

Hytera Mobilfunk GmbH deploys a country wide public safety network with HiveMQ.





About Hytera Mobilfunk GmbH

Hytera Mobilfunk GmbH is a German provider and manufacturer of mission-critical communication solutions. The company offers solutions which provide customers from public safety organisations, as well as from industrial, supply and transport companies, with highly available and secure radio communication. As a well-known specialist in mobile radio technology such as TETRA, LTE and DMR, the company has been a pioneer in professional mobile radio systems for 40 years. Hytera Mobilfunk GmbH is part of Hytera Communications Co. Ltd., which has a worldwide network of 60 subsidiaries and branches on every continent and employs more than 9,000 people.

ACCESSNET®-T IP uses HiveMQ for reliable and secure messaging

The IP based product ACCESSNET®-T IP includes hardware and software components to build up radio communication networks according to the ETSI1 TETRA standard, which is used wherever reliability and security in radio communication are critical requirements, e.g. police, fire brigades, industry or public transport customers. ACCESSNET®-T IP consists of intelligent base stations handling all radio communication in a network cell and centrally hosted network management applications, such as radio subscriber management, infrastructure monitoring and system configuration management. In addition to all its functional capabilities, ACCESSNET®-T IP supports hardware and software redundancy, encrypted communication, secure authentication and audit trailing.

In close cooperation with HiveMQ's engineers, the HiveMQ MQTT broker was introduced into the product to collect information on the technical status, capacity and radio user operations from all base stations in a communications system in near real time. This allows customers to monitor the availability and usage of the communication services and to enable additional capacity if needed – even automatically by an algorithm considering the radio frequencies already used in the range of the base station.



Hytera Mobilfunk GmbH

Location

Bad Münden, Germany

Application

Private radio communication networks

Key Challenge

- Delivering fast and reliable technical status information about network
- Customer demands for high security and high availability

Results

- HiveMQ deploys to a country wide public safety network
- 2400 publishers providing up to 2500 message/second in near real time
- Network status changes available immediately

“We are using HiveMQ in a country wide public safety network with 2400 publishers providing up to 2500 messages/second to central network management applications in near real time...”

Gerald Nolte, CTO at Hytera Mobilfunk



HiveMQ in large public safety networks

"We are using HiveMQ in a country wide public safety network with 2400 publishers providing up to 2500 messages/second to central network management applications in near real time using encrypted communication, LDAP authentication of clients and redundancy to fulfill the customer's very high security and availability demands", Gerald Nolte, CTO at Hytera Mobilfunk explains.

In contrast to the widely used SNMP based communication in telecommunication networks, the MQTT broker using extremely lightweight publish/subscribe messaging provides more flexibility, so that access to selected information in the network stored in MQTT topics can even be granted to customer applications using the HiveMQ authorization mechanisms. By using retained messages for important status information, new clients connecting the broker immediately get the latest status without information polling.

"In earlier versions of the product, we just collected status information and statistics counters using SNMP with rather long polling cycles. With MQTT, we now see status changes immediately and can even automate network management reactions." says Gerald Nolte.

Another key argument for using MQTT in ACCESSNET®-T IP was that it offers the flexibility of providing many specialized clients with exactly the data they need without affecting the bandwidth of the communication links to the base stations.

Gerald Nolte adds: *"After successful prototyping with open source MQTT implementations, such as Eclipse Mosquitto, we selected HiveMQ as the most reliable, secure and scalable product on the market."*

1 European Telecommunications Standards Institute



Fast and Reliable Messaging for Connected Devices

The HiveMQ enterprise MQTT platform can help power your connected assets.

We are ready to make HiveMQ and MQTT the core part of your infrastructure to improve efficiencies and implement predictive maintenance in addition to data integration for machine learning.

Contact us to discover how we may be able to help create your next IoT project.

Contact us  sales@hivemq.com

Find out more  hivemq.com