VQ Conference Manager 3 Analytics

Using Elasticsearch and Kibana to simplify the complex

elasticsearch   kibana

Unified Communications is complex; there are many moving parts, plenty of things can go wrong and an almost infinite variety of requests for analysis of log files or data records produced by the component parts of the system. Rather than build yet another tool, VQ took the decision to use best of breed tooling and include it as part of the VQ package.

VQCM's 3.x architecture allows "off the shelf" packages such as Elasticsearch and Kibana to be packaged and distributed as part of the VQCM VM. Customers get the benefits of state-of-the-art without the proprietary price tag.

Elasticsearch is a document store (https://www.elastic.co/products/elasticsearch) and Kibana (https://www.elastic.co/products/kibana) is a browser based visualization tool; both are from Elastic. Both are Open Source and evolving rapidly. Elasticsearch/Kibana is becoming established as an industry standard tool with many companies adopting it and ISVs integrating it into their products. This leads to a virtuous circle of success driving success; a large installed base attracts more engineers contributing new functionality which drives a larger installed base. How successful? Elastic has a market capitalization of $6.5bn. VQ is an OEM partner of Elastic.

Feature	Benefit
High performance, highly scalable	Elasticsearch document store and Kibana visualization technology for large datasets from a wide range of data sources. Elastic-search is designed to work in distributed, resilient environments; as VQ Conference Manager becomes fully distributed more of this functionality will be exploited: • CMS, Tenant, User, Space, Participant and VQCM logging data in a single database • Pre-built Kibana dashboards to cover most use cases • Easily drill down into time-series visualizations • Filter by Space, Call Name, Remote Address, Calling Number, Media Type, Media Encryption, Tenant • Custom report-builder • As an early adopter program, (VQCM 3.6) we have introduced CMS (syslog) and Expressway data (syslog, CDR and system metric) ingest into Elasticsearch* • VQCM 3.6 introduces a refined Kibana UI and the new Lens visualization tool (see the video on vqcomms.com) • Export report data as csv or pdf**
Usage trends to demonstrate ROI	Demonstrate ROI by identifying usage trends by Tenants, users, Spaces and participants. Increase usage by improving user experience: • Moniter live activity • Justify new investment by understanding usage trends by Tenant, Users, Spaces, Participant, Device Type or Cost Code • Increase user adoption by identifying top Spaces, Users and participants
Call troubleshooting tools	The pre-built time-series visualizations allow customers to isolate problems quicker, pro-actively identifying improvements: • Call participant call quality data - Packet/Jitter and High Round Trip Alarms • Diagnose by drilling down by Space URI, Remote Device Address, Tenant etc. • Filter based searching of Participant in Calls • Audit history of API Command Requests
CMS usage and alarms	Diagnose and isolate Cisco Meeting Server problems quicker • Cisco Meeting Server alarms per Node • Cisco Meeting Server bandwidth usage per node / total usage • Cisco Meeting Server media process load • Online/offline Cisco Meeting Server node events • Join and leave events with participant disconnect reasons

License usage data	Monitor license usage and plan for growth by understanding your license usage • Cisco Meeting Server license usage • Cisco Meeting Server license usage per node • Easily identify unlicensed usage
On-premise solution	The Elasticsearch database is stored on the VQ Conference Manager Virtual Machine and therefore ideal for customer environments where Cloud based logging and reporting tooling cannot be used.
Integration/Automation*	Integrate with tools customers already using and proactively alert operations teams to potential issues: • Watcher functionality**; set conditions on data values, run scripts and perform actions (send email, post Slack message). For example, automatic Slack update if a CMS node goes offline with links to dashboards with data/visualizations for the 10 minutes leading up to the CMS node-offline event • SQL Connector; access Elastic data via a SQL data connector and ideal for integration with customer's existing Business Intelligence or reporting applications.*
Roadmap	Future versions of VQ Conference Manager will exploit more of the functionality available within Elasticsearch to: • Include support for SNMP; allow devices to raise SNMP traps and store them in Elasticsearch • Include data from the network infrastructure (Routers and Switches) • Include room participant count data from the latest generation of Cisco video systems

Elasticsearch, Kibana and VQ Conference Manager

We believe the power of Elasticsearch/Kibana is its ability to store and quickly retrieve vast amounts of data and this is ideally suited to the problem of understanding what is happening in advanced Unified Communications systems. We think most customers would like to know more about what their systems are doing and be able to isolate problems quicker when they happen.

As UC networks get bigger, the problem gets bigger. It needs tools and technology that scales to the task.

* We have some initial Kibana Dashboards and Visualizations but would like to work with early adopters to get a better understanding of how to best use the data and present it. If you'd like to work with us on this, please contact customer support (support@vqcomms.com)

** The Elastic Stack Enterprise subscription is licensed on a per Elastic Data node basis, (up to a maximum of 32gb per Elastic Data node). The license covers one Elastic Data node. In future versions of VQCM where, for example, the VQCM system forms a 3 node High Availability
Cluster with 3 Elastic Data nodes, customers wishing to subscribe to the Enterprise license will need to purchase three Enterprise licenses, one for each Elastic Data node in their VQCM Cluster.
Functionality enabled by the additional license includes: exporting data as csv or pdf, Watchers and SQL data connector.