SIEMENS

Learning Journey - TIA Portal Programmierung Advanced (TIA-PROADV-LJ)

Short Description

The Totally Integrated Automation Portal (TIA Portal) forms the work environment for integrated engineering with SIMATIC STEP 7 and SIMATIC WinCC. The second learn-ing journey of the SIMATIC TIA Portal programming training is based on the knowledge of the TIA Portal gained in the SIMATIC S7 TIA Portal programming Basic learning journey, including STEP 7, SIMATIC S7, HMI and PROFINET IO. You expand your knowledge of complex operations and the reusability of program blocks. In addition to analog value processing and data management with complex data types, program-related error evaluation and handling is also considered. Build-ing on this, you will learn how to connect an operating and monitoring system (HMI). Thanks to the knowledge imparted, you will gain new impetus and ideas for efficient PLC programming.

An optimal mix of guided live modules (online) and self-learning modules will provide you with all of the content imperative for your work and sustainable learning success. Various practical tasks in our virtual exercise environment throughout the learning journey help you to prepare for practical application. The learning journey provides curated on-demand content to support you in your own personal practice transfer..

More information on learning journeys

Objectives

After this learning journey you will be able to ...
- Use program design methods to structure the program
- Solve extensive programming tasks with reusable blocks
- Program advanced functions, such as indirect addressing, in STEP 7
- Implement data management with the SIMATIC S7 automation system
- Apply system blocks along with blocks from the standard STEP 7 library
- Program classical software error handling and evaluation
- Configure the connection of an operator control and monitoring system (HMI).
- Configure TIA system components consisting of SIMATIC S7, HMI, PROFINET IO.

You will deepen your theoretical knowledge through numerous practice-oriented exercises in our virtual learning environment on a TIA system model. This consists of a SIMATIC S7-1500 automation system, Comfort Panel TP700 and a virtual learning environment of a production plant

Target Group

Programmers
Commissioning engineers
Engineering personnel

Content

The Learning Journey TIA-PROADV-LJ (Level: Advanced) consists of:
- 8 live modules (3.5 hours each)
- 18 self-study modules (approx. 12 hours); In addition to the live modules, you should plan about 1 hour of self-study time per day as well as dial-in and follow-up times.
- On-demand themed content
- Individual transfer support in the form of a 1:1 coaching (1 hour)

A learning membership to work through the self-learning modules and access to on-demand content is included for 1 year.

topics
- Tools for program creation (e.g. structograms)
- Analog value processing
- Functions, function blocks, and multi-instances using the IEC-compliant tim-er/counter as an example (International Electro technical Commission)
- Jump commands
- Indirect addressing
- Classical software error handling and evaluation with error organization blocks (OBs)
- Evaluation of diagnostic data
- Configure the connection of an HMI device (Touchpanel)
- Introduction into Structured Control Language (SCL)
- Introduction into S7-GRAPH
- Deeper understanding of contents through practical exercises in the virtual learning environment of a production plant

Prerequisites

Basic knowledge of automation technology
With the help of the available online entrance test, you will ensure that the course you choose matches your competences.

- Online Assessment Test.
- Technical requirements

Note

Participation in the learning journey is personal and non-transferable.

Type

Learning Journey

Duration

40 hours

Language

de

copyright by Siemens AG 2024