

# RTAC

## Real-time acquisition and control system

### APPLICATIONS

- Real-time monitoring and control of downhole tools and equipment
- Real-time visibility of reservoir and production parameters

### BENEFITS

- Reduced downtime with real-time diagnosis of events requiring intervention
- Cost savings from fixed, one-time licenses
- Increased security through user-controlled data access

### FEATURES

- Local and remote monitoring and control
- Standard modules as well as fit-for-purpose solutions
- Compatibility with WellWatcher Advisor\* real-time intelligent completion software and other Schlumberger surveillance software
- Provision for emergency shutdown (ESD) of surface equipment

RTAC\* real-time acquisition and control system consists of hardware and software modules that provide an interface between Schlumberger permanent downhole and surface completion equipment and the operator's SCADA system. It can be customized to provide fit-for-purpose solutions.

Currently, 40 modules are available, each incorporating

- interface driver for acquiring data from the tool at the correct rate, using a specific communication protocol
- data- and event-processing component to manage the data acquired by the interface driver in real time, enabling alarm detection, data compression, and generation of export files
- human machine interface (HMI).

### Human machine interface

The system is installed at the wellsite or on the platform; a user-friendly HMI enables onsite operators to monitor and control downhole tools in real time. The HMI can also be installed for multiple remotely situated experts to access reservoir and tool health data. The operator's distributed control system (DCS) can be used instead of the HMI, if preferred.

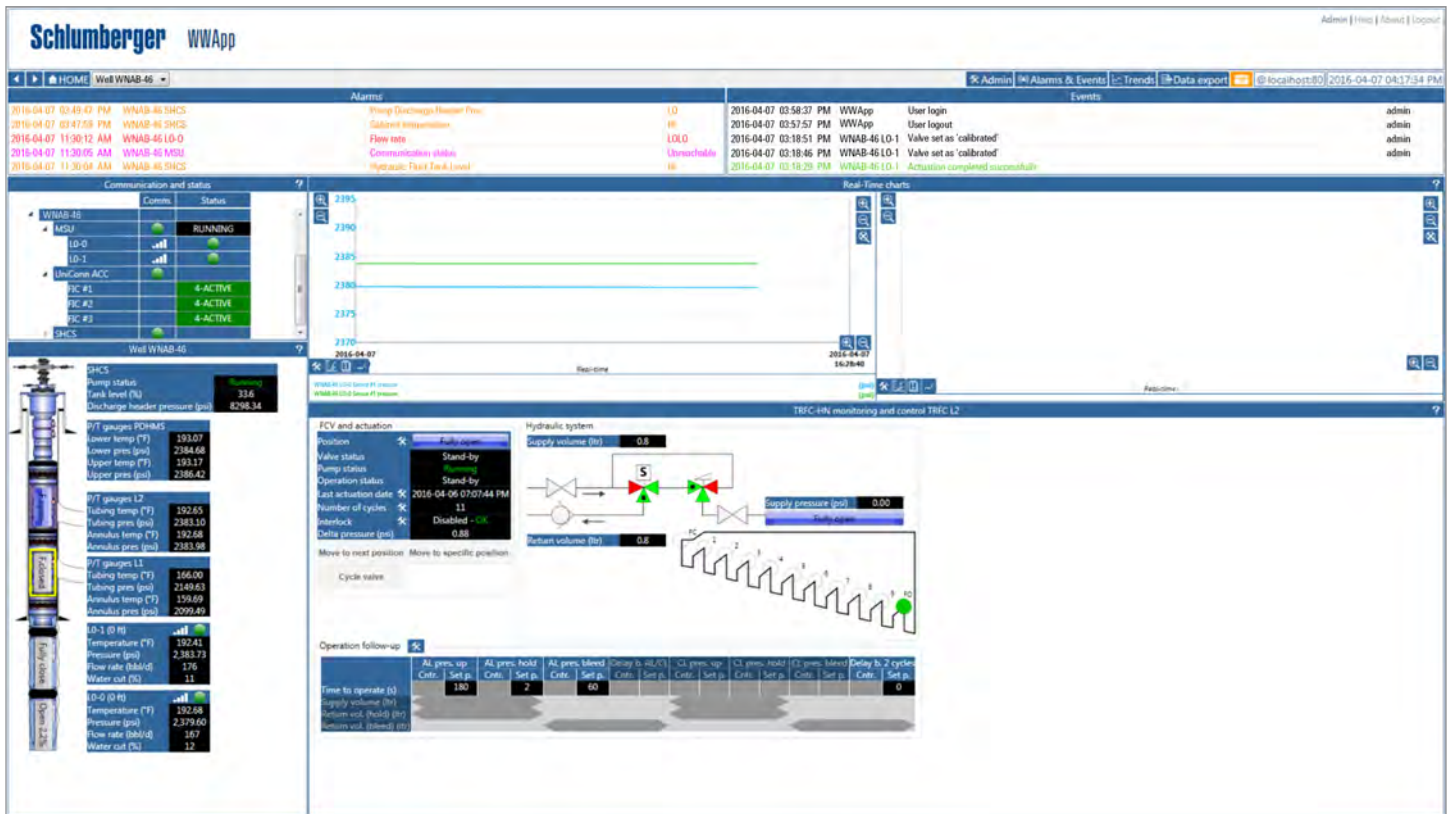
The main production data is shared with the DCS for historization and transmission to the primary historian located offsite.

### Industry-standard software

RTAC system software is based on SCADA software that is widely deployed in many different industries worldwide. Extensively supported and mature, it meets the robustness and long-term sustainability requirements of successful SCADA systems.



Typical RTAC system architecture enables data viewing and equipment control directly at the wellsite or remotely.



Sample view of the HMI, which enables onsite or remote operators to monitor and control downhole tools in real time.

## Communication and data security

The RTAC system uses mainly Modbus®, Modbus TCP, and Open Platform Communications (OPC-DA or OPC-UA) protocols, but it supports many other drivers. For remote operations or data transmission over a LAN or WAN, the system uses an industry-standard security protocol.

## Safety alarms

A range of alarms can be programmed by setting acceptable thresholds for various parameters (e.g., temperature, hydraulic pressure, electric current).