

REMOTE MANAGEMENT OF MANUFACTURING NETWORK INFRASTRUCTURE

SUMMARY

The manufacturing industry is entering a new era called digital transformation. The change in global economic and political landscapes, along with the development of IoT and AI, is making an impact on manufacturing and drives the need for new improved processes and optimization in the sector. The competition is huge, and time is of the essence, so streamlined operations and efficient predictive analytics are a must to stay in the game. Implementing the right IoT technology has an impact on all - productivity, quality, cost, and even safety of the production.

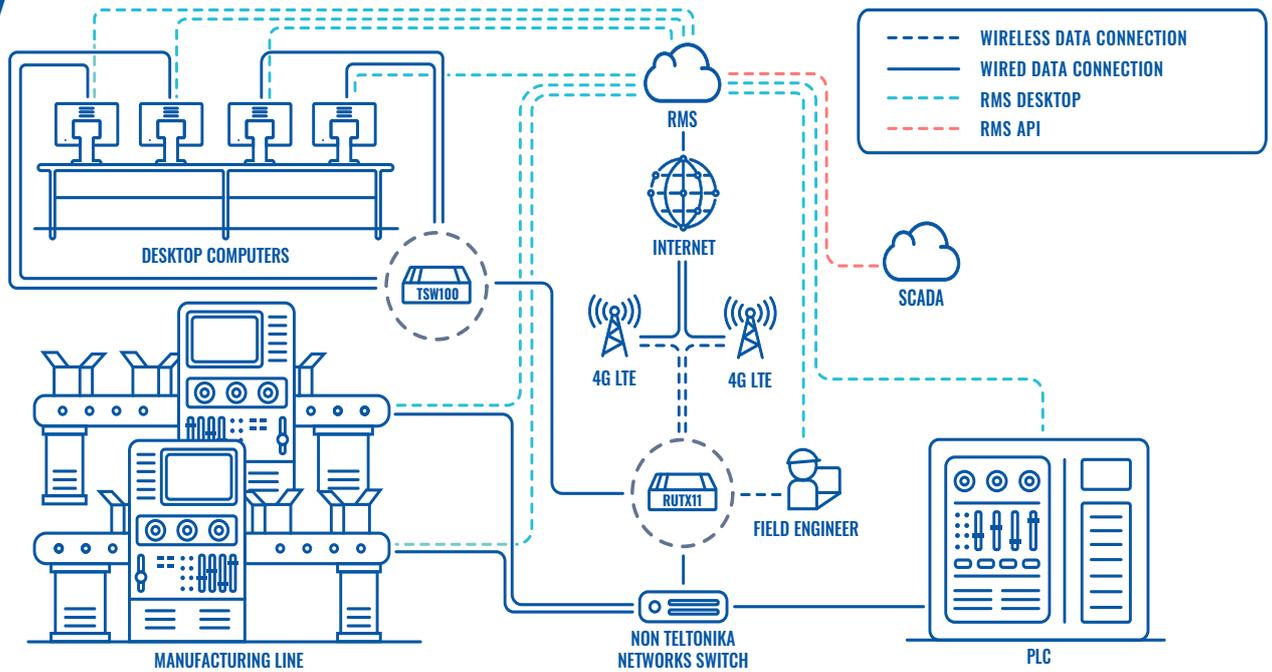
CHALLENGE

Manufacturing facilities are usually quite complicated infrastructures connecting various machines, computers, and platforms. These hardware and software elements accumulate over some time and therefore have various compatibility challenges. Another layer of complexity comes into the picture as these systems are usually implemented by different integrators. As a result, we get an ecosystem that is difficult to connect, manage, and collect data for predictive maintenance and increase operational efficiency. There is a need for one connectivity platform which could combine all the different industrial components into one accessible unified structure.

SOLUTION

We created the Remote Management System (RMS) to simplify the monitoring and management of Teltonika Networks routers and gateways. Whereas it provided convenient access to our devices from anywhere in the world, it did not take long to notice the demand for another functionality – reaching the end-devices of a solution remotely. As such, we introduced RMS Connect. It enables to access and control non-Teltonika Networks devices via RDP/VNC, SSH, or HTTP(S) protocols without any additional software, and does not require a public IP or third-party VPN service. Moreover, our API provides a possibility to carry endless RMS functionalities into your in-house IoT platform, in case you would rather stick to your familiar interface. As shown in the topology, RMS now functions as a unified software system for the whole network ecosystem. Via wired and wireless connectivity, our routers and switches provide internet access to the whole solution.

TOPOLOGY



This includes third-party devices, like manufacturing production lines, desktop, industrial computers, laptops, and even PLC's. Then, RMS Management takes care of easy remote control to our routers and gateways to ensure availability and security. On the other hand, RMS Connect enables to access WebUI or CLI of all smart devices in the same network. Finally, you can even access Windows and Linux machines via RDP/VNC just like you would be sitting in front of them. Best of all, RMS API lets you take the desired RMS functionality and transfer it to your SCADA or IoT platform. This allows for seamless integration and saves time and money because of better automation, remote management, planning and predictions, and extended overall lifecycle of the old equipment due to resolved compatibility issues.

BENEFITS

- One unified system – control the whole solution of multiple objects and interfaces using just one simple IoT platform.
- Compatibility - RMS is cloud based and platform agnostic – you can use it with any operating system and browser. RMS API allows using RMS features in your own IoT platform interface too.
- Customizability – RMS is highly customizable and every client can make it work for their own specific business needs.
- Remote – get notifications straight to your phone or laptop whenever any events occur as per pre-set rules. RMS enables a fully remote 24/7 management saving on employee costs and time resources.
- Security – hosted on AWS, communicating via MQTT and secured with TLS 1.2 and 1.3 protocols, RMS meets the highest standards of safety with international recognition by Bell Canada and Forensik.
- Free trial – our goal is to have long-lasting trust-based relationships with our clients; therefore, we want to be sure our product is exactly what they need. For this reason, we offer a 30-day free trial with every new compatible Teltonika Networks device.

WHY TELTONIKA NETWORKS?

We aim to create a product that serves the clients' needs best. Therefore, we often update and improve. It is a continuous process of growth and refinement. We carefully analyze the needs of the market and adjust rapidly by adding new functionalities and customization options. We create products that are secure, reliable, and easy to use. But you know what? It is always better to try it on your own! That is why we offer a 30-day free trial for RMS Management for every Teltonika Networks device, so why not create an account here and see it for yourself?

