

WinCC OA SmartSCADA Add-On Training

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Course code

ETM-WinCCOASMART

Description

The SmartSCADA Add-on is a tool delivering its users instruments for statistical analysis of a system they are familiar with. These instruments are also called wizards and using “R”, which is a mathematical programming language and environment for statistical computing and graphics. The main idea behind the analysis is to find hidden dependencies and to evaluate system performance.

Hidden dependencies are root causes to leverage the system performance and could be worked out using the Data Mining wizard. System performance could be evaluated using Key Performance Indicator (KPI) wizard with KPI constructor included. The Classification wizard might be helpful as a decision-making support and in cooperation with KPIs, it is designed to be a multi-parameter online diagnostic tool. SmartSCADA gives the opportunity to increase competence on the system where it is applied to.

The two-day instructor-led course provides experienced trainees with the knowledge and skills necessary to use the WinCC OA SmartSCADA wizards (KPIs, Data Mining and Classification), delivered with the SmartSCADA Add-on.

A demonstration project providing data for the analysis will be offered as a training basis with exercises for the participants.

Prerequisites

Participating trainees should be PC literate (MS Windows, keyboard and mouse skills) and be familiar with WinCC OA at least at basic level. Trainees should bring a suitable laptop. A training copy of the WinCC OA software will be provided for the duration of the course if needed. A minimum specification for this PC is detailed in the note below.

Training objectives

On completion of this course, the trainee knows about the functionality of the SmartSCADA Add-On and will be able to apply SmartSCADA wizards to analyse data from a real-life system.

The participants will be able to define KPIs, perform data mining to check dependencies and train a random forest model to perform a root cause analysis based on the parameters of the previously defined KPIs.

Content

- Installation and configuration
- KPI Wizard
- Data Mining Wizard
- Classification Wizard
- Discussion of possible customer use cases / Q&A Session



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Please note: WinCC OA only supports 64bit-operating systems! Hardware and software, except for WinCC OA, are not provided and must be brought by the participant. The minimum hardware and software requirements are as follows:

- Processor Intel Core i3 / i5 / i7 with 2.2 GHz or similar
- RAM 4 GB
- HDD 5GB free disk space
- Graphic 1280 x 1024
- Input Keyboard, mouse and USB-port (required)
- Operating system Windows 10 CB Version 20H2, LTSC Version 2019, Windows Server 2019, RedHat Enterprise Linux 8 64bit, Oracle® Linux 8.3, SIMATIC Industrial OS 2.2, Docker-Version 20.10.3 with Debian 10 Buster
- Optional VMware Cluster (HA) ESXi 6.7 Update 3*
(supported by all operating systems which are mentioned above)
- Optional software Microsoft Excel 2016, Excel 365 1912
(Only 32bit Excel versions can be used for the WinCC OA Excel-report.)

Duration

2 days non-residential

*...The use of a virtualization is optional and not required for the installation of WinCC OA!