THINGSSPOT FOR MACHINE PREDICTIVE MAINTENANCE

The IIoT (Industrial Internet of Things) is a part of a large concept known as Internet of Things (IoT). It consists of sensors, devices, gateways and analytics servers. The IIoT can improve scalability, efficiency, time and cost savings of industry organizations. As a solution for IIoT, Ovak Technologies designed "ThingsSpot" system, which in this case is used as an IIoT gateway.

The system consists of NI Industrial Controller, NI programmable hardware and ThingsSpot gateway application. Controller running ThingsSpot acquires data from machines/sensors, logs in local databases and delivers valuable data to cloud for further analytics and performing the predictive maintenance.

The system provides:

- ✓ IoT (MQTT, CoAP) and Industrial (Modbus, BACnet, KNX, LonWorks, OPC UA) protocols support
- ✓ Secured HTTP and MQTT protocols with TLS 1.2
- ✓ Cloud connectivity (IBM Bluemix, Microsoft Azure, Google Cloud Platform, GE Predix, Amazon AWS)
- ✓ Data Logging
- ✓ LabVIEW ThingsSpot API

Features and Benefits:

- ✓ Connectivity to various IoT cloud platforms, such as IBM Bluemix, Microsoft Azure, Google Cloud Platform, GE Predix, Amazon AWS for analytics
- ✓ Popular industrial protocols support
- ✓ Real-time data processing
- ✓ Connects with LabVIEW ThingsSpot API from NI's controllers to ThingsSpot gateway and automatically provides controller's tags information

SENSORS

- Noise
- Vibration
- Temperature
- Voltage
- Pressure

Modbus, MQTT

NI Industrial Controller IC-3173
ThingsSpot Gateway

IBM Bluemix
Microsoft Azure
Google Cloud Platform
GE Predix
Amazon AWS

IoT Cloud Platforms

IC-3173