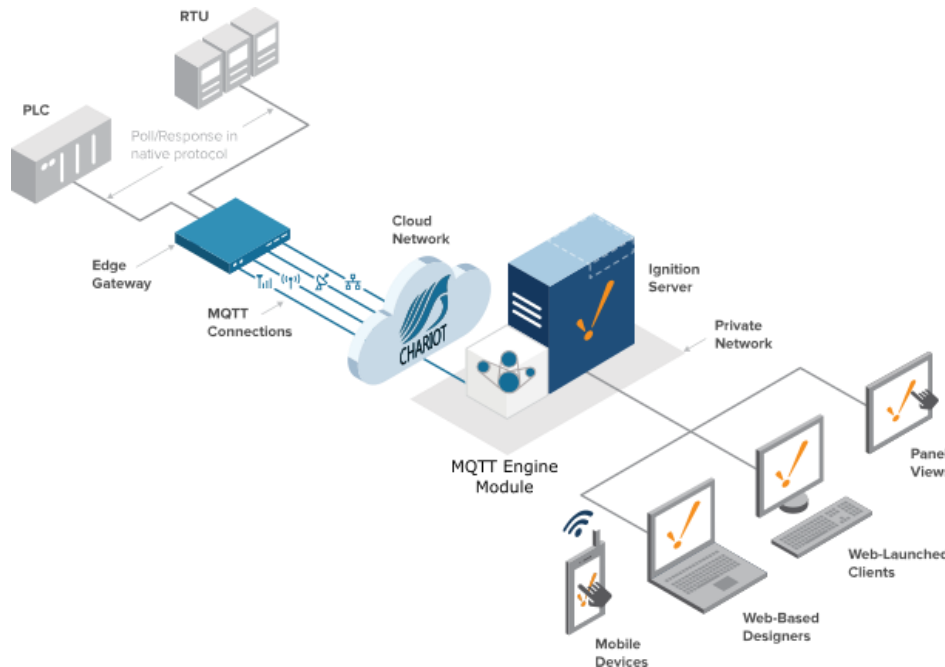




Chariot SCADA

By Cirrus Link Solutions

CHARIOT SCADA is middleware infrastructure focusing on the industrial automation and Internet of Things market enabling the quick integration of data assets in SCADA and IIoT systems. For 30 years, Cirrus Link has the experience in the moving bits of data effectively, securely and with the reliability to run mission critical systems. With our knowledge base and our hardware partners, Chariot SCADA simplifies the edge of the network enabling critical and new data assets for clients to effectively operate, manage and maintain their systems over its lifetime. Chariot SCADA is provided for private or on premise, as a cloud service or a hybrid of both. Components of Chariot SCADA include Chariot MQTT Servers, Ignition by Inductive Automation and Cirrus Link MQTT Modules for Ignition.



Chariot SCADA Topology Overview

Powered by Ignition



Chariot SCADA is powered by Ignition, the powerful HMI, SCADA, and MES software platform from Inductive Automation providing cross-platform compatibility, unlimited free clients, robust out-of-the-box SQL database support, and fast installation.

Leveraging the full power of the Ignition universal industrial automation platform with fully integrated HMI/SCADA functionality, the Chariot SCADA solution with Ignition define a true IIoT solution unlike any other on the market today

Features

- Increased Data Throughput & Efficiencies
- Data Integration
- Self-Learning Data Tags
- Exceptional Redundancy & Security
- Automatic System Health Metrics

Powered by Ignition

Supported Operating Systems

- Windows Server 2008/2012 Windows 7, 8, and 10 Ubuntu Linux 12.04 or later
- Other Java SE-enabled OSes1

Supported Databases

- Microsoft® SQL Server MySQL Oracle PostgreSQL

Supported MQTT Servers

- The MQTT Distributor Module2 and any server compliant with the 3.1.1 MQTT protocol OASIS standard

Requirements

- Ignition v7.7.6+ Java SE 8 (server) Java SE 6, 7, or 8 (client) 1024 MB RAM3 1 GB free HD space MQTT Servers Edge Gateway Hardware

1. Ignition is compatible with any Java SE 8-enabled OS. Full support is only offered for listed OSes.
2. MQTT Distributor Module is limited to 50 edge gateways.
3. Requirements vary by usage

Benefits of the Chariot SCADA Infrastructure:

Increased Data Availability

- Latency is decreased as the polling is done at the edge at faster intervals instantly reporting changed data
- Throughput efficiencies increased
- Efficiencies and Detection is improved with improved awareness
- Best path for connectivity is managed and quickly switched upon failure for higher up times

Data Integration

- With Chariot SCADA, data is published from the edge into a MOM(message-oriented-middleware) platform enabling data to be sent to many applications breaking the one-to-one data relationship
- All types of data now available at the edge from process variables to a captured image
- MQTT Client JSON data integration directly into the business enterprise
- REST Endpoint Integration

Securely Simplifies the Edge

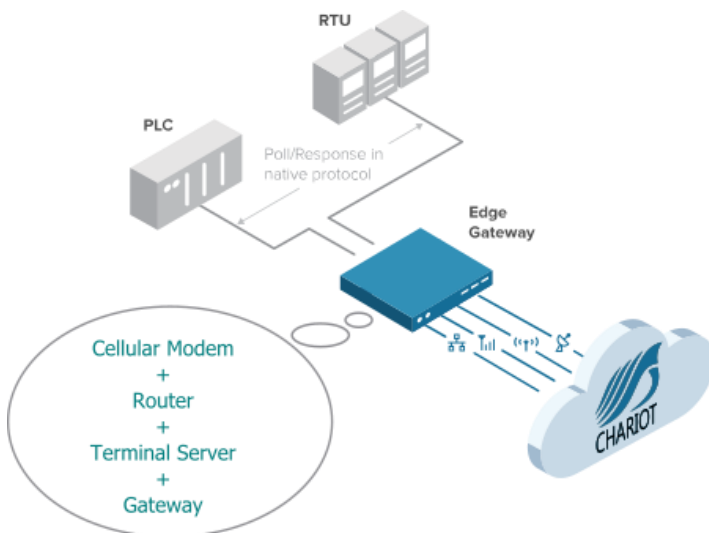
- One connection in and out for all data.. One Pipe... One Process
- Enables connectivity to Multiple Devices and protocols to delivery all data types including Real-time control
- Security is simplified and improved with secure TLS client originated connectivity

Exceptional Redundancy Performance

- Up-time Improved – Quicker fail-over and Acknowledgements when issues arise
- Scalability, Disaster Recovery and High Availability are native capabilities of the system... Scale out, up and across.
- Many levels of redundancy available for the messaging middleware
- Drawing

EDGE Gateways

To enable this connectivity to the field devices, Edge Gateways are installed that extends the polling to the edge of the network and delivers the data utilizing MQTT to Chariot SCADA MQTT Servers. The Edge Gateway combines the capabilities of a cellular modem, router, terminal server and gateway all in one box eliminating costs and failure rates. Cirrus Link's main provider of the Edge Gateway is Elecsys and their RediGate line gateways that provide the capabilities and proven experience required.



Elecsys Edge Gateways Simplify the Complexity

The capabilities of the Elecsys Edge Gateways include:

- Data Management
- Protocol Conversion
- Smart Terminal Sever interleaving multiple masters per channel
- RBE Functionality – Efficient use of communication and increased change of state awareness
- Arbitrator for between network routes for uptime – Best Path and Failover
- Cellular Connectivity
- Security – TLS Client originated
- MQTT Client
- IEC-61131 Local Logic for Control