

Guardian™ Support for DeltaV™ Distributed Control System

- Risk management
- Incident management
- Lifecycle management



Subscribe to an innovative service for achieving peak reliability and performance of your DeltaV™ distributed control system.

Introduction

Guardian™ Support is a prognostic service designed to optimize the reliability and performance of your DeltaV™ distributed control system (DCS). It is the core element for Emerson Lifecycle Services, designed to help improve your competitive advantage and bottom line business results through critical service and support information. It enables real-time visualization and management of your control system. The service can help improve productivity by analyzing data and delivering useful, relevant, critical, system-specific information to keep your plant current. It will help you make more-informed, proactive decisions about your process automation system. By making day-to-day systems management tasks fast and efficient, Guardian Support will also allow you lower operations and maintenance costs by shifting from reactive/preventive maintenance to a predictive strategy.

Guardian Support aggregates and securely delivers personalized real time service intelligence tailored to platform architecture and application — at the individual System level, the Plant level and the Enterprise level. Guardian Support delivers technical support and life cycle services for the DeltaV DCS architecture. Additionally, Guardian Support aggregates information related to OEM and commercial off-the-shelf technologies, digital field devices and Emerson Alliance partner products associated with DeltaV DCS. The result is a single point of critical system information to help you effectively manage your DeltaV DCS.

Benefits

Risk management: Through continuous improvement and support, you can begin to focus on critical business objectives. Guardian Support provides risk management by matching system-specific information to your systems and displaying it in a secure, customized support portal. You'll have a proactive way to manage risk by way of a secure website dashboard and push email notifications. The *Guardian Support dashboard* features user-configurable content specific to your systems, both real-time and historic.

A visual dashboard gauges the overall health of your system. The *System Health Score* measures Key Performance Indicators (KPIs) that determine how well risks to your system's safety, security and process are being managed. KPIs for risk areas are listed as KBA, Software Updates, Service Calls, Support Status, SHM Action Alerts and SSM Findings. It's an easy way to increase performance as you see which systems need attention, and which are at low risk. Drill down into your system information using your own system node names and immediately determine serial numbers, warranty status, model numbers for spares, versions, drivers, hot-fixes, DeltaV DCS version compatibility, lifecycle status, and more.

The Guardian website also includes proactive *Knowledge Base Articles (KBAs)* that are matched to the system and presented in executive summary format: one click for the full article and another click to download any applicable hot-fix. KBA management tools track the status of mitigation actions, and new or revised KBAs are continuously re-matched to the most recently captured system content information. Minimize risks

related to cybersecurity threats, process control disruptions or safety concerns with this valuable resource to manage constant updates. Patching, KBAs and hot fixes — left unknown or unattended — can lead to production loss, and it's important to understand the applicability, necessity and urgency of updates. You need to be fully versed in your hardware and how it can be compromised. Improve capital efficiency and stay ahead of the technology curve with the latest software releases, including service packs and major new releases. *Microsoft Security Updates* are tested and confirmed for compatibility, and then bundled for easier installation. Risk alerts are ranked for urgency, with recommendations given about what to install and when. This supports your work planning and prioritization so you can make better business decisions.

Guardian Support subscription includes an *Automated Service Notification* feature that is user-configurable and system-specific, providing immediate notification whenever relevant, actionable system information becomes available. Two delivery methods are available: email with a personally configured subject title, and RSS web feed.

System Analysis Reports prepared by Emerson experts include day-to-day service activity for the covered service period. These reports are based on system content, trends, events, and call history to help you operate and maintain your system with the highest availability and sustainability. The reported information is reduced to actionable, informative charts, graphs and recommendations.

Incident management: Receive the expertise to troubleshoot and fix system failures. Slower repair times lead to longer production downtime. You strive to make efficient use of all your resources, but there can be a huge maintenance cost, in terms of both dollars and man-hours, to troubleshoot and fix a system if you're pulling away staff that should be focusing on other issues, or if your maintenance team doesn't have the right training or skill set. You need access to experts at all times to help you through critical issues.

Guardian Support provides incident management with standard *24x7 Expert Technical Support* coverage at no extra charge. You can call at any time, chat with our Technical Support or submit questions and issues through the dashboard on the Guardian portal. The Global Service Center (GSC) prioritizes calls to respond quickly when your plant is down, and experts are always on-hand to walk you through steps to fix the issue.

Remote system diagnosis helps GSC to speed troubleshooting and problem resolution, helping to reduce downtime and improve your operating performance. At the customer's request, Emerson Technical Specialist can remotely log on your automation system to perform online troubleshooting.



Information on *Call Logs* provides you the ability to monitor technical support calls of your systems. You can view, open and closed calls. It provides information such as for which system was the call made for, a brief description of the call, the severity of the call, the name of the caller, and when the call was last updated.

You can also *Submit New Call* via Guardian website. A service call form is needed in order for our technical support team to efficiently address your concerns. This includes information about the affected system issue and details of your query. Emerson's technical support team will contact you via phone or email depending on your preferences.

Information from *Knowledge Base Articles* helps onsite staff fix issues quickly and correctly, and special tools collect system data to help diagnose issues faster. With a historical record of system issues, you can view all system incidents, calls and resolution. This makes it easy to share best practices and lessons learned, distribute information across your enterprise, build skills and collaborate with all your DeltaV DCS managers worldwide on similar issues.

Lifecycle management: Ensure your equipment runs reliably and is available. When done manually, it can take a lot of time to manage system hardware and software, to keep your assets current and to manage the lifecycle of all your equipment. With Guardian Support, you'll have access to a complete system inventory, so you can plan for upgrades, replacements and parts obsolescence. This is critical to sustaining your system investment as components, subassemblies and critically dependent software evolve. Use it to gain an accurate view of all the hardware, licensing and documentation in place, which is valuable for budget planning.

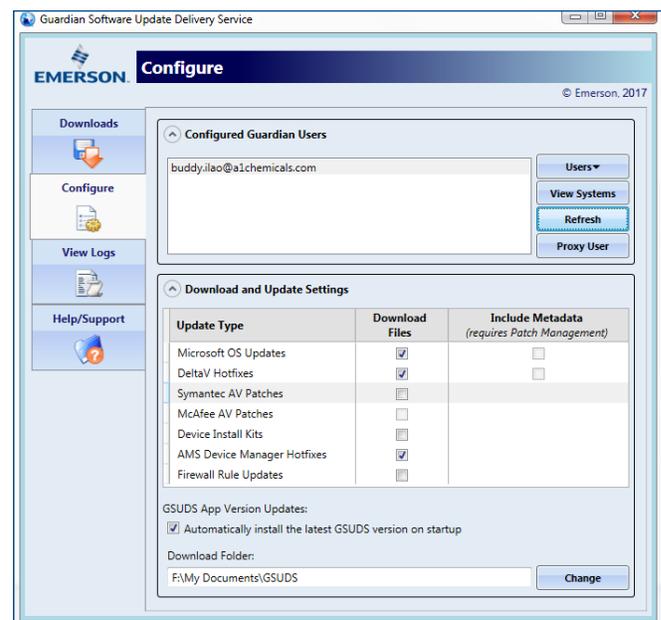
Guardian Support provides lifecycle management by matching your enrolled system-specific hardware and software content to its associated lifecycle status via the dashboard. Email alerts provide notice whenever there is a change on the lifecycle status of enrolled hardware/software. The service keeps an updated and accurate inventory of all system components and licensing in a readily viewable format through a secure site. Asset Lifecycle status information listed by node name and Emerson model number helps you plan system management and sustainability investments.

Guardian Support provides *Software Upgrade* by having the capability of downloading the latest DVD media directly from the website. The website also provides users with the Checksum Tool. Software downloads are highly reliable in most circumstances. However, if you want to check the integrity of the downloaded ISO files before burning DVD media, you can perform a checksum on the downloaded ISO file. This will redirect you to a Microsoft website download center for the tool.

Guardian Support features a *License Usage* screen that shows what licenses are available, assigned, and unused for each system node. This feature is also useful for demonstrating conformance of license utilization to license purchase.

Education screen allows you to view the list of training courses and schedules that Emerson can offer. You can choose from the five training delivery options that can best suite your needs. These are Regional Training Centers, On-Site, Local Training, Blended Learning Training, Virtual Classroom and eLearning. Videos and webinars are also available in the page.

An automated *Guardian Software Update Delivery (GSUD)* applet that allows the user to download (either on demand or scheduled) system-specific DeltaV DCS and AMS Device Manager hot fixes, Microsoft® OS Updates, Device Install kits (for DeltaV DCS, AMS Device Manager, Ovation, Hart, Fieldbus™, Profibus® and DeviceNet™), McAfee Antivirus Patches and text files containing the filename of the latest Symantec™ Antivirus updates. This applet is necessary for the successful implementation of the optional Automated Patch Management service – that allows for deployment of the said updates to the nodes across the DeltaV network.



Fleet management: Collaborate with your peers and share best practices in managing your systems across the enterprise. System issues that occur in one site can be immediately mitigated in another site that is located in another part of the world through on-time notification and proper documentation. Knowing relevant information about all the systems in your enterprise helps in efficient planning and utilization of the already limited global resources you have.

Guardian Support provides fleet management by providing access to a user-configurable Dashboard Website where you view all systems across the enterprise or choose to view information as a group of systems. Depending on how your account is configured, you will be able to monitor the information that are presented in the website, and thus, act accordingly when issues arise. You can easily determine which system among the many systems you have globally need immediate attention, so you can flag the manpower you have locally to address these concerns.

Guardian Support provides a value page that shows realized Guardian Support benefits for your systems and provides a summary of deliverables associated to managing the risks, incidents, and lifecycle information of your systems. It focuses on critical system-specific information to efficiently manage your systems' health, consequently lowering your operations and maintenance costs, and optimizing the reliability and performance of your systems.

An easy-to-use System Explorer provides a quick view of all the systems you have access to. Simply choose the systems you are interested in by placing a check mark beside the system name. Click OK and you will be able to view the system health score of the selected system. A Search field is also available, accepting entries such as system ID and system description, allowing you quick selection. You may also select by product line by using the dropdown provided.

The Notification Settings from the Guardian Support website can be selected on an enterprise level, location level or system level, depending on user preference. A user having global responsibility of managing the systems can therefore receive timely information on KBAs, software updates or even retiring assets matched to his systems, and this triggers immediate need for action to be addressed by the affected sites globally.

Cost management: Save time and money by significantly reducing your unplanned downtime and maximizing the investment in your system. Guardian Support shifts maintenance strategies from being reactive/preventive to proactive/preventive, and having access to critical information and expert technical support round-the-clock not only gives

you peace of mind, it also increases productivity of your workforce by focusing only on the most critical processes in the system.

The product safety notice, security and process hot fixes and updates that are matched to your system have been identified to have the potential to disrupt your control process. These Knowledge Base Articles are brought to your attention for mitigation or resolution to help you prevent unplanned events. If applied immediately, the risk of downtime, which usually tends to be expensive, will be lessened. These critical Knowledge Base Articles (KBAs) and Microsoft Security Updates are presented in the Guardian Support website using an easily readable table format that you can also export to Excel if needed.

The lack of engineering expertise in-house due to the aging workforce makes it difficult and expensive to keep the plant running at its peak. Especially in today's fast-paced technology-driven environment, having a network of highly skilled Subject Matter Experts, who have the resources to access the latest technology, helps you in maximizing your plant assets and provides the appropriate guidance in addressing any technical concerns that you encounter in your production process.

The Lifecycle Status information help you plan your capital budget while prioritizing which system components to maintain, upgrade, or migrate. This information will also be useful in planning your spare parts inventory, aiding in the effective and efficient use of capital.

Guardian connect: Guardian Connect provides web access and system health visibility to systems without Guardian Support, allowing customers to immediately determine the relevant system security and safety risks they are exposed to. For those systems that are not yet registered, you are allowed to activate the one-time 30-Days Trial Support to experience the benefit of the Guardian website by uploading your registration file.



Guardian Mobile: Guardian Mobile provides real-time visualization and management of your Lifecycle Support requirements using your mobile devices. It is an easy to use application to manage your DeltaV systems. Guardian Mobile is the perfect solution for the on-the-go management professionals who want to extract the most performance from their system with the lowest lifecycle cost and maximum process availability.

Conventional Software Support

As part of your active Guardian Support service, we created the Conventional Software Support (CSS) license that will be installed on your system to give access to all DeltaV software updates and upgrades, including hotfixes that are created for a software version during the Conventional Software Support (CSS) period. This is the time period during which Emerson offers software hotfix support, when merited, for a specific version of the DeltaV software.

During the CSS period, a software support license will be generated for each system at the time of Guardian Support initial purchase and Guardian Support renewals. This is a DeltaV license that should be applied to a specific DeltaV DCS and is not transferrable or reusable in other systems with a different system ID. The license expiration date is concurrent with the support plan expiration. When service is renewed, a new CSS license will be generated for the system. Active Guardian Support users can download the CSS license at <https://guardian.emerson.com/>.

A hotfix identified as Safety-Related may be applied to all appropriate DeltaV DCS, including those without CSS licenses.

The CSS availability dates are as follows:

- DeltaV v11 – through November 2016 (Service Pack Release Date: December 1, 2011).
- DeltaV v12 – through April 2019 (Service Pack Release Date: April 21, 2014).
- DeltaV v13 – through September 2020 (Service Pack Release Date: TBA).

DeltaV version v10 moves to a Retired lifecycle status in February 2014. To stay current with the latest technology and take advantage of new functionality in DeltaV, we encourage you to work with your local Emerson Service Provider, who can provide you system life planning assistance to best manage your control system investment.

Starting with v11.3.1, the 5-year Software Support Lifecycle for a major version begins when Service Pack 1 is released.

Knowledge Base Article AP-1000-0004 contains detailed information regarding the CSS license function and installation procedure.

Guardian Support Bridge

Guardian Support Bridge is a service option available for DeltaV v11.3.1 Guardian Support subscribers. Guardian Support Bridge offers an extended period of KBA/ DeltaV software (hotfix) support, as well as security patch, OS Updates and anti-virus update testing. For DeltaV v11.3.1, Guardian Support Bridge is available for up to three years from the Conventional Software Support (CSS) Retirement date of December 1, 2016.

Service Requirements

- DeltaV version 7.4 or higher required.
- System information collection requires periodic customer use of an automation-assisted process using the standard DeltaV DCS registration utility. This process does not require a direct Internet system connection.
- Guardian Support is available 24/7 for telephone technical support service. Emerson's Global Service Center provides English, Spanish and Mandarin languages support.
- Additional Local Help Desk and Scheduled & Remedial On-site services are available through one of Emerson's local Field Service Offices or Local Business Partners on a per quote basis.
- Model Numbers are also available to order combined support for DeltaV DCS and AMS Device Manager packages that are located at the same physical site. This combined model number provides Guardian Support for the DeltaV DCS and Foundation Support for the AMS Device Manager packages.
- Guardian Support quotation can be requested by logging -in at Guardian website and click the Request to Quote button. An email notification will be sent to you as reference and also to the appropriate Emerson representative that will assist you with your request.
- Contact Guardian.Info@Emerson.com for single site DST consolidation exceeding 30,000 DSTs.

Ordering Information

Description	Model Number
Guardian Support Service with emergency telephone support (24 hours/day, 365 days/year)	VE9041Sxxxx*
Guardian Support Service with emergency telephone support (24 hours/day, 365 days/year) – Multi-Year Option	VE9041Sxxxx*-y**
Guardian Support for both DeltaV system and AMS Device Manager package, both with emergency telephone support (24 hours/day, 365 days/year)	VE9048Sxxxx*
Guardian Support for both DeltaV system and AMS Device Manager package, both with emergency telephone support (24 hours/day, 365 days/year) – Multi-Year Option	VE9048Sxxxx*-y**
Guardian Support for an additional 1,000 DSTs when consolidation exceeds 30,000 DSTs	VE9041S1KEXT
Guardian Support for an additional 1,000 DSTs when consolidation exceeds 30,000 DSTs – Multi-Year Option	VE9041S1KEXT-y**
Guardian Support for both DeltaV system and AMS Device Manager package, both with emergency telephone support (24 hours/day, 365 days/year), for an additional 1,000 DSTs when consolidation exceeds 30,000 DSTs	VE9048S1KEXT
Guardian Support for both DeltaV system and AMS Device Manager package, both with emergency telephone support (24 hours/day, 365 days/year), for an additional 1,000 DSTs when consolidation exceeds 30,000 DSTs – Multi-Year Option	VE9048S1KEXT-y**
Guardian Support Bridge Year x***, Date of Support; xxxx* DST Max System Size	VE9050R11Yx***Sxxxx*

*Where xxxxx represents the location's aggregate DST count, up to 30,000 DSTs. Contact factory for single site location aggregation exceeding 30,000 DSTs.

**Where y is the number of years for Multi-Year Agreement, choose from number 2, 3, 4 or 5.

***Where x is the number of years after the 5-year Software Support Lifecycle for Guardian Support Bridge, choose from 6, 7 or 8.

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

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