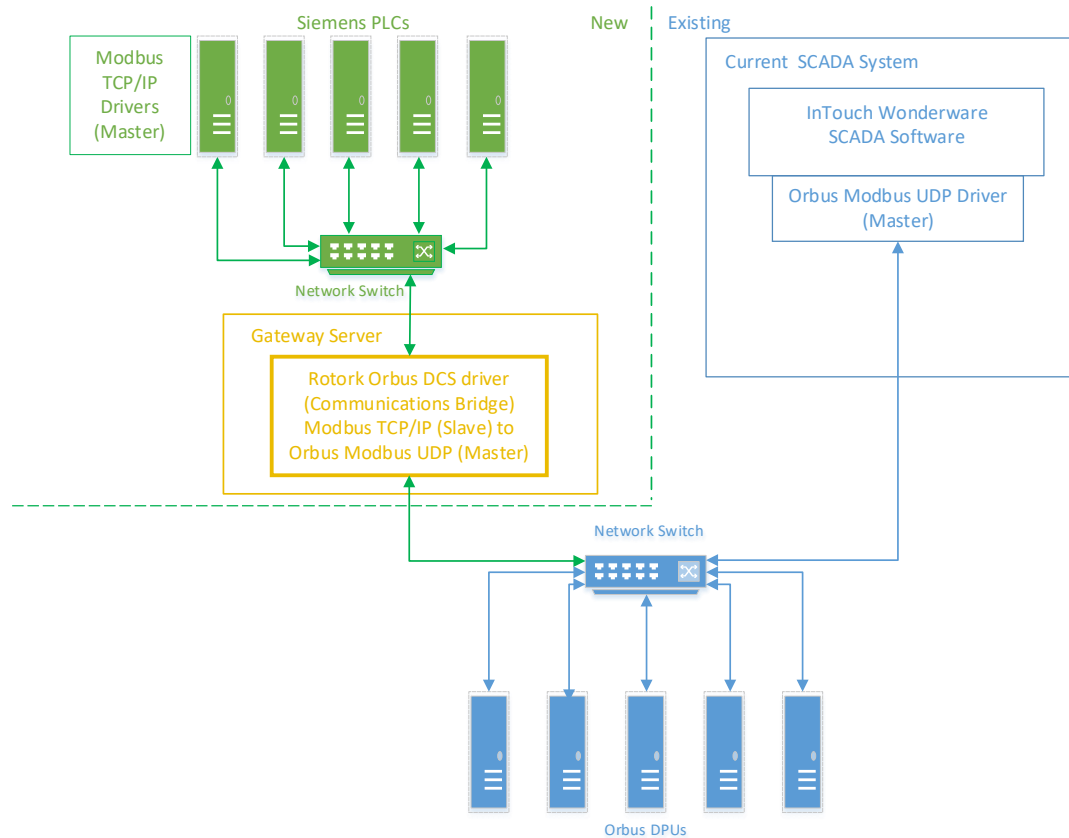# Intelligent Information: Rotork Orbus DCS Gateway

Orbus Gateway Schematic

Overview

This Orbus gateway was engineered to facilitate the efficient replacement of a Rotork Orbus DCS (Distributed Control System) with a Siemens PLC solution.

The Siemens PLCs could access the Orbus DCS I/O directly and the Orbus software was disabled using a soft-switch. This enabled the Siemens PLC code to be tested extensively with the existing field wiring; the Orbus code always being available as a back-up.

The gateway also allowed the Siemens PLCs access to the internal registers and flags of the Orbus DPUs thus allowing communication between PLCs and DPUs to occur; each Orbus DPU could be replaced in turn running a hybrid Siemens / Orbus system until the full replacement system was commissioned.

Main Features

➢ Gateway is based on widely available hardware / operating system software

➢ Read / Write access to the Orbus DPU I/O available directly to one or more PLCs

➢ Read / Write access to the Orbus flags and registers enabling inter PLC / DPU communication; PLCs could be brought online to control plant areas with existing DPUs controlling other plant areas

➢ Replacement system testing performed with existing field wiring and I/O racks; field instrumentation re-wired when all testing was complete

➢ DCS System replaced whilst process running; very little downtime necessary

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