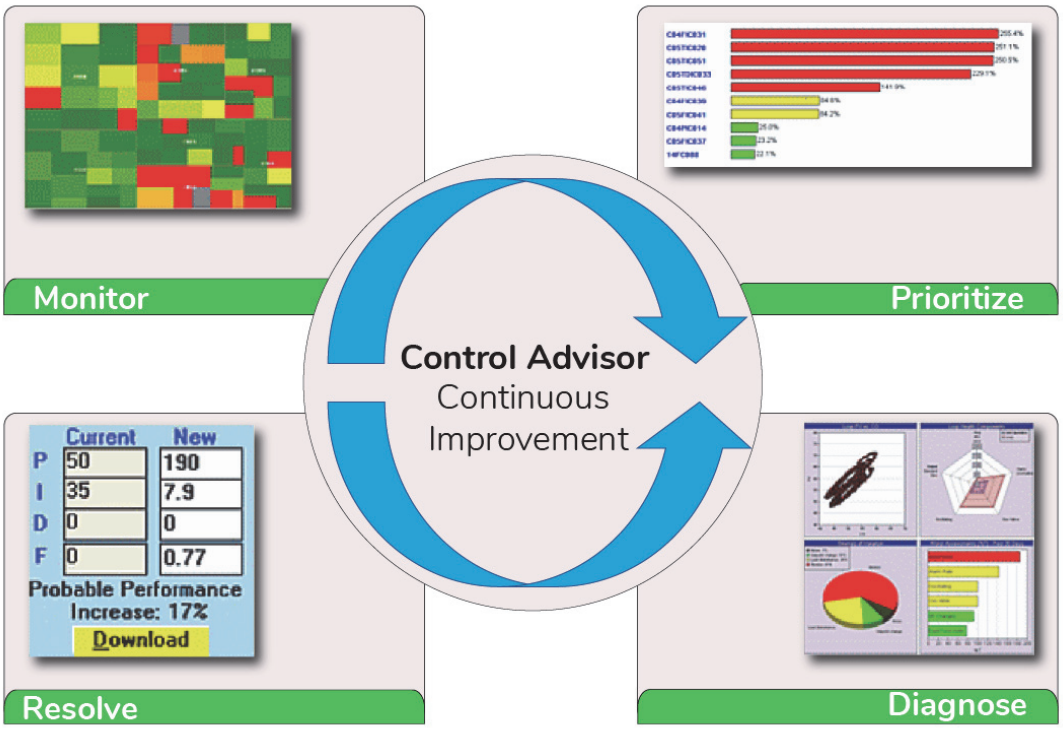
EcoStruxure™

Control Advisor

PSS 41S-4CTRLADV

Product Specification

July 2021



Schneider Electric™

https://www.se.com

Legal Information

Features

EcoStruxure™ Control Advisor is a control loop performance solution that helps monitor, improve, and maintain your Foxboro™ control loops. Control Advisor:

- Prioritizes and diagnoses each improvement opportunity
- Directs you to the most pressing problems and biggest payback loops
- Isolates control valves that have mechanical issues
- Finds the root cause of oscillations
- Finds the root cause of process upsets
- Recommends improved tuning for improved controller performance

Benefits

With Control Advisor, your plant can experience these types of benefits:

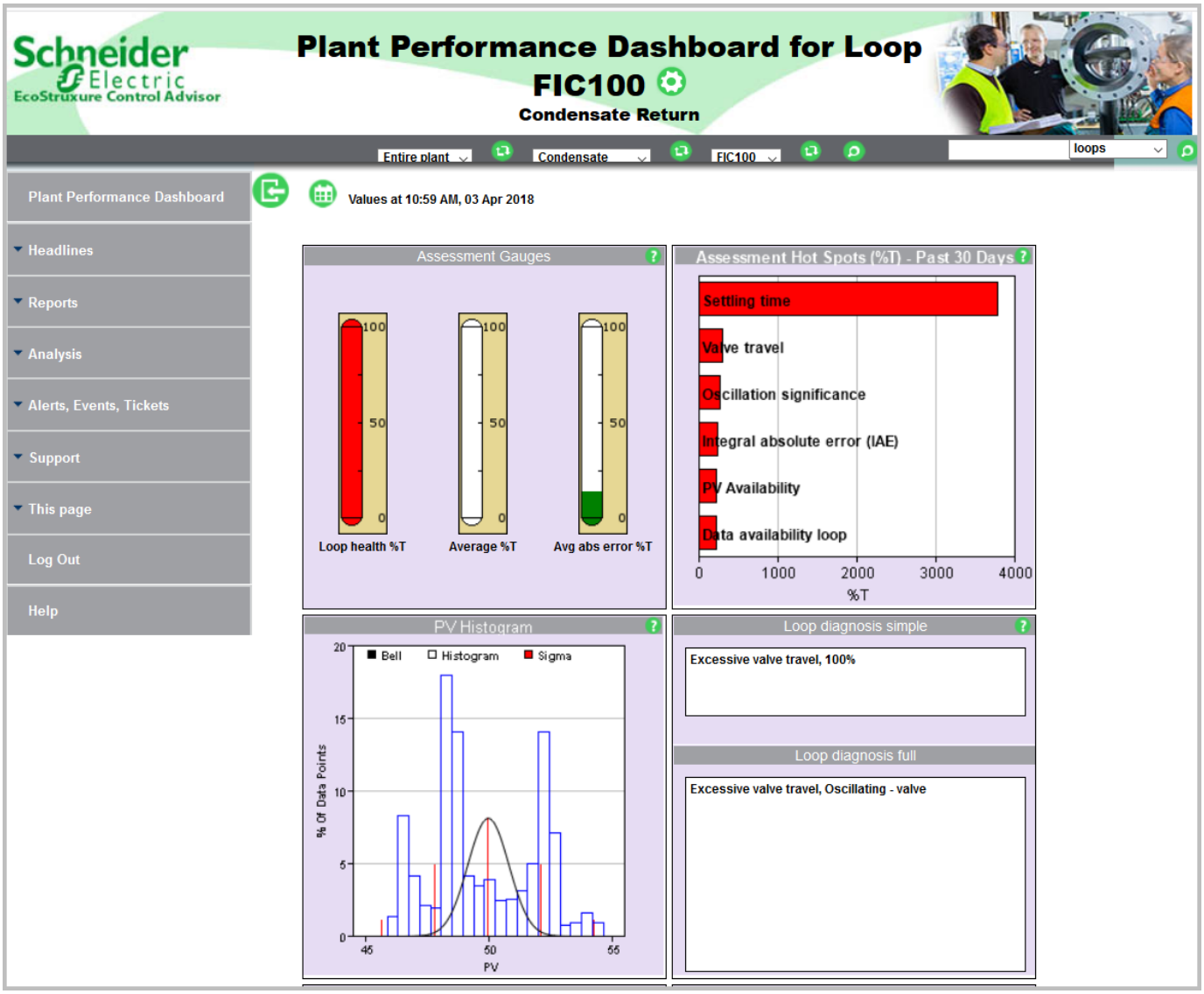
- Energy savings (0.5 – 2.0%)
- Increased production (1 – 10%)
- Reduced maintenance costs
- Reduced waste/scrap
- Improved reliability
- Process knowledge
- Return on investment (typically 3 – 6 months)

Control Advisor functions on a physical Windows® based server machine or VMWare virtual machine meeting the recommended minimum requirements. Control Advisor requires connectivity to the Foxboro DCS with real-time values for the control loops to be monitored.

Software Features

- Analysis and reporting
  - Process analysis and consulting
  - Daily variability and benefit monitoring
- Optimization as the process changes
  - System modification for process changes
  - Addressing bottlenecks from controller constraints
  - Maximizing controller utilization
- Continuous operational support
  - Remote process and controls troubleshooting and support
  - Phone and email support
  - Proactive remote assistance
  - Operation training
- Model predictive control monitoring
  - Continuous assessments to diagnose issues with:
    - Disturbance Variables (DVs)
    - Controlled Variables (CVs)
    - Manipulated Variables (MVs)
    - MPC Controller
- Intuitive interface
  - Simple navigation
  - Personalized newsletter
- Auto configuration
  - Uses the OPC browse feature to query OPC servers
- Additional analytical tools
  - Enhanced AMCT Models

Figure 1 - Plant Performance Dashboard for Loop



Total Solution Approach

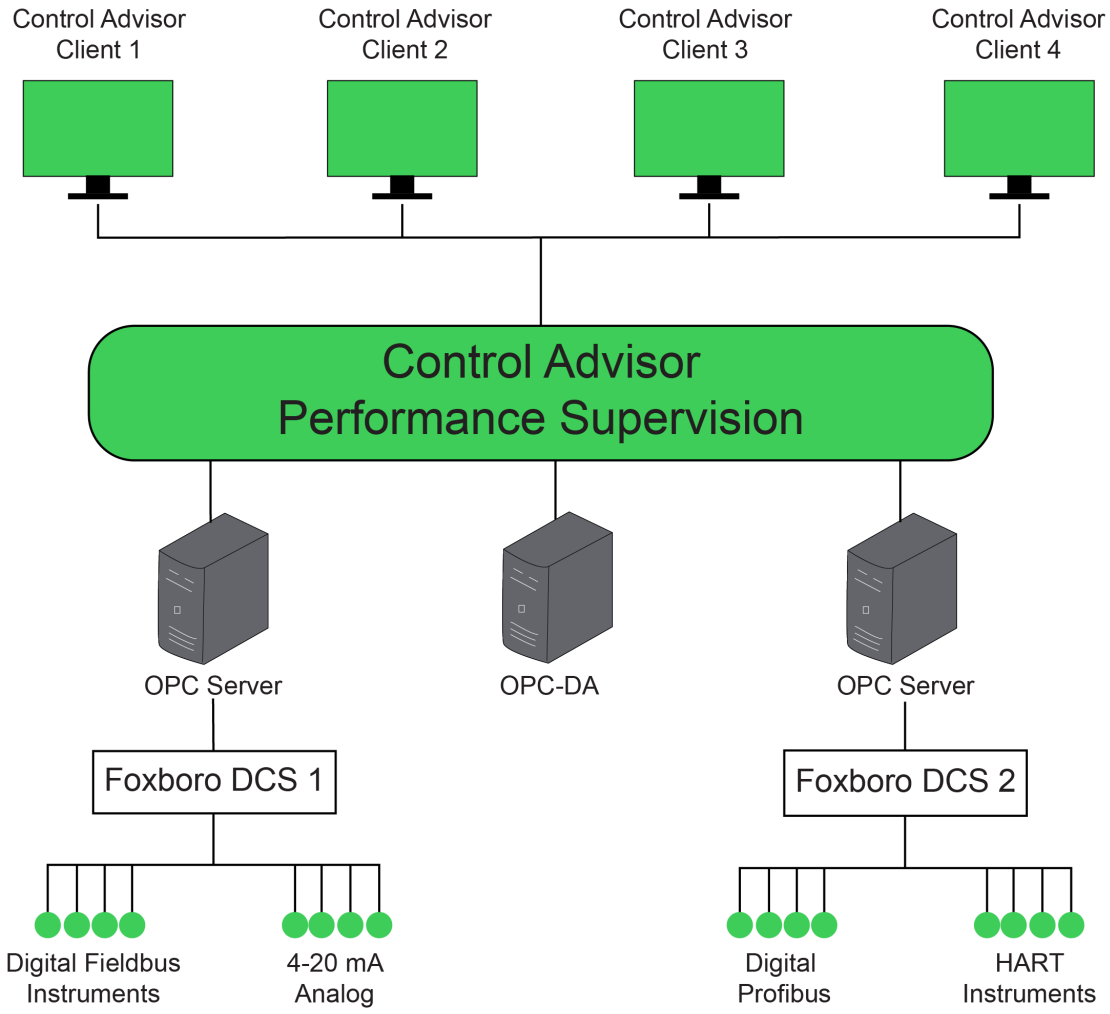
To fully achieve the benefits of a control loop performance management solution, a combined software and consulting model is recommended. This model is often based on a phased approach, which includes:

- Planning
- Agreeing on implementation concept and scope
- Agreeing on network topology and cybersecurity concept
- Agreeing on license size and roll-out approach
- Onsite setup
- Installing hardware and software
- Establishing communication between the Foxboro DCS and Control Advisor
- Creating database
- Establishing relationships
- Learning site process
- Importing loops
- Customizing commercial attributes, location (areas, units), and so on
- Setting the initial baseline and thresholds
- Delivering value
- Training
- Working to find improvements
- Documenting improvements for posterity
- Implementing findings
- Providing suggestions for future planning

System Architecture

This image shows a general system architecture.

Figure 2 - Control Advisor Performance Supervision



OPC software is available at an additional cost.

Hardware and Software Requirements

Hardware Requirements

This table lists the minimum hardware requirements based on the size of the Control Advisor server. For the best user experience, faster hardware with greater memory is always recommended.

These hardware requirements are for a system dedicated only to Control Advisor.

Control Advisor Server	**Minimum Requirements**			
Loops	**Processors**	**RAM**	**Storage Size**	**Storage Type**
100 to 300	2 cores to 2.0 Ghz	4 GB	500 GB	HDD 10,000 RPM
301 to 700	4 cores to 2.0 Ghz	8 GB	600 GB	HDD 10,000 RPM
701 to 1200	8 cores to 2.1 Ghz	12 GB	800 GB	SSD recommended
1201 to 1500	8 cores to 2.1 Ghz	16 GB	1 TB / 1024 GB	SSD
1500	Contact Schneider Electric for hardware requirements.			

Additional information:

- HDD: RAID 5 minimum
- SSD (Solid State Drives): Recommended
- UPS: Recommended
- SMTP server, required if using Control Advisor's email feature
- Virtual Machine: Microsoft Hyper-V virtualization must use a software key Recommended only for version 19.3 or later.

Operating System Requirements

Control Advisor runs on any Windows-based operating system. It is a server-based application and requires services and operating system functionality normally available on a Windows server-class machine.

Additional Software Requirements

The software required for each Control Advisor server and by the end user, includes:

- Microsoft® Windows Server 2016 or later
- Microsoft Edge or Google Chrome
- Microsoft Internet Information Service (IIS)
- ASP.NET 4.5, 4.6, or 4.7
- .Net Framework 3.5, 4.5, 4.6, or 4.7
- Microsoft Excel recommended for bulk configuration
- PDF reader

Software Licensing

Control Advisor is licensed based on the number of loops. A loop is anything that has a real-time Process Value (PV). For example, adding an analog input from an analyzer consumes a loop.

There is no additional cost to add more information to a loop. For example, if you add Setpoint (SP), Control Output (OP), PID values, mode, engineering ranges, status bits, and economics *within the context of a single loop,* there is no additional cost. A 2000-loop system, with each loop having a PV, SP, and OP, could be monitoring 6000 tags.

You can purchase licenses for groups of 100 loops, ranging from 100 to 1000 loops. For groups larger than 1000 loops, licenses are available in increments of 1300,1600, and 2000 loops.

Control Advisor license validation is done through a hardware USB dongle.

Related Documents

Document Number	Description
B0830AA	*EcoStruxure™ Control Advisor Application Guide*
B0830AB	*EcoStruxure™ Control Advisor Continuous Improvement Guide*
B0830AC	*EcoStruxure™ Control Advisor Installation Guide*
B0830AD	*EcoStruxure™ Control Advisor User's Guide*
B0830AE	*EcoStruxure™ Control Advisor Project Planning Guide*
B0830AF	*EcoStruxure™ Control Advisor Upgrade Guide*

WARNING: This product can expose you to chemicals including lead and lead compounds, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.p65warnings.ca.gov/.

Schneider Electric Systems USA, Inc.
70 Mechanic Street
Foxboro, Massachusetts 02035–2037
United States of America

Global Customer Support: https://pasupport.schneider-electric.com

As standards, specifications, and design change from time to time, please ask for confirmation of the information given in this publication.

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