Lifecycle Services for DeltaV™ Systems
Keep your plant running consistently, while improving asset reliability and achieving business goals.

Protect your investment, while improving performance and safety.
You’re expected to keep your control system running smoothly and productively for the next 40+ years.

When you are entrusted with preserving your automation system for the lifespan of your facility, you must ensure it is reliable in order to gain a competitive edge in the market and respond to the changing world around you.

You are also expected to manage the total cost of ownership, making it imperative to follow a comprehensive, proactive maintenance plan, develop a long-term lifecycle strategy for reliability, manage risk, and access the right people and resources necessary to keep your plant performing optimally to achieve your business goals.

“Unplanned downtime due to asset reliability impacts plant safety, as well as availability, with as much as 5 percent of production capacity lost each year due to unplanned shutdowns. Estimates show nearly 80% of these losses are preventable.”

“US business leaders are increasingly concerned about cybercrime. 69% of US respondents reported they were worried about the impact of cyber threats to their growth prospects.”

“50% of experienced and managerial personnel in national and international oil and gas processing companies are expected to retire in the coming decade.”

Instead of relying on reactive, firefighting methods to handle issues, what if you could keep your system up-to-date and have the necessary information to make decisions on how to effectively optimize your system? Approach your lifecycle planning differently and build a long-term strategy.

Lifecycle Services for DeltaV™ systems provide expertise, technology and processes to help you operate safely, improve asset reliability and optimize process capabilities. Working with Emerson, you’ll have the resources to maximize the effectiveness of your system through its lifecycle and reduce costs.
Better manage your total cost of ownership while making continuous improvements to increase efficiency.

You place a lot of effort into developing a maintenance plan so your operators can meet today’s demands. But it can be arduous to stay on top of the relentlessly fast pace of changing technology, particularly since keeping current or spending money to upgrade your system may seemingly contradict a lean philosophy to improve quality and lower costs.

When you partner with Emerson, the result is a well-designed and effectively executed comprehensive maintenance strategy that will allow you to operate your system efficiently and safely. Improve plant reliability with better insight into system and equipment health, and access the right expertise and training to strengthen plant performance.

Operate safely, consistently and economically.

Access the tools, technology and processes needed to identify potential failures early, so your team can quickly respond to emerging problems and keep your system performing at peak efficiency. Factory-certified experts provide faster resolutions to operational issues and minimize the likelihood of future concerns.

Increase plant reliability and preserve your investment.

Proactively identify reliability issues or cyber threats before they cause system failures that contribute to downtime. By executing a long-term lifecycle reliability strategy, you minimize a myriad of business disruptions by identifying the root cause of potential issues in your system. This will reduce risk and increase system availability and sustainability.

Strengthen plant performance.

Obtain the right expertise to help you successfully adopt and deploy more complex product features that will optimize the performance of your system. In addition to augmenting your in-house staff with process experts who can get you back on track when your system requires attention, you can access first-rate training to the up-and-coming members of your workforce to enhance their capabilities.

Improve your competitive advantage and bottom line business results.

Improve risk management, lifecycle management, and incident management through critical service and support information. Make better decisions while reducing maintenance costs and operational risks.
Use proactive **MAINTENANCE** to operate safely, consistently and economically.

You are expected to keep your automation system running continuously, without negatively impacting production. But, when faced with persistent changes in technology and a shrinking workforce, your small crew must react quickly to each new maintenance problem.

It is imperative that you have the right plan in place for extending the life of your control system. This means you must build a comprehensive maintenance strategy detailing proactive maintenance activities to lower the cost of ownership. You need to access skilled personnel and proven processes to operate long into the future. In order to protect your investment and minimize risk, you must also stay on top of cybersecurity threats. You must ensure that your system is secure and consistently receives upgrades and patches to avoid unforeseen issues.

“82% of companies with high-performing security practices collaborate with others to deepen their knowledge of security and threat trends.”


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**Keep your system running smoothly**

- Shifting from a reactive to a proactive maintenance strategy makes day-to-day system management tasks fast and efficient.
- You need immediate insight into operational issues, as well as access to critical and relevant information about your system.
- Keep your plant current with software upgrades to avoid issues with automatic, real-time alerts identifying specific actions required for maintenance.

**Get faster resolution and expert support**

- Free up your in-house team to perform value-add activities and focus on optimizing production.
- A vast network of local and remote factory-certified experts has the right process, expertise and tools to solve any problem.
- A dedication to training and certification means experts are up-to-date on the latest changes and advancements in technology.

**Protect your control system from critical issues and a security breach**

- A comprehensive risk assessment will identify vulnerabilities, specify remediation actions and protect your process control system from cybersecurity risks.
- Safeguard your system with a portfolio of cybersecurity management solutions.
- Get the right combination of experts, technology and best practices to ensure the availability of your system.
Improve plant **RELIABILITY** and preserve your investment.

You are responsible for protecting your automation investment for the lifespan of your facility. Unfortunately, when your system goes down, it disrupts the operation of your entire plant and shatters any possibility of meeting your plant’s production targets on time. You need to support production changes and demand for increased throughput, while minimizing variability and running closer to constraints, all within a set budget. While you do everything possible to get it up and running quickly, it is even more taxing if you don’t know the source of the problem or how to make improvements to avoid future shutdowns. Because it takes more than a maintenance plan to keep your system sustainable, you recognize the need for an effective, proactive long-term approach to keep your control system in prime condition.

"We don’t have to run around and manually do patches anymore. We can really see them all in one place, and easily get the data and reports we require... It saves us much time and effort compared to manual methods."


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**What if you could achieve your lifecycle objectives and lower your total cost of ownership, now and in years to come?**

**Get proactive and avoid system reliability surprises**
- Plan for obsolescence and enhance your ability to make critical risk-mitigating decisions.
- Get critical, relevant, system-specific information — including remote diagnosis, real-time system health alerts and software updates — to optimize your system reliability.
- Improve asset availability through earlier issue detection and quicker resolution, resulting in reduced equipment failures, data loss and downtime.

**Operational Savings 5-10x**
A top reliability program delivers operational savings 5-10 times over maintenance savings.

- Reported by Emerson’s Reliability Consulting based on multi-industry study of Best Practices

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**Increase system availability while reducing risk**
- Minimize maintenance costs with an evaluation of your control system across multiple dimensions.
- Gain insight into critical issues, get recommendations for appropriate corrective actions, and determine priority of which issues to remediate first.
- Gain visibility to the most critical aspects of your control system to improve uptime and productivity.

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**Secure critical parts promptly**
- The combination of trained experts, proximity to your plant and the right parts ensures maximum uptime for a safe, consistent and economical system.
- Emerson’s global support service program features more than 165 global service locations staffed by factory certified personnel available 24x7x365.
- Parts and staging space are available within 24 hours.

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`Operational Savings 5-10x`
Strengthen plant PERFORMANCE.

Your plant must meet rigorous production goals, to remain competitive in a demanding market filled with ever-increasing competition, that require highly skilled processing expertise. However, it is challenging to keep your system running at peak performance around the clock when you’re confronted with endless technology changes and complex processes. Your workforce demographics are also changing. A retiring workforce, and a continual influx of young, new engineers and technicians who may lack knowhow and expertise, make it difficult to make critical decisions about your system when something goes wrong. You need to be able to take advantage of the built-in functions of your modern control system so you can get the full return on your automation investment.

What if you could have priority access to process experts 24 hours a day, every day?

Augment your team

• Offset the loss of experienced talent with dedicated, local service teams to work onsite.
• Process control experts can respond faster to alarms and reduce the potential for mistakes.
• Support your smaller workforce with experienced consultants who can help you diagnose performance and equipment problems remotely.

Replenish lost expertise

• You need knowledgeable talent to keep your plants performing optimally and to maximize the return on your investment.
• Increased operations skills can directly improve your facility’s bottom line, giving you a sustainable, competitive edge.
• Hands-on training provides your team with practical application skills to increase safety and ensure your facility’s performance levels.

Achieve your business goals

• Consulting advice, tools, process improvements and training can optimize your control system performance.
• Improved process availability leads to less operator intervention and better regulatory compliance.
• A mix of onsite and offsite consultation, data collection, analysis and remediation can be tailored to meet your specific needs.
Make better decisions and reduce risk with GUARDIAN SUPPORT.

Guardian™ Support is the core element of your Lifecycle Services program. This prognostic service is designed to optimize the reliability and performance of your system, and it includes access to all software updates. Guardian Support is the single source for aggregated, critical and personalized data about your platform architecture and applications. It delivers risk, lifecycle and incident management with 24x7x365 expert technical support.

What if you could improve your competitive advantage and bottom line business results with one critical, prognostic service?

Risk Management
• Match system specific information to your systems and proactively manage risk with a secure web dashboard and push notifications.
• Microsoft updates are tested, confirmed for compatibility and bundled for easier installation.
• A visual dashboard gauges overall system health, making it easy to see which systems need attention or are at low risk.

Lifecycle Management
• Match enrolled hardware/software content to its associated lifecycle status to better plan for upgrades and replacements.
• An accurate inventory of all system components and licensing is readily viewable through a secure site.
• The Global Service Center provides expertise and advice for maintaining your system, with resources to help troubleshoot or extend knowledge.

Incident Management
• Support is always available, with access to experts at all times to help you through critical issues.
• Knowledge Base Articles help you fix issues quickly and correctly, while other tools collect special system data to help diagnose issues faster.
• A historical record of your system issues makes it easy to collaborate or share information across your enterprise.
SURESERVICE packaged services make it easier to fill the gaps between where you are now, and where you want to be in the future.

The control system is undeniably the most critical asset of your facility. From the people who operate the process and the alarms it provides, to the process metrics, different field devices, business systems and potentially even regulatory paperwork — your control system has many jobs it must perform in a timely manner to ensure the operation runs smoothly. Furthermore, you’re challenged to keep it running reliably for 40+ years.

Maintaining a fleet of control systems is a complex task. Every site has different challenges, a unique history and a particular way of doing things. You need to have the right people, tools and processes to develop and execute a successful strategy. Working with Emerson will allow you to focus on proactive and predictive efforts to unlock the full value of your system.

When considering the SureService program, with four tiered packages of Lifecycle Services to fill the gaps, you have the flexibility to decide how involved Emerson is in your system maintenance, reliability and performance. Emerson’s experts will assist in benchmarking against your goals and best practices, and help you select the tier that best meets your needs.

"End users have decided to focus on core competencies and outsource automation system maintenance due to the increasingly specialized knowledge set and labor required to keep automation assets running optimally."


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<thead>
<tr>
<th>Tier</th>
<th>Description</th>
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<tr>
<td>ST100</td>
<td>Core support proactively provides critical, relevant, system-specific information to keep your system current, and includes the Site Evaluation Service.</td>
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<tr>
<td>ST200</td>
<td>Gain streamlined resolution to your issues through an expert Technical Lead who facilitates priority call handling and escalation through oversight and intervention.</td>
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<tr>
<td>ST300</td>
<td>A dedicated System Program Manager and support team will guide you through your system lifecycle strategy to ensure you meet your Key Performance Indicators. Factory-certified experts will manage service delivery and provide fleet management and governance across all your systems.</td>
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<tr>
<td>ST400</td>
<td>Forming a strategic alliance allows Emerson to take responsibility of your system maintenance, reliability and performance.</td>
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Protect your investment, while improving performance and safety.

Work with Emerson Lifecycle Services to follow a comprehensive maintenance plan, develop a long-term lifecycle strategy for reliability, and access the right people and necessary resources to keep your system performing optimally. Get access to the expertise, technology and processes that will help you operate consistently and economically, improve asset reliability, and fortify your shrinking workforce.

• **Guardian Support** (pages 12-13) is the core element of Lifecycle Services for your DeltaV distributed control system (DCS). It is designed to help improve your competitive advantage and bottom line business results through critical service and support information. This important service can help lower your total cost of ownership by enabling a shift from reactive and preventive maintenance, to a predictive strategy as you make more-informed, proactive decisions about your process automation system.

• **SureService Program** (pages 14-15) helps you develop and implement a strategy to ensure you make proactive, predictive decisions to unlock the full value of your system. A choice of four service tiers makes it easier to fill the gaps between where you are and where you want to be.

• **Lifecycle Services for DeltaV Systems** (pages 17-19) provide solutions to improve the maintenance, reliability and performance of your distributed control and safety system.

• **Educational Services** (pages 20-21) provide your team with practical skills to help ensure your facility’s peak performance levels and profits. Classes with a high level of application expertise and practical field experience from Emerson Certified Instructors can dramatically boost your personnel’s skills and performance.

• **The Global Service Center** (page 22) and Product Engineering organization includes engineers for every core technical product discipline who provide expert technical analysis and consultation of your control system.
**Reliability**

**Get proactive and avoid system reliability surprises**
- Backup and Recovery Services provide a centralized, scalable, single solution for data protection and disaster recovery.

**Increase system availability while reducing risk**
- DeltaV Upgrade Service modernizes your system safely and efficiently, with minimal disruptions to current operations and production.
- Power and Grounding Integrity Service allows specialists to investigate, analyze and report recommendations for integrity issues in your plant.

**Secure critical parts promptly**
- Spare Parts Management with DeltaV Extended Hardware Warranty provides direct access to required spare parts and lowers total cost of ownership by creating budget certainty.
- Sustain Program for PROVOX & RS3 gives you access to spare parts, repairs and support following product retirement.
- Extended Computer Availability Service provides factory-certified remanufactured workstations and server computers.

**Performance**

**Augment your team**
- System Consulting Services connect you with technical experts who support systems and applications worldwide.

**Replenish lost expert knowledge internally**
- Educational Services offer training through traditional classroom, e-learning, virtual training, instructor-led classes, blended learning and operator training solutions.
- Control Performance Improvement provides access to consulting, tools and training to optimize system performance.
- DeltaV Logbooks Services help maximize functionality with worry-free installation, setup and configuration.

**Achieve your business goals**
- Alarm Services help you improve alarm performance while increasing operator efficiency.
- SIS Modification Services ensure straightforward, predictable and documented modifications.
- High Performance Graphics Services include consultation and implementation services designed to increase process situational awareness, allowing you to run your plant safer and more efficiently.
- Loop Service Express offers consultation, data collection, analysis and basic loop tuning.
Hands-on training from Emerson’s EDUCATIONAL SERVICES provides your team with practical skills to help ensure your facility’s peak performance levels.

Acquiring and retaining qualified people is a major challenge. As your workforce ages, automation experts retire and there’s a shortage of experienced engineers and operators. Make a smart investment by transferring knowledge and educating capable personnel. By continually increasing your employees’ skills, you boost job satisfaction and increase employee retention.

Classes with a high level of application expertise and practical field experience from Emerson Certified Instructors can dramatically boost your personnel’s skills and performance. Hands-on training from Emerson’s Educational Services provides your team with practical skills to help ensure your facility’s peak performance levels and profits. Comprehensive, customized training programs are designed to your job or application requirements. Flexible training modules are offered in an easy, intuitive environment and in a variety of formats including e-learning, virtual training and instructor-led classes.

“Hands-on training from Emerson’s EDUCATIONAL SERVICES was a key factor in boosting our facility’s peak performance levels and profits.”
— Operations Manager in the Chemical Industry

Classes are available in three formats:

1. **Traditional Classroom**
   - Instructor-led classes provide local language support with the equipment and tools necessary for hands-on deep dives into engineering, maintenance, and operations knowledge.
   - Courses can be taken at an Emerson regional training center, at a local site, or in your facility.

2. **Virtual Classroom**
   - Gain all the benefits of learning in a classroom without the cost of traveling. Students participate in live classes in their own locations while interacting with an instructor based at an Emerson facility. In a virtual learning environment, students also interact with the equipment and other students in real-time.

3. **Competency Development Program**
   - Fill your knowledge and skill gaps using a consultative process to understand specific issues, problems and the impact on operations caused by a lack of trained personnel. A discovery assessment will recommend proposed education solutions.

4. **Blended Learning**
   - With this option, the use of state-of-the-art media and technology are used to create optimum training programs and budgets. Blended learning offerings include virtual live instructor sessions, cloud classrooms with recorded lectures and demonstrations, and student hands-on workshops performed on a virtual system in the cloud.

5. **DeltaV Custom Operator Training Solutions**
   - Customized instructor-led curriculum packages expose operators to what they will experience in their actual control room in a simulated environment. Other options for complete, process specific, dynamic simulation-based training platforms provide a rapidly deployable yet long-term training solution for your operations staff.

“Competency Development Program was a success! The operators were able to apply the knowledge and skills they acquired in the real world.”
— Maintenance Worker in the Chemical Industry

“DeltaV Custom Operator Training Solutions was a great investment. It helped our operators boost their skills and confidence.”
— Operations Manager in the Refining Industry
The Emerson Global Service Center provides immediate access to technical support on a 24x7x365 basis.

The Global Service Center and Product Engineering organization includes technical support engineers, laboratory engineers, support personnel, and experienced executive and senior technical managers. Engineers for every core technical product discipline are continuously and immediately available to fully support all aspects of Emerson products.

The Global Service Center has a fully-equipped laboratory for issue replication and simulation. The large, modern facility features extensive problem verification labs and powerful analytical and information retrieval tools.

The Global Service Center and Product Engineering staff provide expert technical consultation. These engineers can perform direct examination and analysis of your control system via remote system diagnosis.

When you call for support, Customer Support Engineering uses a well-defined escalation process based on severity and impact to each customer. Rapid response ensures proper resources are engaged to manage and resolve critical situations that directly impact production. Call activity is regularly monitored, and actionable information is communicated to the installed base via Knowledge Base Articles.

Emerson uses a Service Management System to provide technical, customer, system, product and service information to ensure effective and consistent services. This global information system ensures real-time sharing of system data and call records with local Emerson support locations throughout the world. Assistance from the Global Service Center is gained through enrollment in the Guardian Support program.

- **Lifecycle Services for Machinery Health Products** offers the most powerful tools for machinery analysis, now and in the future, along with access to software updates, repairs and a wealth of information to optimize your program.

- **Lifecycle Services for Smart Operations Management** is designed to offer extended value and flexibility to help you get the most out of your investment.

- **Lifecycle Services for Smart Device Management** allows you to set up maintenance best practices, determine asset prioritization to use resources most effectively, and choose the appropriate level of support for your facilities.
Develop proactive maintenance strategies to operate safely, improve reliability, and optimize process capabilities and performance.

Operate consistently and economically, preserve your investment and strengthen plant performance. Access the right people and resources necessary to achieve your business goals.

To learn how comprehensive Lifecycle Services solutions address your process management needs, contact your local Emerson sales office or representative, or visit www.emersonprocess.com/DeltaVLifecycleServices.

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