORING AND CONTROL OF JAVA APPLICATIONS

- view and modification of application configuration
- collection and publication of statistical data on application operation
- notification of any wrong changes of status

CROSS-PLATFORM

Agents for MS Windows OS family, MAC OS and Linux allow to arrange monitoring and control of computing equipment with any operational system

MECHANISM OF SUPPORT AND CONTROL OF SELF-PERFORMANCE



AUTOMATED SETTING UPON DEPLOYMENT

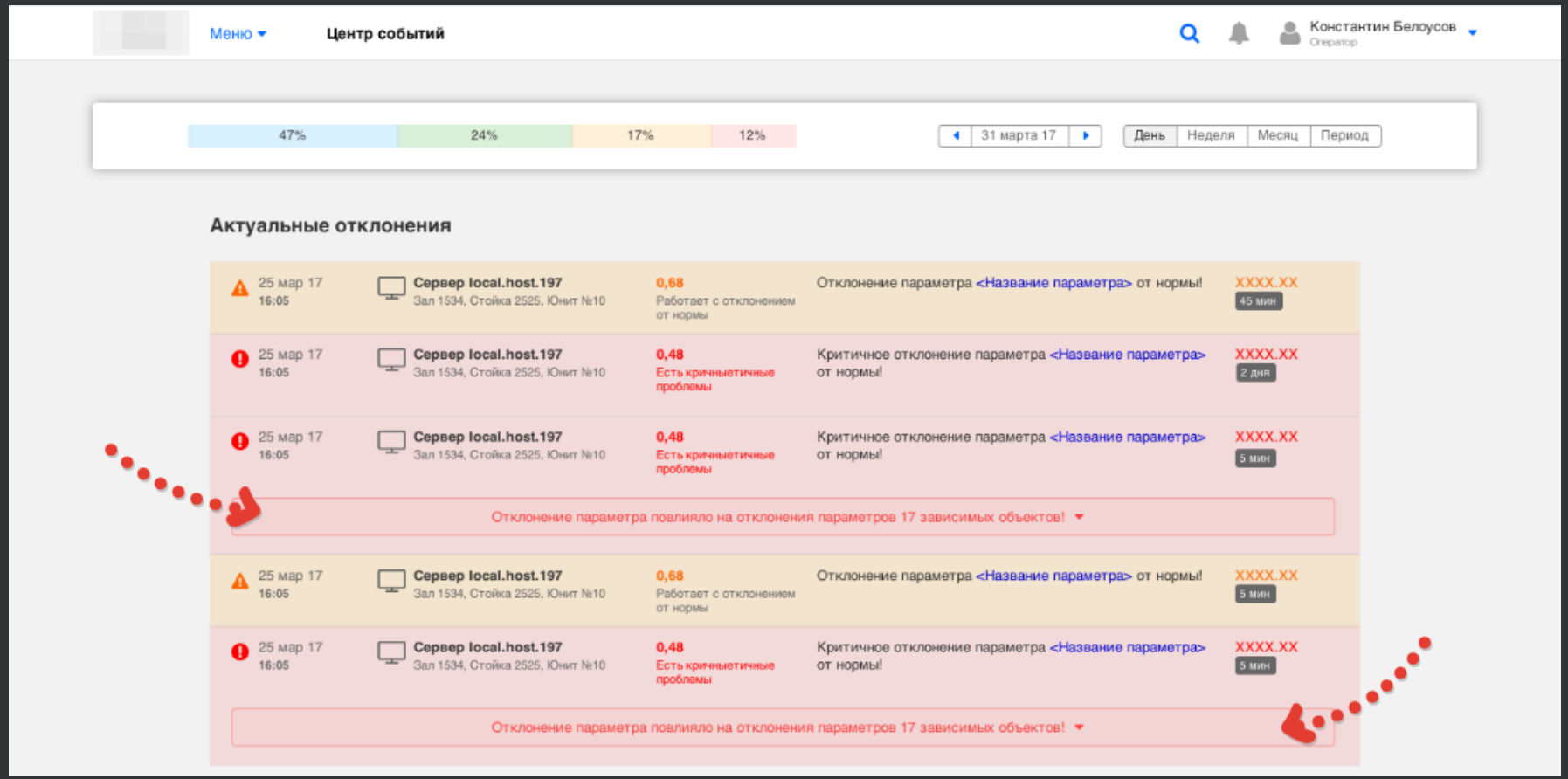
Data on network topology received by
ARP, STP, AFT, CDP, LLDP and SNMP protocols

Automatic detection of network devices
Automatic network topology construction

Recommended stetting data for FSS server

POSSIBILITY OF CORRELATION OF EVENTS AND ALARMS

The system keeps record of equipment interdependence. In case of de-energization of an equipment rack an operator will be informed on a root cause of the fault and will not be deluged with reports on consequences.

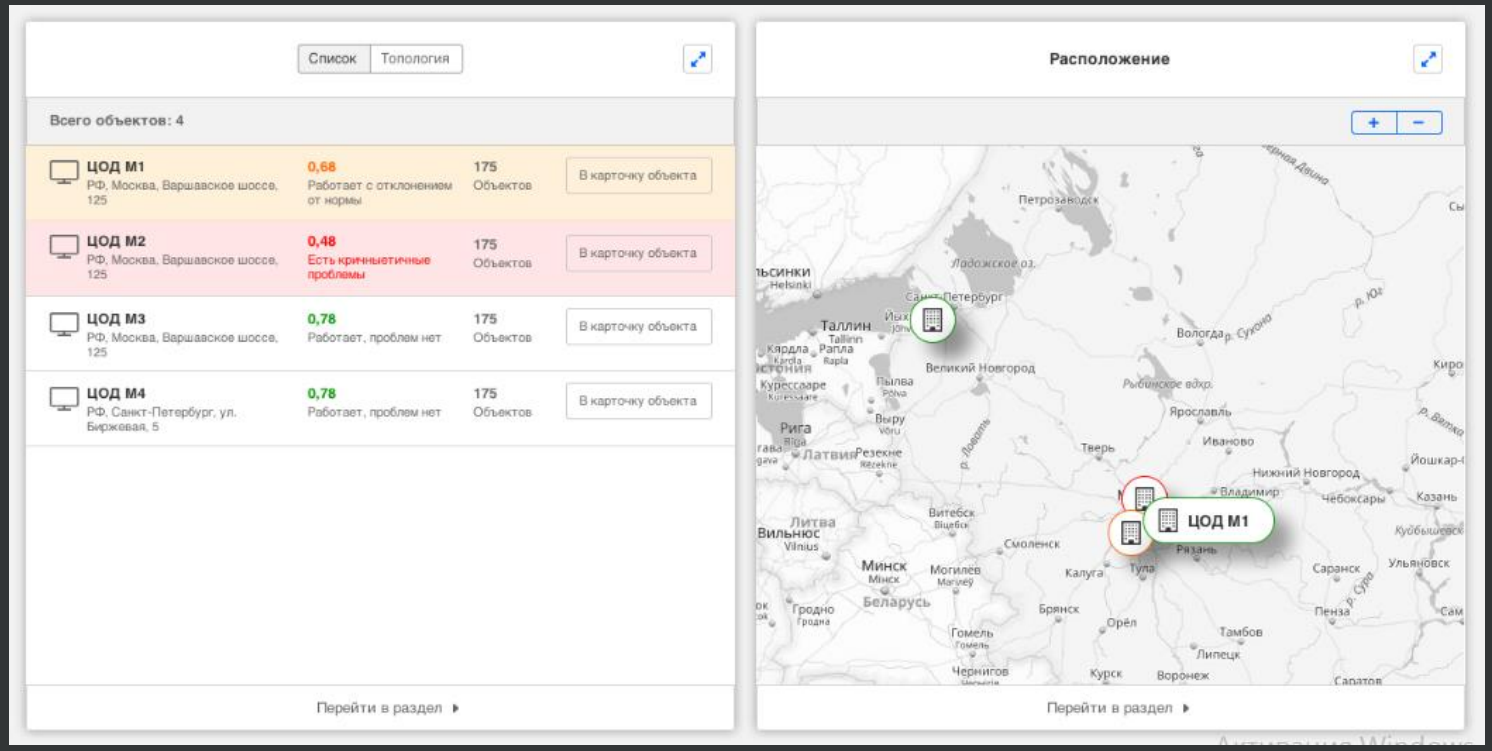


USER'S GRAPHIC INTERFACE

FSS server

Monitoring data

Operation commands



Interactive web interface based on widgets. Operators arrange their working area by themselves in accordance with their tasks at the workplace

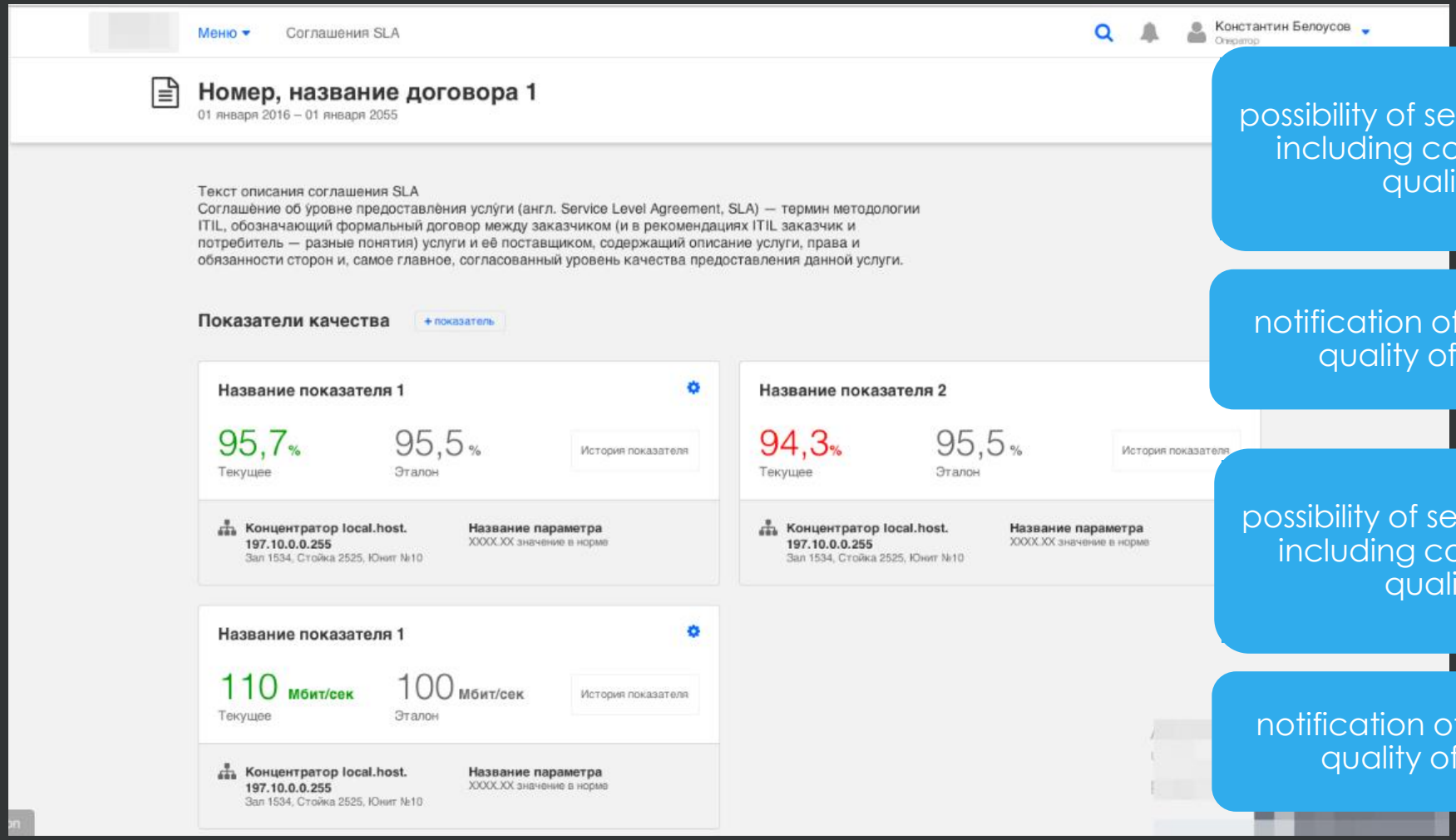
INTEGRATED REPORTING MECHANISM

Monitoring data

Reporting engine

The report form description language allows to enlarge a set of reports "out of the box" with reports that are specific for a company operating DPC

SLA CONTROL SUBSYSTEM



possibility of service quality monitoring including comparison with preset quality parameters

notification of operator about lower quality of services provided

possibility of service quality monitoring including comparison with preset quality parameters

notification of operator about lower quality of services provided

configuration of IP SLA tests and analysis of their implementation

INFORMATION SUPPORT SUBSYSTEM

Information access control

Quick search for information

Quick access to operation documents

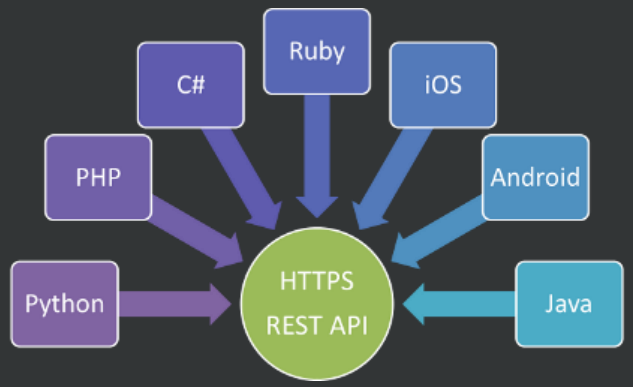
Centralized content formation and updating

Each type of alarm has a link to an article in the integrated wikipedia. The article describes actions in case of this alarm and its possible causes. A log for this alarm is also kept here.

The interactive learning system will promptly prepare personnel for watchstanding at the monitored facility

INTERACTION WITH EXTERNAL SYSTEMS OF INVENTORY

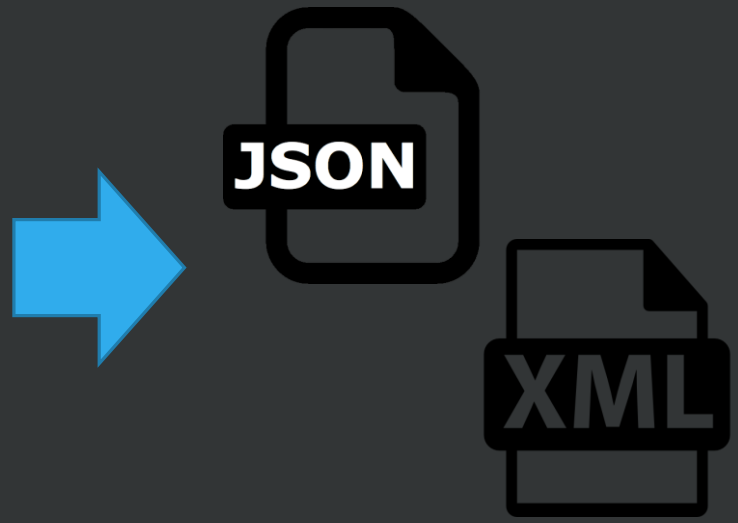
SYSTEMS OF INVENTORY AND RECORD KEEPING OF MATERIALS



REST API allows to quickly import inventory data from the system at customer's facility to FSS

INTERACTION WITH EXTERNAL SYSTEMS

Integrated modules of export to JSON or XML formats provide for interaction with external systems functioning at a customer's facility.

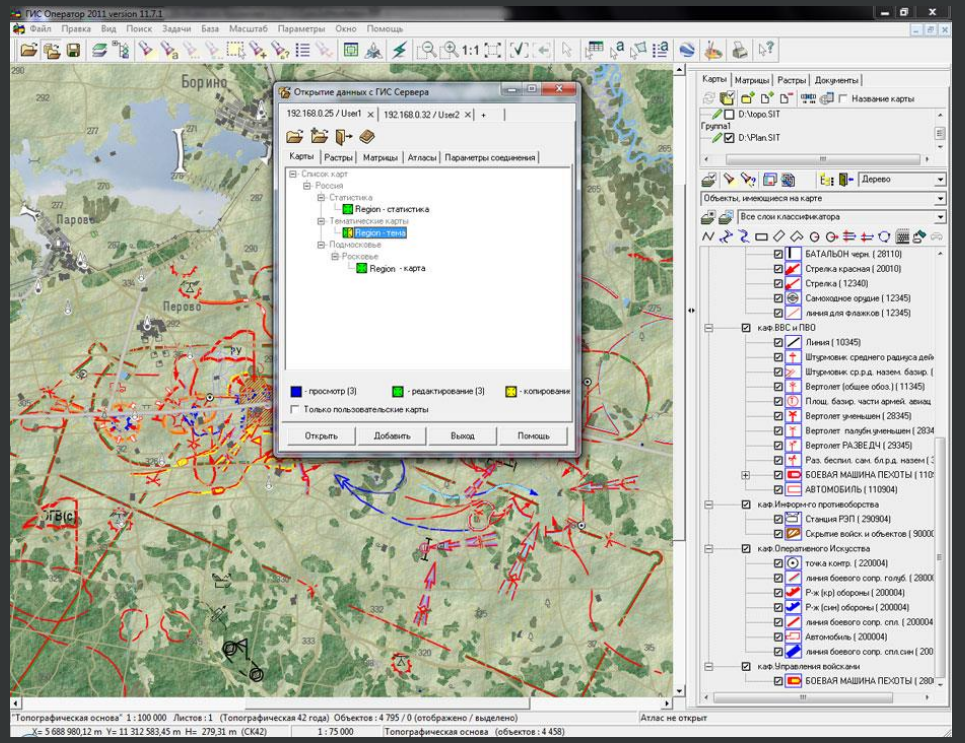


INTERACTION WITH GEOINFIRMATION SYSTEMS

It is possible to display monitored facilities on a map for geographically dispersed DPC:

- Operator GIS mapping service.
- Integrated openstreetmap-based mapping.

API call



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