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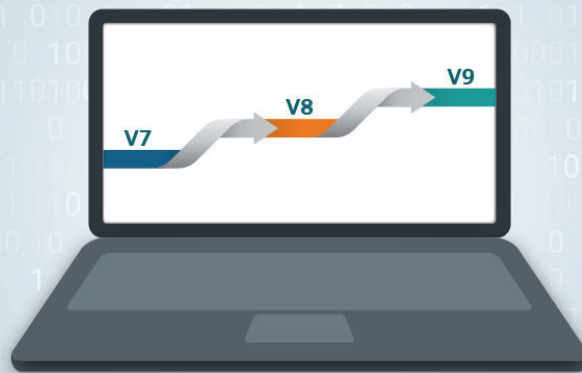
SIMATIC PCS 7 V9.1

Your next step towards increased plant availability and long-term productivity

In process plants, the control system is the starting point for optimum added value. The control system monitors and controls all production processes with the help of automation systems and distributed I/Os. A high-performance control system thus directly increases the efficiency of plant operation. Since the market launch of SIMATIC PCS 7 Version 9.0, Siemens has been opening up new perspectives for plant owner/operators: With an innovative, robust hardware platform based on Profinet and numerous new software enhancements, we have brought digitalization right down to the field level.

With released version 9.1 of our proven control system, we are taking the next step and providing a veritable plus in terms of overview, availability and safety. This way, you not only benefit from even better and safer plant performance – you also put your plant on a sustainable course for the future! The new version offers you easy access to the scope and condition of your installed components. Get an overview of the update status of your plant and rely on proactive lifecycle management in the future. In addition, support for the latest Microsoft operating systems, Windows 10 Enterprise LTSC 2019 and Windows Server 2019, leads to increased cybersecurity and improved future reliability.

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SIMATIC PCS 7 takes the many facets of safety into account

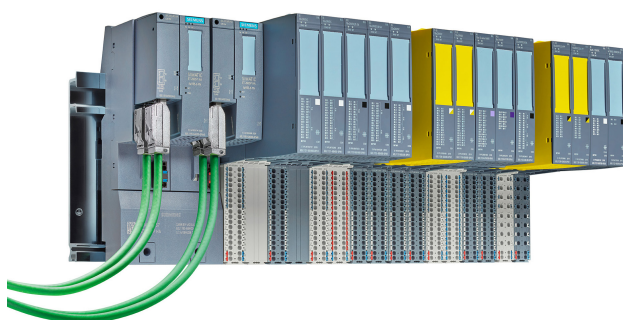
Safety is a key issue for everyone responsible in the process industry. It has many facets, ranging from process and plant safety to HSE (Health, Safety and Environment) issues and IT security.

Hardware innovations prepare for failsafe applications and explosion-hazard areas

In the future, you can also rely on the powerful SIMATIC ET 200SP HA distributed I/O system in failsafe applications: The new failsafe modules are based on SIMATIC Safety Integrated and correspond to the standard modules in terms of their design. They are certified by TÜV SÜD for safety applications up to SIL 3. SIMATIC ET 200SP HA is therefore suitable for demanding safety and standard applications in process and manufacturing industries, where high availability and PROFINET R1 redundancy are essential. Intrinsically safe I/O modules for use in hazardous areas will soon be available for the SIMATIC ET 200SP HA. With the new modules, separate Ex isolators with corresponding wiring and large space requirements are no longer needed. The I/O modules can be installed up to ATEX zone 2 and provide intrinsically safe circuits with protection level Ex ia for field devices up to zone 0. The explosion-proof modules offer channel diagnostics, Configuration in Run and are approved for ambient temperatures from -40 to +70 °C.

Protection at management and operational level

With the end of support for operating systems, plant owners/operators face an increased security risk due to the lack of security-relevant updates. The consequence: Newly discovered vulnerabilities are no longer closed and can thus be exploited unhindered by cybercriminals. Version 9.1 supports Windows Server 2019 Standard Edition 64 Bit and Windows 10 Enterprise 2019 LTSC 64 Bit and is compatible with our current Industrial Workstations (IPCs). This ensures that the latest Microsoft updates will be conveniently available for installation via the Microsoft Windows Server Update Service (WSUS). In addition, Windows Defender Antivirus is now released for SIMATIC PCS 7 V9.1. Together with our holistic industrial security concept (Defense in Depth), this provides the greatest possible protection against security vulnerabilities.



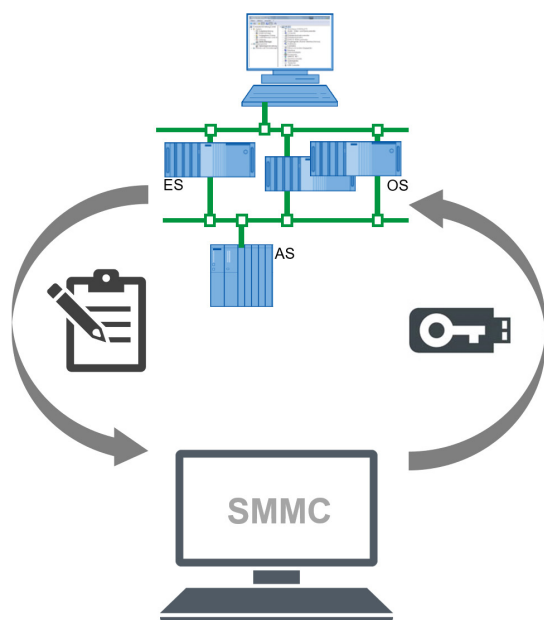
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Proactive life cycle management: efficient over decades

Process plants must be continuously kept up to date, especially due to their long operating life. This also applies first and foremost to process control technology. With Version 9.1 of SIMATIC PCS 7, efficient upgrade strategies can be implemented safely.

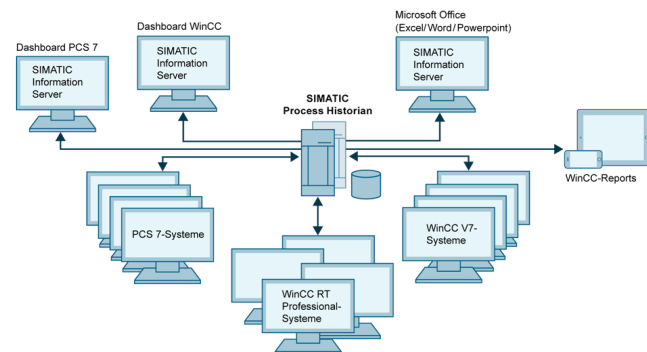
Systematically inventoried and always up-to-date

Plant performance always results from the interaction of the entire plant equipment. It is therefore important to know the status of the hardware and software used. But how do you keep track of hundreds of devices? With the SIMATIC Management Console (SMMC) integrated in SIMATIC PCS 7 and our Update Services, you get a detailed and up-to-date picture of the status of your automation infrastructure (software and hardware). This improves the proactive life-cycle management of your existing SIMATIC PCS 7 plant. The SMMC enables a convenient inventory of the installed base and a simplified comparison with the latest software and hardware updates. In interaction with the new web-based SIMATIC PCS myExpert application, this information is standardized, clearly displayed and monitored - even across multiple plants. Microsoft Windows updates are also managed via SMMC. Benefit from an even more comprehensive overview of available updates, obsolescence or the lifecycle status of individual assets. All Microsoft Defender events from all PCS 7 stations in a plant also converge in the SMMC.



Generating added value from data - with the right IT solution

Another lever for more efficient plant management in future lies in previously unused process data, tags, alarms and batch data at runtime and from the past. With SIMATIC PCS 7 Process Historian (PH), this information can be archived and evaluated centrally and in real time. In addition to standard database interfaces such as ODBC, OLE DB and ADO.NET, data can now also be processed via OPC UA. This enables simple and standardized integration of third-party systems. The archive data is visualized via the Information Server (IS). Based on Microsoft Reporting Services, individual and target group-specific reports can be created very intuitively using interactive dashboards.



Accessing and evaluating the volume of historical data for plant optimization requires a high-performance archiving, reporting and backup system. With SIMATIC DCS/SCADA Infrastructure, Siemens offers you a comprehensive IT solution consisting of hardware, software and customized services. Leave nothing to chance when it comes to data archiving, visualization and backup. For example, the right disaster recovery strategy plays a central role in resuming production after a failure and preventing data loss.

Future-proof and efficient plant engineering

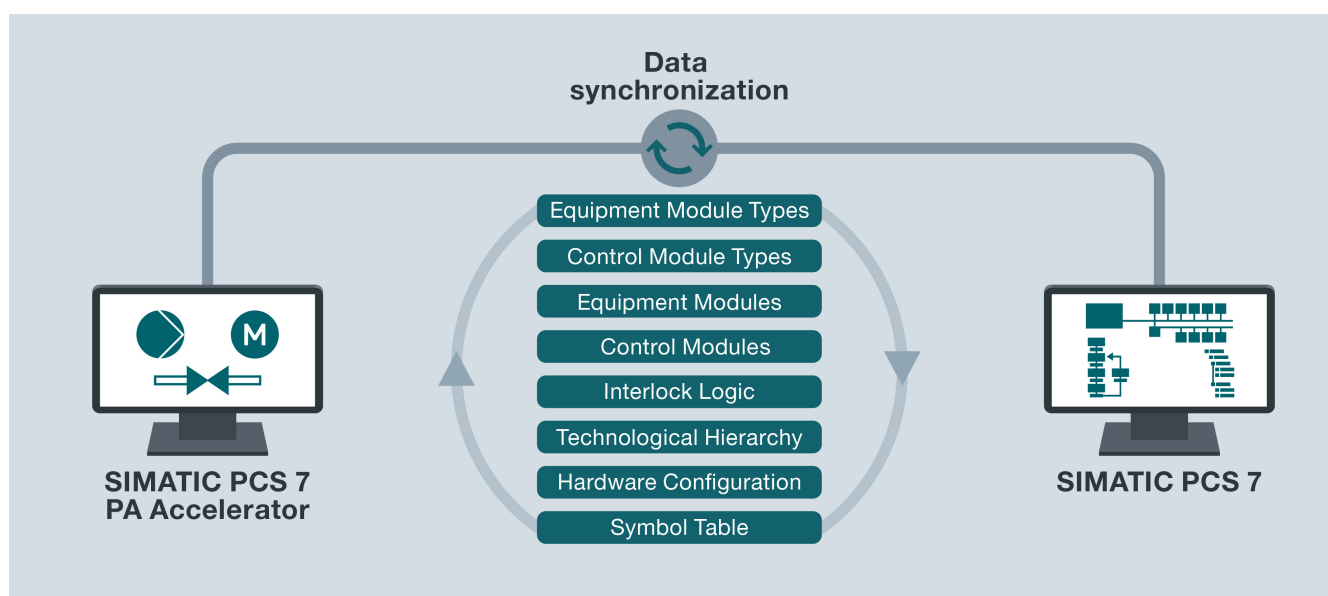
In addition to an up-to-date lifecycle status across all components, structured and systematic plant modeling in engineering also ensures productivity and thus ensures sustainable plant operation.

Automation information - standardized and reusable

With the object-oriented type and instance concept, SIMATIC PCS 7 has long enabled the definition of master templates with which an almost unlimited derivation of instances can be implemented. These templates or types enable reduced testing and maintenance efforts during modeling and comply with the general requirements of the ANSI/ISA standards ISA-88 and 106. Changes made to the master template can be synchronized with each instance - making it easier to adapt to new or changing requirements. SIMATIC PCS 7 V9.1 also comes with an updated master data library: The updateable and future-proof Advanced Process Library include a variety of ready-made, standardized and system-tested types such as Control Module Types (CMT) or Equipment Module Types (EMT). The technological connections and the creation of variants make especially the single Control Module Types (CMT) even more powerful compared to the original function block templates. Existing module types can be automatically converted to CM types.

Contemporary engineering: specific tools and consistent data flow

In addition, CMTs enable fast mass data engineering, which significantly reduces the risk of errors. Engineering can be performed using the SIMATIC PCS 7 Technological List Editor, a Microsoft Excel-based editor that requires no system-specific knowledge. In addition, the SIMATIC PCS 7 Plant Automation Accelerator creates the basis for fully integrated planning and documentation of plant automation projects. With the new version, process sequential controls and their corresponding types can be planned even more comprehensively and intuitively. The consistent matching of types and instances between planning and automation is done on a bidirectional basis.



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Subject to change without prior notice
Article No. DIPA-B10189-00-7600
Printed in Germany
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