RFC

ONE SCREEN OVERVIEW *for* NOC

THE INDISPENSABLE TOOL FOR NOC

NOC workflow requires a general overview of the monitored multimedia chain with instant alerts of irregularities and the ability to instantly react on them. RFC is designed to fullfil these needs by providing an aggregated view of the state of the monitored systems. RFC hides all the complex technical details from the VB probes UI and provides a simplified overview of the current state.

Everything at a glance

THE BENEFITS

- *UNIFIED DASHBOARD for EACH INTERFACE TYPE*
- *NOC FRIENDLY PRESENTATION*
- *REALTIME RF SIGNAL MONITORING*
- *HISTORIC CHARTS for KPI*
- *REALTIME CONSTELLATION CHARTS (RF)*
- *IP and DVB MEASUREMENT LAYERS*
- *REALTIME PROBE ALARMS*
- *AUTOMATIC INGEST OF PROBE CONFIGURATION*
- *CHARTS METRICS EXPORT to CSV / PNG*
- *SLA REPORTING*
- *DATA RETENTION for HISTORIC VIEWS*

RFC is a companion product for Bridgetech Technologies© VB family of probes. It collects, stores and visualizes the relevant metrics and alarms from the monitored interfaces on the probes and provides either live overview or various historical charts. The web based user interface has been designed to be modern, user friendly and intuitive, adaptive to different devices and screen sizes, from NOC large displays to mobile devices.

THE DASHBOARDS

(one for each type of monitored interface) provide the realtime view with optional details for a specific tuning or stream.

THE CHARTS

section consists of historic charts for specific metrics, depending on interface type and the monitored component.

THE ALARMS

section can be viewed in a monitoring view with the active alarms shown on the top or as a fully searchable archive of all the probe alarms.

THE REPORTS

section for RF interfaces for signal quality or bitrates.

The main benefit of the solution is that it provides a *UNIFIED SINGLE VIEW* of several interfaces from all the monitored probes at the same time. That means one can see all the monitored tunings (e.g. DVB-S/S2 interfaces) from several probes on a single dashboard with all the relevant metrics (on demand). There are specific dashboards for each supported BT© probe interface (DVB-S/S2, QAM, IP, ASI) that correspond to different signal formats. The charts section is also divided into interface sections as each signal format has its own specifics.

The Dashboard section was designed specifically with focus on NOC demands to display the status of all tunings and any potential alarms with an optional detailed view of any tuning. All data on the dashboards is updated in realtime so the overview is always current. The RF Constellation chart also falls into NOC part (i.e. realtime overview) as it is constantly refreshing and shows the current vew of all the RF interfaces of a specific probe.

The charts sections are meant for historic analysis of various performance metrics, either for operational needs or for reporting (performance reports, SLA reports). In charts with multiple metrics (e.g. bitrates of several services from a tuning) individual lines can be hidden for better visibility. Either the data in csv format or the whole chart as an image can also be exported.

All chars can be zoomed in/out or dragged on the time line to provide either more detail or give a trending overview.

FULLY EXTENDABLE SOLUTION

SERVICE BITRATE CHART
DVBC PROBE

HOW IT WORKS

RFC relies on the Eii interface for collecting metrics. Most metrics are collected on a minute interval while some are collected in near-realtime (2 sec interval - e.g. Constellation diagrams). The metrics are then stored for a configurable period. The solution consists of two modules - a combined collector/visualizer/data node (RFC node) and a data node (RFCdata node), which extends the storage, availability and search performance of the solution. The RFC node can be deployed as a standalone solution for smaller environments and RFCdata nodes can extend the capacity of the system. Each RFC node can collect from up to 10 BT© VB200 probes and additional RFCdata nodes can be added. In case of larger environment more RFC nodes can be added to the cluster to extend the collector capabilities of the whole system.

RFC relies on ETR monitored tunings for a full view of the transport stream as well as its components. It supports either a continous mode or a round-robin mode. With non-ETR monitored tunings the level of insight and collected metric is much lower.
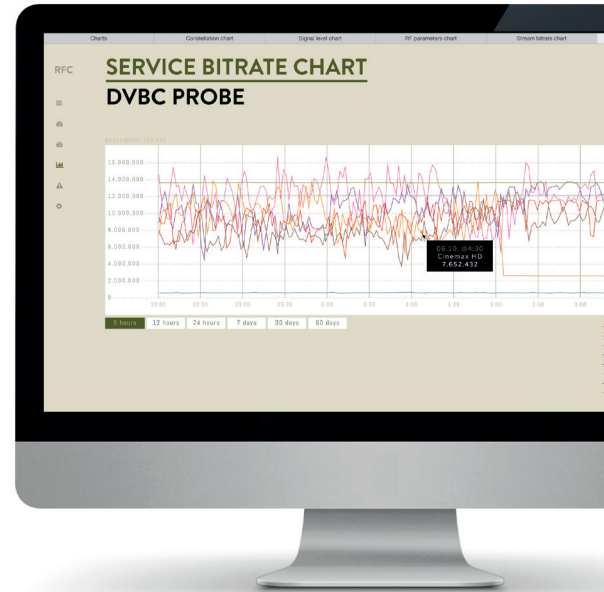
ARCHITECTURE and DEPLOYMENT

The underlying design provides a fully redundant and extensible data layer where loss of any node from the cluster (in cluster mode) doesn't result in loss of any data. The overall capacity of the system can be easily extended with addition of either RFCdata nodes or in case of more collector points with additional RFC nodes.

STANDALONE MODE

In smaller environments (up to equivalent of 10 VB220 probes) a standalone node is sufficient. The standalone RFC node is fully internally redundant to accommodate a potential component loss. The standalone node provides all the necessary functions and can be easily extended to a cluster if the need arises.

CLUSTER MODE

Cluster mode consists of several RFC and RFCdata nodes joined together in a cluster. Such deployments provide a high level of availability and horizontal scalability (increased storage/retention time) and at the same time increased performance as search queries are extended over all the nodes. Such a cluster can grow acording to company needs and environment growth.

SUPPORTED METRICS and INTERFACES

	SAT	IP	ASI	QAM
SIGNAL LEVEL	•			•
RF PARAMETERS (EB/N0, MER, SNR)	•			•
BER	•			•
STREAM EFFECTIVE BITRATE	•	•	•	•
SERVICE BITRATES	•	•	•	•
PID BITRATES	•	•	•	•
OTHER PID BITRATES	•	•	•	•
CC ERRORS	•	•	•	•
IAT		•		
ALARMS	•	•	•	•
REPORT	•			

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