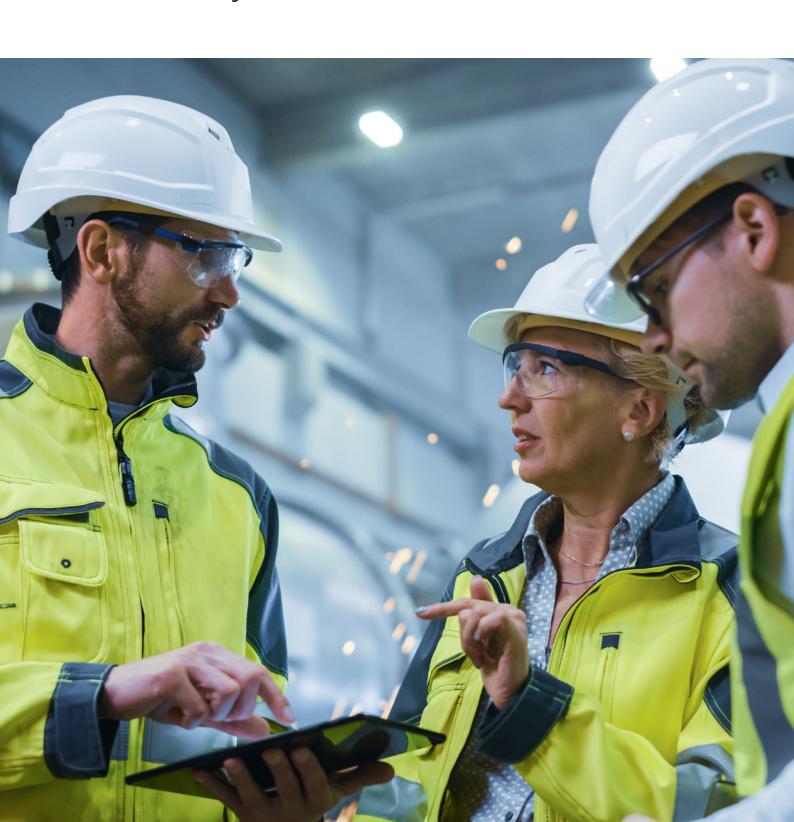


### **Automation Software Maintenance**

Life Cycle Management Program for Control Systems



## **Automation Software Maintenance Program**

### Introduction and Benefits

Control system life cycle management and investment protection have always been cornerstones of ABB's development programs. Over the last 40 years, ABB has built a large installed base across diverse industries. ABB looks after its installed base by crafting solutions that ensure the continued productivity, reliability and capability of all installed ABB assets.

> With this 40 year track record, ABB has established a history of 'Evolution through enhancement' developing new products in a way that allows for incremental adoption, minimum risk to operations and maximum investment protection.

> In support of this mission is Automation Software Maintenance, ABB's control system life cycle management and support program. With this program, customers can keep control software up-to-date and maintain a flexible path forward to new system software technology. Automation Software Maintenance provides the fundamental software support deliverables required to maintain operation and maximize the availability of the installed ABB control system.

The Automation Software Maintenance Program assists system owners in actively managing their ABB control system software life cycle costs. It

- · Optimal operation and availability of installed ABB assets through 24/7 support and maintenance
- · Better productivity through enhanced software functionality
- · Lower support cost and more predictable software management budgeting as a result of annual subscription fee
- Access to the most current system documentation
- · Evolution to more advanced human system interface, control platform, information management and connectivity
- A way to stay current with the latest technology standards

As new technology advances and business requirements change, many customers have adopted the strategy of extending the service life of their process control systems.

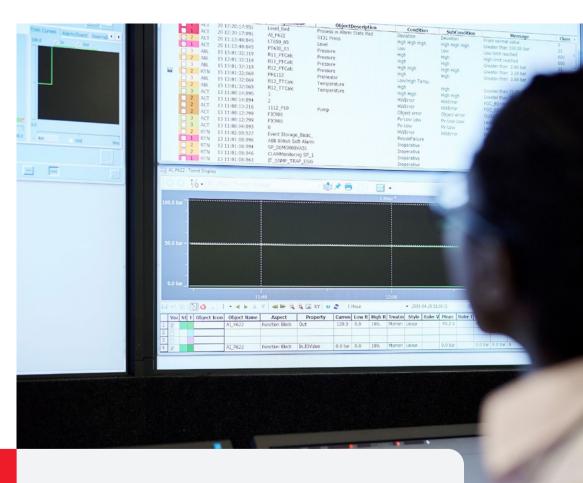
Managed properly, a process control system can provide continually higher levels of performance throughout its life cycle. Rather than degrading over time, it can be maintained in a way that vastly extends its longevity and continually increases its performance.

ABB supports this strategy with the Automation Software Maintenance Program. It offers a range of services to support and extend the life and reliability of your ABB control systems. ABB recommends its customers that all installed ABB control systems are covered with an Automation Software Maintenance subscription.

The Automation Software Maintenance Program provides solutions for the main challenges system owner face to achieve maximum availability and reliability of the control system:

- Software maintenance and upgrades
- Cyber and IT security
- · Online access to relevant information
- Control system software and performance checks

It also provides an evolution path to newer technology system enhancements to improve plant effectiveness and long-term support through annual maintenance subscription budgeting





### Benefits

#### Maintain operation and avoid loss of production

Higher productivity through enhanced software functionality

#### Continuous optimization of your process operations

Improves system availability, performance and reliability with predictable costs

#### Reduces overall maintenance costs

Yearly subscription provides predictability for plant budgeting

#### Complete flexibility

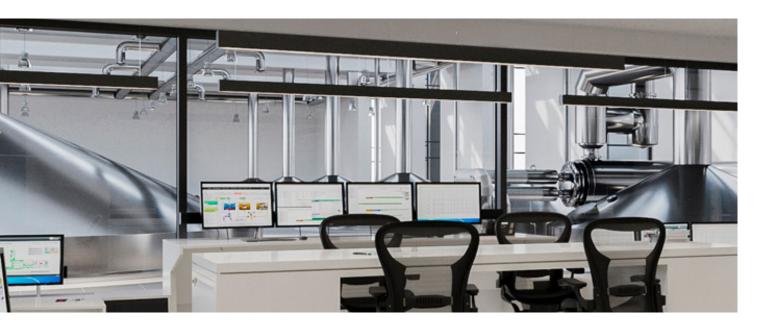
Improve your control system over time. Always the best, lowest risk path forward

#### Protection of intellectual property

Your operator graphics and control programs are protected when new technology is implemented

### Life Cycle Management

### How We Do It



### Software maintenance and upgrades

More support at lower costs maximizes the return on assets (ROA) of the systems and reduces operational expenditures (OPEX). Plant managers look to improve overall productivity from their installed system by adding new functions and features (improving performance), extending useful life and applications (improving availability) and reducing maintenance costs while improving overall reliability (improving quality).

With business conditions constantly changing, requiring faster turnarounds, achieving compliance with operational and environmental requirements, increasing greater operator effectiveness through advanced alarm management, all in a secured and reliable control environment with lower overall costs, more is required than first and second generation Distributed Control Systems (DCS) could offer.

Today's collaborative process automation systems synchronize all process operations within one common environment for operations, engineering and information. In response to these system owner needs, the Automation Software Maintenance program provides the means to keep installed systems performing at a high level to meet production needs. It also provides system enhancements to improve plant effectiveness, a long-term support through annual maintenance subscription budgeting and an evolution path to newer technology.

- Improve operation and productivity with new software versions providing new features
- System performance improvements to ensure compatibility and ongoing life cycle support with software maintenance updates that also incorporate third-party product changes.
- Maximize system availability and decrease process and personnel interruptions with regular maintenance

### Cyber and IT security

Industrial automation and control systems have evolved over the past decades thanks to technological advancements. At the heart of these advancements are specialized IT systems. To provide end users with comprehensive real-time information and allow for higher levels of reliability and control, these systems have become more and more interconnected. The security of industrial automation and control systems becomes increasingly critical as different networks are interconnected and systems are integrated in a collaborative manufacturing environment. The online threat to process control systems is greater today than ever.

For industrial automation and control systems the potential impact of an attack may be more serious than for computer systems in general. Users of these systems need to pay correspondingly increased attention to these issues. Security measures aim at protecting the confidentiality, integrity, and availability of a computer system from being compromised through deliberate or accidental attacks. Similar to process and safety improvements, security improvement needs to be a continuous activity.

ABB fully understands the importance of cyber security, and its role to advance the security of control systems. ABB customers can rely on system solutions where reliability and security have the highest priority.

ABB recommends a defense in depth approach with multiple layers of protection placed throughout the system to shield systems and data from threats. Current security updates on site are a key factor to reach the next level of cyber security.

 ABB recommends that an antimalware solution is used on all control system servers and workplaces.

- ABB reviews, tests and validates Microsoft® security updates for relevance and system compatibility with ABB control system software
- McAfee® and Symantec™ updates, scan engines and virus definition files are verified by ABB for relevance and system compatibility with ABB control system software
- Information about the latest validated patches, security updates, scan engine, and virus definition files is provided

Automation Software Maintenance is the exclusive way for ABB control system users to receive these validated Microsoft security patches and virus definition file verification reports. Authorized users can download the relevant files as follows:

- Via web access to My Control System for a manual retrieve and download
- Via a separate subscription to the ABB System Update Service (SUS) for an automated retrieve and download. SUS is available for System 800xA, Symphony Plus, Freelance and P14.

- Minimized user efforts in evaluation, installing and testing of security patches and updates
- Reduced risk of introducing an unauthorized patch into a running system
- Enhanced security against cyber-attacks and cyber threats
- Antimalware software and operating system software always updated according to ABB's recommendation



#### Online access to relevant information

Apart from the technical complexity of the control system insofar as it interacts with its particular manufacturing process, there is much non-trivial administrative and support complexity to deal with for the user. Typically, a control system requires software licenses, up-to-date malware protection, system diagnostic and maintenance tools, training modules, safety monitoring reports and more

An Automation Software Maintenance subscription provides online access to relevant and actionable information and content related to the installed control system through myABB/ My Control System business portal.

MyABB/My Control System business portal The myABB business portal, our secure, web based self-service tool available 24/7, offers you a single online entry point to a variety of services based on your needs for all ABB products.

The myABB business portal/My Control System, a managed personalized access to your ABB installed base of control systems, provides information, service and support deliverables for your control system(s) and general control system documentation. To ensure that complete and up-to-date documentation is available for use when needed, online access to instruction manuals for installed systems is available with an Automation Software Maintenance subscription. Release notes and product bulletins are also available online, providing the latest product information to support maintenance of the control system at its peak performance.

The myABB/ My Control System business portal is a great way to increase your productivity, minimize cost, and extend the useful life of your ABB control products and systems.

#### **Features**

- Detailed information about the installed system software, system health status, safety and security reports, field alerts and service contacts
- Valuable source for maintenance information and for enhancement of the control system
- Timely notifications allow prompt access and apply important software updates and problem workgrounds
- Download software patches for immediate installation
- Quick delivery of most current documentation and software updates
- Answers to Frequently Asked Questions (FAQ)

- Lowers operations cost through access to selfhelp database and support tools
- Increases operating performance through continous enhancement of the system and fast implementation of software updates
- Better decision making through direct access to filtered information about the installed control system
- Reduces maintenance and support cost through shorter software delivery times



7

#### Control system software and performance checks



Automating production requires the processing of large amounts of data and the volume of data processing increases as automation or production processes become more complex. During production, working and environmental conditions, hardware and software upgrades, operator input, and other variables combine to diminish efficiency. Finding the sources of inefficiencies can be a challenge because of automation and process complexity.

Also, control systems are robust by design and development and therefore tolerant towards occurring issues. Non-optimal system settings and conditions often do not cause incidents immediately, but might result in disturbances over time.

Automation Software Maintenance subscribers have access to ABB's maintenance tools which check and analyze the configuration of the control system to uncover issues that limit current system performance.

Potential system performance issues and non-optimal system settings are identified and a report

with detailed recommendations for improvement is generated. These reports provide a solid foundation for continuous improvement based on data analysis methodology.

An improvement plan is generated to quickly close performance gaps. With this plan, time- and money-saving improvements can be implemented and pro-active maintenance work will lead to reduced risk and increased uptime. Using these tools might help system owners to operate their system at continuous peak performance. Features:

 Sophisticated report simplifies management decision process by focusing on high impact opportunities for improvement

- Bridge performance gaps through control system health audit with In-depth analysis, impact and recommendations
- Continuous improvement based on data analysis methodology em health audit with Indepth analysis, impact and recommendations

### **Program structure**

Designed to help customers actively manage the life cycle costs of assets, the ABB Automation Software Maintenance program enables ABB customers to keep their installed software products up to date and maintain a flexible and affordable path to evolve to the latest system software technology. It offers five subscription levels.

#### **Automation Software Maintenance Basic**

This level provides a set of lifecycle support basic services focusing on the control system security and web access to timely and relevant control system information via My Control System.

#### **Automation Software Maintenance Update**

This level provides services and deliverables to maintain the system at its current version. It is ideal for customers focused on maximizing the availability of their system while minimizing the introduction of risk and/or changes. At this level the full support of ABB is available to maintain the system and to maximize the return on the original investment.

#### **Automation Software Maintenance Upgrade**

This level includes all the Maintenance Update services, plus access to new software license versions as well as enhancements to installed products. With this option, customers may upgrade to new software versions while maintaining its core control system platform or components. This level provides increased flexibility to those customers wishing to maintain their system but able to tolerate a moderate amount of risk in exchange for improved functionality.

#### **Automation Software Maintenance LTS**

This ASM program level addition is meant to accompany the new type of 800xA software versions known as 'LTS Version' (Long Term Support Version). The ASM LTS subscription level is most suited for users who want to stay on a given software version for as long as possible. All the lifecycle deliverables under ASM Upgrade level and additionally the support of the designated LTS version/revision for a period up to 10 years from the date of its initial release are supported.

#### **Automation Software Maintenance Evolve**

This level includes all the services available in ASM Upgrade, plus the capability to evolve to state-of-the-art ABB control system products including System 800xA. Symphony Plus and Freelance. This level provides the greatest flexibility to employ "leading edge" productivity and enhancement improvements.

The Automation Software Maintenance Program covers the following ABB control systems and products\*:

- Advant / Master systems
- · Advant OCS with Master Software
- Advant OCS with MOD 300 Software
- Compact Product Suite
- Freelance system
- MOD 300 system
- Procontrol P13 (only for Maintain & Evolve subscriptions)
- Procontrol P14 (only for Maintain & Evolve subscriptions)
- Safeguard 400 Series
- Satt / SattLine
- Symphony DCI System Six
- Symphony Harmony / INFI 90 / Network 90 systems
- Symphony Melody / Contronic systems
- Symphony Plus
- System 800xA

With the Automation Software Maintenance, ABB customers can be assured that their automation assets have the extended capability to scale the dynamic changes in business objectives, with minimum impact on the total cost of ownership.

This is the power of evolution.

# Program Levels and Deliverables of Automation Software Maintenance (ASM)

	ASM Basic	ASM Update	ASM Upgrade	ASM LTS	ASM Evolve	3 months Trial Period	Project Period
Software Maintenance	-	•	•	•	•	-	-
Software Upgrades	-	-	•	•	•	-	-
Access to Expert Product Support (L3 and L4 support)	•	•	•	•	•	•	•
Selected 800xA Control Libraries	-	•	•	•	•	-	-
Access to updated and new Device Libraries of ABB & third-party device type objects	-	• Including reque	• st to integrate I	• Device Type	• es for Proces	- s Industries	•
ABB Evolution Software Licenses	-	-	-	-	•	-	-
Evolution Planning & Engineering Services	-	-	-	-	\$	\$	n/a
ord D			Contact your sa	ales repres	entative		
3 <sup>rd</sup> Party Control System Evolution	-	-	-	-	•	-	
3 <sup>rd</sup> Party Control System Evolution Planning &	-	-	-	-	\$	\$	n/a
Engineering Systems			Contact your sa	ales repres	entative ————		
	Cyber	and IT Security					
IT Security Test and Validation Reports	•	•	•	•	•	•	•
			According to	Lifecycle F	Policy		
Hardware and Software Qualification Reports	•	•	•	•	•	•	•
	According to Lifecycle Policy						
	Online Access	to relevant infor	mation				
MyABB/MCS Premium Access	•	•	•	•	•		•
Advanced Notification		•	•	•	•		-
P	rice incentive f	for Advanced Se	rvices (*)				
System Benchmark			Fre	emium			
System Fingerprint	%	%	%	%	%	\$	\$
System Assessment	%	%	%	%	%	\$	\$
System Update Service (**)	%	%	%	%	%	-	-
System Channel for Service Port	%	%	%	%	%	\$	\$
System Monitoring	%	%	%	%	%	\$	\$
Fingerprint for FAT/SAT	-	-	•	•	•	-	•
	Special O	offers and Servic	es				
Introductory Offers	%	%	%	%	%	n/a	n/a
			For new subsc			, =	, -
Continuous Renewal	%	%	%	%	%	n/a	n/a
Non-production Control System	%	%	%	%	%	n/a	n/a
Group / Enterprise subscription	•	•	•	•	•	-	•
Hardware Step-Up Service	-	_	%	%	%	-	-
Last Software Version Delivery Service	-	_	_	-		_	•
	Included in a	n active Automa	tion Software N	1aintenanc	e subscriptio	on or during Ti	rial
	Not available	without Autom	ation Software	Maintenan	ce or for a sp	ecific subscri	ption mod
\$	Available without an active Automation Software Maintenance subscription,						
%	standard pricing applies						
n/a	Automation Software Maintenance subscriber will receive a price incentive						
(*)	Not applicable						
(**)	Advanced Se	rvices are availa	ble for selected	l systems a	nd versions		

### **Deliverables and Benefits**



#### Software Maintenance

Automation Software Maintenance subscribers are entitled to software maintenance for the current version of installed software products, including patches and updates.

#### **Benefits**

- Lowers cost of life cycle maintenance through a predictable annual fee
- Improves performance by adding new functions and features
- Minimizes unplanned plant upsets and trips
- Reduces maintenance costs with improved overall reliability
- · Extends the life of automation systems



#### **Software Upgrades**

Automation Software Maintenance subscribers are eligible to upgrade their software licenses to new versions and/or receive enhancements of their existing products.

#### Benefits

- Protects intellectual property investment
- Extends the useful life of the system and its applications
- Improves the competitiveness of your production facility through enhanced functionality
- · Lowest cost for system evolution within the industry



#### **Extended Software Support**

Automation Software Maintenance delivers extended life cycle support and maintenance for selected control system software versions for up to seven years.

#### **Benefits**

· Protects present investments



### Access to Expert Product Support and Technical Telephone Support

Automation Software Maintenance subscribers have access to expert product support resources including technical phone support, trouble-shooting and assistance with product, application and configuration issues and questions to minimize the impact on production and personnel.

#### **Benefits**

- Time and costs savings for the user through faster troubleshooting
- Reduced downtime and improved operating performance



#### Selected System 800xA Control Libraries

Selected 800xA application libraries are covered under Automation Software Maintenance at no additional cost:

- Process Control Device Library
- · Process Control Equipment Library
- ProBase Library
- Burner Management Library for 800xA
- MOD 300 Evolution Libraries (CCF Library)
- Harmony Evolution Libraries (Infi90FC Library)

- Cuts amount of work for users by using System 800xA controller libraries
- Efficiently engineer your plant with outstanding reuse capabilities which lowers costly engineering and test time



### Access to updated and new Device Libraries of ABB and third-party device type objects

Device Integration packages provide the necessary components required to manage a field device in the ABB control system environment. Automation Software Maintenance subscribers have online access to new versions of device library files - tested by ABB and released at regular intervals - via myABB/My Control System. These updates cover new library device types, enhancements in devices and updates to the latest device versions published by the manufacturers.

#### **Benefits**

- Reduces efforts for users to develop and test database templates for Profibus, Foundation Fieldbus and HART-based field devices
- Online access to updated and new Device Libraries
- Request integration of new and updated Device
   Types for Process Instruments without charge



#### **3rd Party Hardware**

#### & Software Qualification Reports

ABB provides a list of IT/OT (Information Technology/Operational Technology) products like workstations and servers from several suppliers that are tested and certified towards our main DCS systems.

#### **Benefits**

- Minimizes user efforts to find, test and replace a failed PC and reduce the risk of employing a PC model which is incompatible with the system software
- Ensures a predictable performance of existing software when a PC or a server is replaced and is no longer available on the market



#### **ABB System Evolution Software Licenses**

ABB is committed to continually demonstrating that you have made the right choice by choosing ABB as your automation system partner. Our goal is to protect your investment by mitigating your ongoing risks, eliminating down-time and maximizing the performance of your system.

ABB's commitment to 'Evolution without obsolescence' provides plant owners with the ability to extend the operating life of their control systems and improve the profitability of their investments through seamless evolution, thus avoiding the costs and risks associated with 'rip-and-replace' upgrade methods.

A successful evolution program begins with a solid plan driven by the system owner's business goals. Good planning is critical for any incremental, step-wise evolution and can minimize the negative production impact of the actual system upgrading process. It can simplify the yearly budgeting process and facilitate timing of system upgrades with planned plant shutdowns.

Automation Software Maintenance subscribers are eligible to receive software licenses for newer versions of their installed product, "like functionality" in newer technology products within their system family, and "like functionality" in ABB state-of-the art systems and products.

- Extends the useful life of the system and its applications
- Enhances and sustains the control system to meet today's business challenges
- Improves the competitiveness of your production facilitythrough enhanced functionality
- Provides the lowest cost for System Evolution within the industry
- Protects intellectual property and capital equipment



#### **3rd Party System Evolution Software Licenses**

A newly-acquired automation system offers the best set of solutions to help your business be successful and stay competitive. That may no longer be the case. Today's demands on network availability, efficiency and capacity are increasing continuously. In many cases, the systems from earlier technology generations can't meet these new requirements. Now the risk of unplanned downtime is always present. Lengthy production stops cannot be ruled out. What's more, production gains via mere process control improvements are no longer enough to stay ahead of the competition. The solution is an evolution of your existing control system installation.

As DCS market-leader with the world's largest installed base of control systems, ABB truly understands your needs for step-wise improvement and modernization of production equipment. To achieve continuous improvement yet still retain productive assets, we have developed comprehensive evolution solutions for our own installed base as well as for thirdparty DCS systems. Such cost-efficient and low-risk evolution is ideal for manufacturers with a mix of systems (sometimes from different vendors) at each production site.

Our evolution programs are designed to give you the financial flexibility to "step-up" from your existing automation systems to new higher performance Human System Interfaces, system engineering tools, controllers, control networks, and information management - one functional area at a time. Placing System 800xA on top of vintage systems such as Honeywell TDC2000, TDC3000 or Experion; Emerson Fisher RS3 / Provox / DeltaV; Siemens Teleperm M / WinCC/PCS7; Yokogawa Centum 3000/Centum VP or Invensys Foxboro IA our customers instantly acquire a world-class human-machine interface that makes all mission-critical data available in a highly advanced workstation environment.

- Extends life cycle for present investments
- Savings on operations and service through less number of control systems to take care of
- Integrates legacy functionality, information and historical data into new ABB Human Machine Interface (HMI)
- No down time of the production system during evolution phase through off-site installation and testing





### ABB System Evolution and 3rd Party System Evolution Planning & Engineering Services

Your control system is the brains behind your process, and maintaining its health and longevity makes good business sense. Determining what it costs to operate and maintain your equipment effectively is key to deciding how long to keep it, how much to invest in it and when it's time to upgrade. Good planning helps to minimize the negative production impact from any upgrade and is critical for any incremental, stepwise evolution. It simplifies and improves yearly budgeting, and facilitates planning for system upgrades and plant shutdowns.

ABB Evolution experts help to ensure the longevity of your equipment with life cycle prediction and planning services. They help you build a life cycle strategy to manage system updates, plan for system obsolescence and justify equipment upgrades. They can also assess your current situation, help you gauge future automation needs, and plan for expansion. After a comprehensive audit of your existing system, and an understanding of your business drivers:

- ABB will submit a 3-5 year plan to be reviewed and revised as necessary. Our incremental approach supports flexibility, and allows for changes to the plan as may be required over the course of time.
- We will identify and target which facilities are at greatest risk for production loss and those that have the greatest potential for increased production. As each phase is identified, ABB will provide value assessments and Return-on-Investment support for consideration in order to facilitate successful project appropriation requests.
- The long-term plan is reviewed periodically and updated as required to reflect your changing business needs, and new ABB solutions. This approach takes the guessing out of your budgeting process. As part of this planning, specific projects are identified and initiated.

Automation Software Maintenance subscribers are entitled to software maintenance for the current version of installed software products, including patches and updates.

- Improves performance by adding new functions and features
- Minimizes unplanned plant upsets and trips
- Extends the life of automation systems
- Protects intellectual property and capital equipment





### Premium access to myABB/My Control System business portal

The myABB business portal/My Control System, a managed personalized access to your ABB installed base of control systems, provides information, service and support deliverables for your control system(s) and general control system documentation. By using a secure log-in at the www.abb.com website, customers can access one easy-to-find location from which they can retrieve detailed information about their system.

MyABB/My Control System presents, in dashboard format, important information about the control system's subscriptions and software licenses in terms of content, expiration dates, tools and license key downloads. All this data is available with just a few clicks. For convenience, the ABB local service contact information is listed on the starting page. Using myABB/My Control System, customers will be able to download documentation and software updates relating to their control system, view online training videos, run system benchmark reports and access all relevant safety reports, alerts or product documents. Rapid problem identification through real-time access to the dashboard is one of the main benefits of the myABB/My Control System portal.

An Automation Software Maintenance subscription provides access in myABB/My Control System to:

- Publications: Technical product information for ABB control products and systems such as Product/Technical Bulletins/ Application guides; Product Manuals; Change Notices or Release Notes
- Downloads: Latest release notes, feature packs and updates

- Excellent overview of control system installation

   everything in one place
- Better decision making through direct access to filtered information about the installed ABB control system
- Recommendations on how to improve productivity of the installed ABB Control System
- Reduces maintenance and support cost through shorter software delivery times
- Reduce cost of after-hours phone support or service callsby accessing self-help online
- Reduction of documentation and software delivery timesand testing



#### Advanced Auto-Notification

Automation Software Maintenance subscribers receive automatic email notifications of alerts, important control system news and information on the latest software updates and new releases as well as technical updates and product release information filtered according to their installed system profile.

#### **Benefits**

- Efficient method of delivering update information relevant to the installed ABB control system
- Convenient service to budget for the renewal of subscriptions with Auto-Generated Automation Software Maintenance quotation



#### **System Benchmark**

The health status of the control system can be checked with benchmark reports indicating optimization possibilities. This software utility checks and analyzes the health and security of the control system and is used to verify a wide set of basic system functional and performance parameters to see if they are within acceptable ranges. The system parameters selection covers a series of issues which are known to be critical or important. This service is also used to uncover existing functional limitations, possible risks (e.g. single points of failure) or weak spots in the system performance. Benchmark will look for any inconsistencies, missing products, current and/or incompatible versions of ABB and 3rd party software.



#### **Plant Site / Group Subscriptions**

Automation Software Maintenance subscribers may combine different systems located in one plant or on multiple sites within a country and handle them as one group for better management, synchronization and advantageous pricing.

#### **Benefits**

- Reduces administrative work and saves time when subscriptions are grouped together
- Simplifies customer budgeting with synchronized subscriptions



#### **System Fngerprint**

System Fingerprint is an extension of the System Benchmark. Fingerprint is a complete health audit of the status and performance of the control system, including analysis of issues, impact and recommendations. This service will determine what corrective actions are needed to close performance gaps and to take the system from its actual status to where it should be for maximum performance.

#### **Benefits**

 Reduces risk and increases uptime through pro-active maintenance work as a result of Benchmark and Fingerprint



#### **System Assessment**

System Assessment provides a detailed and comprehensive inspection and status evaluation of critical areas that affect system performance, including hardware, software and firmware, system and Ethernet communications, and current maintenance practices.

Computer aided data collection and analysis is supplemented by individual inspections and audits provided by an ABB service engineer. The resulting System Health Check Report outlines actions that will help prevent potential problems and improve availability, reliability and system performance. It is a key service for maintaining high system availability and avoiding disruptions and interruptions in production.

#### **Benefits**

- Increases control system performance, availability and reliability
- Minimizes risk of system upsets
- Lowers maintenance cost
- · Improves system maintainability
- Reduces risk of component failures



#### System Update Service

For a better protection of ABB control systems against malware infection and cyber-attacks ABB recommends regularly updating the antimalware software and installing the latest Microsoft Windows™ security patches.

ABB reviews, tests and validates Microsoft® security updates as well as McAfee® and Symantec™ scan engines and virus definition files for relevance and system compatibility with ABB control system software.

An active Automation Software Maintenance subscription is the exclusive way for ABB control system users to receive these validated Microsoft security patches and virus definition file verification reports.

The System Update Service ensures that Microsoft security patches and virus definition files are made available to download to the target control systems(s) right after validation by ABB. Based on ABB's Remote Access Platform (RAP/RAS) solution, the System Update Service distributes updates in a secure, automated an controlled way to customer sites.

- Antimalware software and operating system updates according to ABB's recommendation
- Highly secure and automated process of receiving qualified and approved security patches and security updates to your site
- User efforts in evaluation, installing and testing of security patches and updates minimized
- Increased productivity with an automated process instead of time-consuming manual work
- Enhanced security against cyber-attacks and cyber threats and increased protection of intellectual property

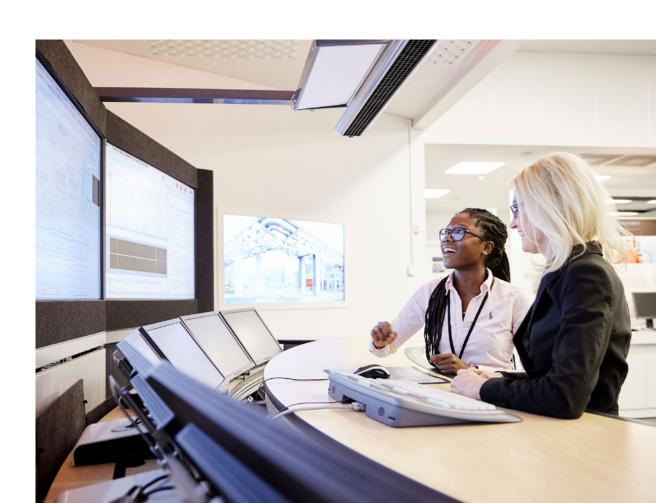


#### Hardware StepUp Service

Your controller must be in control of your process at all times, regardless of system load. To assure this, it is possible to StepUp your controller, by replacing your current controller processor module with a more powerful unit, as part of your Automation Software Maintenance agreement.

The Parts StepUp Service is the most cost efficient way of increasing the processor power of your system controller. Also, when upgrading a control system, the StepUp Service is the obvious cost efficient choice.

- Improves your application functionality in your control system by adding controller performance
- Eliminates the risk that your control system runs out of processor power



# Automation Software Maintenance Program

A commitment to your success



In summary, ABB's life cycle management program offers a two-pronged approach to supporting our customers in their efforts to maximize the value of their automation investments while optimizing the useful life of their automation assets:

- A written life cycle support policy to help predict support for automation assets
- A system 'Evolution without obsolescence' policy that provides for incremental, planned steps for adding new technologies or upgrading technologies in existing systems while protecting installed asset investments.

The combination of these two strategies and resulting deliverables provides our customers with the most predictable, lowest risk, and lowest cost option to optimize the useful life and cost of their automation systems.

Our life cycle management program allows our customers to choose the level of support and the upgrade schedule that works best for immediate business needs and long-term production targets.

ABB has world-class experience in specifying, installing, maintaining, managing, developing and troubleshooting industrial process automation. This has allowed a long and proud tradition to be built, providing worldwide service support to industry.

Backed by more than a century of proven experience, ABB provides expert training, tools, parts and service to help process and power industry organizations achieve increased success. Our network of 20,000 trained experts have a thorough understanding of your systems, applications and processes and a singular commitment: to help your organization keep production running, maximize system life cycle, optimize process performance and deliver operational excellence.

### Why ABB has the best solution



Maintain operation and avoid loss of production Higher productivity through enhanced software functionality



Manage your life cycle costs Yearly subscription provides predictability for plant precise budgeting



Continuous optimization of your process operations

Improves system availability, performance and reliability with predictable costs



Supports changing business goals with flexible life cycle support Introduce new technology at your own pace



Complete flexibility

Improve your control system over time. Always the best, lowest risk path forward

Automation Software Maintenance is our commitment to help you get the most value out of your current ABB control system investment; it protects your past and present, as well as your future automation investments.

