



Motion Control

SIMOTION IT – technology accessible via web

Efficient commissioning, diagnostics and maintenance of your machine – with the integrated web server functions of SIMOTION

How can the diverse functions of a modern automation solution be even more efficiently structured for the commissioning engineer? And how can a service technician perform diagnostics of the machine's status without a special engineering tool? SIMOTION IT opens up an intuitive way to access your machine via the integrated web server functions.

The automation solutions for production machines in the engineering of special and series machines are becoming more and more powerful – and thus more complex. This complexity presents machine operators with new challenges: The engineering software is typically optimized for implementing the automation solution and not for easy maintenance of the machine. It also requires detailed know-how and a considerable familiarization period. Thus, the costs for the necessary support of the end user increase exponentially for the manufacturer of a series machine.

Powerful function package

With SIMOTION IT, a comprehensive function package is available onboard each SIMOTION controller in order to overcome these challenges. The on-site technician only needs an Ethernet cable and a computer with a web browser installed.

SIMOTION consists of three elements:

- 1. SIMOTION HTML pages:** The integrated standard pages offer comprehensive aids for commissioning and diagnostics. In addition, it is possible to create user-defined HTML pages.
- 2. SIMOTION OPC XML-DA:** With this HTTP-based communication mechanism, read/write accesses to process values of the controller are possible – ideal for use in conjunction with JavaScript in HTML pages.
- 3. SIMOTION VM:** An integrated JAVA runtime environment. It allows parallel execution of individual JAVA programs – a powerful supplement to the standard automation program.

Security first

For protection against possible attacks, the SIMOTION Webserver has multi-level security mechanisms – such as a role-based authorization concept with configurable users and an encrypted HTTPS connection for secure communication between the web browser and the SIMOTION Webserver. Remote access is also possible (via VPN tunnel, for example) provided there is a corresponding IT infrastructure.

Faster diagnostics

The standard web pages of SIMOTION already provide a wide variety of information on the device and its current status (firmware versions, hardware components, technology objects, CPU utilization or task runtimes). It is also possible to access configuration and drive variables, the expanded diagnostics buffer, and technology object alarms. The device trace and the distributed trace (system trace) can be parameterized for recording variables and signal sequences. The supplied "WebTraceViewer" program can be used to evaluate the recorded data (Fig. 1).

Remote maintenance made easy

Especially user-friendly: Via the interactive "Device Update" page, you can back up the current software, including firmware and user program, completely or partially on the user's PC. Conversely, software packages can be loaded onto the controller as a device update (Fig. 2).

Individual web-based commissioning

Beyond the prepared standard HTML pages, the SIMOTION Webserver also gives you the capability of creating totally individual web pages according to the design and function requirements of the customer. The machine manufacturer is completely free here to provide a commissioning interface for the end customer in his own corporate design. This is particularly appealing in series machine engineering: Like a router for home use, all of the tools for commissioning, diagnostics, and maintenance of the machine are available on the controller and can be called up at any time (Fig. 3).

Conclusion

- Can be used quickly thanks to web technology without specific engineering tool
- Cost-effective maintenance and diagnostics thanks to immediate use – without installation effort
- Increased machine availability due to maintenance and diagnostics at any time, from any location
- Flexible in solutions because individual JAVA applications are possible in the integrated Virtual Machine

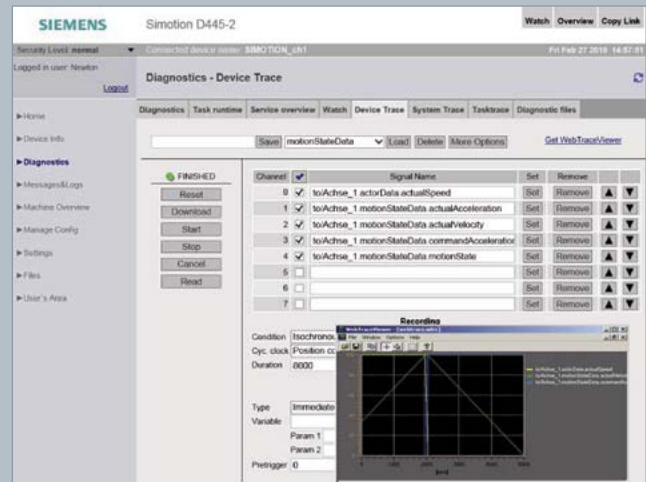


Fig. 1: Trace functionality onboard for faster diagnostics

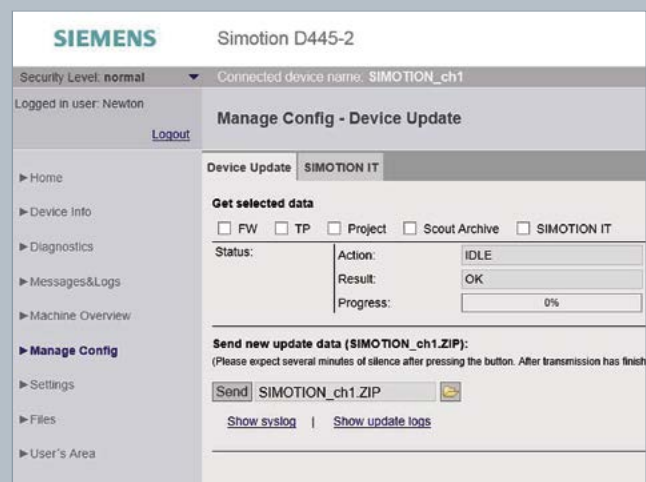


Fig. 2: Simple software updates via "Device Update"

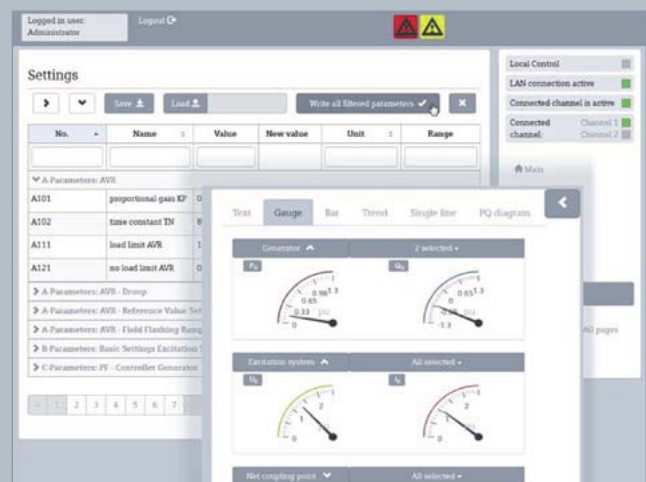


Fig. 3: Example of a customized HTML5 application

Siemens AG
Digital Factory
P.O. Box 31 80
91050 Erlangen
GERMANY

Subject to change without prior notice
Article No. E20001-A1430-P620-V1-7600
Dispo 06372
SCHÖ/1000022620 B.2269.17.MAR.WCO
SB 04151.5
Printed in Germany
© Siemens AG 2015

The information provided in this brochure contains merely general descriptions or characteristics of performance which in case of actual use do not always apply as described or which may change as a result of further development of the products. An obligation to provide the respective characteristics shall only exist if expressly agreed in the terms of contract. All product designations may be trademarks or product names of Siemens AG or supplier companies whose use by third parties for their own purposes could violate the rights of the owners. For the secure operation of Siemens products and solutions, it is necessary to take suitable preventive action (e.g. cell protection concept) and integrate each component into a holistic, state-of-the-art industrial security concept. Third-party products that may be in use should also be considered. For more information about industrial security, visit <http://www.siemens.com/industrialsecurity>