

Guardian™ Support for DeltaV™ Distributed Control System

- Risk management
- Lifecycle management
- Incident management



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.

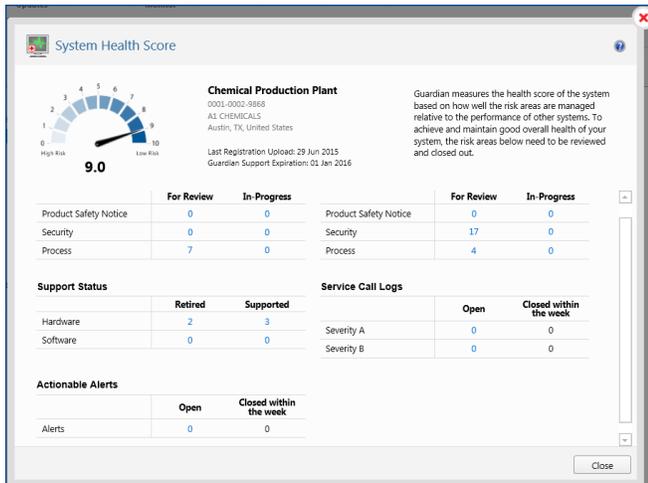
Benefits

Risk management through continuous improvement and support allows you to focus on critical business objectives. Minimize risks related to cybersecurity threats, process control disruptions or safety concerns with this valuable resource to manage constant updates. Patching, Knowledge Based Articles (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.

Guardian Support provides risk management by matching system-specific information to your systems. You'll have a proactive way to manage risk by way of a secure web dashboard and push email notifications. Improve capital efficiency and stay ahead of the technology curve with the latest software releases, including service packs and major new releases. Microsoft 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. Also, a visual dashboard gauges the overall health of your system. 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 version compatibility, lifecycle status, and more.



Lifecycle management ensures 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.

Product Name	Currently Installed	Support Status	User Notes
AI Card, 8 Ch, 4-20 mA, HART Emerson Model: K3302X1-BA1	27	Retired	
DI Card, 32 Ch, High Density Emerson Model: K3301X1-CA1	26	Retired	

Additionally with Guardian Support, Emerson's Global Service Center (GSC) provides expertise and advice on maintaining your system. You can submit questions directly through the portal or make a phone call. The Guardian site provides in-depth documentation and resources to help you troubleshoot or gain extended knowledge of your system.

Incident management delivers 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.

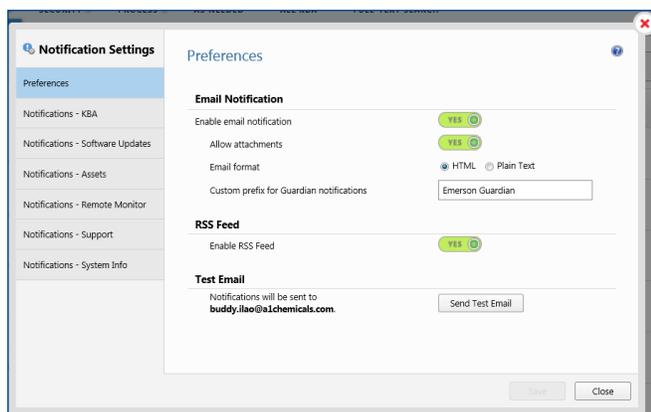
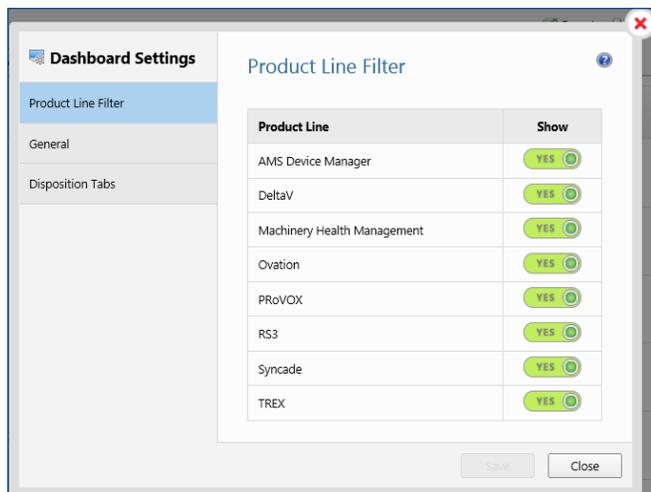
Guardian Support provides incident management with standard 24x7x365 coverage at no extra charge. You can call at any time, or submit questions and issues through the dashboard on the Guardian portal. The GSC prioritizes calls to respond quickly when your plant is down, and experts are always on-hand to walk you through steps to fix the issue. Information from KBAs 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.



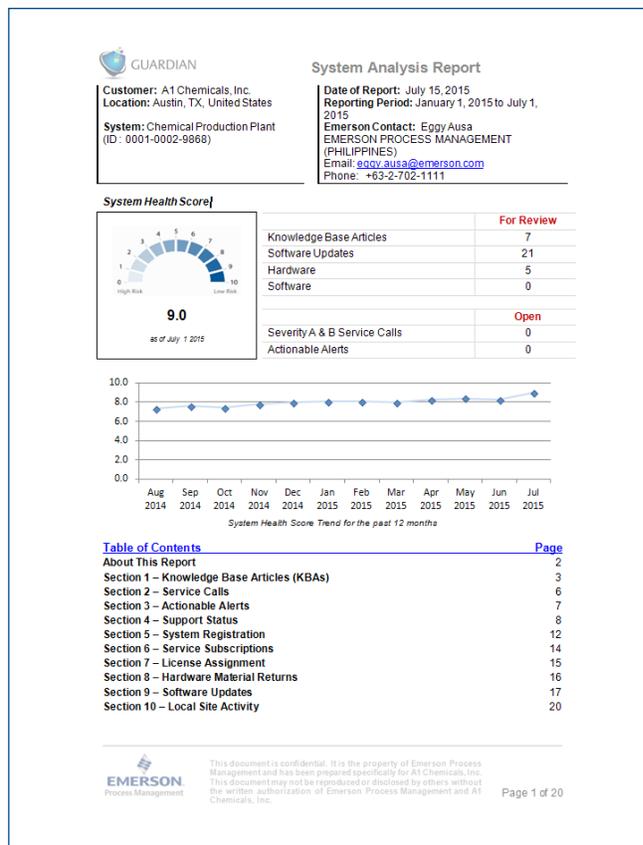
Guardian Support Features

Guardian Support aggregates and securely delivers personalized realtime 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 Architecture. Additionally, Guardian aggregates information related to OEM and Commercial off-the-shelf technologies, Digital Field Devices and Emerson Alliance partner products associated with DeltaV. The result is a single point of critical system information to help you effectively manage your DeltaV Digital Automation System. Features include:

1. Expert technical phone support by Emerson professionals to help you get the answers you need, when and where you need them.
2. Remote system diagnosis to speed troubleshooting and problem resolution, helping to reduce downtime and improve operating performance.
3. Software updates, DVD media (also available for online download) and documentation for maintenance (fix) releases, and for upgrades containing new features and functions.
4. The Guardian dashboard support website with user-configurable content specific to your systems, both real-time and historic. The Guardian website includes service features such as:
 - 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.
 - Technical Support call management that allows you to open new calls, examine call history, and send or receive call status updates.
 - Software update management that allows you to view and manage applicable Safety, Security, and Process system updates including DeltaV hot fixes and DeltaV-approved Microsoft OS Updates.
 - KBA management tools to track the status of mitigation actions. New or revised KBAs are continuously re-matched to the most recently captured system content information.
 - Asset Lifecycle status information listed by node name and Emerson model number to help you plan system management and sustainability investments.
 - System Health Score that measures how well risks to your system's safety, security and process are being managed.
 - 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.
 - An automated Guardian Software Update Delivery (GSUD) applet that allows the user to download (either on demand or scheduled) system-specific DeltaV and AMS Device Manager hot fixes, Microsoft® OS Updates, Device Install kits (for DeltaV, AMS Device Manager, Ovation, Hart, Fieldbus™, Profibus® and DeviceNet™) 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.
5. Automated Service Notifications that are user-selected and system-specific provide immediate notification whenever relevant, actionable system information becomes available via two delivery methods: email with a personally configured subject title, and RSS web feed.



6. 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. The report utilizes the same gauge found in the Guardian Support website to visually signal and prioritize service management considerations.
7. Guardian Support integrates technical support and lifecycle services for the DeltaV Architecture. Additionally, Guardian aggregates information related to OEM and Commercial off-the-shelf technologies, Digital Field Devices and Emerson Alliance partner products associated with DeltaV. This information includes Service Bulletins, Availability of Updates, Compatibility Information, and Lifecycle Information.



8. Conventional Software Support (CSS) license, which is generated for each system upon initial purchase/renewal of Guardian Support, gives active Guardian Support subscribers access to all DeltaV software updates and upgrades, including hotfixes that are created for a DeltaV version during the CSS period.

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.emersonprocess.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 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.

Service Requirements and Ordering Information

- 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. Our 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 Guardian Support for the AMS Device Manager packages.
- Contact Guardian.Info@Emerson.com for single site DST consolidation exceeding 30,000 DSTs.

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/guardiansupport.

Description	Model Number
Guardian Support Service with emergency telephone support (24 hours/day, 365 days/year)	VE9041Sxxxx*
Guardian Support for both DeltaV system and AMS Device Manager package, both with emergency telephone support (24 hours/day, 365 days/year)	VE9048Sxxxx*

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

Emerson Process Management

Asia Pacific: 65.6777.8211

Europe, Middle East: 41.41.768.6111

North America, Latin America:

T 1 (800) 833 8314 or

1 (512) 832 3774

www.emersonprocess.com/guardiansupport

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